FORM 10-K/A

Annual report pursuant to section 13 and 15(d) [amend]

Filing Date: **2005-05-02** | Period of Report: **2004-12-31**
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FILER

TRANSKARYOTIC THERAPIES INC
CIK:**885259**| IRS No.: **043027191** | State of Incorp.:**DE** | Fiscal Year End: **1231**
Type: **10-K/A** | Act: **34** | File No.: **000-21481** | Film No.: **05791966**
SIC: **2836** Biological products, (no disgnostic substances)

Business Address
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CAMBRIDGE MA 02139
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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K/ A

AMENDMENT NO. 1

FOR ANNUAL AND TRANSITION REPORTS PURSUANT TO SECTIONS 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2004

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File No. 0-21481

Transkaryotic Therapies, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**04-3027191**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
700 Main Street **Cambridge, Massachusetts** *(Address of principal executive offices)*	**02139** *(Zip Code)*

Registrant' s telephone number, including area code:
(617) 349-0200

Securities registered pursuant to Section 12(b) of the Act:
None

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, $.01 par value per share
Preferred Stock Purchase Rights
(Title of class)

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant' s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is an accelerated filer as defined by Rule 12b-2 of the Securities Exchange Act of 1934, as amended. Yes ☑ No ☐

As of June 30, 2004, the approximate aggregate market value of the voting Common Stock held by non-affiliates of the registrant was $470,459,507 based on the last reported sale price of the registrant' s voting Common Stock on The Nasdaq National Market as of the close of business on June 30, 2004. There were 34,956,679 shares of Common Stock outstanding as of April 22, 2005.

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EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/ A ("Amendment No. 1") to the Annual Report on Form 10-K of Transkaryotic Therapies, Inc. (the "Company") for the fiscal year ended December 31, 2004 that was originally filed with the Securities and Exchange Commission on March 16, 2005 (the "Original Filing") is being filed to amend the Original Filing as follows:

Item 9A is amended to include management' s annual report on internal control over financial reporting, including management' s assessment of the effectiveness of the Company' s internal control over financial reporting, and to include the related attestation report of Ernst & Young LLP, the Company' s independent registered public accounting firm;

Items 10, 11, 12, 13 and 14 are amended to include the required disclosures; and

the Exhibit Index is amended to reflect the filing of additional exhibits and the certifications required by Rule 13a-14(a) and Rule 13a-14(b) under the Securities Exchange Act of 1934, as amended.

The amendment to Item 9A is included pursuant to Securities and Exchange Commission Release No. 34-50754, which provides up to 45 additional days after the required filing date of the Original Filing to file the information omitted from Item 9A of the Original Filing.

PART II

Item 9A. *Controls and Procedures*

(a) Disclosure Controls and Procedures

The Company' s management, with the participation of the Company' s President and Chief Executive Officer and Senior Vice President and Chief Financial Officer, evaluated the effectiveness of the Company' s disclosure controls and procedures as of December 31, 2004. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by the company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC' s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company' s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

As described below in the Management' s Report on Internal Control Over Financial Reporting, the Company has identified and reported to the Company' s audit committee and Ernst & Young LLP, the Company' s independent registered public accounting firm, material weaknesses in the Company' s internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) with respect to its sales and marketing subsidiary, TKT Europe A.B. (formerly TKT Europe-5S A.B.) ("TKT Europe"), as of December 31, 2004. These material weaknesses include both entity-level control weaknesses and weaknesses in process, transaction and application controls as defined in the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control Integrated Framework. As a result of these material weaknesses, the Company' s President and Chief Executive Officer and Senior Vice President and Chief Financial Officer have concluded that, as of December 31, 2004, the Company' s disclosure controls and procedures were not effective.

Notwithstanding the above-mentioned material weaknesses, in light of the processes involved in the preparation of the Company of its consolidated financial statements for the year ended December 31, 2004, the Company believes that these financial statements fairly present the Company' s consolidated financial position as of, and the consolidated results of operations for the year ended, December 31, 2004. These processes included detailed transaction testing for various key accounts, sales order processes, cash receipts, and vendor invoice processing and related payments thereon. Moreover, as part of these processes, manage-

ment concluded that no material adjustments were needed to such financial statements or with respect to amounts recorded in the interim periods in the year ended December 31, 2004.

(b) Internal Control Over Financial Reporting

MANAGEMENT' S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) under the Exchange Act). The Company' s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Internal control over financial reporting includes policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company, (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company' s assets that could have a material effect on the financial statements.

The Company' s management assessed the effectiveness of the Company' s internal control over financial reporting as of December 31, 2004. In making this assessment, the Company' s management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control-Integrated Framework.*

Management' s assessment included an evaluation of such elements as the design and operating effectiveness of key financial reporting controls, process documentation, accounting policies, overall control environment and information systems control environment.

A material weakness is a control deficiency, or combination of control deficiencies, that results in a more than remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. We identified the following material weaknesses at our TKT Europe subsidiary in our assessment of the effectiveness of internal control over financial reporting as of December 31, 2004:

1. *Inadequate entity level controls.* As of December 31, 2004, the Company did not have effective entity level controls, as defined in the COSO framework, at TKT Europe. These weaknesses included: (i) weaknesses in the control environment at TKT Europe, including a lack of uniform and consistent communication by all members of senior management regarding the importance of controls, a lack of effective segregation of duties, and a lack of adequate resources in accounting, finance and information systems; (ii) weaknesses in risk assessment controls at TKT Europe, including a lack of adequate mechanisms for anticipating and identifying financial reporting risks, and for reacting to changes in the operating environment that could have a potential effect on financial reporting; (iii) weaknesses over control activities at TKT Europe, including a lack of necessary policies and procedures, a lack of information systems access and security controls, and a lack of adequate controls to safeguard assets, including computer programs and data files; (iv) weaknesses over information and communication controls at TKT Europe, including a lack of effective information systems and business processes required to support operations and reporting requirements, and a lack of adequate controls over changes to financial applications; and (v) weaknesses over monitoring control activities at TKT Europe, including a lack of periodic evaluations of internal control and the effectiveness thereon. If the Company was not, or is not in future periods, successful in identifying these material weaknesses, the Company' s quarterly or annual financial statements could be materially misstated.

2. *Inadequate information systems procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls over the information systems control environ-

ment at TKT Europe. These weaknesses were related to: (i) inadequate application and infrastructure change controls to ensure that changes to financial applications at TKT Europe are properly authorized and tested; (ii) inadequate security around user access rights to certain financial application systems at TKT Europe to ensure access to TKT Europe' s financial applications are appropriately restricted; (iii) inadequate security and data protection controls pertaining to TKT Europe' s information technology infrastructure and (iv) inadequate documentation surrounding standard operating procedures for certain key aspects of information technology environment at TKT Europe, including change management, data backup policies, acceptable use policies and general security. Therefore, the Company is not able to place reliance on its information systems application controls and the resulting data at TKT Europe. As a result, misstatements in the financial statements could occur and not be prevented or detected by the Company' s controls in a timely manner. If the Company was not, or is not in future periods, successful in identifying these material weaknesses, the Company' s quarterly or annual financial statements could be materially misstated.

3. *Inadequate sales order processing and cash receipts procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls over sales order processing and cash receipts at TKT Europe. These weaknesses included inadequate: (i) evidence of management' s review of TKT Europe sales and accounts receivable reconciliations; (ii) evidence of management review of sales order transaction processing and related invoicing data entry review from source documentation to the accounting system; (iii) evidence of management review of cash receipts processing; and (iv) evidence of management review of sales order supporting documentation with respect to price, quantity and evidence of an arrangement; and (v) segregation of duties in TKT Europe' s sales order processing and cash receipts processes. These weaknesses could prevent the Company from recording cash receipts on its accounts receivable accurately and timely. Further, misstatements in the revenue, cost of goods sold, inventory and deferred revenue accounts could also occur. If the Company was not, or is not in future periods, successful in identifying these material weaknesses, the Company' s quarterly or annual financial statements could be materially misstated.

4. *Inadequate revenue recognition procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls over revenue recognition with respect to telephonic orders at TKT Europe. The Company did not have adequate procedures and controls to ensure that: (i) evidence of an arrangement existed between TKT Europe and customers placing telephonic orders and (ii) all significant terms of the Company' s arrangements with these customers was documented and understood to ensure revenue recognition was appropriate. As a result, misstatements in the revenue, cost of goods sold, accounts receivable, inventory and deferred revenue accounts could occur. If the Company was not, or is not in future periods, successful in identifying these material weaknesses, the Company' s quarterly or annual financial statements could be materially misstated.

5. *Inadequate purchasing and cash disbursement procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls over purchasing and cash disbursements at TKT Europe. TKT Europe did not have adequate authorization controls and procedures, adequate evidence of management review controls, or proper segregation of duties in TKT Europe' s purchasing and cash disbursements processes. As a result, misstatements in the current assets, non-current assets, current liabilities and operating expense accounts could occur. If the Company was not, or is not in future periods, successful in identifying these material weaknesses, the Company' s quarterly or annual financial statements could be materially misstated.

6. *Inadequate financial statement preparation and review procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls to ensure that accurate financial statements at TKT Europe can be prepared and reviewed by management on a timely basis, including: (i) insufficient levels of supporting documentation; (ii) insufficient evidence of management review of accounting records prepared by local accounting offices for TKT Europe subsidiaries and within TKT Europe' s accounting department; (iii) insufficient evidence of management review of the consolidation of TKT Europe subsidiaries; (iv) insufficient underlying supporting documentation to evidence that balances are properly summarized and posted to the general ledger; and (v) insufficient analysis of

reserves and accruals, including the accrual of interest income throughout the year. As a result, misappropriation of assets and misstatements in the financial statements could occur and not be prevented or detected by the Company' s controls in a timely manner. If the Company was not, or is not in future periods, successful in identifying these material weaknesses, the Company' s quarterly or annual financial statements could be materially misstated.

7. *Inadequate treasury procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls over the treasury functions at TKT Europe. TKT Europe did not have adequate authorization controls and procedures, adequate evidence of management review controls or proper segregation of duties in TKT Europe' s treasury functions. As a result, misappropriation of assets and misstatements in the financial statements could occur and not be prevented or detected by the Company' s controls in a timely manner. If the Company was not, or is not in future periods, successful in identifying these material weaknesses, the Company' s quarterly or annual financial statements could be materially misstated.

8. *Inadequate segregation of duties and safeguarding of assets procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls in place to ensure proper segregation of duties within the purchasing/payables, billing/ collection, information systems and treasury processes at TKT Europe. Information systems end users may also have had the ability to gain unlimited access to TKT Europe' s systems. As a result, misappropriation of assets and misstatements in the financial statements could occur and not be prevented or detected by the Company' s controls in a timely manner. If the Company was not, or is not in future periods, successful in identifying these material weaknesses, the Company' s quarterly or annual financial statements could be materially misstated.

Because of these material weaknesses, the Company' s management have concluded that the Company' s internal control over financial reporting as of December 31, 2004 was not effective, based on the criteria established by COSO.

Management' s assessment of the effectiveness of the Company' s internal control over financial reporting as of December 31, 2004 has been audited by Ernst & Young LLP, an independent registered public accounting firm ("Ernst & Young"). Ernst & Young' s report on internal control over financial reporting is set forth below.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Board of Directors and Shareholders of
Transkaryotic Therapies, Inc.

We have audited management' s assessment, included in the accompanying Management' s Report on Internal Control Over Financial Reporting, that Transkaryotic Therapies, Inc. (the Company) did not maintain effective internal control over financial reporting as of December 31, 2004, because of the effect of the eight material weaknesses identified in management' s assessment, based on criteria established in Internal Control − Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Transkaryotic Therapies, Inc.' s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on management' s assessment and an opinion on the effectiveness of the Company' s internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, evaluating management' s assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company' s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company' s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company' s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

A material weakness is a control deficiency, or combination of control deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. The following eight material weaknesses have been identified and included in management' s assessment:

1. *Inadequate entity level controls.* As of December 31, 2004, the Company did not have effective entity level controls, as defined in the COSO framework, at TKT Europe. These weaknesses included: (i) weaknesses in the control environment at TKT Europe, including a lack of uniform and consistent communication by all members of senior management regarding the importance of controls, a lack of effective segregation of duties, and a lack of adequate resources in accounting, finance and information systems; (ii) weaknesses in risk assessment controls at TKT Europe, including a lack of adequate mechanisms for anticipating and identifying financial reporting risks, and for reacting to changes in the operating environment that could have a potential effect on financial reporting; (iii) weaknesses over control activities at TKT Europe, including a lack of necessary policies and procedures, a lack of information systems access and security controls, and a lack of adequate controls to safeguard assets,

including computer programs and data files; (iv) weaknesses over information and communication controls at TKT Europe, including a lack of effective information systems and business processes required to support operations and reporting requirements, and a lack of adequate controls over changes to financial applications; and (v) weaknesses over monitoring control activities at TKT Europe, including a lack of periodic evaluations of internal control and the effectiveness thereon.

2. *Inadequate information systems procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls over the information systems control environment at TKT Europe. These weaknesses were related to: (i) inadequate application and infrastructure change controls to ensure that changes to financial applications at TKT Europe are properly authorized and tested; (ii) inadequate security around user access rights to certain financial application systems at TKT Europe to ensure access to TKT Europe' s financial applications are appropriately restricted; (iii) inadequate security and data protection controls pertaining to TKT Europe' s information technology infrastructure and (iv) inadequate documentation surrounding standard operating procedures for certain key aspects of information technology environment at TKT Europe, including change management, data backup policies, acceptable use policies and general security. Therefore, the Company is not able to place reliance on its information systems application controls and the resulting data at TKT Europe. As a result, misstatements in the financial statements could occur and not be prevented or detected by the Company' s controls in a timely manner.

3. *Inadequate sales order processing and cash receipts procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls over sales order processing and cash receipts at TKT Europe. These weaknesses included inadequate: (i) evidence of management' s review of TKT Europe sales and accounts receivable reconciliations; (ii) evidence of management review of sales order transaction processing and related invoicing data entry review from source documentation to the accounting system; (iii) evidence of management review of cash receipts processing; and (iv) evidence of management review of sales order supporting documentation with respect to price, quantity and evidence of an arrangement; and (v) segregation of duties in TKT Europe' s sales order processing and cash receipts processes. These weaknesses could prevent the Company from recording cash receipts on its accounts receivable accurately and timely. Further, misstatements in the revenue, cost of goods sold, inventory and deferred revenue accounts could also occur.

4. *Inadequate revenue recognition procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls over revenue recognition with respect to telephonic orders at TKT Europe. The Company did not have adequate procedures and controls to ensure that: (i) evidence of an arrangement existed between TKT Europe and customers placing telephonic orders and (ii) all significant terms of the Company' s arrangements with these customers was documented and understood to ensure revenue recognition was appropriate. As a result, misstatements in the revenue, cost of goods sold, accounts receivable, inventory and deferred revenue accounts could occur.

5. *Inadequate purchasing and cash disbursement procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls over purchasing and cash disbursements at TKT Europe. TKT Europe did not have adequate authorization controls and procedures, adequate evidence of management review controls, or proper segregation of duties in TKT Europe' s purchasing and cash disbursements processes. As a result, misstatements in the current assets, non-current assets, current liabilities and operating expense accounts could occur.

6. *Inadequate financial statement preparation and review procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls to ensure that accurate financial statements at TKT Europe can be prepared and reviewed by management on a timely basis, including: (i) insufficient levels of supporting documentation; (ii) insufficient evidence of management review of accounting records prepared by local accounting offices for TKT Europe subsidiaries and within TKT Europe' s accounting department; (iii) insufficient evidence of management review of the consolidation of TKT Europe subsidiaries; (iv) insufficient underlying supporting documentation to evidence that balances are properly summarized and posted to the general ledger; and (v) insufficient analysis of

reserves and accruals, including the accrual of interest income throughout the year. As a result, misappropriation of assets and misstatements in the financial statements could occur and not be prevented or detected by the Company' s controls in a timely manner.

7. *Inadequate treasury procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls over the treasury functions at TKT Europe. TKT Europe did not have adequate authorization controls and procedures, adequate evidence of management review controls or proper segregation of duties in TKT Europe' s treasury functions. As a result, misappropriation of assets and misstatements in the financial statements could occur and not be prevented or detected by the Company' s controls in a timely manner.

8. *Inadequate segregation of duties and safeguarding of assets procedures and controls.* As of December 31, 2004, the Company did not have adequate procedures and controls in place to ensure proper segregation of duties within the purchasing/payables, billing/ collection, information systems and treasury processes at TKT Europe. Information systems end users may also have had the ability to gain unlimited access to TKT Europe' s systems. As a result, misappropriation of assets and misstatements in the financial statements could occur and not be prevented or detected by the Company' s controls in a timely manner.

These material weaknesses were considered in determining the nature, timing, and extent of audit tests applied in our audit of the December 31, 2004 financial statements, and this report does not affect our report dated March 15, 2005 on those financial statements.

In our opinion, management' s assessment that Transkaryotic Therapies, Inc. did not maintain effective internal control over financial reporting as of December 31, 2004, is fairly stated, in all material respects, based on the COSO control criteria. Also, in our opinion, because of the effect of the material weaknesses described above on the achievement of the objectives of the control criteria, Transkaryotic Therapies, Inc has not maintained effective internal control over financial reporting as of December 31, 2004, based on the COSO control criteria.

/s/ Ernst & Young LLP

Boston, Massachusetts
April 29, 2005

MANAGEMENT' S REMEDIATION INITIATIVES

As a result of management' s evaluation of internal control over financial reporting, certain material weaknesses were identified as set forth in Management' s Report on Internal Control Over Financial Reporting. The Company and TKT Europe have been, and intend to continue to, plan and implement changes to TKT Europe' s infrastructure and related processes that the Company believes are reasonably likely to strengthen and materially affect TKT Europe' s internal control over financial reporting. The Company anticipates that remediation will be ongoing throughout fiscal 2005. In February 2005, the Company hired a new General Manager and a new Director of Finance at TKT Europe who are primarily responsible for the remediation efforts. The Company expects to implement the following remediation efforts at TKT Europe during 2005:

To improve the Company' s entity level procedures and controls at TKT Europe, the Company is focused on increasing the clarity and uniformity of communications by senior management of the importance of internal controls, establishing further controls over authorizations and approvals of transactions and expenditures, and addressing any remaining needs for staffing and segregation of duties in accounting, finance and information systems. As part of such improvements, the Company is continuing to revise or create, as the case may be, policies and procedures for key business processes and functions and establishing proper systems access and controls. The Company intends to implement

controls and processes to manage business risk. As part of transition planning at TKT Europe, the Company intends to revise or create key policies and procedures at TKT Europe. The Company expects to develop a communication and training plan to ensure proper implementation of all key policies.

To improve the Company' s procedures and controls over information systems at TKT Europe, the Company is implementing redundant backup procedures as well as improving firewall access, improving manual controls to mitigate the design deficiency in TKT Europe' s information access controls for its financial applications, and improve change management procedures.

To improve the Company' s procedures and controls over sales order processing and cash receipts at TKT Europe, the Company is focused on implementing control procedures, including requiring evidence of management' s review of sales order transaction processing and related invoice data entry to ensure that sales are completely and accurately recorded. The Company will also implement procedures to ensure that posting of cash receipts and reconciliations of sales and accounts receivable are appropriately reviewed by management and that there is appropriate evidence of such review. The Company is continuing to revise or create, as the case may be, policies and procedures for sales transaction processing.

To improve the Company' s procedures and controls over revenue recognition at TKT Europe, the Company currently requires that all sales orders be accompanied by customer purchase orders to evidence the arrangement between TKT Europe and its customers.

To improve the Company' s procedures and controls over purchasing and cash disbursements at TKT Europe, the Company intends to implement controls to ensure that purchases and cash disbursements are completely and accurately recorded in the proper period, and that such purchases and cash disbursements are accompanied by appropriate evidence of management' s review. In addition, the Company is in the process of establishing approval limits on purchasing and cash disbursements.

To improve the Company' s procedures and controls over financial statement preparation and review at TKT Europe, the Company is focused on improving controls around the TKT Europe consolidation, subsidiary reporting packages and local subsidiary financial reporting packages, including requiring evidence of review by senior management of such consolidations and reporting packages. In addition, the Company is also focused on improving processes related to key account reconciliations, including requiring evidence of review by senior management The Company is focused on improving review procedures on and documentation of its accounts including the preparation of memoranda to support significant judgments and estimates related primarily to reserves and accurals each quarter.

To improve the Company' s procedures and controls over the treasury function at TKT Europe, the Company is in the process of revising its authorization limits on significant bank accounts and reviewing the overall treasury strategy.

To improve the Company' s procedures and controls over segregation of duties and safeguarding of assets at TKT Europe, the Company is currently evaluating the resource requirements of TKT Europe in order to build a well-controlled and effective organization and to ensure segregation of key functions within the accounting department. In addition, the Company is evaluating its overall access controls over key accounting systems.

The Company is currently designing and implementing a new control environment intended to address the material weaknesses at TKT Europe in TKT Europe' s internal control over financial reporting, as described above, and to remedy the ineffectiveness of TKT Europe' s disclosure controls and procedures. While this design and implementation phase is underway, the Company is relying on extensive manual procedures, including regular reviews by U.S. executive management, TKT Europe management and external consultants to assist the Company implement an effective control environment. The Company expects to establish and implement a policy-based system of controls at TKT Europe. While the Company is undertaking the design and implementation of TKT Europe' s control environment, material weaknesses may continue to exist that

could result in material misstatements in the Company' s quarterly or annual financial statements not being prevented or detected by the Company' s controls in a timely manner.

(c) Changes in Internal Control Over Financial Reporting

There were not any changes in the Company' s internal control over financial reporting during the fiscal quarter ended December 31, 2004 that materially affected, or are reasonably likely to materially affect, the Company' s internal control over financial reporting. As described above, the Company has determined that identified significant deficiencies in the Company' s internal control over financial reporting constitute "material weaknesses" and, during 2005, the Company has made changes and plans to continue to make changes to its internal control over financial reporting as part of its steps to remediate such weaknesses.

PART III

Item 10. *Directors and Executive Officers of the Registrant*

Set forth below is information with respect to each of the members of the Board of Directors and each of the executive officers of the Company as of April 22, 2005. There are no family relationships between or among any of the members of the Board of Directors or executive officers of the Company.

David D. Pendergast, Ph.D., age 57, has served as a Director since April 2005. Since April 2005, Dr. Pendergast has also served as President and Chief Executive Officer of the Company. Dr. Pendergast served as Executive Vice President and Chief Operating Officer of the Company from October 2003 to April 2005. Prior to October 2003 and since joining the Company in December 2001, Dr. Pendergast served in a number of senior quality and operations roles at the Company, including Executive Vice President, Operations. Prior to joining the Company, Dr. Pendergast was employed by Biogen from April 1996 through August 2001, most recently serving as Vice President, Product Development and Quality Assurance. Dr. Pendergast received a B.S. in Chemistry from Western Michigan University and a Ph.D. in Pharmaceutics from the University of Wisconsin.

Walter Gilbert, Ph.D., age 73, has served as a Director since April 2000. Since 1987, he has been the Carl M. Loeb University Professor in the Department of Molecular and Cellular Biology at Harvard University. Dr. Gilbert is also Managing Director of BioVentures Investors, a healthcare investment firm. Dr. Gilbert won the Nobel Prize in Chemistry in 1980. Previously, he was a founder and Chief Executive Officer of Biogen, predecessor of Biogen Idec ("Biogen"). Dr. Gilbert is also Vice Chairman of the Board of Directors of Myriad Genetics, Inc., a biotechnology company, and a member of the Board of Directors of Memory Pharmaceuticals, Inc., a pharmaceutical company.

Dennis H. Langer, M.D., J.D., age 53, has served as a Director since November 2003. Since January 2004, Dr. Langer has served as President, North America, of Dr. Reddy' s Laboratories Limited, a pharmaceutical company. From September 1994 to January 2004, Dr. Langer held several high-level positions at GlaxoSmithKline plc, a pharmaceutical company, and its predecessor, SmithKline Beecham, including most recently as Senior Vice President, Project and Portfolio Management of Research and Development from December 2000 to January 2004. Dr. Langer is also a member of the Board of Directors of Myriad Genetics, Inc., a biotechnology company.

Jonathan S. Leff, age 36, has served as a Director since June 2000. Since 1996, Mr. Leff has been with Warburg Pincus LLC (formerly E.M. Warburg, Pincus & Co., LLC) ("WP LLC"), a private equity investment firm, where he currently serves as Managing Director. Prior to becoming Managing Director, Mr. Leff worked at WP LLC as a Vice President from January 1999 to December 1999 and as an Associate from July 1996 to December 1998. Mr. Leff is a Director of Intermune, Inc., Neurogen Corporation, ZymoGenetics, Inc., and Allos Therapeutics, all of which are biotechnology companies.

Rodman W. Moorhead, III, age 61, has served as a Director since May 1992. Mr. Moorhead served as Chairman of the Board of Directors from May 1992 until April 2004. Since 1973, he has been with WP LLC, a private equity investment firm, where he currently serves as a Managing Director and Senior Advisor. He is also a Director of Coventry Health Care, Inc., a health maintenance organization, and a Director of Scientific Learning Corporation, a company specializing in computerized special education training.

Lydia Villa-Komaroff, Ph.D., age 57, has served as a Director since November 2003 and as the Chairwoman of the Board of Directors since January 2005. Since January 2003 Dr. Villa-Komaroff has served as Vice President for Research and Chief Operating Officer at Whitehead Institute for Biomedical Research. Prior to joining Whitehead Institute in 2003, she was Vice President for Research at Northwestern University from January 1998 to December 2002. Dr. Villa-Komaroff has also served as an Associate Professor of Neurology at Harvard Medical School and Children' s Hospital, and Associate Director of the Division of Neuroscience at Children' s Hospital in Boston.

Wayne P. Yetter, age 59, has served as a Director since November 1999. Mr. Yetter served as Chairman of the Board of Directors from April 2004 until January 2005. Since November 2004, Mr. Yetter has served as President and Chief Executive Officer of Odyssey Pharmaceuticals, Inc., a pharmaceutical company. Prior to joining Odyssey Pharmaceuticals, in August 2003, Mr. Yetter founded BioPharm Advisory, LLC, a pharmaceutical and biotechnology consulting company, which Mr. Yetter manages. Prior to that, Mr. Yetter served as Chairman of the Board of Directors and Chief Executive Officer of Synavant Inc., formerly a subsidiary of IMS Health, Inc., a pharmaceutical relationship management solutions company from September 2000 through June 2003. From 1999 to 2000, Mr. Yetter served as Chief Operating Officer at IMS Health, Inc., which provides information services for the healthcare industry. From 1997 to 1999, he served as President and Chief Executive Officer of Novartis Pharmaceutical Corporation, a pharmaceutical company. From 1991 to 1997, Mr. Yetter served as President and Chief Executive Officer of Astra Merck, Inc., a pharmaceutical company. Mr. Yetter also serves as a director of Maxim Pharmaceuticals, Inc., Matria Healthcare and Noven Pharmaceuticals, Inc.

Renato Fuchs, Ph.D., age 62, joined the Company as Senior Vice President, Manufacturing and Operations, in March 2002. Prior to joining TKT, Dr. Fuchs was employed by Chiron Corporation, a pharmaceutical company, from 1993 through February 2002, most recently serving as Senior Vice President, BioPharmaceuticals. Dr. Fuchs received a B.S. in Chemical Engineering from University of Valle and a Ph.D. in Biochemical Engineering from the Massachusetts Institute of Technology.

Neil Kirby, Ph.D., age 44, has served as Senior Vice President, Strategic Product Development since November 2004. From January 2002, when he joined the Company, to November 2004, Dr. Kirby served as Vice President, Regulatory Affairs. Prior to joining TKT, Dr. Kirby served as Program Executive for Vertex Pharmaceuticals' commercial and clinical HIV products from November 1999 to December 2001. Prior to joining Vertex, Dr. Kirby served as Project Director, Hemophilia Products at Genetics Institute, a biotechnology company. Dr. Kirby also has held a variety of regulatory appointments at Biogen. Dr. Kirby received a B.Pharm and a Ph.D. from the University of London.

Gregory D. Perry, age 44, has served as Senior Vice President and Chief Financial Officer since November 2004. From May 2003, when he joined the Company, to November 2004, Mr. Perry served as Vice President, Finance, and Chief Financial Officer. From September 1998 to November 2002, Mr. Perry was employed by PerkinElmer, Inc. where he most recently served as Senior Vice President, Finance and Business Development, Life Sciences. Prior to joining PerkinElmer, Mr. Perry was Chief Financial Officer of the Automotive Aftermarket Products Group at Honeywell International Incorporated from March 1997 to September 1998. Mr. Perry also held numerous positions of increasing responsibility in finance and business development at General Electric Company, including Chief Financial Officer of GE Medical Systems, Europe, headquartered in Paris, France. Mr. Perry received a B.A. from Amherst College.

Audit Committee

The members of the Audit Committee are currently Mr. Yetter, who serves as Chairman, and Drs. Langer and Villa-Komaroff, each of whom are non-employee directors. The Board of Directors has

determined that none of the members of the Audit Committee is an "audit committee financial expert" as defined in Item 401(h) of Regulation S-K. However, the Board also concluded that the ability of the Audit Committee to perform its duties would not be impaired by the absence of an "audit committee financial expert" in light of the backgrounds and areas of expertise of the members of the Audit Committee. In particular, Mr. Yetter' s past experience and background as Chairman and Chief Executive Officer of Synavant Inc. and President and Chief Executive Officer of Astra Merck, Inc. and his current role as President and Chief Executive Officer of Odyssey Pharmaceuticals, Inc. provide him with the level of financial sophistication required by the rules and regulations promulgated by the NASDAQ National Market. The Board of Directors' search for an additional member who would qualify as an "audit committee financial expert" has been suspended pending the consummation of the Company' s merger transaction with Shire Pharmaceuticals Group plc ("Shire"). More information on this transaction is set forth in Item 13 hereof.

Section 16(a) Beneficial Ownership Reporting Compliance

Based solely on its review of copies of reports filed by individuals required to make filings ("Reporting Persons") pursuant to Section 16(a) of the Exchange Act or written representations from certain Reporting Persons that no Form 5 filing was required for such persons, the Company believes that during 2004 all filings required to be made by its Reporting Persons were timely made in accordance with the requirements of the Exchange Act.

Code of Business Conduct and Ethics

TKT has adopted a Code of Business Conduct and Ethics that applies to all directors, officers and employees of TKT, including its principal executive officer, principal financial officer and principal accounting officer or controller. The Code of Business Conduct and Ethics and information regarding any amendments to, or waivers from, the Code of Business Ethics, are posted on the Investor Relations − Governance section of the Company' s website, www.tktx.com.

Item 11. *Executive Compensation*

Summary Compensation Table

The table below sets forth certain compensation information for the former chief executive officer of the Company and the four other most highly compensated executive officers of the Company who were serving at the end of the year ended December 31, 2004 (collectively referred to herein as the "Named Executive Officers").

Summary Compensation Table

		Annual Compensation			Long-Term Compensation Awards	
Name and Principal Position	Year	Salary ($)	Bonus ($)(1)	Other Annual Compensation ($)(2)	Securities Underlying Options (#)	All Other Compensation ($)(3)
David D. Pendergast, Ph.D.(4)	2004	372,917	150,000	−	135,000	12,098
President and Chief	2003	329,583	−	−	58,000	8,322
Executive Officer	2002	278,333	−	−	−	6,742
Michael J. Astrue(5)	2004	422,917	275,000	−	225,000	27,942
Former President and Chief	2003	295,047	−	−	350,000	9,798
Executive Officer	2002	308,000	−	−	−	6,310
Renato Fuchs, Ph.D.	2004	328,333	132,000	−	50,000	34,999
Senior Vice President,	2003	301,250	−	−	35,000	26,276
Manufacturing	2002	220,769	−	155,462	100,000	15,821
Gregory D. Perry(6)	2004	299,167	75,000	−	56,459	17,852
Senior Vice President and Chief Financial Officer	2003	173,628	−	−	90,000	4,755
Neil Kirby, Ph.D.	2004	247,823	62,500	−	70,000	18,598
Senior Vice President, Strategic Product	2003	221,884	−	−	22,500	16,019
Development	2002	199,359	−	−	60,000	14,170

(1) Bonuses indicated as earned in any year were generally paid in the first quarter of the following year. Bonuses for 2004 were paid in the second quarter of 2005.

(2) In accordance with the rules promulgated by the SEC, Other Annual Compensation in the form of perquisites and other personal benefits has been omitted in those instances where the aggregate amount of such perquisites and other personal benefits constituted less than the lesser of $50,000 or 10% of the total amount of annual salary and bonus for the executive officer for the year indicated.

(3) All Other Compensation in 2004, 2003 and 2002 includes some or all of the following: (a) the Company' s contributions under the Transkaryotic Therapies, Inc. Deferred Compensation Plan, adopted October 1, 2000 or the Company' s Executive Nonqualified Excess Plan, adopted February 1, 2004 (collectively referred to below as the "Deferred Compensation Plans"); (b) the Company' s contributions under the Company' s 401(k) Plan; and (c) the taxable portion of group term life insurance premiums paid by the Company.

The following table presents contributions made by the Company to the Named Executive Officers under each of these plans and programs:

	Deferred Compensation Plans ($)			401(k) Plan ($)			Taxable Portion of Group Term Life Insurance Premiums ($)		
	2004	2003	2002	2004	2003	2002	2004	2003	2002
David D. Pendergast, Ph.D.	–	–	–	6,500	6,000	5,500	5,598	2,322	1,243
Michael J. Astrue	20,000	3,208	–	6,500	6,000	5,500	1,442	589	810
Renato Fuchs, Ph.D.	20,000	20,000	13,000	6,500	2,713	–	8,499	3,564	2,821
Gregory D. Perry	10,000	–	–	6,500	3,625	–	1,352	324	–
Neil Kirby, Ph.D.	10,000	10,000	10,000	6,196	5,547	3,750	2,402	472	420

(4) Dr. Pendergast commenced employment with the Company in December 2001. Dr. Pendergast served as Executive Vice President and Chief Operating Officer of the Company from October 2003 to April 2005. Prior to October 2003 and after joining the Company in December 2001, Dr. Pendergast served in a number of senior quality and operations roles at the Company, including Executive Vice President, Operations. Dr. Pendergast has served as President and Chief Executive Officer of the Company since April 2005.

(5) Mr. Astrue commenced employment with the Company in May 2000. In January 2003, Mr. Astrue resigned as the Company' s Senior Vice President, Administration and General Counsel. In February 2003, Mr. Astrue rejoined the Company as President and Chief Executive Officer. Mr. Astrue served as President and Chief Executive Officer from February 2003 until April 2005, when he resigned.

(6) Mr. Perry commenced employment with the Company in May 2003.

Option Grant Table

The following table sets forth certain information regarding options granted during the fiscal year ended December 31, 2004 by the Company to the Named Executive Officers:

Option Grants in Last Fiscal Year

			Individual Grants		Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term(3)	
Name	Number of Securities Underlying Options Granted (#)(1)	Percent of Total Options Granted to Employees in Fiscal Year(2)	Exercise Price ($/Share)	Expiration Date	5% ($)	10% ($)
David D. Pendergast, Ph.D.	45,000	3 %	11.97	2/25/14	338,754	858,469
	40,000	2 %	10.62	3/24/14	267,154	677,022
Michael J. Astrue	100,000	6 %	10.62	3/24/14	667,886	1,692,554
Renato Fuchs, Ph.D.	25,000	2 %	10.62	3/24/14	166,972	423,139
Gregory D. Perry	8,959	1 %	10.62	3/24/14	59,836	151,636
	32,500	2 %	21.74	11/11/14	444,345	1,126,059
Neil Kirby, Ph.D.	15,000	1 %	10.62	3/24/14	100,183	253,883
	40,000	2 %	21.74	11/11/14	546,887	1,385,918

(1) The option granted to Dr. Pendergast for 45,000 shares becomes exercisable in four equal annual installments beginning on the first anniversary of the grant date. The option granted to Dr. Pendergast for 40,000 shares becomes exercisable in three equal annual installments beginning on the first anniversary of the grant date. Options granted to Mr. Astrue are currently exercisable for all of the shares covered by such options. Options granted to Drs. Fuchs and Kirby and Mr. Perry become exercisable in three equal annual installments beginning on the first anniversary of the grant date.

(2) Calculated based on options to purchase an aggregate of 1,609,617 shares of common stock granted to employees during the fiscal year ended December 31, 2004 under the Company' s stock option plans.

(3) Potential realizable value is based on an assumption that the market price of the stock will appreciate at the stated rate, compounded annually, from the date of grant until the end of the 10-year term of the option. These values are calculated based on rules promulgated by the SEC and do not reflect the Company' s estimate or projection of future stock prices. Actual gains, if any, on stock option exercises will be dependent upon the future performance of the price of the Company' s common stock, which will benefit all stockholders proportionately.

Option Exercises and Year-End Values

The following table sets forth certain information regarding the aggregate shares of Common Stock acquired upon stock option exercises by the Named Executive Officers and the value realized upon such exercises during the year ended December 31, 2004, as well as certain information regarding the value of exercisable and unexercisable stock options held by the Named Executive Officers as of December 31, 2004.

AGGREGATED OPTION EXERCISES IN LAST FISCAL YEAR AND FISCAL YEAR-END OPTION VALUES

Name	Shares Acquired on Exercise (#)	Value Realized ($)(1)	Number of Securities Underlying Unexercised Options at Fiscal Year-End (#)		Value of Unexercised In-the-Money Options at Fiscal Year-End ($)(2)	
			Exercisable	Unexercisable	Exercisable	Unexercisable
David D. Pendergast, Ph.D.	–	–	97,666	145,334	753,405	1,445,835
Michael J. Astrue	–	–	87,500	362,500	1,889,125	7,144,375
Renato Fuchs, Ph.D.	–	–	66,250	93,750	469,088	525,613
Gregory D. Perry	–	–	32,400	99,059	594,216	1,307,333
Neil Kirby, Ph.D.	–	–	36,875	100,625	316,676	473,109

(1) Value realized is calculated based on the difference between the option exercise price and the closing market price of the Company' s Common Stock on the Nasdaq National Market on the date of exercise, multiplied by the number of shares exercised.

(2) Value of Unexercised In-the-Money Options at Fiscal Year-End is calculated based on the difference between $25.39, the last reported sales price of the Company' s Common Stock on the Nasdaq National Market on December 31, 2004, and the exercise price of the option, multiplied by the number of shares underlying the option.

Employment Agreements

On April 21, 2005, in connection with the resignation by Mr. Astrue as President and Chief Executive Officer and as a member of the Board of Directors of the Company, Mr. Astrue and the Company executed a letter agreement (the "Letter Agreement") under which the Company agreed to provide to Mr. Astrue all of the benefits to which he would have been entitled under his employment agreement with the Company dated April 30, 2003 if he had terminated his employment for good reason in accordance with the terms of his employment agreement. As a result, Mr. Astrue is entitled to severance pay for a period of 18 months from his resignation at a rate based on his annual base salary of $500,000. In addition, under the Letter Agreement, the Company agreed that the vesting of all options to purchase shares of the Company' s common stock held by Mr. Astrue would be accelerated in full as of April 21, 2005 so that such options would become immediately exercisable for all of the shares covered by such options.

The Company is a party to an employment agreement with Dr. Pendergast dated December 13, 2001. Under the terms of his employment agreement, prior to April 21, 2005, the Company was paying Dr. Pendergast an annual base salary of $410,000. In addition, under his employment agreement, Dr. Pendergast is eligible to receive an annual bonus based upon the achievement of individual and company goals. The employment agreement may be terminated with or without cause by Dr. Pendergast or by the Company. If the Company terminates Dr. Pendergast' s employment without cause (as defined therein), or if Dr. Pendergast terminates his employment for good reason (as defined therein), the Company is required to pay to Dr. Pendergast severance payments at his base salary rate for 12 months. These severance payments will be reduced by an amount equal to the amount of any other compensation earned by Dr. Pendergast during such 12-month period. The employment agreement also provides for payments to be made to Dr. Pendergast in the event Dr. Pendergast ceases to be an employee as a result of a disability. Under the employment agreement, Dr. Pendergast is bound by certain non-compete obligations for two years after termination of employment or one year after termination if the Company terminates his employment other than for cause. In connection with the appointment of Dr. Pendergast as President and Chief Executive Officer, the Board of Directors of the Company agreed to increase the annual base salary for Dr. Pendergast to $500,000 effective as of April 21, 2005, granted him a bonus of $250,000 effective upon the closing of the merger transaction with Shire and agreed to extend the Company' s severance obligations under his employment agreement from 12 months to 18 months.

The Company also is a party to employment agreements with Mr. Perry, and Drs. Fuchs and Kirby. Each employment agreement contains provisions for establishing the annual base salary and bonus for each such executive officer. Pursuant to the terms of their respective employment agreements, the 2005 annual base salary for each of Mr. Perry, and Drs. Fuchs and Kirby has been established at $320,167, $343,750, and $268,333, respectively. In addition, under their respective employment agreements, each of Mr. Perry and Drs. Fuchs and Kirby is eligible to receive an annual bonus based upon the achievement of individual and Company goals. The employment agreements may be terminated with or without cause by the executive or by the Company.

Under the terms of each of Mr. Perry' s and Dr. Fuchs' employment agreements, if the Company terminates the executive' s employment without cause (as defined therein), or, in some cases, if the executive terminates his employment for certain reasons, the Company is required to pay to such executive severance payments at the executive' s base salary rate for 12 months. These severance payments will be reduced by an amount equal to the amount of any other compensation earned by such individual during such 12-month period. Under the terms of Dr. Fuchs' employment agreement, in the event of a change of control of the Company, if the Company terminates Dr. Fuchs' employment, Dr. Fuchs is eligible for severance payments at his base salary rate for up to 12 months. Each of Mr. Perry' s and Dr. Fuchs' employment agreements also provides for payments to be made to the executive in the event the executive ceases to be an employee as a result of a disability. Under each of the foregoing employment agreements, the executives are bound by certain non-compete obligations for two years after termination of employment or one year after termination if the Company terminates such executive' s employment other than for cause.

Under the terms of Dr. Kirby' s employment agreement, if the Company terminates his employment without cause after the completion of one year of service, the Company is required to pay Dr. Kirby severance payments at his base salary rate for 12 months. These severance payments will be reduced by an amount equal to the amount of any other compensation earned by such individual during such 12-month period. Under this employment agreements, Dr. Kirby is bound by certain non-compete obligations for two years after termination of employment.

Directors' Compensation

The Company compensates directors who are not employees of the Company for service as directors, other than Messrs. Leff and Moorhead who are employees of WP LLC. The Company pays these directors $12,000 annually. In addition, the Company pays each director $2,000 for each meeting of the Board they attend in person and $1,000 for each meeting of the Board such director attends telephonically. The Company

pays each non-employee director $1,000 for each meeting of committees of the Board they attend in person and $500 for each meeting of committees of the Board such director attends telephonically.

The 2002 Stock Incentive Plan does not provide for automatic grants to directors. However, the Board of Directors has provided, through resolution, for an annual stock option grant to non-employee directors, other than Messrs. Leff and Moorhead, of options to purchase 10,000 shares of Common Stock of the Company under the 2002 Stock Incentive Plan. Such stock options generally vest over a period of three years and have an exercise price equal to the closing price of the Company' s Common Stock on the Nasdaq National Market on the date of grant. Currently, Drs. Gilbert, Langer and Villa-Komaroff, and Mr. Yetter, are eligible to receive option grants under the 2002 Stock Incentive Plan.

The following table sets forth the compensation paid to the Company' s non-employee directors in 2004.

Name	Cash Compensation	Shares Underlying Stock Options(1)
Walter Gilbert, Ph.D.	$ 25,000	10,000
Dennis H. Langer, M.D., J.D.	$ 28,500	10,000
Lydia Villa-Komaroff, Ph.D.	$ 28,000	10,000
Wayne P. Yetter	$ 29,500	10,000

(1) The exercise price of $14.61 per share was equal to the closing price of the Company' s Common Stock on the Nasdaq National Market on the date of grant.

Compensation Committee Interlocks And Insider Participation

During 2004, the Compensation Committee was comprised of Mr. Moorhead and Drs. Gilbert, Langer and Villa-Komaroff, each of whom is a non-employee director. No member of the Compensation Committee has a relationship that would constitute an interlocking relationship with executive officers or directors of another entity.

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth information, as of April 22, 2005 (except as otherwise stated in the footnotes to this table), regarding the ownership of the Company' s Common Stock by (i) each person known by the Company to own more than 5% of the outstanding shares of Common Stock, (ii) each of the directors of the Company, (iii) each of the Named Executive Officers and (iv) all current directors and executive officers of the Company as a group.

Name and Address of Beneficial Owner	Shares of Common Stock Beneficially Owned(1)	Percentage of Common Stock Outstanding(2)
Five Percent Holders		
Warburg, Pincus Equity Partners, L.P. 466 Lexington Avenue, 10th Floor New York, NY 10017-3147	5,038,396(3)	14.4%
A. Alex Porter c/o Porter Fellman Inc. 100 Park Avenue Suite 2120 New York, NY 10017	3,205,869(4)	9.2 %
Deutsche Bank AG Taunusanlage 12, D-60325 Frankfurt am Main Federal Republic of Germany	2,486,382(5)	7.1 %

Name and Address of Beneficial Owner	Shares of Common Stock Beneficially Owned(1)	Percentage of Common Stock Outstanding(2)
Ziff Asset Management, L.P. 153 East 53rd Street, 43rd Floor New York, NY 10022	2,305,000(6)	6.6 %
FMR Corp. 82 Devonshire Street Boston, MA 02109	2,262,228(7)	6.5 %
Citigroup Inc. 399 Park Avenue New York, NY 10043	2,245,681(8)	6.4 %
Aventis Holdings Inc. 3711 Kennett Pike, Suite 200 Greenville, DE 19801	2,187,408(9)	6.3 %
OrbiMed Advisors LLC 767 3rd Avenue, 30th Floor New York, NY 10017	2,126,100(10)	6.1 %
Barclays Global Investors, NA 45 Fremont Street, 17th Floor San Francisco, CA 94105	2,037,176(11)	5.8 %
T. Rowe Price Associates, Inc. 100 E. Pratt Street Baltimore, MD 21202	2,038,770(12)	5.8 %
Citigroup Global Markets Holdings Inc. 388 Greenwich Street New York, NY 10013	2,029,991(8)	5.8 %
Directors and Named Executive Officers		
Michael J. Astrue	575,000 (13)	1.6 %
Walter Gilbert, Ph.D.	40,834 (14)	*
Dennis H. Langer, M.D., J.D.	3,334 (15)	*
Jonathan S. Leff c/o Warburg Pincus LLC 466 Lexington Avenue, 10th Floor New York, NY 10017-3147	5,038,944(16)	14.4%
Rodman W. Moorhead, III c/o Warburg Pincus LLC 466 Lexington Avenue, 10th Floor New York, NY 10017-3147	5,092,862(17)	14.6%
Lydia Villa-Komaroff, Ph.D.	3,334 (18)	*
Wayne P. Yetter	26,917 (19)	*
Renato Fuchs, Ph.D.	98,334 (20)	*
Neil Kirby, Ph.D.	57,500 (21)	*
David D. Pendergast, Ph.D.	136,750 (22)	*
Gregory D. Perry	49,787 (23)	*
All directors and current executive officers as a group (10 individuals)	6,085,200(24)	17.4%

* Percentage is less than 1% of the total number of outstanding shares of Common Stock of the Company.

(1) The number of shares beneficially owned by each person is determined under rules promulgated by the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares as to which the person has the sole or shared voting power or

investment power and also any shares which the person has the right to acquire within 60 days of April 22, 2005 through the exercise of any stock option or other right. Except as indicated in the footnotes to this table, each person or entity listed has sole investment and voting power (or shares such power with his spouse) with respect to the shares set forth in the table. The inclusion herein of any shares deemed beneficially owned does not constitute an admission of beneficial ownership of such shares.

(2) The number of shares of Common Stock deemed outstanding for purposes of determining the percentage of Common Stock held by a person or entity includes 34,956,679 shares outstanding as of April 22, 2005, and any shares subject to issuance upon exercise of options or other rights held by such person or entity that were exercisable on or exercisable within 60 days after April 22, 2005.

(3) The stockholders are Warburg Pincus Equity Partners, L.P., including three affiliated partnerships ("WPEP"). Warburg Pincus & Co. ("WP") is the sole general partner of WPEP. WPEP is managed by Warburg Pincus LLC ("WP LLC").

(4) The information presented herein is as reported in, and based solely upon, a Schedule 13G/ A filed with the SEC on February 14, 2005 by A. Alex Porter, Paul Orlin, Geoffrey Hulme, Jonathan W. Friedland, and CF Advisors, LLC. These reporting persons have shared voting power and sole dispositive power as to the following number of shares: A. Alex Porter: 3,205,869; Paul Orlin: 3,205,869; Geoffrey Hulme: 3,127,759; Jonathan W. Friedland: 3,127,759; and CF Advisors, LLC: 1,813,159. These reporting persons have disclaimed beneficial ownership over these shares except to the extent of their pecuniary interest therein.

(5) The information presented herein is as reported in, and based solely upon, a Schedule 13G/ A filed with the SEC on February 27, 2004 by Deutsche Bank AG ("DBAG"). Shares deemed beneficially owned by DBAG include shares owned by various entities affiliated with DBAG, including Deutsche Bank Trust Company Americas and DWS Holding & Service GmbH. DBAG has sole voting and dispositive power as to all of these shares.

(6) The information presented herein is as reported in, and based solely upon, a Schedule 13G filed with the SEC on April 5, 2004 by Ziff Asset Management, L.P. ("Ziff"). Shares deemed beneficially owned by Ziff include shares owned by Philip Korsant and PBK Holdings, Inc. Each beneficial owner has shared voting and dispositive power as to all of these shares.

(7) The information presented herein is as reported in, and based solely upon, a Schedule 13G/ A filed with the SEC on February 14, 2005 by FMR Corp. ("FMR"). Fidelity Management & Research Company, a wholly-owned subsidiary of FMR, is deemed a beneficial owner as a result of its role as investment advisor to various entities affiliated with FMR, including Fidelity Growth Company Fund, which directly owns approximately 1,869,188 of the shares reported as held by FMR Corp. Edward C. Johnson 3d, Chairman of FMR, and Abigail Johnson, a Director of FMR, own 12% and 24.5% of the aggregate outstanding voting stock of FMR, respectively. Edward C. Johnson 3d and FMR, through their control of Fidelity Management & Research Company, each have the sole power to dispose of all of these shares. Neither FMR nor Edward C. Johnson 3d has the sole power to vote or direct the voting of the shares owned directly by the funds, which power resides with the funds' Boards of Trustees.

(8) The information presented herein is as reported in, and based solely upon, a Schedule 13G filed jointly with the SEC on February 11, 2005 by Citigroup Inc., a Delaware corporation ("Citigroup"), and Citigroup Global Markets Holdings Inc., a New York corporation ("CGM Holdings"). Citigroup has shared voting and dispositive power as to 2,029,991 shares, and CMG Holdings has shared voting and dispositive power as to 2,245,681 shares.

(9) The information presented herein is as reported in, and based solely upon, a Schedule 13G filed jointly with the SEC on February 9, 2005 by Sanofi-Aventis, a French corporation headquartered in Paris, France ("Sanofi-Aventis"); Aventis Pharmaceuticals Inc., a Delaware corporation headquartered in Bridgewater, New Jersey USA ("API"); Aventis Holdings Inc., a Delaware corporation headquartered in Greenville, Delaware, USA ("AHI"); and Aventis Inc., a Pennsylvania corporation headquartered in Bridgewater, New Jersey USA ("Aventis"). Each beneficial owner has shared voting and dispositive power as to all of these shares.

(10) The information presented herein is as reported in, and based solely upon, a Schedule 13G/ A filed with the SEC on February 14, 2005 by OrbiMed Advisors LLC, a Delaware limited liability company.

(11) The information presented herein is as reported in, and based solely upon, a Schedule 13G filed with the SEC on February 14, 2005 by Barclays Global Investors, NA.

(12) The information presented herein is as reported in, and based solely upon, a Schedule 13G filed with the SEC on February 10, 2004 by T. Rowe Price Associates, Inc. ("T. Rowe Price"). Shares deemed beneficially owned by T. Rowe Price include shares owned by individual and institutional investors for which T. Rowe Price serves as an investment advisor. T. Rowe Price disclaims beneficial ownership of these shares. T. Rowe Price filed a Schedule 13G/ A with the SEC on February 14, 2005 to report that, as of February 14, 2005, T. Rowe Price had ceased to be the beneficial owner of more than 5% of the outstanding shares of Common Stock of the Company.

(13) Shares deemed to be beneficially owned by Mr. Astrue consist of 575,000 shares of Common Stock issuable within 60 days of April 22, 2005 upon exercise of outstanding stock options granted under the Company' s stock option plans.

(14) Shares deemed to be beneficially owned by Dr. Gilbert include 40,834 shares of Common Stock issuable within 60 days of April 22, 2005 upon exercise of outstanding stock options granted under the Company' s stock option plans.

(15) Shares deemed to be beneficially owned by Dr. Langer include 3,334 shares of Common Stock issuable within 60 days of April 22, 2005 upon exercise of outstanding stock options granted under the Company' s stock option plans.

(16) Shares deemed to be beneficially owned by Mr. Leff include 5,038,396 shares of Common Stock held by WPEP, WP and their affiliates, and 548 shares of Common Stock held by Mr. Leff. Mr. Leff is a general partner of WP and a managing director and member of WP LLC. Shares held by WPEP, WP and their affiliates are included because of Mr. Leff' s affiliation with the Warburg Pincus entities. Mr. Leff disclaims beneficial ownership of all shares held by WPEP, WP and their affiliates.

(17) Shares deemed to be beneficially owned by Mr. Moorhead include 5,038,396 shares of Common Stock held by WPEP, WP and their affiliates, and 54,466 shares of Common Stock held by Mr. Moorhead. Mr. Moorhead is a general partner of WP and a managing director and member of WP LLC. Shares held by WPEP, WP and their affiliates are included because of Mr. Moorhead' s affiliation with the Warburg Pincus entities. Mr. Moorhead disclaims beneficial ownership of all shares held by WPEP, WP and their affiliates.

(18) Shares deemed to be beneficially owned by Dr. Lydia Villa-Komaroff include 3,334 shares of Common Stock issuable within 60 days of April 22, 2005 upon exercise of outstanding stock options granted under the Company' s stock option plans.

(19) Shares deemed to be beneficially owned by Mr. Yetter consist of 26,917 shares of Common Stock issuable within 60 days of April 22, 2005 upon exercise of outstanding stock options granted under the Company' s stock option plans.

(20) Shares deemed to be beneficially owned by Dr. Fuchs consist of 98,334 shares of Common Stock issuable within 60 days of April 22, 2005 upon exercise of outstanding stock options granted under the Company' s stock option plans.

(21) Shares deemed to be beneficially owned by Dr. Kirby consist of 57,500 shares of Common Stock issuable within 60 days of April 22, 2005 upon exercise of outstanding stock options granted under the Company' s stock option plans.

(22) Shares deemed to be beneficially owned by Dr. Pendergast consist of 136,750 shares of Common Stock issuable within 60 days of April 22, 2005 upon exercise of outstanding stock options granted under the Company' s stock option plans.

(23) Shares deemed to be beneficially owned by Mr. Perry consist of 49,787 shares of Common Stock issuable within 60 days of April 22, 2005 upon exercise of outstanding stock options granted under the Company' s stock option plans.

(24) Includes 991,790 shares of Common Stock issuable within 60 days of April 22, 2005 upon exercise of outstanding stock options granted under the Company's stock option plans to current directors and executive officers as a group. Shares owned by WPEP, WP and their affiliates attributable to both Mr. Leff and Mr. Moorhead are counted only once.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information as of December 31, 2004 about the Company's Common Stock that may be issued upon exercise of options, warrants and rights under all of the Company's equity compensation plans as of December 31, 2004, including the 1993 Non-Employees Director's Stock Option Plan, 1993 Long-term Incentive Plan, 2001 Non-Officer, Non-Director Employee Stock Incentive Plan and 2002 Stock Incentive Plan, as amended. The Company's stockholders have approved all of these plans other than the 2001 Non-Officer, Non-Director Employee Stock Incentive Plan.

EQUITY COMPENSATION PLAN INFORMATION

Plan Category	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights(1)	(b) Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	(c) Number of Securities Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
Equity Compensation Plans Approved by Security Holders	3,722,629	$ 19.90	1,506,741
Equity Compensation Plans Not Approved by Security Holders	1,890,376	$ 23.10	7,200
Total	5,613,005	$ 20.98	1,513,941

(1) The number of shares is subject to adjustment in the event of a stock split or similar events.

Material Terms of Plans Not Approved by the Company's Stockholders

2001 Non-Officer, Non-Director Employee Stock Incentive Plan

The 2001 Non-Officer, Non-Director Employee Stock Incentive Plan (the "2001 Plan") provides for the grant of non-statutory stock options and restricted stock awards (collectively, "Awards"). All of the Company's employees (and any individuals who have accepted an offer for employment), other than those employees who are also officers or directors of the Company, and all of the Company's consultants and advisors are eligible to receive Awards under the 2001 Plan. Subject to adjustments as described in the 2001 Plan, Awards may be made under the 2001 Plan for up to 2,000,000 shares of the Company's Common Stock. As of April 22, 2005, 63,514 shares remained available for issuance under the 2001 Plan.

The 2001 Plan is administered by the Board of Directors. The Board of Directors has the authority to adopt, amend and repeal the administrative rules, guidelines and practices relating to the 2001 Plan and to interpret the provisions of the 2001 Plan. Pursuant to the terms of the 2001 Plan, the Board of Directors may delegate authority under the 2001 Plan to one or more committees or subcommittees of the Board of Directors. The Board of Directors has authorized the Compensation Committee to administer certain aspects of the 2001 Plan, including the granting of options to employees. The Board may amend, suspend or terminate the 2001 Plan or any portion thereof at any time.

The Company's Board of Directors has the authority to grant non-statutory stock options under the 2001 Plan and to determine the number of shares of Common Stock to be covered by each option, the exercise price of each option and the conditions and limitations applicable to the exercise of each option. The Board shall establish the exercise price at the time each option is granted and specify it in the applicable instrument evidencing the grant of the option. Each option shall be exercisable at such times and subject to such terms

and conditions as the Board may specify in the applicable instrument evidencing the grant of the option. No option granted under the Plan shall be intended to be an "incentive stock option" as defined in Section 422 of the Internal Revenue Code, as amended in 1986.

The Board may grant restricted stock awards entitling participants to acquire shares of Common Stock under the 2001 Plan, subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price (or to require forfeiture of such shares if issued at no cost) from the participant in the event that conditions specified by the Board in the instrument evidencing the restricted stock award are not satisfied prior to the end of the applicable restriction period or periods established by the Board for such award. The Board shall determine the terms and conditions of any such restricted stock award, including the conditions for repurchase (or forfeiture) and the issue price, if any.

Item 13. ***Certain Relationships and Related Transactions***

TKT is a party to certain arrangements with Aventis Pharmaceuticals, Inc. ("Aventis"), which is one of the Company' s five percent stockholders. TKT entered into an agreement with Aventis in May 1994, and amended the agreement in March 2004. Under the amended agreement, TKT regained exclusive rights to make, use and sell Dynepotm (epoeitin delta) ("Dynepo") outside of the United States. Dynepo is TKT' s Gene-Activated erythropoietin product for anemia related to kidney disease that TKT developed with Aventis. TKT licensed the Dynepo trademark from Aventis. Under the amended agreement, TKT agreed to pay Aventis a single-digit percentage royalty on TKT' s net sales of Dynepo outside of the United States. TKT' s royalty obligation expires, on a country-by-country basis, on the later of the date 10 years after the first commercial sale of Dynepo in such country and the date of expiration of the last to expire of the patents covering Dynepo in such country. Under the amended agreement, Aventis retained its exclusive right to make, use and sell Dynepo in the United States and is obligated to pay the Company a low double-digit percentage royalty on Aventis' net sales of Dynepo in the United States. TKT has the potential to receive an additional $8.0 million pursuant to a payment contingent upon the achievement of a commercial milestone. TKT also granted Aventis a one-year right of first refusal to purchase or license any of TKT' s gene therapy programs that TKT determines to sell or license. This right of first refusal expired on March 26, 2005.

In April 2005, the Company entered into a merger agreement with Shire and a wholly-owned subsidiary of Shire for the acquisition of TKT. In connection with entering into the merger agreement, the Company and Shire also entered into a license agreement under which the Company granted to Shire the right to develop and manufacture Dynepo and distribute and sell Dynepo outside of North America. However, the license agreement will only take effect if the merger agreement is terminated in certain circumstances. Upon the effectiveness of the license agreement, Shire has agreed to pay the Company an upfront license fee of $450 million of which $86 million will be paid directly to Aventis pursuant to the terms of the Company' s agreement with Aventis. If the license agreement with Shire becomes effective, Shire has also agreed to pay on behalf of the Company applicable third party royalties on an ongoing basis, including any royalties due to Aventis.

The Company and Aventis have been involved in patent infringement actions with Amgen Inc. ("Amgen") in the United States and Kirin-Amgen, Inc. ("Kirin-Amgen") in the United Kingdom with respect to Dynepo. Under the amended license agreement, Aventis retained the right to control the litigation in the United States and agreed to assume responsibility for 100% of the litigation costs incurred with respect to both the United States litigation and the litigation in the United Kingdom prior to March 26, 2004. Aventis will pay all U.S. litigation expenses incurred from and after March 26, 2004, but TKT is required to reimburse Aventis for 50% of these litigation costs. Aventis is entitled to deduct up to 50% of any royalties that Aventis may otherwise owe TKT with respect to the sale of Dynepo until Aventis has recouped the full amount of TKT' s share of the U.S. litigation costs. TKT has the right to control the U.K. litigation and any other litigation that may arise outside of the United States, and is responsible for all litigation costs incurred with respect to such litigation from and after March 26, 2004.

In October 2004, with respect to the U.K. Litigation, the House of Lords upheld a decision by the Court of Appeals that Dynepo did not infringe Kirin-Amgen' s patent and also held that Kirin-Amgen' s patent is

invalid. The Company does not expect to incur further significant costs related to the U.K. Litigation, and expects that, pursuant to U.K. fee-shifting rules, Kirin-Amgen will have to pay the Company a substantial percentage of the legal fees that the Company has incurred since March 26, 2004. The U.S. Litigation is still pending, and the Company expects that there will be continuing, ongoing costs related to the U.S. Litigation.

Item 14. *Principal Accountant Fees and Services*

Independent Auditors Fees

The following table presents fees for professional services rendered by Ernst & Young LLP for audit, audit-related, tax and other services for the Company' s fiscal years ended December 31, 2004 and 2003. The Audit Committee of the Company' s Board of Directors believes that the non-audit services described below did not compromise Ernst & Young' s independence.

Fee Category	2004	2003
Audit Fees(1)	$ 538,000	$ 354,986
Audit-Related Fees(2)	$ 17,760	$ –
Tax Fees(3)	$ 72,000	$ 53,960
All Other Fees	$ –	$ –
Total Fees	$ 627,760	$ 408,946

(1) Audit fees were for professional services performed in connection with the audit of the Company' s annual financial statements, reviews of the Company' s quarterly reports on Form 10-Q, and consents and comfort letters related to the Company' s issuance of debt securities. Audit fees during 2004 also included audit services related to the Company' s compliance with Section 404 of the Sarbanes-Oxley Act regarding internal control over financial reporting.

(2) Audit-related fees were for professional services related to accounting consultations and advice on compliance with Section 404 of the Sarbanes-Oxley Act.

(3) Tax fees consist of fees for tax compliance, tax advice and tax planning services. Tax advice and tax planning services relate to assistance with tax audits and appeals and tax advice related to business development activities.

Pre-Approval Policy and Procedures

The Audit Committee has adopted policies and procedures relating to the approval of all audit and non-audit services that are to be performed by the Company' s independent auditors. This policy generally provides that the Company will not engage its independent auditors to render audit or non-audit services unless the service is specifically approved in advance by the Audit Committee or the engagement is entered into pursuant to one of the pre-approval procedures described below.

From time to time, the Audit Committee may pre-approve specified types of services that are expected to be provided to the Company by its independent auditors during the next 12 months. Any such pre-approval is detailed as to the particular service or type of services to be provided and is also generally subject to a maximum dollar amount.

The Audit Committee may also delegate to each member of the Audit Committee the authority to approve any audit or non-audit services to be provided to the Company by its independent auditors. Any approval of services by a member of the Audit Committee pursuant to this delegated authority is reported on at the next meeting of the Audit Committee. During 2004, the Audit Committee did not delegate such authority.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules***

Documents filed as a part of this Form 10-K:

1. *Financial Statements.* The following financial statements and supplementary data are included as part of this Annual Report on Form 10-K:

Report of Independent Auditors

Consolidated Balance Sheets as of December 31, 2004 and 2003

Consolidated Statements of Operations for the years ended December 31, 2004, 2003 and 2002

Consolidated Statement of Stockholders' Equity for the years ended December 31, 2004, 2003 and 2002

Consolidated Statements of Cash Flows for the years ended December 31, 2004, 2003 and 2002

2. *Financial Statement Schedules.* The Company is not filing any financial statement schedules as part of this Annual Report on Form 10-K because they are not applicable or the required information is included in the financial statements or notes thereto.

3. *Exhibits.* The Exhibits listed in the Exhibit Index immediately preceding such Exhibits are filed as part of this Annual Report on Form 10-K, and such Exhibit Index is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TRANSKARYOTIC THERAPIES, INC.

By: /s/ DAVID D. PENDERGAST

David D. Pendergast
President and Chief Executive Officer

Date: May 2, 2005

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant, in the capacities and on the dates indicated.

Signature	Title	Date
/s/ DAVID D. PENDERGAST David D. Pendergast	President, Chief Executive Officer and Director (Principal Executive Officer)	May 2, 2005
/s/ GREGORY D. PERRY Gregory D. Perry	Senior Vice President and Chief Financial Officer (Principal Accounting and Financial Officer)	May 2, 2005
/s/ LYDIA VILLA-KOMAROFF Lydia Villa-Komaroff	Chairwoman of the Board of Directors	May 2, 2005
Walter Gilbert	Director	May 2, 2005
/s/ DENNIS H. LANGER Dennis H. Langer	Director	May 2, 2005
/s/ JONATHAN S. LEFF Jonathan S. Leff	Director	May 2, 2005
/s/ RODMAN W. MOORHEAD, III Rodman W. Moorhead, III	Director	May 2, 2005
/s/ WAYNE P. YETTER Wayne P. Yetter	Director	May 2, 2005

EXHIBIT INDEX

Exhibit No.	Description
3 .1	Amended and Restated Certificate of Incorporation of the Registrant, as amended.(1)
3 .2	Amended and Restated By-Laws of the Registrant, as amended.(1)
4 .1	Rights Agreement dated December 13, 2000, between Registrant and Equiserve Trust Company, N.A.(4)
4 .2*	Indenture, dated as of May 4, 2004, between the Registrant and The Bank of New York, as Trustee
4 .3*	Supplemental Indenture, dated as of May 4, 2004, between the Registrant and The Bank of New York, as Trustee
4 .4*	Form of Senior Convertible Note (contained in Exhibit 4.3)
10.1	Lease Agreement, dated January 1, 1994, for office space at 195 Albany Street, Cambridge, Massachusetts, by and between the Trust under the Will of Harry F. Stimpson and the Registrant.(5)
10.2	Sublease Agreement, dated April 7, 1992, for office space located at 185 Albany Street, Cambridge, Massachusetts, by and between the Massachusetts Institute of Technology and the Registrant.(5)
10.3	1993 Non-Employee Directors' Stock Option Plan.(5)(6)
10.4	1993 Long-Term Incentive Plan.(5)(6)
10.5	Form of Letter Agreement re: Confidentiality, Inventions and Non-Disclosure.(5)
10.6	Form of Letter Agreement re: Restricted Stock.(5)
10.7	Form of Scientific Advisor Agreement.(5)
10.8	Collaboration and License Agreement, dated July 22, 1993 and amended on May 30, 1996, by and between Wyeth (successor to Genetics Institute, Inc.) and the Registrant.(5)(8)
10.9	Amended and Restated License Agreement, dated March 1, 1995, by and between Aventis S.A. and the Registrant.(5)(8)
10.10	Agreement, dated November 15, 1999, by and between Mr. Wayne P. Yetter and the Registrant.(6)(11)
10.11	Registration Rights Agreement, dated June 9, 2000, by and between certain holders of Series A Convertible Preferred Stock and the Registrant.(2)
10.12	Agreement, dated April 20, 2000, by and between Dr. Walter Gilbert and the Registrant.(2)(6)
10.13	Lease Agreement, dated August 4, 2000, for new corporate headquarters and research and development space in Cambridge, Massachusetts, by and between the Massachusetts Institute of Technology and the Registrant.(12)
10.14	Purchase and Sale and Assignment Agreement, dated November 28, 2000, by and between Serono, Inc. and the Registrant.(3)
10.15	First Amendment to Purchase and Sale and Assignment Agreement, dated February 8, 2001, by and between Serono, Inc. and the Registrant.(3)
10.16	Lease Agreement, dated February 2001, by and between Trinet Property Partners, L.P and the Registrant.(3)

10.17	2001 Non-Officer Employee Stock Incentive Plan.(3)(6)
10.18*	Executive Nonqualified Excess Plan, adopted February 1, 2004.(6)
10.19	Stockholders' Agreement, dated as of April 12, 2000, by and among certain other stockholders in TKT Europe 5S AB, a corporation organized under the laws of Sweden, and the Registrant.(13)
10.20	Employment Agreement, dated December 18, 2001 by and between Dr. David D. Pendergast and the Registrant.(14)(6)
10.21*	Revised Employment Agreement, dated February 26, 2002, by and between Dr. Renato Fuchs and the Registrant.(6)
10.22	License Agreement, dated June 7, 2002, by and between Cell Genesys, Inc. and the Registrant.(8)(15)

Exhibit No.	Description
10.23#	Commercial Supply and Process Validation Agreement, entered into as of December 6, 1999, by and between Chesapeake Biological Laboratories, Inc. and the Registrant.(8)(16)
10.24#	Master Production Agreement, made as of December 1, 1998, between BioScience Contract Production Corp. and the Registrant.(8)(16)
10.25	2002 Stock Incentive Plan, including Amendment No. 1 thereto.(1)(6)
10.26	Indemnification Agreement, dated April 30, 2003, by and between Mr. Michael J. Astrue and the Registrant.(1)
10.27	Employment Agreement, dated April 30, 2003, by and between Mr. Michael J. Astrue and the Registrant.(1)(6)
10.28#	License Agreement, dated February 28, 2003, by and between Women' s and Children' s Hospital and the Registrant.(1)
10.29	Indemnification Agreement between Richard F Selden, M.D. and the Registrant.(18)
10.30	Agreement dated May 1, 2003 between Gregory Perry and the Registrant.(19)(6)
10.31#	Amended and Restated License Agreement, dated March 26, 2004, between Aventis Pharmaceuticals, Inc. and the Registrant.(20)
10.32#	Services Agreement, dated July 23, 2004, between Lonza Biologics PLC and the Registrant.(21)
10.33**	Agreement dated November 5, 2001, between Neil Kirby and the Registrant.(6)
10.34**	TKT Management Bonus Plan, including form of bonus schedule.(6)
10.35**	Form of Nonstatutory Stock Option Agreement Under Registrant' s 2002 Stock Incentive Plan, as amended.(6)
10.36**	Form of Incentive Stock Option Agreement Under Registrant' s 2002 Stock Incentive Plan, as amended.(6)
10.37**	Summary Description of Director Compensation.(6)
10.38*	Amendment to 1993 Long-Term Incentive Plan.(6)
10.39*	Amendment to 2001 Non-Officer, Non-Director Employee Stock Incentive Plan.(6)
10.40*	Amendment to 2002 Stock Incentive Plan.(6)
21.1*	Subsidiaries of the Registrant.
23.1**	Consent of Ernst & Young LLP.
23.2*	Consent of Ernst & Young LLP.
31.1*	Certification by the Registrant' s President and Chief Executive Officer pursuant to Rule 13a-14 of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification by the Registrant' s Chief Financial Officer pursuant to Rule 13a-14 of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification by the Registrant' s President and Chief Executive Officer pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

32.2*	Certification by the Registrant' s Chief Financial Officer pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

* Filed herewith.

** Filed as an exhibit to the Company' s Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 16, 2005 and incorporated herein by reference.

Confidential treatment requested as to certain portions pursuant to Rule 24-b-2 promulgated under the Exchange Act of 1934, as amended.

1. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended March 31, 2003 (File No. 0-21481) and incorporated herein by reference.
2. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended June 30, 2000 (File No. 0-21481) and incorporated herein by reference.
3. Filed as an exhibit to this Annual Report on Form 10-K for the year ended December 31, 2000 (File No. 0-21481) and incorporated herein by reference.
4. Filed as an exhibit to the Company' s Current Report on Form 8-K filed with the SEC on December 14, 2000 (File No. 0-21481) and incorporated herein by reference
5. Filed as an exhibit to the Company' s Registration Statement on Form S-1 filed with the SEC on August 27, 1996 (File No. 333-10845) and incorporated herein by reference.
6. Management contract or compensation plan or arrangement required to be filed as an exhibit pursuant to Item 15(c) of Form 10-K.
7. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended March 31, 1998 (File No. 0-21481) and incorporated herein by reference.
8. Confidential treatment granted as to certain portions.
9. Filed as an exhibit to the Company' s Registration Statement on Form S-1 filed with the SEC on July 24, 1997 (File No. 333-31957) and incorporated herein by reference.
10. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended June 30, 1999 (File No. 0-21481) and incorporated herein by reference.
11. Filed as an exhibit to the Company' s Annual Report on Form 10-K for the year ended December 31, 1999 (File No. 0-21481) and incorporated herein by reference.
12. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended September 30, 2000 (File No. 0-21481) and incorporated herein by reference.
13. Filed as an exhibit to the Company' s Current Report on Form 8-K filed with the SEC on June 15, 2001 (File No. 0-21481) and incorporated herein by reference.
14. Filed as an exhibit to the Company' s Annual Report on Form 10-K for the year ended December 31, 2001 (File No. 0-21481) and incorporated herein by reference.
15. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended June 30, 2002 (File No. 0-21481) and incorporated herein by reference.
16. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended September 30, 2002 (File No. 0-21481) and incorporated herein by reference.
17. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended June 30, 2003 (File No. 0-21481) and incorporated herein by reference.
18. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended September 30, 2003 (File No. 0-21481) and incorporated herein by reference.
19. Filed as an exhibit to the Company' s Annual Report on Form 10-K for the year ended December 31, 2003 (File No. 0-21481) and incorporated herein by reference.
20. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended March 31, 2004 (File No. 0-21481) and incorporated herein by reference.
21. Filed as an exhibit to the Company' s Quarterly Report on Form 10-Q for the quarter ended September 30, 2004 (File No. 0-21481) and incorporated herein by reference.

EXHIBIT 4.2

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TRANSKARYOTIC THERAPIES, INC.,

ISSUER

and

THE BANK OF NEW YORK,

TRUSTEE

INDENTURE

Dated as of May 4, 2004

Senior Debt Securities

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CROSS-REFERENCE TABLE(1)

<TABLE>
<CAPTION>

Section of Trust Indenture Act of 1939, as amended	Section of Indenture
<S>	<C>
310(a)	7.09
310(b)	7.08 7.10
310(c)	Inapplicable
311(a)	7.13(a)
311(b)	7.13(b)
311(c)	Inapplicable
312(a)	5.02(a)
312(b)	5.02(b)
312(c)	5.02(c)
313(a)	5.04(a)
313(b)	5.04(b)
313(c)	5.04(a) 5.04(b)
313(d)	5.04(c)
314(a)	5.03
314(b)	Inapplicable
314(c)	13.06
314(d)	Inapplicable
314(e)	13.06
314(f)	Inapplicable
315(a)	7.01(a) 7.02
315(b)	6.07
315(c)	7.01
315(d)	7.01(b) 7.01(c)
315(e)	6.07
316(a)	6.06 8.04
316(b)	6.04
316(c)	8.01
317(a)	6.02
317(b)	4.03

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1 This Cross-Reference Table does not constitute part of the Indenture and shall not have any bearing on the interpretation of any of its terms or provisions.

TABLE OF CONTENTS(2)

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(2) This Table of Contents does not constitute part of the Indenture and shall not have any bearing on the interpretation of any of its terms or provisions.

INDENTURE, dated as of May 4, 2004, among Transkaryotic Therapies, Inc., a Delaware corporation (the "Company"), and The Bank of New York, a New York banking corporation, as trustee (the "Trustee"):

WHEREAS, for its lawful corporate purposes, the Company has duly authorized the execution and delivery of this Indenture to provide for the issuance of unsecured debt securities (hereinafter referred to as the "Securities"), in an unlimited aggregate principal amount to be issued from time to time in one or more series as in this Indenture provided, as registered Securities without coupons, to be authenticated by the certificate of the Trustee;

WHEREAS, to provide the terms and conditions upon which the Securities are to be authenticated, issued and delivered, the Company has duly authorized the execution of this Indenture; and

WHEREAS, all things necessary to make this Indenture a valid agreement of the Company, in accordance with its terms, have been done.

NOW, THEREFORE, in consideration of the premises and the purchase of the Securities by the holders thereof, it is mutually covenanted and agreed as follows for the equal and ratable benefit of the holders of Securities:

ARTICLE I

DEFINITIONS

SECTION 1.01 Definitions of Terms.

The terms defined in this Section (except as in this Indenture otherwise expressly provided or unless the context otherwise requires) for all purposes of

this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section and shall include the plural as well as the singular. All other terms used in this Indenture that are defined in the Trust Indenture Act of 1939, as amended, or that are by reference in such Act defined in the Securities Act of 1933, as amended (except as herein otherwise expressly provided or unless the context otherwise requires), shall have the meanings assigned to such terms in said Trust Indenture Act and in said Securities Act as in force at the date of the execution of this instrument.

"Authenticating Agent" means an authenticating agent with respect to all or any of the series of Securities appointed with respect to all or any series of the Securities by the Trustee pursuant to Section 2.10.

"Bankruptcy Law" means Title 11, U.S. Code, or any similar federal or state law for the relief of debtors.

"Board of Directors" means the Board of Directors of the Company or any duly authorized committee of such Board.

"Board Resolution" means a copy of a resolution certified by the Secretary or an Assistant Secretary of the Company to have been duly adopted by the Board of Directors and to be in full force and effect on the date of such certification.

"Business Day" means, with respect to any series of Securities, any day other than a day on which Federal or State banking institutions in the Borough of Manhattan, The City of New York, are authorized or obligated by law, executive order or regulation to close.

"Certificate" means a certificate signed by the principal executive officer, the principal financial officer or the principal accounting officer of the Company. The Certificate need not comply with the provisions of Section 13.07.

"Company" means Transkaryotic Therapies, Inc., a corporation duly organized and existing under the laws of the State of Delaware, and, subject to the provisions of Article Ten, shall also include its successors and assigns.

"Corporate Trust Office" means the office of the Trustee at which, at any particular time, its corporate trust business shall be principally administered in The City of New York, except that whenever a provision herein refers to an office or agency of the Trustee in the Borough of Manhattan, The City of New York, such office is located, at the date hereof, at 101 Barclay Street, New York, New York 10286, Attention: Corporate Trust Administration or such other address as the Trustee may designate from time to time by notice to the Holders and the Company, or the principal corporate trust office of any successor Trustee (or such other address as such successor Trustee may designate from time to time by notice to the Holders and the Company..

"Custodian" means any receiver, trustee, assignee, liquidator, or similar official under any Bankruptcy Law.

"Default" means any event, act or condition that with notice or lapse of time, or both, would constitute an Event of Default.

"Depositary" means, with respect to Securities of any series, for which the Company shall determine that such Securities will be issued as a Global Security, The Depository Trust Company, New York, New York, another clearing agency, or any successor registered as a clearing agency under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or other applicable statute or regulation, which, in each case, shall be designated by the Company pursuant to either Section 2.01 or 2.11.

"Event of Default" means, with respect to Securities of a particular series any event specified in Section 6.01, continued for the period of time, if any, therein designated.

"Global Security" means, with respect to any series of Securities, a Security executed by the Company and delivered by the Trustee to the Depositary or pursuant to the Depositary's instruction, all in accordance with the Indenture, which shall be registered in the name of the Depositary or its

nominee.

"Governmental Obligations" means securities that are (i) direct obligations of the United States of America for the payment of which its full faith and credit is pledged or (ii) obligations of a Person controlled or supervised by and acting as an agency or instrumentality of the United States of America, the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America that, in either case, are not callable or redeemable at the option of the issuer thereof, and shall also include a depositary receipt issued by a bank (as defined in Section 3(a)(2) of the Securities Act of 1933, as amended) as custodian with respect to any such Governmental Obligation or a specific payment of principal of or interest on any such Governmental Obligation held by such custodian for the account of the holder of such depositary receipt; provided, however, that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depositary receipt from any amount received by the custodian in respect of the Governmental Obligation or the specific payment of principal of or interest on the Governmental Obligation evidenced by such depositary receipt.

"Herein", "hereof" and "hereunder", and other words of similar import, refer to this Indenture as a whole and not to any particular Article, Section or other subdivision.

"Indenture" means this instrument as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into in accordance with the terms hereof.

"Interest Payment Date", when used with respect to any installment of interest on a Security of a particular series, means the date specified in such

Security or in a Board Resolution or in an indenture supplemental hereto with respect to such series as the fixed date on which an installment of interest with respect to Securities of that series is due and payable.

"Officers' Certificate" means a certificate signed by the President or a Vice President and by the Treasurer or an Assistant Treasurer or the Controller or an Assistant Controller or the Secretary or an Assistant Secretary of the Company that is delivered to the Trustee in accordance with the terms hereof. Each such certificate shall include the statements provided for in Section 13.07, if and to the extent required by the provisions thereof.

"Opinion of Counsel" means an opinion in writing of legal counsel, who may be an employee of or counsel for the Company, that is delivered to the Trustee in accordance with the terms hereof. Each such opinion shall include the statements provided for in Section 13.07, if and to the extent required by the provisions thereof.

"Outstanding", when used with reference to Securities of any series, means, subject to the provisions of Section 8.04, as of any particular time, all Securities of that series theretofore authenticated and delivered by the Trustee under this Indenture, except (a) Securities theretofore canceled by the Trustee or any paying agent, or delivered to the Trustee or any paying agent for cancellation or that have previously been canceled; (b) Securities or portions thereof for the payment or redemption of which moneys or Governmental Obligations in the necessary amount shall have been deposited in trust with the Trustee or with any paying agent (other than the

Company) or shall have been set aside and segregated in trust by the Company (if the Company shall act as its own paying agent); provided, however, that if such Securities or portions of such Securities are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as in Article Three provided, or provision satisfactory to the Trustee shall have been made for giving such notice; and (c) Securities in lieu of or in substitution for which other Securities shall have been authenticated and delivered pursuant to the terms of Section 2.07.

"Person" means any individual, corporation, partnership, joint-venture, joint-stock company, unincorporated organization or government or any agency or political subdivision thereof.

"Predecessor Security" of any particular Security means every previous Security evidencing all or a portion of the same debt as that evidenced by such particular Security; and, for the purposes of this definition, any Security authenticated and delivered under Section 2.07 in lieu of a lost, destroyed or stolen Security shall be deemed to evidence the same debt as the lost, destroyed or stolen Security.

"Responsible Officer" when used with respect to the Trustee means the , any vice president, assistant vice president, assistant secretary, assistant treasurer, any trust officer, or any other officer of the Trustee customarily performing functions similar to those performed by the Persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred because of his or her knowledge of and familiarity with the particular subject and who shall have direct responsibility for the administration of this Indenture.

"Securities" means the debt Securities authenticated and delivered under this Indenture.

"Securityholder", "holder of Securities", "registered holder" or other similar term, means the Person or Persons in whose name or names a particular Security shall be registered on the books of the Company kept for that purpose in accordance with the terms of this Indenture.

"Subsidiary" means, with respect to any Person, (i) any corporation at least a majority of whose outstanding Voting Stock shall at the time be owned, directly or indirectly, by such Person or by one or more of its Subsidiaries or by such Person and one or more of its Subsidiaries, (ii) any general partnership, joint venture or similar entity, at least a majority of whose outstanding partnership or similar interests shall at the time be owned by such Person, or by one or more of its Subsidiaries, or by such Person and one or more of its Subsidiaries and (iii) any limited partnership of which such Person or any of its Subsidiaries is a general partner.

"Trustee" means The Bank of New York, and, subject to the provisions of Article Seven, shall also include its successors and assigns, and, if at any time there is more than one Person acting in such capacity hereunder, "Trustee" shall mean each such Person. The term "Trustee" as used with respect to a particular series of the Securities shall mean the trustee with respect to that series.

"Trust Indenture Act" means the Trust Indenture Act of 1939, as amended, subject to the provisions of Sections 9.01, 9.02 and 10.01, as in effect at the date of execution of this instrument.

"Voting Stock", as applied to stock of any Person, means shares, interests, participations or other equivalents in the equity interest (however designated) in such Person having ordinary voting power for the election of a majority of the directors (or the equivalent) of such Person, other than shares, interests, participations or other equivalents having such power only by reason of the occurrence of a contingency.

ARTICLE II

ISSUE, DESCRIPTION, TERMS, EXECUTION, REGISTRATION AND EXCHANGE OF SECURITIES

SECTION 2.01 Designation and Terms of Securities.

(a) The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited. The Securities may be issued in one or more series up to the aggregate principal amount of Securities of that series from time to time authorized by or pursuant to a Board Resolution of the Company or pursuant to one or more indentures supplemental hereto. Prior to the initial issuance of Securities of any series, there shall be established in or pursuant to a Board Resolution of the Company, and set forth in an Officers'

Certificate of the Company, or established in one or more indentures supplemental hereto:

(1) the title of the Security of the series (which shall distinguish the Securities of the series from all other Securities);

(2) any limit upon the aggregate principal amount of the Securities of that series that may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of that series);

(3) the date or dates on which the principal of the Securities of the series is payable and the place(s) of payment;

(4) the rate or rates at which the Securities of the series shall bear interest or the manner of calculation of such rate or rates, if any;

(5) the date or dates from which such interest shall accrue, the Interest Payment Dates on which such interest will be payable or the manner of determination of such Interest Payment Dates, the place(s) of payment, and the record date for the determination of holders to whom interest is payable on any such Interest Payment Dates;

(6) the right, if any, to extend the interest payment periods and the duration of such extension;

(7) the period or periods within which, the price or prices at which and the terms and conditions upon which, Securities of the series may be redeemed, in whole or in part, at the option of the Company;

(8) the obligation, if any, of the Company to redeem or purchase Securities of the series pursuant to any sinking fund or analogous provisions (including payments made in cash in satisfaction of future sinking fund obligations) or at the option of a holder thereof and the period or periods within which, the price or prices at which, and the terms and conditions upon which, Securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;

(9) the form of the Securities of the series including the form of the Certificate of Authentication for such series;

(10) if other than denominations of one thousand U.S. dollars ($1,000) or any integral multiple thereof, the denominations in which the Securities of the series shall be issuable;

(11) any and all other terms with respect to such series (which terms shall not be inconsistent with the terms of this Indenture, as amended by any supplemental indenture) including any terms which may be required by or advisable under United States laws or regulations or advisable in connection with the marketing of Securities of that series;

(12) whether the Securities are issuable as a Global Security and, in such case, the identity for the Depositary for such series;

(13) whether the Securities will be convertible into shares of common stock or other securities of the Company and, if so, the terms and conditions upon which such Securities will be so convertible, including the conversion price and the conversion period;

(14) if other than the principal amount thereof, the portion of the principal amount of Securities of the series which shall be payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.01; and

(15) any additional or different Events of Default or restrictive covenants provided for with respect to the Securities of the series.

All Securities of any one series shall be substantially identical except as to denomination and except as may otherwise be provided in or pursuant to any such Board Resolution or in any indentures supplemental hereto.

If any of the terms of the series are established by action taken pursuant to a Board Resolution of the Company, a copy of an appropriate record of such action shall be certified by the Secretary or an Assistant Secretary of the Company and delivered to the Trustee at or prior to the delivery of the Officers' Certificate of the Company setting forth the terms of the series.

Securities of any particular series may be issued at various times, with different dates on which the principal or any installment of principal is payable, with different rates of interest, if any, or different methods by which rates of interest may be determined, with different dates on which such interest may be payable and with different redemption dates.

SECTION 2.02 Form of Securities and Trustee's Certificate.

The Securities of any series and the Trustee's certificate of authentication to be borne by such Securities shall be substantially of the tenor and purport as set forth in one or more indentures supplemental hereto or as provided in a Board Resolution of the Company and as set forth in an Officers' Certificate of the Company and the and may have such letters, numbers or other marks of identification or designation and such legends or endorsements printed, lithographed or engraved thereon as the Company may deem appropriate and as are not inconsistent with the provisions of this Indenture, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any stock exchange on which Securities of that series may be listed, or to conform to usage.

SECTION 2.03 Denominations; Provisions for Payment.

The Securities shall be issuable as registered Securities and in the denominations of one thousand U.S. dollars ($1,000) or any integral multiple thereof, subject to Section 2.01(10). The Securities of a particular series shall bear interest payable on the dates and at the rate specified with respect to that series. The principal of and the interest on the Securities of any series, as well as any premium thereon in case of redemption thereof prior to maturity, shall be payable in the coin or currency of the United States of America that at the time is legal tender for public and private debt, at the office or agency of the Company maintained for that purpose in the Borough of Manhattan, the City and State of New York. Each Security shall be dated the date of its authentication. Interest on the Securities shall be computed on the basis of a 360-day year composed of twelve 30-day months.

The interest installment on any Security that is payable, and is punctually paid or duly provided for, on any Interest Payment Date for Securities of that series shall be paid to the Person in whose name said Security (or one or more Predecessor Securities) is registered at the close of business on the regular record date for such interest installment. In the event that any Security of a particular series or portion thereof is called for redemption and the redemption date is subsequent to a regular record date with respect to any Interest Payment Date and prior to such Interest Payment Date, interest on such Security will be paid upon presentation and surrender of such Security as provided in Section 3.03.

Any interest on any Security that is payable, but is not punctually paid or duly provided for, on any Interest Payment Date for Securities of the same series (herein called "Defaulted Interest") shall forthwith cease to be payable to the registered holder on the relevant regular record date by virtue of having been such holder; and such Defaulted Interest shall be paid by the Company, at its election, as provided in clause (1) or clause (2) below:

(1) The Company may make payment of any Defaulted Interest on Securities to the Persons in whose names such Securities (or their respective Predecessor Securities) are registered at the close of business on a special record date for the payment of such Defaulted Interest, which shall be fixed in the following manner: the Company shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each such Security and the date of the proposed payment, and at the same time the Company shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed

payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as in this clause provided. Thereupon the Trustee shall fix a special record date for the payment of such

Defaulted Interest which shall not be more than 15 nor less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Company of such special record date and, in the name and at the expense of the Company, shall cause notice of the proposed payment of such Defaulted Interest and the special record date therefor to be mailed, first class postage prepaid, to each Securityholder at his or her address as it appears in the Security Register (as hereinafter defined), not less than 10 days prior to such special record date. Notice of the proposed payment of such Defaulted Interest and the special record date therefor having been mailed as aforesaid, such Defaulted Interest shall be paid to the Persons in whose names such Securities (or their respective Predecessor Securities) are registered on such special record date.

(2) The Company may make payment of any Defaulted Interest on any Securities in any other lawful manner not inconsistent with the requirements of any securities exchange on which such Securities may be listed, and upon such notice as may be required by such exchange, if, after notice given by the Company to the Trustee of the proposed payment pursuant to this clause, such manner of payment shall be deemed practicable by the Trustee.

Unless otherwise set forth in a Board Resolution of the Company or one or more indentures supplemental hereto establishing the terms of any series of Securities pursuant to Section 2.01 hereof, the term "regular record date" as used in this Section with respect to a series of Securities with respect to any Interest Payment Date for such series shall mean either the fifteenth day of the month immediately preceding the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the first day of a month, or the last day of the month immediately preceding the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the fifteenth day of a month, whether or not such date is a Business Day.

Subject to the foregoing provisions of this Section, each Security of a series delivered under this Indenture upon transfer of or in exchange for or in lieu of any other Security of such series shall carry the rights to interest accrued and unpaid, and to accrue, that were carried by such other Security.

SECTION 2.04 Execution and Authentications.

The Securities shall be signed on behalf of the Company by its President, or one of its Vice Presidents, or its Treasurer, or one of its Assistant Treasurers, or its Secretary, or one of its Assistant Secretaries, under its corporate seal attested by its Secretary or one of its Assistant Secretaries. Signatures may be in the form of a manual or facsimile signature. The Company may use the facsimile signature of any Person who shall have been a President or Vice President thereof, or of any Person who shall have been a Secretary or Assistant Secretary thereof, notwithstanding the fact that at the time the Securities shall be authenticated and delivered or

disposed of such Person shall have ceased to be the President or a Vice President, or the Secretary or an Assistant Secretary, of the Company. The seal of the Company may be in the form of a facsimile of such seal and may be impressed, affixed, imprinted or otherwise reproduced on the Securities. The Securities may contain such notations, legends or endorsements required by law, stock exchange rule or usage. Each Security shall be dated the date of its authentication by the Trustee.

A Security shall not be valid until authenticated manually by an authorized signatory of the Trustee, or by an Authenticating Agent. Such signature shall be conclusive evidence that the Security so authenticated has been duly authenticated and delivered hereunder and that the holder is entitled

to the benefits of this Indenture. At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver Securities of any series executed by the Company to the Trustee for authentication, together with a written order of the Company for the authentication and delivery of such Securities, signed by its President or any Vice President and its Secretary or any Assistant Secretary, and the Trustee in accordance with such written order shall authenticate and deliver such Securities.

In authenticating such Securities and accepting the additional responsibilities under this Indenture in relation to such Securities, the Trustee shall be entitled to receive, and (subject to Section 7.01) shall be fully protected in relying upon, an Opinion of Counsel stating that the form and terms thereof have been established in conformity with the provisions of this Indenture.

The Trustee shall not be required to authenticate such Securities if the issue of such Securities pursuant to this Indenture will affect the Trustee's own rights, duties or immunities under the Securities and this Indenture or otherwise in a manner that is not reasonably acceptable to the Trustee.

SECTION 2.05 Registration of Transfer and Exchange.

(a) Securities of any series may be exchanged upon presentation thereof at the office or agency of the Company designated for such purpose in the Borough of Manhattan, the City and State of New York, for other Securities of such series of authorized denominations, and for a like aggregate principal amount, upon payment of a sum sufficient to cover any tax or other governmental charge in relation thereto, all as provided in this Section. In respect of any Securities so surrendered for exchange, the Company shall execute, the Trustee shall authenticate and such office or agency shall deliver in exchange therefor the Security or Securities of the same series that the Securityholder making the exchange shall be entitled to receive, bearing numbers not contemporaneously outstanding.

(b) The Company shall keep, or cause to be kept, at its office or agency designated for such purpose in the Borough of Manhattan, the City and State of New York, or such other location designated by the Company a register or registers (herein referred to as the "Security Register") in which, subject to such reasonable regulations as it may prescribe, the Company shall register the Securities and the transfers of Securities as in this Article provided and which at all reasonable times shall be open for inspection by the Trustee. The registrar for the purpose of registering Securities and transfer of Securities as herein provided shall be appointed as authorized by Board Resolution (the "Security Registrar").

Upon surrender for transfer of any Security at the office or agency of the Company designated for such purpose, the Company shall execute, the Trustee shall authenticate and such office or agency shall deliver in the name of the transferee or transferees a new Security or Securities of the same series as the Security presented for a like aggregate principal amount.

All Securities presented or surrendered for exchange or registration of transfer, as provided in this Section, shall be accompanied (if so required by the Company or the Security Registrar) by a written instrument or instruments of transfer, in form satisfactory to the Company or the Security Registrar, duly executed by the registered holder or by such holder's duly authorized attorney in writing.

(c) No service charge shall be made for any exchange or registration of transfer of Securities, or issue of new Securities in case of partial redemption of any series, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge in relation thereto, other than exchanges pursuant to Section 2.06, Section 3.03(b) and Section 9.04 not involving any transfer.

(d) The Company shall not be required (i) to issue, exchange or register the transfer of any Securities during a period beginning at the opening of business 15 days before the day of the mailing of a notice of redemption of less than all the Outstanding Securities of the same series and ending at the close of business on the day of such mailing, nor (ii) to register the transfer of or

exchange any Securities of any series or portions thereof called for redemption. The provisions of this Section 2.05 are, with respect to any Global Security, subject to Section 2.11 hereof.

SECTION 2.06 Temporary Securities.

Pending the preparation of definitive Securities of any series, the Company may execute, and the Trustee shall authenticate and deliver, temporary Securities (printed, lithographed or typewritten) of any authorized denomination. Such temporary Securities shall be substantially in the form of the definitive Securities in lieu of which they are issued, but with such omissions, insertions and variations as may be appropriate for temporary Securities, all as may be determined by the Company. Every temporary Security of any series shall be executed by the Company and be authenticated by the Trustee upon the same conditions and in substantially the same manner, and with like effect, as the definitive Securities of such series. Without unnecessary delay the Company will execute and will furnish definitive Securities of such series and thereupon any or all temporary Securities of such series may be surrendered in exchange therefor (without charge to the holders), at the office or agency of the Company designated for the purpose in the Borough of Manhattan, the City and State of New York, and the Trustee shall authenticate and such office or agency shall deliver in exchange for such temporary Securities an equal aggregate principal amount of definitive Securities of such series, unless the Company advises the Trustee to the effect that definitive Securities need not be executed and furnished until further notice from the Company. Until so exchanged, the temporary Securities of such series shall be entitled to the same benefits under this Indenture as definitive Securities of such series authenticated and delivered hereunder.

SECTION 2.07 Mutilated, Destroyed, Lost or Stolen Securities.

In case any temporary or definitive Security shall become mutilated or be destroyed, lost or stolen, the Company (subject to the next succeeding sentence) shall execute, and upon the Company's request the Trustee (subject as aforesaid) shall authenticate and deliver, a new Security of the same series, bearing a number not contemporaneously outstanding, in exchange and substitution for the mutilated Security, or in lieu of and in substitution for the Security so destroyed, lost or stolen. In every case the applicant for a substituted Security shall furnish to the Company and the Trustee such security or indemnity as may be required by them to save each of them harmless, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Company and the Trustee evidence to their satisfaction of the destruction, loss or theft of the applicant's Security and of the ownership thereof. The Trustee may authenticate any such substituted Security and deliver the same upon the written request or authorization of any officer of the Company. Upon the issuance of any substituted Security, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee) connected therewith. In case any Security that has matured or is about to mature shall become mutilated or be destroyed, lost or stolen, the Company may, instead of issuing a substitute Security, pay or authorize the payment of the same (without surrender thereof except in the case of a mutilated Security) if the applicant for such payment shall furnish to the Company and the Trustee such security or indemnity as they may require to save them harmless, and, in case of destruction, loss or theft, evidence to the satisfaction of the Company and the Trustee of the destruction, loss or theft of such Security and of the ownership thereof.

Every replacement Security issued pursuant to the provisions of this Section shall constitute an additional contractual obligation of the Company whether or not the mutilated, destroyed, lost or stolen Security shall be found at any time, or be enforceable by anyone, and shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of the same series duly issued hereunder. All Securities shall be held and owned upon the express condition that the foregoing provisions are exclusive with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities, and shall preclude (to the extent lawful) any and all other rights or remedies, notwithstanding any law or statute existing or hereafter enacted to the contrary with respect to the replacement or payment of negotiable instruments or other securities without their surrender.

SECTION 2.08 Cancellation.

All Securities surrendered for the purpose of payment, redemption, exchange or registration of transfer shall, if surrendered to the Company or any paying agent, be delivered to the Trustee for cancellation, or, if surrendered to the Trustee, shall be cancelled by it, and no Securities shall be issued in lieu thereof except as expressly required or permitted by any of the provisions of this Indenture. On request of the Company at the time of such surrender, the Trustee shall deliver to the Company canceled Securities held by the Trustee. In the absence of such request the Trustee may dispose of canceled Securities in accordance with its standard procedures and deliver a certificate of disposition to the Company. If the Company shall otherwise acquire any of the Securities, however, such acquisition shall not operate as a

redemption or satisfaction of the indebtedness represented by such Securities unless and until the same are delivered to the Trustee for cancellation.

SECTION 2.09 Benefits of Indenture.

Nothing in this Indenture or in the Securities, express or implied, shall give or be construed to give to any Person, other than the parties hereto and the holders of the Securities any legal or equitable right, remedy or claim under or in respect of this Indenture, or under any covenant, condition or provision herein contained; all such covenants, conditions and provisions being for the sole benefit of the parties hereto and of the holders of the Securities.

SECTION 2.10 Authenticating Agent.

So long as any of the Securities of any series remain Outstanding there may be an Authenticating Agent for any or all such series of Securities which the Trustee shall have the right to appoint. Said Authenticating Agent shall be authorized to act on behalf of the Trustee to authenticate Securities of such series issued upon exchange, transfer or partial redemption thereof, and Securities so authenticated shall be entitled to the benefits of this Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee hereunder. All references in this Indenture to the authentication of Securities by the Trustee shall be deemed to include authentication by an Authenticating Agent for such series. Each Authenticating Agent shall be acceptable to the Company and shall be a corporation that has a combined capital and surplus, as most recently reported or determined by it, sufficient under the laws of any jurisdiction under which it is organized or in which it is doing business to conduct a trust business, and that is otherwise authorized under such laws to conduct such business and is subject to supervision or examination by Federal or State authorities. If at any time any Authenticating Agent shall cease to be eligible in accordance with these provisions, it shall resign immediately.

Any Authenticating Agent may at any time resign by giving written notice of resignation to the Trustee and to the Company. The Trustee may at any time (and upon request by the Company shall) terminate the agency of any Authenticating Agent by giving written notice of termination to such Authenticating Agent and to the Company. Upon resignation, termination or cessation of eligibility of any Authenticating Agent, the Trustee may appoint an eligible successor Authenticating Agent acceptable to the Company. Any successor Authenticating Agent, upon acceptance of its appointment hereunder, shall become vested with all the rights, powers and duties of its predecessor hereunder as if originally named as an Authenticating Agent pursuant hereto.

SECTION 2.11 Global Securities.

(a) If the Company shall establish pursuant to Section 2.01 that the Securities of a particular series are to be issued as a Global Security, then the Company shall execute and the Trustee shall, in accordance with Section 2.04, authenticate and deliver, a Global Security that (i) shall represent, and shall be denominated in an amount equal to the aggregate principal amount of, all of the Outstanding Securities of such series, (ii) shall be registered in the name of the Depositary or its nominee, (iii) shall be delivered by the Trustee to the Depositary or pursuant to

the Depositary's instruction and (iv) shall bear a legend substantially to the following effect: "Except as otherwise provided in Section 2.11 of the Indenture, this Security may be transferred, in whole but not in part, only to another nominee of the Depositary or to a successor Depositary or to a nominee of such successor Depositary."

(b) Notwithstanding the provisions of Section 2.05, the Global Security of a series may be transferred, in whole but not in part and in the manner provided in Section 2.05, only to another nominee of the Depositary for such series, or to a successor Depositary for such series selected or approved by the Company or to a nominee of such successor Depositary.

(c) If at any time the Depositary for a series of the Securities notifies the Company that it is unwilling or unable to continue as Depositary for such series or if at any time the Depositary for such series shall no longer be registered or in good standing under the Exchange Act, or other applicable statute or regulation, and a successor Depositary for such series is not appointed by the Company within 90 days after the Company receives such notice or becomes aware of such condition, as the case may be, this Section 2.11 shall no longer be applicable to the Securities of such series and the Company will execute, and subject to Section 2.05, the Trustee will authenticate and deliver the Securities of such series in definitive registered form without coupons, in authorized denominations, and in an aggregate principal amount equal to the principal amount of the Global Security of such series in exchange for such Global Security. In addition, the Company may at any time determine that the Securities of any series shall no longer be represented by a Global Security and that the provisions of this Section 2.11 shall no longer apply to the Securities of such series. In such event the Company will execute and subject to Section 2.05, the Trustee, upon receipt of an Officers' Certificate evidencing such determination by the Company, will authenticate and deliver the Securities of such series in definitive registered form without coupons, in authorized denominations, and in an aggregate principal amount equal to the principal amount of the Global Security of such series in exchange for such Global Security. Upon the exchange of the Global Security for such Securities in definitive registered form without coupons, in authorized denominations, the Global Security shall be canceled by the Trustee. Such Securities in definitive registered form issued in exchange for the Global Security pursuant to this Section 2.11(c) shall be registered in such names and in such authorized denominations as the Depositary, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. The Trustee shall deliver such Securities to the Depositary for delivery to the Persons in whose names such Securities are so registered.

ARTICLE III

REDEMPTION OF SECURITIES AND SINKING FUND PROVISIONS

SECTION 3.01 Redemption.

The Company may redeem the Securities of any series issued hereunder on and after the dates and in accordance with the terms established for such series pursuant to Section 2.01 hereof.

SECTION 3.02 Notice of Redemption.

(a) In case the Company shall desire to exercise such right to redeem all or, as the case may be, a portion of the Securities of any series in accordance with the right reserved so to do, the Company shall, or shall cause the Trustee to, give notice of such redemption to holders of the Securities of such series to be redeemed by mailing, first class postage prepaid, a notice of such redemption not less than 30 days and not more than 90 days before the date fixed for redemption of that series to such holders at their last addresses as they shall appear upon the Security Register unless a shorter period is specified in the Securities to be redeemed. Any notice that is mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the registered holder receives the notice. In any case, failure duly to give

such notice to the holder of any Security of any series designated for redemption in whole or in part, or any defect in the notice, shall not affect the validity of the proceedings for the redemption of any other Securities of such series or any other series. In the case of any redemption of Securities prior to the expiration of any restriction on such redemption provided in the terms of such Securities or elsewhere in this Indenture, the Company shall furnish the Trustee with an Officers' Certificate evidencing compliance with any such restriction.

Each such notice of redemption shall specify the date fixed for redemption and the redemption price at which Securities of that series are to be redeemed, and shall state that payment of the redemption price of such Securities to be redeemed will be made at the office or agency of the Company in the Borough of Manhattan, the City and State of New York, upon presentation and surrender of such Securities, that interest accrued to the date fixed for redemption will be paid as specified in said notice, that from and after said date interest will cease to accrue and that the redemption is for a sinking fund, if such is the case. If less than all the Securities of a series are to be redeemed, the notice to the holders of Securities of that series to be redeemed in whole or in part shall specify the particular Securities to be so redeemed. In case any Security is to be redeemed in part only, the notice that relates to such Security shall state the portion of the principal amount thereof to be redeemed, and shall state that on and after the redemption date, upon surrender of such Security, a new Security or Securities of such series in principal amount equal to the unredeemed portion thereof will be issued.

(b) If less than all the Securities of a series are to be redeemed, the Company shall give the Trustee at least 45 days' notice in advance of the date fixed for redemption as to the aggregate principal amount of Securities of the series to be redeemed, and thereupon the Trustee shall select, by lot or in such other manner as it shall deem appropriate and fair in its discretion and that may provide for the selection of a portion or portions (equal to one thousand U.S. dollars ($1,000) or any integral multiple thereof) of the principal amount of such Securities of a denomination larger than $1,000, the Securities to be redeemed and shall thereafter promptly notify the Company in writing of the numbers of the Securities to be redeemed, in whole or in part. The Company may, if and whenever it shall so elect, by delivery of instructions signed on its behalf by its President or any Vice President, instruct the Trustee or any paying agent to call all or any part of the Securities of a particular series for redemption and to give notice of redemption in the manner set forth in this Section, such notice to be in the name of the Company or its own name as the Trustee or such paying agent may deem advisable. In any case in which notice of redemption is to be given by the Trustee or any such paying agent, the Company shall

deliver or cause to be delivered to, or permit to remain with, the Trustee or such paying agent, as the case may be, such Security Register, transfer books or other records, or suitable copies or extracts therefrom, sufficient to enable the Trustee or such paying agent to give any notice by mail that may be required under the provisions of this Section.

SECTION 3.03 Payment Upon Redemption.

(a) If the giving of notice of redemption shall have been completed as above provided, the Securities or portions of Securities of the series to be redeemed specified in such notice shall become due and payable on the date and at the place stated in such notice at the applicable redemption price, together with interest accrued to the date fixed for redemption and interest on such Securities or portions of Securities shall cease to accrue on and after the date fixed for redemption, unless the Company shall default in the payment of such redemption price and accrued interest with respect to any such Security or portion thereof. On presentation and surrender of such Securities on or after the date fixed for redemption at the place of payment specified in the notice, said Securities shall be paid and redeemed at the applicable redemption price for such series, together with interest accrued thereon to the date fixed for redemption (but if the date fixed for redemption is an interest payment date, the interest installment payable on such date shall be payable to the registered holder at the close of business on the applicable record date pursuant to Section 2.03).

(b) Upon presentation of any Security of such series that is to be redeemed in part only, the Company shall execute and the Trustee shall authenticate and the office or agency where the Security is presented shall deliver to the holder thereof, at the expense of the Company, a new Security of the same series of authorized denominations in principal amount equal to the unredeemed portion of the Security so presented.

SECTION 3.04 Sinking Fund.

The provisions of Sections 3.04, 3.05 and 3.06 shall be applicable to any sinking fund for the retirement of Securities of a series, except as otherwise specified as contemplated by Section 2.01 for Securities of such series.

The minimum amount of any sinking fund payment provided for by the terms of Securities of any series is herein referred to as a "mandatory sinking fund payment", and any payment in excess of such minimum amount provided for by the terms of Securities of any series is herein referred to as an "optional sinking fund payment". If provided for by the terms of Securities of any series, the cash amount of any sinking fund payment may be subject to reduction as provided in Section 3.05. Each sinking fund payment shall be applied to the redemption of Securities of any series as provided for by the terms of Securities of such series.

SECTION 3.05 Satisfaction of Sinking Fund Payments with Securities.

The Company (i) may deliver Outstanding Securities of a series (other than any Securities previously called for redemption) and (ii) may apply as a credit Securities of a series that have been redeemed either at the election of the Company pursuant to the terms of such Securities or through the application of permitted optional sinking fund payments pursuant to the

terms of such Securities, in each case in satisfaction of all or any part of any sinking fund payment with respect to the Securities of such series required to be made pursuant to the terms of such Securities as provided for by the terms of such series, provided that such Securities have not been previously so credited. Such Securities shall be received and credited for such purpose by the Trustee at the redemption price specified in such Securities for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly.

SECTION 3.06 Redemption of Securities for Sinking Fund.

Not less than 45 days prior to each sinking fund payment date for any series of Securities, the Company will deliver to the Trustee an Officers' Certificate specifying the amount of the next ensuing sinking fund payment for that series pursuant to the terms of the series, the portion thereof, if any, that is to be satisfied by delivering and crediting Securities of that series pursuant to Section 3.05 and the basis for such credit and will, together with such Officers' Certificate, deliver to the Trustee any Securities to be so delivered. Not less than 30 days before each such sinking fund payment date the Trustee shall select the Securities to be redeemed upon such sinking fund payment date in the manner specified in Section 3.02 and cause notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in Section 3.02. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Section 3.03.

ARTICLE IV

COVENANTS

SECTION 4.01 Payment of Principal, Premium and Interest.

The Company will duly and punctually pay or cause to be paid the principal of (and premium, if any) and interest on the Securities of that series at the time and place and in the manner provided herein and established with respect to such Securities.

SECTION 4.02 Maintenance of Office or Agency.

So long as any series of the Securities remain Outstanding, the Company agrees to maintain an office or agency in the Borough of Manhattan, the City and State of New York, with respect to each such series and at such other location or locations as may be designated as provided in this Section 4.02, where (i) Securities of that series may be presented for payment, (ii) Securities of that series may be presented as herein above authorized for registration of transfer and exchange, and (iii) notices and demands to or upon the Company in respect of the Securities of that series and this Indenture may be given or served, such designation to continue with respect to such office or agency until the Company shall, by written notice signed by its President or a Vice President and delivered to the Trustee, designate some other office or agency for such purposes or any of them. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive all such presentations, notices and demands.

SECTION 4.03 Paying Agents.

(a) If the Company shall appoint one or more paying agents for all or any series of the Securities, other than the Trustee, the Company will cause each such paying agent to execute and deliver to the Trustee an instrument in which such agent shall agree with the Trustee, subject to the provisions of this Section:

(1) that it will hold all sums held by it as such agent for the payment of the principal of (and premium, if any) or interest on the Securities of that series (whether such sums have been paid to it by the Company or by any other obligor of such Securities) in trust for the benefit of the Persons entitled thereto;

(2) that it will give the Trustee notice of any failure by the Company (or by any other obligor of such Securities) to make any payment of the principal of (and premium, if any) or interest on the Securities of that series when the same shall be due and payable;

(3) that it will, at any time during the continuance of any failure referred to in the preceding paragraph (a)(2) above, upon the written request of the Trustee, forthwith pay to the Trustee all sums so held in trust by such paying agent; and

(4) that it will perform all other duties of paying agent as set forth in this Indenture.

(b) If the Company shall act as its own paying agent with respect to any series of the Securities, it will on or before each due date of the principal of (and premium, if any) or interest on Securities of that series, set aside, segregate and hold in trust for the benefit of the Persons entitled thereto a sum sufficient to pay such principal (and premium, if any) or interest so becoming due on Securities of that series until such sums shall be paid to such Persons or otherwise disposed of as herein provided and will promptly notify the Trustee of such action, or any failure (by it or any other obligor on such Securities) to take such action. Whenever the Company shall have one or more paying agents for any series of Securities, it will, prior to each due date of the principal of (and premium, if any) or interest on any Securities of that series, deposit with the paying agent a sum sufficient to pay the principal (and premium, if any) or interest so becoming due, such sum to be held in trust for the benefit of the Persons entitled to such principal, premium or interest, and (unless such paying agent is the Trustee) the Company will promptly notify the Trustee of this action or failure so to act.

(c) Notwithstanding anything in this Section to the contrary, (i) the agreement to hold sums in trust as provided in this Section is subject to the provisions of Section 11.05, and (ii) the Company may at any time, for the purpose of obtaining the satisfaction and discharge of this Indenture or for any other purpose, pay, or direct any paying agent to pay, to the Trustee all sums held in trust by the Company or such paying agent, such sums to be held by the Trustee upon the same terms and conditions as those upon which such sums were held by the Company or such paying agent; and, upon such payment by any paying agent to the Trustee, such paying agent shall be released from all further

liability with respect to such money.

SECTION 4.04 Appointment to Fill Vacancy in Office of Trustee.

The Company, whenever necessary to avoid or fill a vacancy in the office of Trustee, will appoint, in the manner provided in Section 7.10, a Trustee, so that there shall at all times be a Trustee hereunder.

SECTION 4.05 Compliance with Consolidation Provisions.

The Company will not, while any of the Securities remain Outstanding, consolidate with or merge into any other Person, in either case where the Company is not the survivor of such transaction, or sell or convey all or substantially all of its property to any other company unless the provisions of Article Ten hereof are complied with.

ARTICLE V

SECURITYHOLDERS' LISTS AND REPORTS BY THE COMPANY AND THE TRUSTEE

SECTION 5.01 Company to Furnish Trustee Names and Addresses of Securityholders.

The Company will furnish or cause to be furnished to the Trustee (a) on each regular record date (as defined in Section 2.03) a list, in such form as the Trustee may reasonably require, of the names and addresses of the holders of each series of Securities as of such regular record date, provided that the Company shall not be obligated to furnish or cause to furnish such list at any time that the list shall not differ in any respect from the most recent list furnished to the Trustee by the Company and (b) at such other times as the Trustee may request in writing within 30 days after the receipt by the Company of any such request, a list of similar form and content as of a date not more than 15 days prior to the time such list is furnished; provided, however, that, in either case, no such list need be furnished for any series for which the Trustee shall be the Security Registrar.

SECTION 5.02 Preservation Of Information; Communications With Securityholders.

(a) The Trustee shall preserve, in as current a form as is reasonably practicable, all information as to the names and addresses of the holders of Securities contained in the most recent list furnished to it as provided in Section 5.01 and as to the names and addresses of holders of Securities received by the Trustee in its capacity as Security Registrar (if acting in such capacity).

(b) The Trustee may destroy any list furnished to it as provided in Section 5.01 upon receipt of a new list so furnished.

(c) Securityholders may communicate as provided in Section 312(b) of the Trust Indenture Act with other Securityholders with respect to their rights under this Indenture or under the Securities.

SECTION 5.03 Reports by the Company.

(a) The Company covenants and agrees to file with the Trustee, within 15 days after the Company is required to file the same with the Commission, copies of the annual reports and of the information, documents and other reports (or copies of such portions of any of the foregoing as the Commission may from time to time by rules and regulations prescribe) that the Company may be required to file with the Commission pursuant to Section 13 or Section 15(d) of the Exchange Act; or, if the Company is not required to file information, documents or reports pursuant to either of such sections, then to file with the Trustee and the Commission, in accordance with the rules and regulations prescribed from time to time by the Commission, such of the supplementary and periodic information, documents and reports that may be required pursuant to Section 13 of the Exchange Act, in respect of a security listed and registered on a national securities exchange as may be prescribed from time to time in such

rules and regulations.

(b) The Company covenants and agrees to file with the Trustee and the Commission, in accordance with the rules and regulations prescribed from to time by the Commission, such additional information, documents and reports with respect to compliance by the Company with the conditions and covenants provided for in this Indenture as may be required from time to time by such rules and regulations.

(c) The Company covenants and agrees to transmit by mail, first class postage prepaid, or reputable overnight delivery service that provides for evidence of receipt, to the Securityholders, as their names and addresses appear upon the Security Register, within 30 days after the filing thereof with the Trustee, such summaries of any information, documents and reports required to be filed by the Company pursuant to subsections (a) and (b) of this Section as may be required by rules and regulations prescribed from time to time by the Commission.

(d) Delivery of such reports, information and documents to the Trustee is for informational purposes only and the Trustee's receipt of such shall not constitute constructive notice of any information contained therein or determinable form information contained therein, including the Company's compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely exclusively on Officers' Certificates).

SECTION 5.04 Reports by the Trustee.

(a) On or before May 15 in each year in which any of the Securities are Outstanding, the Trustee shall transmit by mail, first class postage prepaid, to the Securityholders, as their names and addresses appear upon the Security Register, a brief report dated as of the preceding May 15, if and to the extent required under Section 313(a) of the Trust Indenture Act.

(b) The Trustee shall comply with Section 313(b) and 313(c) of the Trust Indenture Act.

(c) A copy of each such report shall, at the time of such transmission to Securityholders, be filed by the Trustee with the Company, with each stock exchange upon which any Securities are listed (if so listed) and also with the Commission. The Company agrees

to notify the Trustee when any Securities become listed on any stock exchange and of any delisting thereof.

SECTION 5.05 Statement as to Compliance and Default.

(a) The Company will deliver to the Trustee annually, commencing May 1, 2005, a certificate, from its principal executive officer, principal financial officer or principal accounting officer, stating whether or not to the best knowledge of such officer the Company is in compliance (without regard to period of grace or notice requirements) with all conditions and covenants under this Indenture, and if the Company shall not be in compliance, specifying such non-compliance and the nature and status thereof of which such officer may have knowledge.

(b) The Company shall deliver to the Trustee, as soon as possible and in any event within five days after the Company becomes aware of the occurrence of any Event of Default or an event which, with notice or the lapse of time or both, would constitute and Event of Default, an Officers' Certificate setting for the the details of such Event of Default or default and the action which the Company proposes to take with respect thereto.

ARTICLE VI

REMEDIES OF THE TRUSTEE AND SECURITYHOLDERS ON EVENT OF DEFAULT

SECTION 6.01 Events of Default.

(a) Whenever used herein with respect to Securities of a particular series, "Event of Default" means any one or more of the following events that

has occurred and is continuing:

(1) the Company defaults in the payment of any installment of interest upon any of the Securities of that series, as and when the same shall become due and payable, and continuance of such default for a period of 90 days; provided, however, that a valid extension of an interest payment period by the Company in accordance with the terms of any indenture supplemental hereto, shall not constitute a default in the payment of interest for this purpose;

(2) the Company defaults in the payment of the principal of (or premium, if any, on) any of the Securities of that series as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to that series; provided, however, that a valid extension of the maturity of such Securities in accordance with the terms of any indenture supplemental hereto shall not constitute a default in the payment of principal or premium, if any;

(3) the Company fails to observe or perform any other of its covenants or agreements with respect to that series contained in this Indenture or otherwise established with respect to that series of Securities pursuant to Section 2.01 hereof (other than a covenant or agreement that has been expressly included in this Indenture solely for the benefit of one or more series of Securities other than such series) for a period of 90 days after the date on which written notice of such failure, requiring the same to be remedied and stating that such notice is a "Notice of Default" hereunder, shall have been given to the Company by the Trustee, by registered or

certified mail, or to the Company and the Trustee by the holders of at least 25% in principal amount of the Securities of that series at the time Outstanding;

(4) the Company pursuant to or within the meaning of any Bankruptcy Law (i) commences a voluntary case, (ii) consents to the entry of an order for relief against it in an involuntary case, (iii) consents to the appointment of a Custodian of it or for all or substantially all of its property or (iv) makes a general assignment for the benefit of its creditors; or

(5) a court of competent jurisdiction enters an order under any Bankruptcy Law that (i) is for relief against the Company in an involuntary case, (ii) appoints a Custodian of the Company for all or substantially all of its property, or (iii) orders the liquidation of the Company, and the order or decree remains unstayed and in effect for 90 days.

(b) In each and every such case, unless the principal of all the Securities of that series shall have already become due and payable, either the Trustee or the holders of not less than 25% in aggregate principal amount of the Securities of that series then Outstanding hereunder, by notice in writing to the Company (and to the Trustee if given by such Securityholders), may declare the principal of all the Securities of that series to be due and payable immediately, and upon any such declaration the same shall become and shall be immediately due and payable.

(c) At any time after the principal of the Securities of that series shall have been so declared due and payable, and before any judgment or decree for the payment of the moneys due shall have been obtained or entered as hereinafter provided, the holders of a majority in aggregate principal amount of the Securities of that series then Outstanding hereunder, by written notice to the Company and the Trustee, may rescind and annul such declaration and its consequences if: (i) the Company has paid or deposited with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of that series and the principal of (and premium, if any, on) any and all Securities of that series that shall have become due otherwise than by acceleration (with interest upon such principal and premium, if any, and, to the extent that such payment is enforceable under applicable law, upon overdue installments of interest, at the rate per annum expressed in the Securities of that series to the date of such payment or deposit) and the amount payable to the Trustee under Section 7.06, and (ii) any and all Events of Default under the Indenture with respect to such series, other than the nonpayment of principal on Securities of that series that shall not have become due by their terms, shall have been remedied or waived as provided in Section 6.06.

No such rescission and annulment shall extend to or shall affect any subsequent default or impair any right consequent thereon.

(d) In case the Trustee shall have proceeded to enforce any right with respect to Securities of that series under this Indenture and such proceedings shall have been discontinued or abandoned because of such rescission or annulment or for any other reason or shall have been determined adversely to the Trustee, then and in every such case, subject to any determination in such proceedings, the Company and the Trustee shall be restored respectively to their former positions and rights hereunder, and all rights, remedies and powers of the Company and the Trustee shall continue as though no such proceedings had been taken.

SECTION 6.02 Collection of Indebtedness and Suits for Enforcement by Trustee.

(a) The Company covenants that (1) in case it shall default in the payment of any installment of interest on any of the Securities of a series, or any payment required by any sinking or analogous fund established with respect to that series as and when the same shall have become due and payable, and such default shall have continued for a period of 90 Business Days, or (2) in case it shall default in the payment of the principal of (or premium, if any, on) any of the Securities of a series when the same shall have become due and payable, whether upon maturity of the Securities of a series or upon redemption or upon declaration or otherwise, then, upon demand of the Trustee, the Company will pay to the Trustee, for the benefit of the holders of the Securities of that series, the whole amount that then shall have been become due and payable on all such Securities for principal (and premium, if any) or interest, or both, as the case may be, with interest upon the overdue principal (and premium, if any) and (to the extent that payment of such interest is enforceable under applicable law) upon overdue installments of interest at the rate per annum expressed in the Securities of that series; and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, and the amount payable to the Trustee under Section 7.06.

(b) If the Company shall fail to pay such amounts forthwith upon such demand, the Trustee, in its own name and as trustee of an express trust, shall be entitled and empowered to institute any action or proceedings at law or in equity for the collection of the sums so due and unpaid, and may prosecute any such action or proceeding to judgment or final decree, and may enforce any such judgment or final decree against the Company or other obligor upon the Securities of that series and collect the moneys adjudged or decreed to be payable in the manner provided by law out of the property of the Company or other obligor upon the Securities of that series, wherever situated.

(c) In case of any receivership, insolvency, liquidation, bankruptcy, reorganization, readjustment, arrangement, composition or judicial proceedings affected the Company, or its creditors or property, the Trustee shall have power to intervene in such proceedings and take any action therein that may be permitted by the court and shall (except as may be otherwise provided by law) be entitled to file such proofs of claim and other papers and documents as may be necessary or advisable in order to have the claims of the Trustee and of the holders of Securities of such series allowed for the entire amount due and payable by the Company under the Indenture at the date of institution of such proceedings and for any additional amount that may become due and payable by the Company after such date, and to collect and receive any moneys or other property payable or deliverable on any such claim, and to distribute the same after the deduction of the amount payable to the Trustee under Section 7.06; and any receiver, assignee or trustee in bankruptcy or reorganization is hereby authorized by each of the holders of Securities of such series to make such payments to the Trustee, and, in the event that the Trustee shall consent to the making of such payments directly to such Securityholders, to pay to the Trustee any amount due it under Section 7.06.

(d) All rights of action and of asserting claims under this Indenture, or under any of the terms established with respect to Securities of that series, may be enforced by the Trustee without the possession of any of such Securities, or the production thereof at any trial or other

proceeding relative thereto, and any such suit or proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for payment to the Trustee of any amounts due under Section 7.06, be for the ratable benefit of the holders of the Securities of such series.

In case of an Event of Default hereunder, the Trustee may in its discretion proceed to protect and enforce the rights vested in it by this Indenture by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any of such rights, either at law or in equity or in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in the Indenture or in aid of the exercise of any power granted in this Indenture, or to enforce any other legal or equitable right vested in the Trustee by this Indenture or by law.

Nothing contained herein shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Securityholder any plan of reorganization, arrangement, adjustment or composition affecting the Securities of that series or the rights of any holder thereof or to authorize the Trustee to vote in respect of the claim of any Securityholder in any such proceeding.

SECTION 6.03 Application of Moneys Collected.

Any moneys collected by the Trustee pursuant to this Article with respect to a particular series of Securities shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such moneys on account of principal (or premium, if any) or interest, upon presentation of the Securities of that series, and notation thereon the payment, if only partially paid, and upon surrender thereof if fully paid:

FIRST: To the payment of costs and expenses of collection and of all amounts payable to the Trustee under Section 7.06; and

SECOND: To the payment of the amounts then due and unpaid upon Securities of such series for principal (and premium, if any) and interest, in respect of which or for the benefit of which such money has been collected, ratably, without preference or priority of any kind, according to the amounts due and payable on such Securities for principal (and premium, if any) and interest, respectively.

SECTION 6.04 Limitation on Suits.

No holder of any Security of any series shall have any right by virtue or by availing of any provision of this Indenture to institute any suit, action or proceeding in equity or at law upon or under or with respect to this Indenture or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless (i) such holder previously shall have given to the Trustee written notice of an Event of Default and of the continuance thereof with respect to the Securities of such series specifying such Event of Default, as hereinbefore provided; (ii) the holders of not less than 25% in aggregate principal amount of the Securities of such series then Outstanding shall have made written request upon the Trustee to institute such action, suit or proceeding in its own name as trustee hereunder; (iii) such holder or holders shall have offered to the Trustee such

reasonable indemnity as it may require against the costs, expenses and liabilities to be incurred therein or thereby; and (iv) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity, shall have failed to institute any such action, suit or proceeding and (v) during such 60 day period, the holders of a majority in principal amount of the Securities of that series do not give the Trustee a direction inconsistent with the request.

Notwithstanding anything contained herein to the contrary, any other provisions of this Indenture, the right of any holder of any Security to receive payment of the principal of (and premium, if any) and interest on such Security, as therein provided, on or after the respective due dates expressed in such Security (or in the case of redemption, on the redemption date), or to institute suit for the enforcement of any such payment on or after such respective dates

or redemption date, shall not be impaired or affected without the consent of such holder and by accepting a Security hereunder it is expressly understood, intended and covenanted by the taker and holder of every Security of such series with every other such taker and holder and the Trustee, that no one or more holders of Securities of such series shall have any right in any manner whatsoever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of the holders of any other of such Securities, or to obtain or seek to obtain priority over or preference to any other such holder, or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all holders of Securities of such series. For the protection and enforcement of the provisions of this Section, each and every Securityholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

SECTION 6.05 Rights and Remedies Cumulative; Delay or Omission Not Waiver.

(a) Except as otherwise provided in Section 2.07, all powers and remedies given by this Article to the Trustee or to the Securityholders shall, to the extent permitted by law, be deemed cumulative and not exclusive of any other powers and remedies available to the Trustee or the holders of the Securities, by judicial proceedings or otherwise, to enforce the performance or observance of the covenants and agreements contained in this Indenture or otherwise established with respect to such Securities.

(b) No delay or omission of the Trustee or of any holder of any of the Securities to exercise any right or power accruing upon any Event of Default occurring and continuing as aforesaid shall impair any such right or power, or shall be construed to be a waiver of any such default or on acquiescence therein; and, subject to the provisions of Section 6.04, every power and remedy given by this Article or by law to the Trustee or the Securityholders may be exercised from time to time, and as often as shall be deemed expedient, by the Trustee or by the Securityholders.

SECTION 6.06 Control by Securityholders.

The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding, determined in accordance with Section 8.01, shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee with respect to such series; provided, however, that such direction shall not be in conflict with any rule of law or with this

Indenture or be unduly prejudicial to the rights of holders of Securities of any other series at the time Outstanding determined in accordance with Section 8.01. Subject to the provisions of Section 7.01, the Trustee shall have the right to decline to follow any such direction if the Trustee in good faith shall, by a Responsible Officer or Officers of the Trustee, determine that the proceeding so directed would involve the Trustee in personal liability. The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding affected thereby, determined in accordance with Section 8.01, may on behalf of the holders of all of the Securities of such series waive any past default in the performance of any of the covenants contained herein or established pursuant to Section 2.01 with respect to such series and its consequences, except a default in the payment of the principal of, or premium, if any, or interest on, any of the Securities of that series as and when the same shall become due by the terms of such Securities otherwise than by acceleration (unless such default has been cured and a sum sufficient to pay all matured installments of interest and principal and any premium has been deposited with the Trustee (in accordance with Section 6.01(c)). Upon any such waiver, the default covered thereby shall be deemed to be cured for all purposes of this Indenture and the Company, the Trustee and the holders of the Securities of such series shall be restored to their former positions and rights hereunder, respectively; but no such waiver shall extend to any subsequent or other default or impair any right consequent thereon.

SECTION 6.07 Undertaking to Pay Costs.

All parties to this Indenture agree, and each holder of any Securities by such holder's acceptance thereof shall be deemed to have agreed, that any court

may in its discretion require, in any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant but the provisions of this Section shall not apply to any suit instituted by the Trustee, to any suit instituted by any Securityholder, or group of Securityholders, holding more than 10% in aggregate principal amount of the Outstanding Securities of any series, or to any suit instituted by any Securityholder for the enforcement of the payment of the principal of (or premium, if any) or interest on any Security of such series, on or after the respective due dates expressed in such Security or established pursuant to this Indenture.

ARTICLE VII

CONCERNING THE TRUSTEE

SECTION 7.01 Certain Duties and Responsibilities of Trustee.

(a) The Trustee, prior to the occurrence of an Event of Default with respect to the Securities of a series and after the curing of all Events of Default with respect to the Securities of that series that may have occurred, shall undertake to perform with respect to the Securities of such series such duties and only such duties as are specifically set forth in this Indenture, and no implied covenants shall be read into this Indenture against the Trustee. In case an Event of

Default with respect to the Securities of a series has occurred (that has not been cured or waived), the Trustee shall exercise with respect to Securities of that series such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent man would exercise or use under the circumstances in the conduct of his own affairs.

(b) No provision of this Indenture shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act, or its own willful misconduct, except that:

(1) prior to the occurrence of an Event of Default with respect to the Securities of a series and after the curing or waiving of all such Events of Default with respect to that series that may have occurred:

(i) the duties and obligations of the Trustee shall with respect to the Securities of such series be determined solely by the express provisions of this Indenture, and the Trustee shall not be liable with respect to the Securities of such series except for the performance of such duties and obligations as are specifically set forth in this Indenture, and no implied covenants or obligations shall be read into this Indenture against the Trustee; and

(ii) in the absence of bad faith on the part of the Trustee, the Trustee may with respect to the Securities of such series conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but in the case of any such certificates or opinions that by any provision hereof are specifically required to be furnished to the Trustee, the Trustee shall be under a duty to examine the same to determine whether or not they conform to the requirement of this Indenture;

(2) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer or Responsible Officers of the Trustee, unless it shall be proved that the Trustee was negligent in ascertaining the pertinent facts;

(3) the Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the holders of not less than a majority in principal amount of the Securities of

any series at the time Outstanding relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee under this Indenture with respect to the Securities of that series; and

(4) none of the provisions contained in this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur personal financial liability in the performance of any of its duties or in the exercise of any of its rights or powers, if there is reasonable ground for believing that the repayment of such funds or liability is not reasonably assured to it under the terms of this Indenture or adequate indemnity against such risk is not reasonably assured to it.

SECTION 7.02 Certain Rights of Trustee.

Except as otherwise provided in Section 7.01:

(a) The Trustee may conclusively rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, bond, security or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(b) Any request, direction, order or demand of the Company mentioned herein shall be sufficiently evidenced by a Board Resolution or an instrument signed in the name of the Company, by the President or any Vice President and by the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer thereof (unless other evidence in respect thereof is specifically prescribed herein);

(c) The Trustee may consult with counsel and the written advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken or suffered or omitted hereunder in good faith and in reliance thereon;

(d) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Securityholders, pursuant to the provisions of this Indenture, unless such Securityholders shall have offered to the Trustee security or indemnity reasonably satisfactory to the Trustee against the costs, expenses and liabilities that may be incurred therein or thereby; nothing contained herein shall, however, relieve the Trustee of the obligation, upon the occurrence of an Event of Default with respect to a series of the Securities (that has not been cured or waived) to exercise with respect to Securities of that series such of the rights and powers vested in it by this Indenture, and to use the same degree of care and skill in their exercise, as a prudent man would exercise or use under the circumstances in the conduct of his own affairs;

(e) The Trustee shall not be liable for any action taken or omitted to be taken by it in good faith and believed by it to be authorized or within the discretion or rights or powers conferred upon it by this Indenture;

(f) The Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, bond, security or other papers or documents, unless requested in writing so to do by the holders of not less than a majority in principal amount of the Outstanding Securities of the particular series affected thereby (determined as provided in Section 8.04); provided, however, that if the payment within a reasonable time to the Trustee of the costs, expenses or liabilities likely to be incurred by it in the making of such investigation is, in the opinion of the Trustee, not reasonably assured to the Trustee by the security afforded to it by the terms of this Indenture, the Trustee may require reasonable indemnity against such costs, expenses or liabilities as a condition to so proceeding. The reasonable expense of every such examination shall be paid by the Company or, if paid by the Trustee, shall be repaid by the Company upon demand;

(g) The Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys and the Trustee shall not be responsible for any misconduct or negligence on the part of any agent or attorney appointed with due care by it hereunder;

(h) The Trustee shall not be deemed to have notice of any Default or Event of Default unless a Responsible Officer of the Trustee has actual knowledge thereof or unless written notice of any event which is in fact such a default is received by the Trustee at the Corporate Trust Office of the Trustee, and such notice references the Securities and this Indenture;

(i) The rights, privileges, protections, immunities and benefits given to the Trustee, including, without limitation, its right to be indemnified, are extended to, and shall be enforceable by, the Trustee in each of its capacities hereunder, and each agent, custodian and other Person employed to act hereunder; and

(j) The Trustee may request that the Company deliver an Officers' Certificate setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant to the Indenture, which Officers' Certificate may be signed by any person authorized to sign an Officers' Certificate, including any person specified as so authorized in any such certificate previously delivered and not superseded.

SECTION 7.03 Trustee Not Responsible for Recitals or Issuance or Securities.

(a) The recitals contained herein and in the Securities shall be taken as the statements of the Company, and the Trustee assumes no responsibility for the correctness of the same.

(b) The Trustee makes no representations as to the validity or sufficiency of this Indenture or of the Securities.

(c) The Trustee shall not be accountable for the use or application by the Company of any of the Securities or of the proceeds of such Securities, or for the use or application of any moneys paid over by the Trustee in accordance with any provision of this Indenture or established pursuant to Section 2.01, or for the use or application of any moneys received by any paying agent other than the Trustee.

SECTION 7.04 May Hold Securities.

The Trustee or any paying agent or Security Registrar, in its individual or any other capacity, may become the owner or pledgee of Securities with the same rights it would have if it were not Trustee, paying agent or Security Registrar.

SECTION 7.05 Moneys Held in Trust.

Subject to the provisions of Section 11.05, all moneys received by the Trustee shall, until used or applied as herein provided, be held in trust for the purposes for which they were received, but need not be segregated from other funds except to the extent required by law. The

Trustee shall be under no liability for interest on any moneys received by it hereunder except such as it may agree with the Company to pay thereon.

SECTION 7.06 Compensation and Reimbursement.

(a) The Company covenants and agrees to pay to the Trustee, and the Trustee shall be entitled to, such reasonable compensation (which shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust), as the Company and the Trustee may from time to time agree in writing, for all services rendered by it in the execution of the trusts hereby created and in the exercise and performance of any of the powers and duties hereunder of the Trustee, and, except as otherwise expressly provided herein, the Company will pay or reimburse the Trustee upon its request for all reasonable expenses, disbursements and advances incurred or made by the Trustee

in accordance with any of the provisions of this Indenture (including the reasonable compensation and the expenses and disbursements of its counsel and of all Persons not regularly in its employ) except any such expense, disbursement or advance as may arise from its negligence or bad faith. The Company also covenants to indemnify the Trustee (and its officers, agents, directors and employees) for, and to hold it harmless against, any loss, liability, damage, claim or expense, including taxes (other than taxes based upon, measured by or determined by the income of the Trustee), incurred without negligence or bad faith on the part of the Trustee and arising out of or in connection with the acceptance or administration of this trust, including the costs and expenses of defending itself against any claim (whether asserted by any Holder or any other Person)..

(b) The obligations of the Company under this Section to compensate and indemnify the Trustee and to pay or reimburse the Trustee for expenses, disbursements and advances shall constitute additional indebtedness hereunder. Such additional indebtedness shall be secured by a lien prior to that of the Securities upon all property and funds held or collected by the Trustee as such, except funds held in trust for the benefit of the holders of particular Securities.

(c) When the Trustee incurs expenses or renders services in connection with an Event of Default specified in Section 6.01(a)(4) or Section 6.01(a)(5), the expenses (including the reasonable charges and expenses of its counsel) and the compensation for the services are intended to constitute expenses of administration under any applicable Federal or state bankruptcy, insolvency or other similar law.

The provisions of this Section shall survive the termination of the Indenture.

SECTION 7.07 Reliance on Officers' Certificate.

Except as otherwise provided in Section 7.01, whenever in the administration of the provisions of this Indenture the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering or omitting to take any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may, in the absence of negligence or bad faith on the part of the Trustee, be deemed to be conclusively proved and established by an Officers' Certificate delivered to the Trustee and such certificate, in the absence of negligence or bad faith on the part of the Trustee, shall be full warrant to the

Trustee for any action taken, suffered or omitted to be taken by it under the provisions of this Indenture upon the faith thereof.

SECTION 7.08 Disqualification; Conflicting Interests.

If the Trustee has or shall acquire any "conflicting interest" within the meaning of Section 310(b) of the Trust Indenture Act, the Trustee and the Company shall in all respects comply with the provisions of Section 310(b) of the Trust Indenture Act.

SECTION 7.09 Corporate Trustee Required; Eligibility.

There shall at all times be a Trustee with respect to the Securities issued hereunder which shall at all times be a corporation organized and doing business under the laws of the United States of America or any State or Territory thereof or of the District of Columbia, or a corporation or other Person permitted to act as trustee by the Commission, authorized under such laws to exercise corporate trust powers, having a combined capital and surplus of at least 50 million U.S. dollars ($50,000,000), and subject to supervision or examination by Federal, State, Territorial or District of Columbia authority. If such corporation publishes reports of condition at least annually, pursuant to law or to the requirements of the aforesaid supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such corporation shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. The Company may not, nor may any Person directly or indirectly controlling, controlled by or under common control with the Company, serve as Trustee. In case at any time the Trustee

shall cease to be eligible in accordance with the provisions of this Section, the Trustee shall resign immediately in the manner and with the effect specified in Section 7.10.

SECTION 7.10 Resignation and Removal; Appointment of Successor.

(a) The Trustee or any successor hereafter appointed, may at any time resign with respect to the Securities of one or more series by giving written notice thereof to the Company and by transmitting notice of resignation by mail, first class postage prepaid, to the Securityholders of such series, as their names and addresses appear upon the Security Register. Upon receiving such notice of resignation, the Company shall promptly appoint a successor trustee with respect to Securities of such series by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee. If no successor trustee shall have been so appointed and have accepted appointment within 30 days after the mailing of such notice of resignation, the resigning Trustee may, at the Company's expense, petition any court of competent jurisdiction for the appointment of a successor trustee with respect to Securities of such series, or any Securityholder of that series who has been a bona fide holder of a Security or Securities for at least six months may on behalf of himself and all others similarly situated, petition any such court for the appointment of a successor trustee. Such court may thereupon after such notice, if any, as it may deem proper and prescribe, appoint a successor trustee.

(b) In case at any time any one of the following shall occur:

(1) the Trustee shall fail to comply with the provisions of Section 7.08 after written request therefor by the Company or by any Securityholder who has been a bona fide holder of a Security or Securities for at least six months; or

(2) the Trustee shall cease to be eligible in accordance with the provisions of Section 7.09 and shall fail to resign after written request therefor by the Company or by any such Securityholder; or

(3) the Trustee shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or commence a voluntary bankruptcy proceeding, or a receiver of the Trustee or of its property shall be appointed or consented to, or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation,

then, in any such case, the Company may remove the Trustee with respect to all Securities and appoint a successor trustee by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor trustee, or, unless the Trustee's duty to resign is stayed as provided herein, any Securityholder who has been a bona fide holder of a Security or Securities for at least six months may, on behalf of that holder and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee. Such court may thereupon after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

(c) The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding may at any time remove the Trustee with respect to such series by so notifying the Trustee and the Company and may appoint a successor Trustee for such series with the consent of the Company.

(d) Any resignation or removal of the Trustee and appointment of a successor trustee with respect to the Securities of a series pursuant to any of the provisions of this Section shall become effective upon acceptance of appointment by the successor trustee as provided in Section 7.11.

(e) Any successor trustee appointed pursuant to this Section may be appointed with respect to the Securities of one or more series or all of such series, and at any time there shall be only one Trustee with respect to the

Securities of any particular series.

SECTION 7.11 Acceptance of Appointment By Successor.

(a) In case of the appointment hereunder of a successor trustee with respect to all Securities, every such successor trustee so appointed shall execute, acknowledge and deliver to the Company and to the retiring Trustee an instrument accepting such appointment, and thereupon the resignation or removal of the retiring Trustee shall become effective and such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee; but, on the request of the Company or the successor trustee, such retiring Trustee shall, upon payment of its charges, execute and deliver an

instrument transferring to such successor trustee all the rights, powers and trusts of the retiring Trustee and shall duly assign, transfer and deliver to such successor trustee all property and money held by such retiring Trustee hereunder.

(b) In case of the appointment hereunder of a successor trustee with respect to the Securities of one or more (but not all) series, the Company, the retiring Trustee and each successor trustee with respect to the Securities of one or more series shall execute and deliver an indenture supplemental hereto wherein each successor trustee shall accept such appointment and which (1) shall contain such provisions as shall be necessary or desirable to transfer and confirm to, and to vest in, each successor trustee all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor trustee relates, (2) shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series as to which the retiring Trustee is not retiring shall continue to be vested in the retiring Trustee, and (3) shall add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee, it being understood that nothing herein or in such supplemental indenture shall constitute such Trustees co-trustees of the same trust, that each such Trustee shall be trustee of a trust or trusts hereunder separate and apart from any trust or trusts hereunder administered by any other such Trustee and that no Trustee shall be responsible for any act or failure to act on the part of any other Trustee hereunder; and upon the execution and delivery of such supplemental indenture the resignation or removal of the retiring Trustee shall become effective to the extent provided therein, such retiring Trustee shall with respect to the Securities of that or those series to which the appointment of such successor trustee relates have no further responsibility for the exercise of rights and powers or for the performance of the duties and obligations vested in the Trustee under this Indenture, and each such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor trustee relates; but, on request of the Company or any successor trustee, such retiring Trustee shall duly assign, transfer and deliver to such successor trustee, to the extent contemplated by such supplemental indenture, the property and money held by such retiring Trustee hereunder with respect to the Securities of that or those series to which the appointment of such successor trustee relates.

(c) Upon request of any such successor trustee, the Company shall execute any and all instruments for more fully and certainly vesting in and confirming to such successor trustee all such rights, powers and trusts referred to in paragraph (a) or (b) of this Section, as the case may be.

(d) No successor trustee shall accept its appointment unless at the time of such acceptance such successor trustee shall be qualified and eligible under this Article.

(e) Upon acceptance of appointment by a successor trustee as provided in this Section, the Company shall transmit notice of the succession of such trustee hereunder by mail, first class postage prepaid, to the Securityholders, as their names and addresses appear upon the Security Register. If the Company fails to transmit such notice within ten days after acceptance

of appointment by the successor trustee, the successor trustee shall cause such notice to be transmitted at the expense of the Company.

SECTION 7.12 Merger, Conversion, Consolidation or Succession to Business.

Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to the corporate trust business of the Trustee, shall be the successor of the Trustee hereunder, provided that such corporation shall be qualified under the provisions of Section 7.08 and eligible under the provisions of Section 7.09, without the execution or filing of any paper or any further act on the part of any of the parties hereto, anything herein to the contrary notwithstanding. In case any Securities shall have been authenticated, but not delivered, by the Trustee then in office, any successor by merger, conversion or consolidation to such authenticating Trustee may adopt such authentication and deliver the Securities so authenticated with the same effect as if such successor Trustee had itself authenticated such Securities.

SECTION 7.13 Preferential Collection of Claims Against the Company.

The Trustee shall comply with Section 311(a) of the Trust Indenture Act, excluding any creditor relationship described in Section 311(b) of the Trust Indenture Act. A Trustee who has resigned or been removed shall be subject to Section 311(a) of the Trust Indenture Act to the extent included therein.

ARTICLE VIII

CONCERNING THE SECURITYHOLDERS

SECTION 8.01 Evidence of Action by Securityholders.

Whenever in this Indenture it is provided that the holders of a majority or specified percentage in aggregate principal amount of the Securities of a particular series may take any action (including the making of any demand or request, the giving of any notice, consent or waiver or the taking of any other action), the fact that at the time of taking any such action the holders of such majority or specified percentage of that series have joined therein may be evidenced by any instrument or any number of instruments of similar tenor executed by such holders of Securities of that series in Person or by agent or proxy appointed in writing.

If the Company shall solicit from the Securityholders of any series any request, demand, authorization, direction, notice, consent, waiver or other action, the Company may, at its option, as evidenced by an Officers' Certificate, fix in advance a record date for such series for the determination of Securityholders entitled to give such request, demand, authorization, direction, notice, consent, waiver or other action, but the Company shall have no obligation to do so. If such a record date is fixed, such request, demand, authorization, direction, notice, consent, waiver or other action may be given before or after the record date, but only the Securityholders of record at the close of business on the record date shall be deemed to be Securityholders for the purposes of determining whether Securityholders of the requisite proportion of Outstanding

Securities of that series have authorized or agreed or consented to such request, demand, authorization, direction, notice, consent, waiver or other action, and for that purpose the Outstanding Securities of that series shall be computed as of the record date; provided, however, that no such authorization, agreement or consent by such Securityholders on the record date shall be deemed effective unless it shall become effective pursuant to the provisions of this Indenture not later than six months after the record date.

SECTION 8.02 Proof of Execution by Securityholders.

Subject to the provisions of Section 7.01, proof of the execution of any

instrument by a Securityholder (such proof will not require notarization) or his agent or proxy and proof of the holding by any Person of any of the Securities shall be sufficient if made in the following manner:

(1) The fact and date of the execution by any such Person of any instrument may be proved in any reasonable manner acceptable to the Trustee.

(2) The ownership of Securities shall be proved by the Security Register of such Securities or by a certificate of the Security Registrar thereof.

(3) The Trustee may require such additional proof of any matter referred to in this Section as it shall deem necessary.

SECTION 8.03 Who May be Deemed Owners.

Prior to the due presentment for registration of transfer of any Security, the Company, the Trustee, any paying agent and any Security Registrar may deem and treat the Person in whose name such Security shall be registered upon the books of the Company as the absolute owner of such Security (whether or not such Security shall be overdue and notwithstanding any notice of ownership or writing thereon made by anyone other than the Security Registrar) for the purpose of receiving payment of or on account of the principal of, premium, if any, and (subject to Section 2.03) interest on such Security and for all other purposes; and neither the Company nor the Trustee nor any paying agent nor any Security Registrar shall be affected by any notice to the contrary.

SECTION 8.04 Certain Securities Owned by Company Disregarded.

In determining whether the holders of the requisite aggregate principal amount of Securities of a particular series have concurred in any direction, consent of waiver under this Indenture, the Securities of that series that are owned by the Company or any other obligor on the Securities of that series or by any Person directly or indirectly controlling or controlled by or under common control with the Company or any other obligor on the Securities of that series shall be disregarded and deemed not to be Outstanding for the purpose of any such determination, except that for the purpose of determining whether the Trustee shall be protected in relying on any such direction, consent or waiver, only Securities of such series that a Responsible Officer of the Trustee actually knows are so owned shall be so disregarded. The Securities so owned that have been pledged in good faith may be regarded as Outstanding for the

purposes of this Section, if the pledgee shall establish to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not a Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Company or any such other obligor. In case of a dispute as to such right, any decision by the Trustee taken upon the advice of counsel shall be full protection to the Trustee.

SECTION 8.05 Actions Binding on Future Securityholders.

At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 8.01, of the taking of any action by the holders of the majority or percentage in aggregate principal amount of the Securities of a particular series specified in this Indenture in connection with such action, any holder of a Security of that series that is shown by the evidence to be included in the Securities the holders of which have consented to such action may, by filing written notice with the Trustee, and upon proof of holding as provided in Section 8.02, revoke such action so far as concerns such Security. Except as aforesaid any such action taken by the holder of any Security shall be conclusive and binding upon such holder and upon all future holders and owners of such Security, and of any Security issued in exchange therefor, on registration of transfer thereof or in place thereof, irrespective of whether or not any notation in regard thereto is made upon such Security. Any action taken by the holders of the majority or percentage in aggregate principal amount of the Securities of a particular series specified in this Indenture in connection with such action shall be conclusively binding upon the Company, the Trustee and the holders of all the Securities of that series.

ARTICLE IX

SUPPLEMENTAL INDENTURES

SECTION 9.01 Supplemental Indentures Without the Consent of Securityholders.

In addition to any supplemental indenture otherwise authorized by this Indenture, the Company and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust Indenture Act as then in effect), without the consent of the Securityholders, for one or more of the following purposes:

(a) to cure any ambiguity, defect or inconsistency herein or in the Securities of any series;

(b) to comply with Article Ten;

(c) to provide for uncertificated Securities in addition to or in place of certificated Securities;

(d) to add to the covenants of the Company for the benefit of the holders of all or any series of Securities (and if such covenants are to be for the benefit of less than all series of Securities, stating that such covenants are expressly being included solely for the benefit of such series) or to surrender any right or power herein conferred upon the Company;

(e) to add to, delete from or revise the conditions, limitations and restrictions on the authorized amount, terms, purposes of issue, authentication and delivery of Securities, as herein set forth;

(f) to make any change that does not adversely affect the rights of any Securityholder in any material respect; or

(g) to provide for the issuance of and establish the form and terms and conditions of the Securities of any series as provided in Section 2.01, to establish the form of any certifications required to be furnished pursuant to the terms of this Indenture or any series of Securities, or to add to the rights of the holders of any series of Securities.

The Trustee is hereby authorized to join with the Company in the execution of any such supplemental indenture, and to make any further appropriate agreements and stipulations that may be therein contained, but the Trustee shall not be obligated to enter into any such supplemental indenture that affects the Trustee's own rights, duties or immunities under this Indenture or otherwise.

Any supplemental indenture authorized by the provisions of this Section may be executed by the Company and the Trustee without the consent of the holders of any of the Securities at the time Outstanding, notwithstanding any of the provisions of Section 9.02.

SECTION 9.02 Supplemental Indentures With Consent of Securityholders.

With the consent (evidenced as provided in Section 8.01) of the holders of not less than a majority in aggregate principal amount of the Securities of each series affected by such supplemental indenture or indentures at the time Outstanding, the Company, when authorized by Board Resolutions, and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust Indenture Act as then in effect) for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of any supplemental indenture or of modifying in any manner not covered by Section 9.01 the rights of the holders of the Securities of such series under this Indenture; provided, however, that no such supplemental indenture shall, without the consent of the holders of each Security then Outstanding and affected thereby, (i) extend the fixed maturity of any Securities of any series, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon, or reduce any premium payable upon the redemption thereof or (ii) reduce the aforesaid percentage of Securities, the holders of which are required to consent to any such supplemental indenture.

It shall not be necessary for the consent of the Securityholders of any series affected thereby under this Section to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such consent shall approve the substance thereof.

SECTION 9.03 Effect of Supplemental Indentures.

Upon the execution of any supplemental indenture pursuant to the provisions of this Article or of Section 10.01, this Indenture shall, with respect to such series, be and be deemed to

be modified and amended in accordance therewith and the respective rights, limitations of rights, obligations, duties and immunities under this Indenture of the Trustee, the Company and the holders of Securities of the series affected thereby shall thereafter be determined, exercised and enforced hereunder subject in all respects to such modifications and amendments, and all the terms and conditions of any such supplemental indenture shall be and be deemed to be part of the terms and conditions of this Indenture for any and all purposes.

SECTION 9.04 Securities Affected by Supplemental Indentures.

Securities of any series affected by a supplemental indenture, authenticated and delivered after the execution of such supplemental indenture pursuant to the provisions of this Article or of Section 10.01, may bear a notation in form approved by the Company, provided such form meets the requirements of any exchange upon which such series may be listed, as to any matter provided for in such supplemental indenture. If the Company shall so determine, new Securities of that series so modified as to conform, in the opinion of the Board of Directors of the Company, to any modification of this Indenture contained in any such supplemental indenture may be prepared by the Company, authenticated by the Trustee and delivered in exchange for the Securities of that series then Outstanding.

SECTION 9.05 Execution of Supplemental Indentures.

Upon the request of the Company, accompanied by its Board Resolutions authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Securityholders required to consent thereto as aforesaid, the Trustee shall join with the Company in the execution of such supplemental indenture unless such supplemental indenture affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion but shall not be obligated to enter into such supplemental indenture. The Trustee, subject to the provisions of Section 7.01, may receive an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant to this Article is authorized or permitted by, and conforms to, the terms of this Article and that it is proper for the Trustee under the provisions of this Article to join in the execution thereof; provided, however, that such Opinion of Counsel need not be provided in connection with the execution of a supplemental indenture that establishes the terms of a series of Securities pursuant to Section 2.01 hereof.

Promptly after the execution by the Company and the Trustee of any supplemental indenture pursuant to the provisions of this Section, the Trustee shall transmit by mail, first class postage prepaid, a notice, setting forth in general terms the substance of such supplemental indenture, to the Securityholders of all series affected thereby as their names and addresses appear upon the Security Register. Any failure of the Trustee to mail such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture.

ARTICLE X

SUCCESSOR ENTITY

SECTION 10.01 Company May Consolidate, Etc.

Nothing contained in this Indenture or in any of the Securities shall

prevent any consolidation or merger of the Company with or into any other Person (whether or not affiliated with the Company) or successive consolidations or mergers in which the Company or its successor or successors shall be a party or parties, or shall prevent any sale, conveyance, transfer or other disposition of the property of the Company or its successor or successors as an entirety, or substantially as an entirety, to any other corporation (whether or not affiliated with the Company or its successor or successors) authorized to acquire and operate the same; provided, however, the Company hereby covenants and agrees that, upon any such consolidation or merger (in each case, if the Company is not the survivor of such transaction), sale, conveyance, transfer or other disposition, the due and punctual payment of the principal of (premium, if any) and interest on all of the Securities of all series in accordance with the terms of each series, according to their tenor and the due and punctual performance and observance of all the covenants and conditions of this Indenture with respect to each series or established with respect to such series pursuant to Section 2.01 to be kept or performed by the Company shall be expressly assumed, by supplemental indenture (which shall conform to the provisions of the Trust Indenture Act, as then in effect) satisfactory in form to the Trustee executed and delivered to the Trustee by the entity formed by such consolidation, or into which the Company shall have been merged, or by the entity which shall have acquired such property.

SECTION 10.02 Successor Entity Substituted.

(a) In case of any such consolidation, merger, sale, conveyance, transfer or other disposition and upon the assumption by the successor entity by supplemental indenture, executed and delivered to the Trustee and satisfactory in form to the Trustee, of the due and punctual payment of the principal of, premium, if any, and interest on all of the Securities of all series Outstanding and the due and punctual performance of all of the covenants and conditions of this Indenture or established with respect to each series of the Securities pursuant to Section 2.01 to be performed by the Company with respect to each series, such successor entity shall succeed to and be substituted for the Company with the same effect as if it had been named as the Company herein, and thereupon the predecessor corporation shall be relieved of all obligations and covenants under this Indenture and the Securities.

(b) In case of any such consolidation, merger, sale, conveyance, transfer or other disposition such changes in phraseology and form (but not in substance) may be made in the Securities thereafter to be issued as may be appropriate.

(c) Nothing contained in this Article shall apply to a consolidation or merger of any Person into the Company where the Company is the survivor of such transaction, or the acquisition by the Company, by purchase or otherwise, of all or any part of the property of any other Person (whether or not affiliated with the Company).

SECTION 10.03 Evidence of Consolidation, Etc. to Trustee.

The Trustee, subject to the provisions of Section 7.01, may receive an Opinion of Counsel as conclusive evidence that any such consolidation, merger, sale, conveyance, transfer or other disposition, and any such assumption, comply with the provisions of this Article.

ARTICLE XI

SATISFACTION AND DISCHARGE

SECTION 11.01 Satisfaction and Discharge of Indenture.

If at any time: (a) the Company shall have delivered to the Trustee for cancellation all Securities of a series theretofore authenticated (other than any Securities that have been destroyed, lost or stolen and that have been replaced or paid as provided in Section 2.07) and Securities for whose payment money or Governmental Obligations have theretofore been deposited in trust or segregated and held in trust by the Company (and thereupon repaid to the Company or discharged from such trust, as provided in Section 11.05); or (b) all such Securities of a particular series not theretofore delivered to the Trustee for cancellation shall have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one

year under arrangements satisfactory to the Trustee for the giving of notice of redemption, and the Company shall deposit or cause to be deposited with the Trustee as trust funds the entire amount in moneys or Governmental Obligations sufficient or a combination thereof, sufficient in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay at maturity or upon redemption all Securities of that series not theretofore delivered to the Trustee for cancellation, including principal (and premium, if any) and interest due or to become due to such date of maturity or date fixed for redemption, as the case may be, and if the Company shall also pay or cause to be paid all other sums payable hereunder with respect to such series by the Company then this Indenture shall thereupon cease to be of further effect with respect to such series except for the provisions of Sections 2.03, 2.05, 2.07, 4.01, 4.02, 4.03 and 7.10, that shall survive until the date of maturity or redemption date, as the case may be, and Sections 7.06 and 11.05, that shall survive to such date and thereafter, and the Trustee, on demand of the Company and at the cost and expense of the Company, shall execute proper instruments acknowledging satisfaction of and discharging this Indenture with respect to such series.

SECTION 11.02 Discharge of Obligations.

If at any time all such Securities of a particular series not heretofore delivered to the Trustee for cancellation or that have not become due and payable as described in Section 11.01 shall have been paid by the Company by depositing irrevocably with the Trustee as trust funds moneys or an amount of Governmental Obligations sufficient to pay at maturity or upon redemption all such Securities of that series not theretofore delivered to the Trustee for cancellation, including principal (and premium, if any) and interest due or to become due to such date of maturity or date fixed for redemption, as the case may be, and if the Company shall also pay or cause to be paid all other sums payable hereunder by the Company with respect to such series, then after the date such moneys or Governmental Obligations, as the case may be, are

deposited with the Trustee the obligations of the Company under this Indenture with respect to such series shall cease to be of further effect except for the provisions of Sections 2.03, 2.05, 2.07, 4,01, 4.02, 4,03, 7.06, 7.10 and 11.05 hereof that shall survive until such Securities shall mature and be paid. Thereafter, Sections 7.06 and 11.05 shall survive.

SECTION 11.03 Deposited Moneys to be Held in Trust.

All moneys or Governmental Obligations deposited with the Trustee pursuant to Sections 11.01 or 11.02 shall be held in trust and shall be available for payment as due, either directly or through any paying agent (including the Company acting as its own paying agent), to the holders of the particular series of Securities for the payment or redemption of which such moneys or Governmental Obligations have been deposited with the Trustee.

SECTION 11.04 Payment of Moneys Held by Paying Agents.

In connection with the satisfaction and discharge of this Indenture all moneys or Governmental Obligations then held by any paying agent under the provisions of this Indenture shall, upon demand of the Company, be paid to the Trustee and thereupon such paying agent shall be released from all further liability with respect to such moneys or Governmental Obligations.

SECTION 11.05 Repayment to Company.

Any moneys or Governmental Obligations deposited with any paying agent or the Trustee, or then held by the Company, in trust for payment of principal of or premium, if any, or interest on the Securities of a particular series that are not applied but remain unclaimed by the holders of such Securities for at least two years after the date upon which the principal of (and premium, if any) or interest on such Securities shall have respectively become due and payable, shall be repaid to the Company on May 31 of each year or (if then held by the Company) shall be discharged from such trust; and thereupon the paying agent and the Trustee shall be released from all further liability with respect to such moneys or Governmental Obligations, and the holder of any of the Securities entitled to receive such payment shall thereafter, as an unsecured general creditor, look only to the Company for the payment thereof.

ARTICLE XII

IMMUNITY OF INCORPORATORS, STOCKHOLDERS, OFFICERS AND DIRECTORS

SECTION 12.01 No Recourse.

No recourse under or upon any obligation, covenant or agreement of this Indenture, or of any Security, or for any claim based thereon or otherwise in respect thereof, shall be had against any incorporator, stockholder, officer or director, past, present or future as such, of the Company or of any predecessor or successor corporation, either directly or through the Company or any such predecessor or successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly understood that this Indenture and the obligations issued hereunder are solely corporate

obligations, and that no such personal liability whatever shall attach to, or is or shall be incurred by, the incorporators, stockholders, officers or directors as such, of the Company or of any predecessor or successor corporation, or any of them, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom; and that any and all such personal liability of every name and nature, either at common law or in equity or by constitution or statute, of, and any and all such rights and claims against, every such incorporator, stockholder, officer or director as such, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom, are hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issuance of such Securities.

ARTICLE XIII

MISCELLANEOUS PROVISIONS

SECTION 13.01 Effect on Successors and Assigns.

All the covenants, stipulations, promises and agreements in this Indenture contained by or on behalf of the Company shall bind its successors and assigns, whether so expressed or not.

SECTION 13.02 Actions by Successor.

Any act or proceeding by any provision of this Indenture authorized or required to be done or performed by any board, committee or officer of the Company shall and may be done and performed with like force and effect by the corresponding board, committee or officer of any corporation that shall at the time be the lawful successor of the Company.

SECTION 13.03 Surrender of Company Powers.

The Company by instrument in writing executed by authority of its Board of Directors and delivered to the Trustee may surrender any of the powers reserved to the Company, and thereupon such power so surrendered shall terminate both as to the Company and as to any successor corporation.

SECTION 13.04 Notices.

Except as otherwise expressly provided herein any notice or demand that by any provision of this Indenture is required or permitted to be given or served by the Trustee or by the holders of Securities to or on the Company may be given or served by being deposited first class postage prepaid in a post-office letterbox addressed (until another address is filed in writing by the Company with the Trustee), as follows: Transkaryotic Therapies, Inc., 700 Main Street, Cambridge, MA 02139, Attention: Chief Financial Officer. Any notice, election, request or demand by the Company or any Securityholder to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or made in writing at the Corporate Trust Office of the Trustee.

SECTION 13.05 Governing Law.

This Indenture and each Security shall be deemed to be a contract made under the internal laws of the State of New York, and for all purposes shall be construed in accordance with the laws of said State.

SECTION 13.06 Treatment of Securities as Debt.

It is intended that the Securities will be treated as indebtedness and not as equity for federal income tax purposes. The provisions of this Indenture shall be interpreted to further this intention.

SECTION 13.07 Compliance Certificates and Opinions.

(a) Upon any application or demand by the Company to the Trustee to take any action under any of the provisions of this Indenture, the Company shall furnish to the Trustee an Officers' Certificate stating that all conditions precedent provided for in this Indenture relating to the proposed action have been complied with and an Opinion of Counsel stating that in the opinion of such counsel all such conditions precedent have been complied with, except that in the case of any such application or demand as to which the furnishing of such documents is specifically required by any provision of this Indenture relating to such particular application or demand, no additional certificate or opinion need be furnished.

(b) Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant in this Indenture shall include (1) a statement that the Person making such certificate or opinion has read such covenant or condition; (2) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based; (3) a statement that, in the opinion of such Person, he has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and (4) a statement as to whether or not, in the opinion of such Person, such condition or covenant has been complied with.

SECTION 13.08 Payments on Business Days.

Except as provided pursuant to Section 2.01 pursuant to a Board Resolution, and as set forth in an Officers' Certificate, or established in one or more indentures supplemental to this Indenture, in any case where the date of maturity of interest or principal of any Security or the date of redemption of any Security shall not be a Business Day, then payment of interest or principal (and premium, if any) may be made on the next succeeding Business Day with the same force and effect as if made on the nominal date of maturity or redemption, and no interest shall accrue for the period after such nominal date.

SECTION 13.09 Conflict with Trust Indenture Act.

If and to the extent that any provision of this Indenture limits, qualifies or conflicts with the duties imposed by Sections 310 to 317, inclusive, of the Trust Indenture Act, such imposed duties shall control.

SECTION 13.10 Counterparts.

This Indenture may be executed in any number of counterparts, each of which shall be an original, but such counterparts shall together constitute but one and the same instrument.

SECTION 13.11 Separability.

In case any one or more of the provisions contained in this Indenture or in the Securities of any series shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Indenture or of

such Securities, but this Indenture and such Securities shall be construed as if such invalid or illegal or unenforceable provision had never been contained herein or therein.

SECTION 13.12 Assignment.

The Company will have the right at all times to assign any of its rights or obligations under this Indenture to a direct or indirect wholly owned Subsidiary of the Company, provided that, in the event of any such assignment, the Company will remain liable for all such obligations. Subject to the foregoing, the Indenture is binding upon and inures to the benefit of the parties thereto and their respective successors and assigns. This Indenture may not otherwise be assigned by the parties thereto.

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed all as of the day and year first above written.

TRANSKARYOTIC THERAPIES, INC.

By: /s/ Michael J. Astrue
_____
Name: Michael J. Astrue
Title: President and CEO

THE BANK OF NEW YORK,
as Trustee

By: /s/ Kisha Holder
_____
Name: Kisha A. Holder
Title: Assistant Vice President

EXHIBIT 4.3

FIRST SUPPLEMENTAL INDENTURE

BETWEEN

TRANSKARYOTIC THERAPIES, INC.

AND

THE BANK OF NEW YORK

MAY 4, 2004

TO INDENTURE
DATED AS OF MAY 4, 2004
PROVIDING FOR THE ISSUANCE
OF SENIOR DEBT SECURITIES

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TRANSKARYOTIC THERAPIES, INC.

FIRST SUPPLEMENTAL INDENTURE

THIS FIRST SUPPLEMENTAL INDENTURE to the Indenture (as defined below), dated as of May 4, 2004, is made between Transkaryotic Therapies, Inc., a Delaware corporation (the "COMPANY") and The Bank of New York, a New York banking corporation, as trustee (the "TRUSTEE"). All terms defined in the Indenture and used in this Supplemental Indenture but not specifically defined herein are used herein as so defined.

W I T N E S S E T H

WHEREAS, the Company has executed and delivered to the Trustee an Indenture, of even date herewith (the "INDENTURE"), providing for the issuance from time to time of its debentures, notes, bonds or other evidence of indebtedness in one or more fully registered series;

WHEREAS, the Indenture provides for the Company's issuance from time to time of senior unsecured debt securities;

WHEREAS, no Securities have heretofore been issued under the indenture and no securityholders currently exist thereunder;

WHEREAS, Section 9.01(g) of the Indenture provides that the Company and the Trustee may from time to time without the consent of any Securityholders enter into one or more indentures supplemental to the Indenture to establish the form and terms of Securities of any series, including redemption, conversion and repurchase terms and procedures;

WHEREAS, Section 2.01 of the Indenture provides that the Company may enter into supplemental indentures to establish the terms and provisions of a series of Securities issued pursuant to the Indenture;

WHEREAS, the Company desires to issue a series of 1.25% senior convertible notes due May 15, 2011 under the Indenture, and has duly authorized the creation and issuance of such notes and the execution and delivery of this Supplemental Indenture to modify the Indenture and provide certain additional provisions as hereinafter described;

WHEREAS, the Company and the Trustee deem it advisable to enter into this Supplemental Indenture for the purpose of establishing the terms of such convertible senior debt securities and providing for the rights, obligations and duties of the Trustee with respect to such debt securities;

WHEREAS, concurrent with the execution hereof, the Company has delivered an Officers' Certificate and has caused its counsel to deliver to the Trustee an Opinion of Counsel or a reliance letter upon an Opinion of Counsel to the effect that the execution of this Supplemental Indenture is authorized or permitted by the Indenture;

WHEREAS, all conditions and requirements of the Indenture necessary to make this Supplemental Indenture a valid, binding and legal instrument in accordance with its terms have been performed and fulfilled by the parties hereto.

NOW THEREFORE:

In consideration of the premises provided for herein, the Company and the Trustee mutually covenant and agree for the equal and proportionate benefit of all Holders of the Securities as follows:

ARTICLE ONE

THE 2011 NOTES

SECTION 101. DESIGNATION OF 2011 NOTES; ESTABLISHMENT OF FORM.

There shall be a series of securities designated "1.25% Senior Convertible Notes Due May 15, 2011" of the Company (the "2011 NOTES"), and the form thereof shall be substantially as set forth in Annex A hereto, which is incorporated into and shall be deemed a part of this First Supplemental Indenture, in each case with such appropriate insertions, omissions, substitutions and other variations as are required or permitted by the Indenture, and which may have such letters, numbers or other marks of identification and such legends or endorsements placed thereon as may be required to comply with the rules of any securities exchange or as may, consistently herewith, be determined by the officers of the Company executing such 2011 Notes, as evidenced by their execution of the 2011 Notes.

Securities of this series need not be issued at the same time and, unless specifically provided otherwise, this series may be reopened, without the consent of the Holders, for issuances of additional securities of such series.

The 2011 Notes will initially be issued in permanent form as a Global Security (as defined in the Indenture), substantially in the form set forth in Annex A hereto, as a book-entry security. Each Global Security shall represent such of the Outstanding 2011 Notes as shall be specified therein and shall provide that it shall represent the aggregate amount of Outstanding 2011 Notes from time to time endorsed thereon and that the aggregate amount of Outstanding 2011 Notes represented thereby may from time to time be increased or reduced to reflect exchanges, conversions, repurchases and redemptions. Any endorsement of a Global Security to reflect the amount, or any increase or decrease in the amount, of Outstanding 2011 Notes represented thereby shall be made by the Trustee in accordance with written instructions or such other written form of instructions as is customary for the Depositary, from the Depositary or its nominee on behalf of any Person having the beneficial interest in the Global Security.

The Company initially appoints The Depository Trust Company to act as Depositary with respect to the Global Securities.

The Company shall maintain an office or agency where the 2011 Notes may be presented for purchase or payment ("PAYING AGENT") and an office or agency where the 2011 Notes may

be presented for conversion ("CONVERSION AGENT"). The Company may have one or more additional paying agents and one or more additional conversion agents.

The Company shall enter into an appropriate agency agreement with any Paying Agent or Conversion Agent (other than the Trustee). The agreement shall implement the provisions of the Indenture and this Supplemental Indenture that relate to such agent. The Company shall notify the Trustee of the name and address of any such agent. If the Company fails to maintain a Paying Agent or Conversion Agent, the Trustee shall act as such and shall be entitled to appropriate compensation therefor pursuant to Section 7.06 of the Indenture. The Company or any Subsidiary or an Affiliate of either of them may act as Paying Agent or Conversion Agent.

The Company initially appoints the Trustee to act as its agent, Paying Agent and Conversion Agent with respect to the 2011 Notes.

SECTION 102. AMOUNT.

(a) The Trustee shall authenticate and deliver 2011 Notes for original issue in an initial aggregate Principal Amount of up to $100,000,000

upon a Company Order for the authentication and delivery of the 2011 Notes, without any further action by the Company.

(b) The Company may not issue new 2011 Notes to replace 2011 Notes that it has paid or delivered to the Trustee for cancellation or that any Holder has converted pursuant to Article 14 of the Indenture.

SECTION 103. INTEREST.

The 2011 Notes shall bear interest at the rate and from the date specified on the face of the form of 2011 Note attached as Annex A hereto. Interest shall be payable semi-annually in arrears on each Interest Payment Date to holders of record on the Regular Record Date immediately preceding such Interest Payment Date. Interest on the 2011 Notes shall be computed on the basis of a 360-day year comprised of twelve 30-day months.

Interest on the 2011 Notes shall accrue from the most recent date to which interest has been paid, or if no interest has been paid, from May 4, 2004, until the Principal Amount is paid or duly made available for payment.

Interest on any 2011 Note that is payable, and is punctually paid or duly provided for, on any Interest Payment Date shall be paid to the Person in whose name that Security is registered at the close of business on the Regular Record Date for such interest at the office or agency of the Company maintained for such purpose. Each installment of interest on any 2011 Note shall be made by check mailed to the address of the Holder specified in the register of Securities, provided, however, that, with respect to any Holder with an aggregate Principal Amount in excess of $2,000,000, at the request of such Holder in writing to the Company, interest on such Holder's Securities shall be paid by wire transfer in immediately available funds in accordance with the written wire transfer instruction supplied by such Holder from time to time to the Trustee and Paying Agent (if different from the Trustee) at least ten days prior to the applicable Interest Payment Date. In the case of a Global Security, interest payable on any Interest Payment Date will be paid by wire transfer of immediately available funds to the account of the

Depositary, with respect to that portion of such Global Security held for its account by Cede & Co. for the purpose of permitting such party to credit the interest received by it in respect of such Global Security to the accounts of the beneficial owners thereof.

SECTION 104. DENOMINATIONS.

The 2011 Notes shall be in fully registered form without coupons in denominations of $1,000 of Principal Amount or any integral multiple thereof.

SECTION 105. PLACE OF PAYMENT.

The "PLACE OF PAYMENT" for the 2011 Notes and the place or places where the 2011 Notes may be surrendered for registration of transfer, exchange, repurchase, redemption or conversion and where notices may be given to the Company in respect of the 2011 Notes is at the office of the Trustee in New York, New York and at the agency of the Trustee maintained for that purpose at the office of the Trustee; provided that payment of interest may be made at the option of the Company by check mailed to the address of the person entitled thereto as such address shall appear in the Security Register.

SECTION 106. REDEMPTION.

(a) There shall be no sinking fund for the retirement of the 2011 Notes.

(b) The Company, at its option, may redeem the 2011 Notes in accordance with the provisions of and at the redemption price set forth under the captions "Redemption" and "Notice of Redemption" in the 2011 Notes and in accordance with

the provisions of the Indenture, including, without limitation, Article Three thereof.

SECTION 107. DISCHARGE OF LIABILITY ON 2011 NOTES.

Article 11 of the Indenture shall be applicable to the 2011 Notes as amended by Section 211 hereto.

SECTION 108. CONVERSION.

The 2011 Notes shall be convertible in accordance with the provisions and at the conversion price set forth under the caption "Conversion" in the 2011 Notes and in accordance with any applicable provisions of the Indenture, including, without limitation, Article 14 thereof.

SECTION 109. MATURITY.

The Stated Maturity of the 2011 Notes is May 15, 2011.

SECTION 110. REPURCHASE.

The Company, at the option of the Holders thereof, shall repurchase the 2011 Notes in accordance with the provisions of and at the Fundamental Change Repurchase Price as set forth under the caption "Purchase of 2011 Notes at Option of Holder Upon a Fundamental Change" in

the 2011 Notes and in accordance with the provisions of the Indenture, including, without limitation, Article 15 thereof.

SECTION 111. OTHER TERMS OF 2011 NOTES.

Without limiting the foregoing provisions of this Article One, the terms of the 2011 Notes shall be as set forth in the form of 2011 Notes set forth in Annex A hereto and as provided in the Indenture. In the event of a conflict or inconsistency between the Indenture and this First Supplement, this First Supplement will control.

ARTICLE TWO

AMENDMENTS TO THE INDENTURE

The amendments contained herein shall apply to the 2011 Notes only and not to any other series of Security issued under the Indenture and any covenants provided herein are expressly being included solely for the benefit of the 2011 Notes. These amendments shall be effective for so long as any 2011 Notes remain Outstanding.

SECTION 201. DEFINITIONS AND OTHER PROVISIONS OF GENERAL APPLICATION.

Section 101 of the Indenture is amended by inserting, amending or restating, as the case may be, in their appropriate alphabetical position, the following definitions:

"Capital Stock" or "capital stock" of any Person means any and all shares, interests, partnership interests, participations, rights or other equivalents (however designated) of such Person's equity interest (however designated) issued by that Person.

"Change of Control Event" means any transaction or event (whether by means of an exchange offer, liquidation, tender offer, consolidation, merger, combination, reclassification, recapitalization, sale of all or substantially all the Company's consolidated assets or otherwise) in connection with which all or substantially all of the Company's Common Stock is exchanged for, converted into, acquired for or constitutes solely the right to receive, consideration which is not all or substantially all Common Stock or American Depositary Shares

that:

- is listed on, or immediately after the transaction or event will be listed on, a United States national securities exchange, or

- is approved, or immediately after the transaction or event will be approved, for quotation on the Nasdaq National Market System or any similar United States system of automated dissemination of quotations of securities prices.

"Closing Price" with respect to the Company's Common Stock on any date means the closing price on such date as reported on the National Association of Securities Dealers Automated Quotation System or the principal U.S. securities exchange on which the Company's Common Stock is then listed, or, if the Company's Common Stock is not quoted on the National Association of Securities Dealers Automated Quotation System and is not listed on a U.S. national or regional exchange or, as reported on the principal other market on which the

Company's Common Stock is then traded. In the absence of such quotations, the Board of Directors of the Company will make a good faith determination of the sale price.

"Common Stock" means the shares of Common Stock, par value $0.01 per share, of the Company as it exists on the date of this Indenture or any other shares of Capital Stock of the Company into which the Common Stock shall be reclassified or changed or, in the event of a merger, consolidation or other similar transaction involving the Company that is otherwise permitted hereunder in which the Company is not the surviving corporation, the common stock, common equity interests, ordinary shares or depositary shares or other certificates representing common equity interests of such surviving corporation or its direct or indirect parent corporation.

"Conversion Agent" has the meaning specified in Section 1.01 hereto.

"Conversion Date" has the meaning specified in Section 14.02(a) hereto.

"Conversion Price" has the meaning specified in Section 14.01(c) hereto.

"Conversion Rate" has the meaning specified in Section 14.01(c) hereto.

"Corporate Trust Office" means the principal office of the Trustee at which at any particular time its corporate trust business shall be administered, which office at the date of original execution of this Indenture is located at 101 Barclay Street, Floor 8W, New York, New York 10286, Attention: Corporate Trust Administration, except that, with respect to presentation of the 2011 Notes for payment or registration of transfers or exchanges and the location of the register, such term means the office or agency of the Trustee at which at any particular time its principal corporate trust business shall be conducted, which at the date of original execution of this Indenture is located at 101 Barclay Street, Floor 8W, New York, New York 10286.

"Current Market Price" has the meaning specified in Section 14.06(f) of the Indenture.

"Determination Date" has the meaning specified in Section 14.06(d) of the Indenture.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, or any successor statute.

"Expiration Date" has the meaning specified in Section 14.06(e) of the Indenture.

"Expiration Time" has the meaning specified in Section 14.06(e) of the Indenture.

"Fundamental Change" means any transaction or event resulting in either a Change of Control Event or a Termination of Trading.

"Fundamental Change Company Notice" has the meaning specified in Section 15.01(b) of the Indenture.

"Fundamental Change Repurchase Date" has the meaning specified in Section 15.01(a) of the Indenture.

"Fundamental Change Repurchase Notice" has the meaning specified in Section 15.01(b) of the Indenture.

"Fundamental Change Repurchase Price" has the meaning specified in Section 15.01(a) of the Indenture.

"Global Securities" has the meaning specified in Section 101 hereof.

"Holder" means a person in whose name a security is registered on the Registrar's books.

"interest", when used with respect to the 2011 Notes means any interest payable under the terms of the 2011 Notes.

"Interest Payment Date" means May 15 and November 15 of each year, commencing November 15, 2004.

"Issue Date" of any 2011 Note means the date on which the 2011 Note was originally issued as specified on the face of the 2011 Note.

"Issue Price" of any 2011 Note means, in connection with the original issuance of such 2011 Note, the initial issue price at which the 2011 Note is sold to the public as set forth on the face of the 2011 Note.

"Notice of Conversion" has the meaning specified in Section 14.02(a) of the Indenture.

"Principal Amount" of a 2011 Note means the Principal Amount as set forth on the face of the 2011 Note.

"Purchased Shares" has the meaning specified in 14.05 of the Indenture.

"Registrar" has the meaning specified in Section 4.02 of the Indenture.

"Redemption Price" has the meaning specified in the Securities.

"Regular Record Date" means, with respect to each Interest Payment Date, the close of business on the May 1 or November 1 next preceding such Interest Payment Date (whether or not a Business Day).

"Rights Plan" has the meaning specified in Section 14.06(c) of the Indenture.

"Sale Price" means the closing per share sale price (or, if no closing sale price is reported, the average of the bid and ask prices or, if more than one in either case, the average of the average bid and average ask prices) on such date as reported in the composite transactions for the principal United States securities exchange on which the Common Stock is traded or, if the Common Stock is not listed on a United States national or regional securities exchange, as reported by the Nasdaq National Market System or its successors.

"Securities Act" means the Securities Act of 1933, as amended, or any successor statute.

"Surviving Entity" has the meaning specified in Section 10.01 of the Indenture.

"Termination of Trading" means the Company's Common Stock or other common stock into which the 2011 Notes are convertible is neither listed for trading on a United States national securities exchange nor approved for listing on the Nasdaq National Market System or any similar United States system of automated dissemination of quotations of securities prices, and no American Depositary Shares or similar instruments for such common stock are so listed or approved for listing in the United States.

"Trading Day" means (x) if the applicable security is quoted on the Nasdaq National Market System or Nasdaq SmallCap Market, a day on which trades may be made on thereon or (y) if the applicable security is listed or admitted for trading on the New York Stock Exchange or another national security exchange, a day on which the New York Stock Exchange or such other national security exchange is open for business or (z) if the applicable security is not so listed, admitted for trading or quoted, any Business Day.

"Trigger Event" has the meaning specified in Section 14.06(c) of the Indenture.

"Triggering Distribution" has the meaning specified in Section 14.06(d) of the Indenture.

"2011 Notes" means the 1.25% Senior Convertible Notes due August 2011 of the Company authorized by resolution of the Board of Directors.

SECTION 202. REGISTRATION, REGISTRATION OF TRANSFER AND EXCHANGE.

The Indenture shall be amended by replacing clause (d) of Section 2.05 with the following paragraph:

> "(d) The Company shall not be required (i) to issue, exchange or register the transfer of any Securities during a period beginning at the opening of business 15 days before the day of the mailing of a notice of redemption of less than all the Outstanding Securities of the same series and ending at the close of business on the day of such mailing, (ii) to register the transfer of or exchange any Securities of any series or portions thereof called for redemption or (iii) to exchange or register a transfer of any 2011 Note or portion thereof in respect of which a Fundamental Change Repurchase Notice has been delivered and not withdrawn by the Holder thereof (except, in the case of the purchase of a 2011 Note in part, the portion not to be purchased). The provisions of this Section 2.05 are, with respect to any Global Security, subject to Section 2.11 hereof."

SECTION 203. MUTILATED, DESTROYED, LOST AND STOLEN SECURITIES.

The Indenture shall be amended by replacing the fifth sentence of the first paragraph of Section 2.07 with the following sentence:

> "In case any Security that has matured or is about to mature, or is about to be repurchased by the Company upon a Fundamental Change or redeemed by the Company on a Redemption Date, shall become mutilated or be destroyed, lost or stolen, the Company may, instead of issuing a substitute Security, pay or authorize the payment of

> the same (without surrender thereof except in the case of a mutilated Security) if the applicant for such payment shall furnish to the Company and the Trustee such security or indemnity as they may require to save them harmless, and, in the case of destruction, loss or theft,

evidence to the satisfaction of the Company and the Trustee of the destruction, loss or theft of such Security and the of the ownership thereof."

SECTION 204. CANCELLATION.

The first sentence of Section 2.08 of the Indenture shall be amended by inserting the word "conversion" in the first sentence thereof, following the word "redemption".

Section 205. REDEMPTION.

Article III of the Indenture shall be amended by:

(a) Section 3.01 of the Indenture is amended to read in its entirety as follows:

"Section 3.01 Redemption

Prior to May 20, 2007, the 2011 Notes are not redeemable. Thereafter, the 2011 Notes are redeemable as follows:

(a) At any time on or after May 20, 2007 and before May 20, 2009, the 2011 Notes are redeemable for cash, in whole or in part, at a Redemption Price equal to 100% expressed as a percentage of the Principal Amount of Securities to be redeemed, together with accrued and unpaid interest, to, but excluding, the Redemption Date, provided that the Closing Price of the Company's Common Stock is greater than 145% of the Conversion Price then in effect for at least 20 Trading Days within a period of 30 consecutive Trading Days ending on the Trading Day prior to the date on which the written notice is mailed to the Trustee of the Company's redemption; provided further that such notice date shall be at least 20 days but not more than 60 days prior to the Redemption Date; and

(b) At any time on or after May 20, 2009, the 2011 Notes are redeemable for cash, in whole or in part, at the option of the Company at the Redemption Price equal to 100% expressed as a percentage of the Principal Amount of Securities to be redeemed, together with accrued and unpaid interest, to, but excluding, the Redemption Date."

(b) Section 3.02 of the Indenture is amended by replacing the words "90 days" with the words "60 days".

(c) A new Section 3.07 shall be inserted as follows:

"Section 3.07. Conversion Arrangement on Call for Redemption

In connection with the 2011 Notes, the Company may arrange for the purchase and conversion of any 2011 Notes called for redemption by an agreement with one or more investment bankers or other purchasers to purchase such 2011 Notes by paying to a

Paying Agent (other than the Company or any of its Affiliates) in trust for the Holders, on or before 11:00 A.M. New York City time on the Redemption Date, an amount that, together with any amounts deposited with such Paying Agent by the Company for the redemption of such 2011 Notes, is not less than the Redemption Price of such 2011 Notes. Notwithstanding anything to the contrary contained in this Article Three, the obligation of the Company to pay the Redemption Price of such 2011 Notes, including interest, if any, shall be deemed to be satisfied and discharged to the extent such amount is so paid by such purchasers; provided, however, that nothing in this Section 3.07 shall relieve the Company of its obligation to pay the Redemption Price on the 2011 Notes called for redemption. If such an agreement is entered

into, any 2011 Notes called for redemption and not surrendered for conversion by the Holders thereof prior to the relevant Redemption Date may, at the option of the Company upon written notice to the Trustee, be deemed, to the fullest extent permitted by law, acquired by such purchasers from such Holders and (notwithstanding anything to the contrary contained in Article Fourteen) surrendered by such purchasers for conversion, all as of 11:00 A.M. New York City time on the Redemption Date, subject to payment of the above amount as aforesaid. The Paying Agent shall hold and pay to the Holders whose 2011 Notes are selected for redemption any such amount paid to it for purchase in the same manner as it would money deposited with it by the Company for the redemption of the 2011 Notes. Without the Paying Agent's prior written consent, no arrangement between the Company and such purchasers for the purchase and conversion of any 2011 Notes shall increase or otherwise affect any of the powers, duties, responsibilities or obligations of the Paying Agent as set forth in this Indenture, and the Company agrees to indemnify the Paying Agent from, and hold it harmless against, any loss, liability or expense arising out of or in connection with any such arrangement for the purchase and conversion of any 2011 Notes between the Company and such purchasers, including the costs and expenses incurred by the Paying Agent in the defense of any claim or liability reasonably incurred without negligence or bad faith on its part arising out of or in connection with the exercise or performance of any of its powers, duties, responsibilities or obligations under this Indenture, in accordance with the indemnity provisions applicable to the Trustee set forth herein."

SECTION 206. MAINTENANCE OF OFFICE OR AGENCY.

Section 4.02 of the Indenture shall be amended by replacing it with the following:

"So long as any series of the Securities remain Outstanding, the Company agrees to maintain an office or agency in the Borough of Manhattan, the City and State of New York, with respect to each such series and at such other location or locations as may be designated as provided in this Section 4.02, where (i) Securities of that series may be presented for payment, (ii) Securities of that series may be presented as herein above authorized for registration of transfer and exchange (the "Registrar"), (iii) Securities of that series may be surrendered as herein authorized for conversion and (iv) notices and demands to or upon the Company in respect of the Securities of that series and this Indenture may be given or served, such designation to continue with respect to such office or agency until the Company shall, by written notice signed by its President or a Vice President and delivered to the Trustee, designate some other office or agency for such purposes or any of them. If at any time the Company shall fail to maintain any such

required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive all such presentations, notices, surrenders and demands."

SECTION 207. EVENTS OF DEFAULT; LIMITATION ON SUITS.

(a) Clause (a)(1) of Section 6.01 of the Indenture is amended to read in its entirety as follows:

"(1) the Company defaults in the payment of any installment of interest upon any of the Securities of that series, as and when the same shall become due, and payable, and continuance of such default for a period of 30 days; provided, however, that a valid extension of an interest payment period by the Company in accordance with the terms of

any indenture supplemental hereto, shall not constitute a default in the payment of interest for this purpose;"

(b) Clause (a)(2) of Section 6.01 of the Indenture is amended by inserting the words "upon repurchase (including upon a Fundamental Change)," in the first sentence thereof, following the word "redemption".

(c) Clause (a)(3) of Section 6.01 of the Indenture is amended by replacing the phrase "90 days" with the phrase "60 days".

(d) Clause (a)(4) of Section 6.01 of the Indenture is renumbered as clause (a)(7).

(e) Section 6.01(a) of the Indenture is amended by included the following new clauses (4), (5) and (6):

"(4) the Company defaults in the performance of its obligation to convert the 2011 Notes upon the exercise of a Holder's rights pursuant to Article 14 and continuance of such default for a period of 10 days;

(5) the Company or any Subsidiary defaults in the payment of the principal or interest on any loan, agreement or other instrument under which there may be outstanding, or by which there may be secured or evidenced, any of the indebtedness of the Company or any of its Subsidiaries for money borrowed in excess of $10,000,000 in the aggregate (other than the indebtedness for borrowed money secured only by the real property where the indebtedness relates and which is non-recourse to the Company or to any Subsidiary, whether such indebtedness now exists or shall hereafter be created, resulting in such indebtedness becoming or being declared due and payable prior to its Stated Maturity, and such acceleration shall not have been rescinded or annulled within 30 days after the date on which written notice of such acceleration has been received by the Company or such Subsidiary from the Trustee or by the Trustee, the Company and such Subsidiary by holders of at least 25% in principal amount of the Securities of that series at the time Outstanding;

(6) the Company fails to give the Fundamental Change Notice;"

(c) Section 6.01(b) of the Indenture is amended by: (i) inserting the words "(other than an Event of Default as specified in Section 6.01(a)(7)" after the words "such case"; (ii) inserting the words "plus accrued and unpaid interest, if any, to the acceleration date" after the words "the same" and (iii) inserting the following words at the end of the paragraph:

"If an Event of Default specified in Section 6.01(a)(7) occurs, the principal of all the Securities of that series, plus accrued and unpaid interest, if any, to the acceleration date, shall be immediately and automatically due and payable without necessity of further action."

(c) Section 6.01(c) of the Indenture is amended by inserting the words "and the Redemption Price or Fundamental Change Repurchase Price, as applicable on", in the first sentence following the phrase, "the principal of (and premium, if any, on)".

(d) Section 6.02(a) of the Indenture is amended by replacing the phrase "90 Business Days" with the phrase "30 days" and inserting the words, "or repurchase (including upon a Fundamental Change)", following the word "redemption".

(e) Section 6.03 of the Indenture is amended by replacing the words "and interest" in the third paragraph with the words ", Redemption Price, Fundamental Change Repurchase Price and interest, as the case may be" and deleting the words "for principal (and premium, if any) and interest, respectively" at the end of that paragraph.

(f) Section 6.04 of the Indenture shall be amended by replacing the second paragraph of that section with the following:

> "Notwithstanding anything contained herein to the contrary, any other provisions of this Indenture, the right of any holder of any Security to receive payment of the principal of (and premium, if any) and interest on such Security (or in the case of redemption, to receive the Redemption Price on the Redemption Date or in the case of a Fundamental Change, to receive the Fundamental Change Repurchase Price on the Fundamental Change Repurchase Date), as therein provided, on or after the respective due dates expressed in such Security (or in the case of redemption, on the redemption date), or to institute suit for the enforcement of any such payment on or after such respective dates or redemption date, shall not be impaired or affected without the consent of such holder and by accepting a Security hereunder it is expressly understood, intended and covenanted by the taker and holder of every Security of such series with every other such taker and holder and the Trustee, that no one or more holders of Securities of such series shall have any right in any manner whatsoever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of the holders of any other of such Securities, or to obtain or seek to obtain priority over or preference to any other such holder, or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all holders of Securities of such series. For the protection and enforcement of the provisions of this Section, each and every Securityholder and the Trustee shall be entitled to such relief as can be given either at law or in equity."

(g) Section 6.06 of the Indenture is amended by: (i) inserting the words "the Redemption Price or the Fundamental Change Repurchase Price," following the words "or premium, if any," in the third sentence and inserting the words "the Redemption Price or the Fundamental Change Repurchase Price" following the words "and any premium" in the third sentence and (ii) inserting the following phrase following the words "except a default" in the third sentence:

> "(a) in respect of a covenant or provision hereof which under Article Nine cannot be modified or amended without the consent of the Holder of each Security then Outstanding and (b)"

(h) Section 6.07 of the Indenture is amended by inserting the words "or the Redemption Price or the Fundamental Change Repurchase Price" following the words "(or premium, if any)".

(i) Section 6.08 below is hereby added in its entirety to the Indenture.

Section 6.08. Unconditional Right of Holders to Receive Payment.

Notwithstanding any other provision of this Indenture, the right of any Holder to receive payment of the Principal Amount, Redemption Price, Fundamental Change Repurchase Price or interest in respect of the Securities held by such Holder, on or after the respective due dates expressed in the Securities in accordance with Article 14, or to bring suit for the enforcement of any such payment on or after such respective dates or the right to convert, shall not be impaired or affected adversely without the consent of such Holder.

(j) Section 6.09 below is hereby added in its entirety to the Indenture.

Section 6.09. Waiver of Stay or Extension Laws.

The Company covenants (to the extent that it may lawfully do so) that it will not any time insist upon, or plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, or extension law wherever enacted, now or at any time hereafter in force, which may affect the covenants or the performance of this Indenture; and the Company (to the extent that it may lawfully do so) hereby expressly waives all benefit or advantage of any such law and covenants that it will not hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law had been enacted.

SECTION 208. SUPPLEMENTAL INDENTURES.

(a) Section 9.01 of the Indenture shall be amended by replacing the entire section with the following:

"In addition to any supplemental indenture otherwise authorized by this Indenture, the Company and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust

Indenture Act as then in effect), without the consent of the Securityholders, for one or more of the following purposes:

(a) to evidence the succession of another Person to the Company and the assumption by any such successor of the covenants of the Company herein and in the Securities of any series;

(b) to add to the covenants of the Company for the benefit of the Holders, or to surrender any right or power herein conferred upon the Company;

(c) to provide for a successor Trustee with respect to the Securities of any series;

(d) to cure any ambiguity or defect, to correct or supplement any provision herein which may be inconsistent with any other provision herein, or to make any other provisions with respect to matters or questions arising under this Indenture which shall not be inconsistent with the provisions of this Indenture, provided that such action pursuant to this clause (d) shall not adversely affect the interests of the Holders in any material respect;

(e) to add any additional Events of Default for the benefit of the Holders;

(f) to convey, transfer, assign, mortgage or pledge to the Trustee as security for the Securities of any series any property or assets;

(g) to increase the Conversion Rate of the Securities of any series; provided, however, that such increase shall be in accordance with the terms of this Indenture or shall not adversely affect the interests of the Holders of the Securities of any series;

(h) to supplement any provision of this Indenture to such extent as shall be necessary to permit or facilitate the discharge of the Securities of any series; provided that such change or modification does not

adversely affect the interests of the Holders of the Securities of any series;

(i) to make any change or modification necessary in connection with the registration of the Securities of any series under the Securities Act; provided that such change or modification does not adversely affect the interests of the Holders of Securities of any series;

(j) to add or modify any other provision herein with respect to matters or questions arising hereunder which the Company and the Trustee may deem necessary or desirable and which would not reasonably be expected to adversely affect the interests of the Holders of Securities of any series in any material respect;

(k) to reopen a series of securities and to issue additional securities of such series pursuant to the terms of this Indenture.

The Trustee is hereby authorized to join with the Company in the execution of any such supplemental indenture, and to make any further appropriate agreements and stipulations that may be therein contained, but the Trustee shall not be obligated to enter into any such supplemental indenture that affects the Trustee's own rights, duties or immunities under this Indenture or otherwise.

Any supplemental indenture authorized by the provisions of this Section may be executed by the Company and the Trustee without the consent of the holders of any of the Securities at the time Outstanding, notwithstanding any of the provisions of Section 9.02."

(b) Section 9.02 of the Indenture shall be amended by replacing the lettered clauses (i) and (ii) of that section with the following:

(a) reduce the rate of or extend the time for payment of interest, if any, on the Security of any series;

(b) reduce the Principal Amount of, or extend the Stated Maturity of, any Security of any series;

(c) make any change that impairs or adversely affects the conversion rights of any Securities of any series;

(d) reduce the Redemption Price or Fundamental Change Repurchase Price of any Security of any series or amend or modify in any manner adverse to the Holders of Securities of any series the Company's obligation to make such payments, whether through an amendment or waiver of provisions in the covenants, definitions or otherwise;

(e) modify the provisions with respect to the right of Holders to cause the Company to repurchase Securities of any series upon a Fundamental Change in a manner adverse to Holders of Securities of any series;

(f) make any interest or principal on a Security of any series payable in money other than that stated in the Security of any series or other than in accordance with the provisions of this Indenture;

(g) impair the right of any Holder to receive payment of

the Principal Amount of or interest on a Holder's Securities of any series on or after the due dates therefor or to institute suit for the enforcement of any payment on or with respect to such Holder's Securities of any series;

(h) reduce the quorum or voting requirements under this Indenture;

(i) change the ranking of the Securities of any series in a manner adverse to the Holders of the Securities of any series;

(j) make any change in the amendment provisions which require each Holder's consent or in the waiver provisions;

(k) reduce the percentage in Principal Amount of the Outstanding Securities, the consent of whose Holders is required for any such supplemental indenture, or the consent of whose Holders is required for any waiver (of compliance with certain

provisions of this Indenture or certain defaults hereunder and their consequences) provided for in this Indenture;

(l) modify any of the provisions of this Section 9.02 or Section 6.06, except to increase any such percentage or to provide that certain other provisions of this Indenture cannot be modified or waived without the consent of the Holder of each Outstanding Security affected thereby."

SECTION 209. COMPANY MAY CONSOLIDATE, ETC. ONLY ON CERTAIN TERMS

Article 10 of the Indenture is amended by replacing Sections 10.01, 10.02 and 10.03 with the following:

"Section 10.01. Company May Consolidate, Etc., Only on Certain Terms.

The Company shall not consolidate with or merge into any other Person or convey, transfer or lease its properties and assets substantially as an entirety to any Person, and the Company shall not permit any Person to consolidate with or merge into the Company or convey, transfer or lease its properties and assets substantially as an entirety to the Company, unless:

(a) either (i) the Company shall be the continuing Person or (ii) the Person (if other than the Company) formed by such consolidation or into which the Company is merged or the Person which acquires by conveyance or transfer, or which leases, the properties and assets of the Company substantially as an entirety (the "SURVIVING ENTITY"), (1) shall be either (a) organized and validly existing under the laws of the United States of America, any State thereof or the District of Columbia, or (b) organized under the laws of a jurisdiction outside of the United States and has common stock traded on a national securities exchange in the United States and a worldwide total market capitalization of its equity securities before giving effect to the consolidation or merger of at least US$2 billion, and (2) the Surviving Entity shall expressly assume, by an indenture supplemental hereto, executed and delivered to the Trustee, all of the obligations of the Company under the Securities and this Indenture;

(b) immediately after giving effect to such transaction, no Event of Default, and no event which, after notice or lapse of time or both, would become an Event of Default, shall have occurred and be continuing; and

(c) the Company or the Surviving Entity has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that such consolidation, merger, conveyance, transfer or lease and, if a supplemental indenture is required in connection with such transaction, such supplemental indenture comply with the applicable provisions of this Indenture.

Section 10.02. Successor Entity Substituted.

(a) Upon any consolidation of the Company with, or merger of the Company into, any other Person or any conveyance, transfer or lease of the properties and assets of the Company substantially as an entirety in accordance with Section 10.01, the successor Person formed by

such consolidation or into which the Company is merged or to which such conveyance, transfer or lease is made shall succeed to, and be substituted for, and may exercise every right and power of, the Company under this Indenture with the same effect as if such successor Person had been named as the Company herein, and thereafter, except in the case of a lease, the predecessor Person shall be relieved of all obligations and covenants under this Indenture and the Securities.

(b) In case of any such consolidation, merger, sale, conveyance, transfer or other disposition such changes in phraseology and form (but not in substance) may be made in the Securities thereafter to be issued as may be appropriate."

SECTION 210. CONVERSION.

The Indenture is amended by adding the following Article Fourteen:

ARTICLE XIV

CONVERSION OF 2011 NOTES

Section 14.01. Conversion Privilege.

Subject to and upon compliance with the provisions of this Article, at the option of the Holder thereof, any 2011 Note or any portion of the principal amount at which is $1,000 or an integral multiple of $1,000 at Stated Maturity thereof may be converted based on the principal amount at Stated Maturity thereof, or of such portion thereof, into fully paid and non-assessable shares (calculated as to each conversion to the nearest 1/100 of a share) of Common Stock of the Company, at the conversion price, determined as hereinafter provided, in effect at the time of conversion. Such conversion right shall commence on the date of issuance of the 2011 Notes and expire at the close of business on the date provided for in the 2011 Notes with respect to such 2011 Notes. In case a 2011 Note or portion thereof is called for redemption, such conversion right in respect of the 2011 Note or portion so called shall expire at the close of business on the second Business Day immediately preceding the Redemption Date, unless the Company defaults in making the payment due upon redemption.

(b) Conversion Period. Notwithstanding the foregoing, if such 2011 Note is submitted or presented for repurchase pursuant to Article 15, such conversion right shall terminate at the close of business on the Business Day prior to the Fundamental Change Repurchase Date for such 2011 Note or such earlier date as the Holder presents such 2011 Note for repurchase (unless the Company shall default when due, in which case the conversion right shall terminate at the close of business on the date such default is cured and such 2011 Note is repurchased).

(c) Conversion Rate; Conversion Price. The conversion rate per 2011 Note (the "CONVERSION Rate") shall be that set forth in under the caption "Conversion" in the 2011 Notes, subject to adjustment as herein set forth. The

initial Conversion Rate is 54.0972 shares of Common Stock per $1,000 principal amount of Securities. The "CONVERSION PRICE" at any particular time is determined by dividing $1,000 by the then-applicable Conversion Rate and rounded to the nearest cent.

(d) Delivery of Officers' Certificate. If any of the 2011 Notes is convertible by the Holders into Common Stock, the Company shall deliver to the Trustee an Officers' Certificate to that effect stating (i) the fact that such 2011 Notes are so convertible, (ii) the date as of which the 2011 Notes are convertible, (iii) the reason why the 2011 Notes are convertible and (iv) the Conversion Rate at which the 2011 Notes are convertible. Unless and until a Trust Officer of the Trustee receives such Officers' Certificate, the Trustee may assume without inquiry that the 2011 Notes are not convertible. Whenever any fact set forth in an Officers' Certificate delivered pursuant to this Section 14.01 changes, the Company shall deliver to the Trustee a new Officers' Certificate setting forth the correct information. Unless and until a Trust Officer receives such a correcting Officers' Certificate, the Trustee may assume without inquiry that the last Officers' Certificate delivered to it remains in full force and effect and is correct is every respect.

(e) 2011 Notes Converted in Whole or in Part. Provisions of this Indenture that apply to conversion of all of a 2011 Note also apply to conversion of a portion of a 2011 Note.

(f) Rights of Holders. A Holder of 2011 Notes is not entitled to any rights of a holder of Common Stock until such Holder has converted its 2011 Notes to Common Stock, and only to the extent such 2011 Notes are deemed to have been converted into Common Stock pursuant to this Article 14.

(g) Payment of Interest. Except as provided in the following sentence, Holders will not receive any cash payment representing accrued and unpaid interest upon conversion of a 2011 Note and accrued and unpaid interest will be deemed paid in full rather than canceled, extinguished or forfeited. Notwithstanding the previous sentence, if a 2011 Note shall be surrendered for conversion during the period from the close of business on any Regular Record Date for the payment of interest through the close of business on corresponding Interest Payment Date, the Holder of such 2011 Note (or portion thereof being converted) at the close of business on such Regular Record Date shall receive the interest payable on the corresponding Interest Payment Date notwithstanding the conversion. Such a 2011 Note must be accompanied by an amount, in funds acceptable to the Company, equal to the interest payable on such Interest Payment Date on the Principal Amount being converted; provided, however, that no such payment shall be required if (i) the 2001 Notes surrendered for conversion shall have been called for redemption by the Company on a Redemption Date that is after such Regular Record Date but prior to the corresponding Interest Payment Date or (ii) there shall exist at the time of conversion a default in the payment of interest on the 2011 Notes. Except where 2011 Notes surrendered for conversion must be accompanied by payment as described above, no interest on converted 2011 Notes will be payable by the Company on any Interest Payment Date subsequent to the date of conversion.

Section 14.02. Conversion Procedure.

(a) To convert a 2011 Note, a Holder must (i) complete and manually sign the conversion notice on the back of the 2011 Note or facsimile of the conversion notice and deliver such notice to a Conversion Agent, (ii) surrender the 2011 Note to a Conversion Agent or, in the case of a Global Security, deliver, or cause to be delivered, by book-entry delivery an interest in such 2011 Note, (iii) furnish appropriate endorsements and transfer documents if required by a Registrar or a Conversion Agent, (iii) in the case of a Global Security, complete, or cause to be

completed, the appropriate instruction form for conversion pursuant to the Depositary's book-entry conversion program, (v) pay any amount as required by Section 14.01(g), if applicable, and (vi) pay any transfer or similar tax, if required. Such notice is hereinafter referred to as a "NOTICE OF CONVERSION." A 2011 Note shall be deemed to have been converted as of the close of business on the date (the "CONVERSION DATE") on which the Holder has complied with the immediately preceding sentence of this clause (a) of Section 14.02. Anything herein to the contrary notwithstanding, in the case of Global Securities, a Notice of Conversion shall be delivered and such 2011 Notes shall be surrendered for conversion in accordance with the rules and procedures of the Depositary as in effect from time to time.

(b) The Company will, as soon as practicable after the Conversion Date, issue, or cause to be issued, and deliver to the Conversion Agent or to such Holder, or such Holder's nominee or nominees, in book-entry form, the number of full shares of Common Stock, if any, to which such Holder shall be entitled. The Person or Persons entitled to receive such Common Stock upon such conversion shall be treated for all purposes as the record holder or holders of such Common Stock, as of the close of business on the applicable Conversion Date; provided, however, that no surrender of a 2011 Note on any date when the stock transfer books of the Company shall be closed shall be effective to constitute the Person or Persons entitled to receive the shares of Common Stock upon such conversion as the record holder or holders of such shares of Common Stock on such date, but such surrender shall be effective to constitute the Person or Persons entitled to receive such shares of Common Stock as the record holder or holders thereof for all purposes at the close of business on the next succeeding day on which such stock transfer books are open; provided further that such conversion shall be at the Conversion Rate in effect on the Conversion Date as if the stock transfer books of the Company had not been closed. Upon conversion of a 2011 Note, such Person shall no longer be a Holder of such 2011 Note. Except as otherwise provided in Section 14.06, no payment or adjustment will be made for dividends or distributions on shares of Common Stock issued upon conversion of a 2011 Note.

(c) If a Holder converts more than one 2011 Note at the same time, the number of shares of Common Stock issuable upon the conversion shall be based on the aggregate Principal Amount of 2011 Notes converted.

(d) Upon surrender of a 2011 Note that is converted in part, the Company shall execute, and the Trustee shall authenticate and deliver to the Holder, a new 2011 Note equal in principal amount to the unconverted portion of the 2011 Note surrendered.

(e) If the last day on which 2011 Note may be converted is not a Business Day in a place where a Conversion Agent is located, the 2011 Notes may be surrendered to that Conversion Agent on the next succeeding Business Day.

(f) Holders that have already delivered a Fundamental Change Repurchase Notice with respect to a 2011 Note may not surrender such 2011 Note for conversion until the Fundamental Change Repurchase Notice has been withdrawn in accordance with the procedures set forth in Article 15.

Section 14.03. Fractional Shares.

The Company will not issue fractional shares of Common Stock upon conversion of 2011 Notes. In lieu thereof, the Company will pay an amount in cash for the current market value of the fractional shares. The current market value of a fractional share shall be determined, (calculated to the nearest 1/1000th of a share) by multiplying the Closing Price of the Common Stock on the Trading Day immediately prior to the Conversion Date by such fractional share and rounding the product to the nearest whole cent.

Section 14.04. Taxes on Conversion.

If a Holder converts a 2011 Note, the Company shall pay any documentary, stamp or similar issue or transfer tax due on the issuance of shares of Common Stock upon such conversion. However, the Holder shall pay any such tax which is due because the Holder requests the shares to be issued in a name other than the Holder's name. The Conversion Agent may refuse to deliver the certificate representing the Common Stock being issued in a name other than the Holder's name until the Conversion Agent receives a sum sufficient to pay any tax which will be due because the shares are to be issued in a name other than the Holder's name. Nothing herein shall preclude any tax withholding required by law or regulation.

Section 14.05. Company to Provide Stock.

(a) The Company shall, prior to issuance of any 2011 Notes hereunder, and from time to time as may be necessary, reserve, out of its authorized but unissued Common Stock, a sufficient number of shares of Common Stock to permit the conversion of all outstanding 2011 Notes into shares of Common Stock (including after taking into account any adjustments to the Conversion Rate pursuant to Section 14.06).

All shares of Common Stock delivered upon conversion of the 2011 Notes shall be newly issued shares, shall be duly authorized, validly issued, fully paid and non-assessable and shall be free from preemptive rights and free of any lien or adverse claim.

The Company will endeavor promptly to comply with all federal and state securities laws regulating the offer and delivery of shares of Common Stock upon conversion of 2011 Notes, if any, and will list or cause to have quoted such shares of Common Stock on each national securities exchange or on the New York Stock Exchange, the Nasdaq National Market System or other over-the-counter market or such other market on which the Common Stock is then listed or quoted; provided, however, that if rules of such automated quotation system or exchange permit the Company to defer the listing of such Common Stock until the first conversion of the 2011 Notes into Common Stock in accordance with the provisions of this Indenture, the Company covenants to list such Common Stock issuable upon conversion of the Notes in accordance with the requirements of such automated quotation system or exchange at such time.

Section 14.06. Adjustment of Conversion Rate.

The Conversion Rate shall be adjusted from time to time by the Company as follows:

(a) In case the Company shall (i) pay a dividend on its Common Stock in shares of Common Stock, (ii) make a distribution on its Common Stock in shares of Common Stock, (iii) subdivide its outstanding Common Stock into a greater number of shares, or (iv) combine its outstanding Common Stock into a smaller number of shares, the Conversion Rate in effect immediately prior thereto shall be adjusted so that the Holder of any 2011 Note thereafter surrendered for conversion shall be entitled to receive that number of shares of Common Stock which it would have owned had such 2011 Note been converted immediately prior to the happening of such event. An adjustment made pursuant to this subsection (a) shall become effective immediately after the record date in the case of a dividend or distribution and shall become effective immediately after the effective date in the case of subdivision or combination.

(b) Subject to the last paragraph of Section 14.06(c), in case the Company shall issue rights or warrants (other than pursuant to a stockholder rights plan) to all or substantially all holders of its Common Stock entitling them (for a period commencing no earlier than the record date described below and expiring not more than 60 days after such record date) to subscribe for or purchase shares of Common Stock (or securities convertible into Common Stock) at a price per share (or having a conversion price per share) less than the Closing Price per share of Common Stock on the Business Day immediately prior to the date of announcement of such issuance, the Conversion Rate in effect shall be

adjusted so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to such announcement by a fraction of which the numerator shall be the number of shares of Common Stock outstanding at the close of business on the date of announcement plus the number of additional shares of Common Stock offered (or into which the convertible securities so offered are convertible), and the denominator of which shall be the number of shares of Common Stock outstanding at the close of business on the date of announcement plus the number of shares which the aggregate offering price of the total number of shares of Common Stock so offered (or the aggregate conversion price of the convertible securities so offered, which shall be determined by multiplying the number of shares of Common Stock issuable upon conversion of such convertible securities by the conversion price per share of Common Stock pursuant to the terms of such convertible securities) would purchase at the Current Market Price per share of Common Stock on the Business Day immediately preceding the date of announcement of such issuance. Such adjustment shall be made successively whenever any such rights or warrants are issued, and shall become effective on the day following the date of announcement of such issuance. If at the end of the period during which such rights or warrants are exercisable not all rights or warrants shall have been exercised, the adjusted Conversion Rate shall be immediately readjusted to what it would have been based upon the number of additional shares of Common Stock actually issued (or the number of shares of Common Stock issuable upon conversion of convertible securities actually issued).

(c) In case the Company shall distribute to all or substantially all holders of its Common Stock any shares of capital stock of the Company (other than Common Stock), evidences of indebtedness or other non-cash assets (including securities of any person other than the Company but excluding (1) dividends or distributions paid exclusively in cash or (2) dividends or distributions referred to in subsection (a) of this Section 14.06), or shall distribute to all or substantially all holders of its Common Stock rights or warrants to subscribe for or purchase any of its securities (excluding those rights and warrants referred to in

subsection (b) of this Section 14.06 and also excluding the distribution of rights to all holders of Common Stock pursuant to a Rights Plan (as defined below) or the detachment of such rights to the extent set forth in the second following paragraph), then in each such case the Conversion Rate shall be adjusted so that the same shall equal the rate determined by multiplying the current Conversion Rate by a fraction of which the numerator shall be the Current Market Price per share of the Common Stock on the record date mentioned below and the denominator shall be the Current Market Price per share of the Common Stock on such record date less the fair market value on such record date (as determined by the Board of Directors, whose determination shall be conclusive evidence of such fair market value and which shall be evidenced by an Officers' Certificate delivered to the Trustee) of the portion of the capital stock, evidences of indebtedness or other non-cash assets so distributed or of such rights or warrants applicable to one share of Common Stock (determined on the basis of the number of shares of Common Stock outstanding on the record date). Such adjustment shall be made successively whenever any such distribution is made and shall become effective immediately after the record date for the determination of shareholders entitled to receive such distribution.

In the event the then fair market value (as so determined) of the portion of the Capital Stock, evidences of indebtedness or other non-cash assets so distributed or of such rights or warrants applicable to one share of Common Stock is equal to or greater than the Current Market Price per share of the Common Stock on such record date, in lieu of the foregoing adjustment, adequate provision shall be made so that each holder of a 2011 Note shall have the right to receive upon conversion the amount of Capital Stock, evidences of indebtedness or other non-cash assets so distributed or of such rights or warrants such holder would have received had such holder converted each 2011 Note on such record date. In the event that such dividend or distribution is not so paid or made, the Conversion Rate shall again be adjusted to be the Conversion Rate which would then be in effect if such dividend or distribution

had not been declared. If the Board of Directors determines the fair market value of any distribution for purposes of this Section 14.06 by reference to the actual or when issued trading market for any securities, it must in doing so consider the prices in such market over the same period used in computing the Current Market Price of the Common Stock.

In the event that the Company has in effect a preferred shares rights plan ("Rights Plan"), upon conversion of the 2011 Notes into Common Stock, to the extent that the Rights Plan is still in effect upon such conversion, the holders of 2011 Notes will receive, in addition to the Common Stock, the rights described therein (whether or not the rights have separated from the Common Stock at the time of conversion), subject to the limitations set forth in the Rights Plan. If the Rights Plan provides that upon separation of rights under such plan from the Company's Common Stock that the Holders would not be entitled to receive any such rights in respect of the Common Stock issuable upon conversion of the 2011 Notes, the Conversion Rate will be adjusted as provided in this Section 14.06(c) (with such separation deemed to be the distribution of such rights), subject to readjustment in the event of the expiration, termination or redemption of the rights. Any distribution of rights or warrants pursuant to a Rights Plan that would allow a Holder to receive upon conversion, in addition to the Common Stock, the rights described therein (whether or not the rights have separated from the Common Stock at the time of conversion), shall not constitute a distribution of rights or warrants pursuant to this Article 14.

Rights or warrants distributed by the Company to all holders of Common Stock entitling the holders thereof to subscribe for or purchase shares of the Company's Capital Stock (either initially or under certain circumstances), which rights or warrants, until the occurrence of a specified event or events ("Trigger Event"): (i) are deemed to be transferred with such shares of Common Stock; (ii) are not exercisable; and (iii) are also issued in respect of future issuances of Common Stock, shall be deemed not to have been distributed for purposes of this Section 14.06 (and no adjustment to the Conversion Rate under this Section 14.06 will be required) until the occurrence of the earliest Trigger Event, whereupon such rights and warrants shall be deemed to have been distributed and an appropriate adjustment (if any is required) to the Conversion Rate shall be made under this clause (c) of Section 14.06. If any such right or warrant, including any such existing rights or warrants distributed prior to the date of this Indenture, are subject to events, upon the occurrence of which such rights or warrants become exercisable to purchase different securities, evidences of indebtedness or other assets, then the date of the occurrence of any and each such event shall be deemed to be the date of distribution and record date with respect to new rights or warrants with such rights (and a termination or expiration of the existing rights or warrants without exercise by any of the holders thereof). In addition, in the event of any distribution (or deemed distribution) of rights or warrants, or any Trigger Event or other event (of the type described in the preceding sentence) with respect thereto that was counted for purposes of calculating a distribution amount for which an adjustment to the Conversion Rate under this Section 14.06 was made, (1) in the case of any such rights or warrants which shall all have been redeemed or repurchased without exercise by any holders thereof, the Conversion Rate shall be readjusted upon such final redemption or repurchase to give effect to such distribution or Trigger Event, as the case may be, as though it were a cash distribution, equal to the per share redemption or repurchase price received by a holder or holders of Common Stock with respect to such rights or warrants (assuming such holder had retained such rights or warrants), made to all holders of Common Stock as of the date of such redemption or repurchase, and (2) in the case of such rights or warrants which shall have expired or been terminated without exercise by any holders thereof, the Conversion Rate shall be readjusted as if such rights and warrants had not been issued.

(d) In case the Company shall, by dividend or otherwise, at any time distribute cash (a "TRIGGERING DISTRIBUTION") to all or substantially all holders of its Common Stock, the Conversion Rate shall be increased so that the

same shall equal the rate determined by multiplying such Conversion Rate in effect on the Business Day (the "DETERMINATION DATE") immediately preceding the day on which such Triggering Distribution is declared by the Company by a fraction of which the numerator shall be the Current Market Price per share of the Common Stock on the Determination Date, and the denominator shall be the Current Market Price per share of the Common Stock on the Determination Date less the aggregate amount of cash so distributed applicable to one share of Common Stock (determined on the basis of the number of shares of Common Stock outstanding on the Determination Date), such increase to become effective immediately prior to the opening of business on the day following the date on which the Triggering Distribution is paid. It is expressly understood that a stock buyback, repurchase or similar transaction or program shall in no event be considered a Triggering Distribution for purposes of this clause (d) or (e) of Section 14.06.

(e) In case the Company or any of its Subsidiaries shall purchase any shares of the Company's Common Stock by means of a tender offer, then, effective immediately prior to the opening of business on the day after the last date (the "EXPIRATION DATE") tenders could have been made pursuant to such tender offer (as it may be amended) (the last time at which such tenders could have been made on the Expiration Date is hereinafter sometimes called the "EXPIRATION TIME"), the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to the close of business on the Expiration Date by a fraction of which the numerator shall be the sum of (x) the aggregate consideration (determined as set forth below) payable to stockholders of the Company based on the acceptance (up to any maximum specified in the terms of the tender offer) of all shares validly tendered and not withdrawn as of the Expiration Time (the shares deemed so accepted, up to any such maximum, being referred to as the "PURCHASED SHARES") and (y) the product of the number of shares of Common Stock outstanding (less any Purchased Shares and excluding any shares held in the treasury of the Company) immediately prior to the Expiration Time and the Current Market Price per share of Common Stock (as determined in accordance with clause (f) of Section 14.06), and the denominator shall be the product of the number of shares of Common Stock outstanding (including Purchased Shares but excluding any shares held in the treasury of the Company) immediately prior to the Expiration Time multiplied by the Current Market Price per share of the Common Stock (as determined in accordance with clause (f) of Section 14.06). For purposes of this clause (e) of Section 14.06, the aggregate consideration in any such tender offer shall equal the sum of the aggregate amount of cash consideration and the aggregate fair market value (as determined by the Board of Directors, whose determination shall be conclusive evidence thereof and which shall be evidenced by an Officers' Certificate delivered to the Trustee) of any other consideration payable in such tender offer. In the event that the Company is obligated to purchase shares pursuant to any such tender offer, but the Company is permanently prevented by applicable law from effecting any or all such purchases or any or all such purchases are rescinded, the Conversion Rate shall again be adjusted to be the Conversion Rate which would have been in effect based upon the number of shares actually purchased. If the application of this clause (e) of Section 14.06 to any tender offer would result in a decrease in the Conversion Rate, no adjustment shall be made for such tender offer under this Section 14.06(e). For purposes of this clause (e) of Section 14.06, the term "tender offer" shall mean and include both tender offers and exchange offers, all references to "purchases" of shares in tender offers (and all similar references) shall mean and include both the purchase of shares in tender offers and the acquisition of shares pursuant to exchange offers, and all references to "tendered shares" (and all similar references) shall mean and include shares tendered in both tender offers and exchange offers.

(f) For the purpose of any computation under clauses (b), (c) and (d) of Section 14.06, the current market price (the "CURRENT MARKET PRICE") per share of Common Stock on any date shall be deemed to be the average of the daily Closing Prices for the ten consecutive Trading Days commencing 11 Trading Days before (i) the Determination Date, with respect to distributions under subsection (c) of this Section 14.06 or (ii) the record date with respect to

distributions, issuances or other events requiring such computation under subsection (b) or (d) of this Section 14.06. For purposes of any computation under subsection (e) of this Section 14.06, the Current Market Price per share of Common Stock shall be deemed to be the average of the

daily Closing Prices for the ten consecutive Trading Days commencing on the Trading Day next succeeding the Expiration Date.

(g) In any case in which this Section 14.06 shall require that an adjustment be made following a record date, an announcement date or a Determination Date or Expiration Date, as the case may be, established for purposes of this Section 14.06, the Company may elect to defer (but only until five Business Days following the filing by the Company with the Trustee of the certificate described in Section 14.09) issuing to the Holder of any 2011 Note converted after such record date or announcement date or Determination Date or Expiration Date the shares of Common Stock and other capital stock of the Company issuable upon such conversion over and above the shares of Common Stock and other capital stock of the Company issuable upon such conversion only on the basis of the Conversion Rate prior to adjustment; and, in lieu of the shares the issuance of which is so deferred, the Company shall issue or cause its transfer agents to issue due bills or other appropriate evidence prepared by the Company of the right to receive such shares. If any distribution in respect of which an adjustment to the Conversion Rate is required to be made as of the record date or announcement date or Determination Date or Expiration Date therefor is not thereafter made or paid by the Company for any reason, the Conversion Rate shall be readjusted to the Conversion Rate which would then be in effect if such record date had not been fixed or such announcement date or effective date or Determination Date or Expiration Date had not occurred.

Section 14.07. No Adjustment.

(a) No adjustment need be made for issuances of Common Stock pursuant to a Company plan for reinvestment of dividends or interest or for a change in the par value or a change to no par value of the Common Stock.

(b) No adjustment in the Conversion Rate shall be made pursuant to this Section 14.06 if the Holders may participate in the transaction that would otherwise give rise to an adjustment pursuant to Section 14.06.

(c) Other than as described above in Section 14.06, no adjustment to the Conversion Rate shall be required for any issuance of Common Stock or convertible or exchangeable securities or rights to purchase Common Stock or convertible or exchangeable securities.

(d) Except as provided in Section 14.01(g), no payment or adjustment to the Conversion Rate shall be required for accrued and unpaid interest.

Section 14.08. Adjustment for Tax Purposes.

The Company shall be entitled to make such increases in the Conversion Rate, in addition to those required by Section 14.06, as it in its discretion shall determine to be advisable in order that any stock dividends, subdivisions of shares, distributions of rights to purchase stock or securities or distributions of securities convertible into or exchangeable for stock hereafter made by the Company to its stockholders shall not be taxable.

Section 14.09. Notice of Conversion Rate Adjustment.

Whenever the Conversion Rate or conversion privilege is adjusted, the Company shall promptly mail to Holders of 2011 Notes a notice of the adjustment and file with the Trustee an Officers' Certificate briefly stating the facts requiring the adjustment and the manner of computing it. Unless and until the

Trustee shall receive an Officers' Certificate setting forth an adjustment of the Conversion Rate, the Trustee may assume without inquiry that the Conversion Rate has not been adjusted and that the last Conversion Rate of which it has knowledge remains in effect.

Section 14.10. Notice of Certain Transactions. In the event that:

(a) the Company takes any action which would require an adjustment in the Conversion Rate;

(b) the Company consolidates or merges with, or transfers all or substantially all of its property and assets to, another corporation and shareholders of the Company must approve the transaction; or

(c) there is a dissolution or liquidation of the Company,

the Company shall mail to Holders and file with the Trustee a notice stating the proposed record or effective date, as the case may be. The Company shall mail the notice at least ten days before such date. Failure to mail such notice or any defect therein shall not affect the validity of any transaction referred to in clause (a), (b) or (c) of this Section 14.10.

Section 14.11. Effect of Reclassification, Consolidation, Merger or Sale on Conversion Privilege.

If any of the following shall occur, namely: (a) any reclassification or change of shares of Common Stock issuable upon conversion of the 2011 Notes (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination, or any other change for which an adjustment is provided in Section 14.06); (b) any consolidation or merger or combination to which the Company is a party other than a merger in which the Company is the continuing corporation and which does not result in any reclassification of, or change (other than in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination) in, outstanding shares of Common Stock; or (c) any sale or conveyance as an entirety or substantially as an entirety of the property and assets of the Company, directly or indirectly, to any Person, then the Company, or such successor, purchasing or transferee corporation, as the case may be, shall, as a condition precedent to such reclassification, change, combination, consolidation, merger, sale or conveyance, execute and deliver to the Trustee a supplemental indenture providing that the Holder of each 2011 Note then outstanding shall have the right to convert such 2011 Note into the kind and amount of shares of stock and other securities and property (including cash) receivable upon such reclassification, change, combination, consolidation, merger, sale or conveyance by a holder of the number of shares of Common Stock deliverable upon conversion

of such 2011 Note immediately prior to such reclassification, change, combination, consolidation, merger, sale or conveyance. Such supplemental indenture shall provide for adjustments of the Conversion Rate which shall be as nearly equivalent as may be practicable to the adjustments of the Conversion Rate provided for in this Article 14. If, in the case of any such consolidation, merger, combination, sale or conveyance, the stock or other securities and property (including cash) receivable thereupon by a holder of Common Stock include shares of stock or other securities and property of a person other than the successor, purchasing or transferee corporation, as the case may be, in such consolidation, merger, combination, sale or conveyance, then such supplemental indenture shall also be executed by such other person and shall contain such additional provisions to protect the interests of the Holders of the 2011 Notes as the Board of Directors shall reasonably consider necessary by reason of the foregoing. The provisions of this Section 14.11 shall similarly apply to successive reclassifications, changes, combinations, consolidations, mergers, sales or conveyances.

In the event the Company shall execute a supplemental indenture

pursuant to this Section 14.11, the Company shall promptly file with the Trustee (x) an Officers' Certificate briefly stating the reasons therefor, the kind or amount of shares of stock or other securities or property (including cash) receivable by Holders of the 2011 Notes upon the conversion of their 2011 Notes after any such reclassification, change, combination, consolidation, merger, sale or conveyance, any adjustment to be made with respect thereto and that all conditions precedent have been complied with and (y) an Opinion of Counsel that all conditions precedent have been complied with, and shall promptly mail notice thereof to all Holders.

Section 14.12. Trustee's Disclaimer.

The Trustee shall have no duty to determine when an adjustment under this Article 14 should be made, how it should be made or what such adjustment should be, but may accept as conclusive evidence of that fact or the correctness of any such adjustment, and shall be protected in relying upon, an Officers' Certificate including the Officers' Certificate with respect thereto which the Company is obligated to file with the Trustee pursuant to Section 14.09. The Trustee makes no representation as to the validity or value of any securities or assets issued upon conversion of 2011 Notes, and the Trustee shall not be responsible for the Company's failure to comply with any provisions of this Article 14.

The Trustee shall not be under any responsibility to determine the correctness of any provisions contained in any supplemental indenture executed pursuant to Section 14.11, but may accept as conclusive evidence of the correctness thereof, and shall be fully protected in relying upon, the Officers' Certificate with respect thereto which the Company is obligated to file with the Trustee pursuant to Section 14.11.

Section 14.13. Voluntary Increase.

The Company from time to time may increase the Conversion Rate by any amount for any period of time if the period is at least 20 days and if the increase is irrevocable during the period if the Board of Directors determines that such increase would be in the best interest of the Company or the Board of Directors deems it advisable to avoid or diminish income tax to

holders of shares of our Common Stock in connection with any stock or rights dividend or distribution or similar event, and the Company provides 15 days prior notice of any increase in the Conversion Rate.

Section 14.14. Company Determination Final.

Any determination that the Company or the Board of Directors must make pursuant to this Article 14 shall be conclusive if made in good faith and in accordance with the provisions of this Article 14, absent manifest error, and set forth in a resolution of the Board of Directors.

SECTION 216. REPURCHASE AT OPTION OF HOLDER; REPURCHASE UPON CHANGE IN CONTROL; TAX EVENTS.

The Indenture is amended by inserting the following new Article 15:

ARTICLE XV

REPURCHASE OF 2011 NOTES UPON A FUNDAMENTAL CHANGE

Section 15.01. Repurchase of 2011 Notes at Option of the Holder Upon Fundamental Change.

(a) General. If prior to the Stated Maturity there shall have occurred a Fundamental Change, 2011 Notes shall be repurchased by the Company at a price (the "FUNDAMENTAL CHANGE REPURCHASE PRICE") equal to 100% of the Principal Amount plus accrued and unpaid interest to, but excluding, the Fundamental

Change Repurchase Date (as defined below) on a date specified by the Company that is not less than 25 days nor more than 35 days after the date of the mailing of a Fundamental Change Company Notice pursuant to clause (b) of this Section 15.01 (the "FUNDAMENTAL CHANGE REPURCHASE DATE"), at the option of the Holder thereof, in accordance with the following procedures; provided that the Company shall not be required to repurchase the 2011 Notes pursuant to this Section 15.01 if the Sale Price per share of Common Stock for any five Trading Days within the period of ten consecutive Trading Days ending immediately after the later of the Fundamental Change and the public announcement of the Fundamental Change equals or exceeds 110% of the Conversion Price of the 2011 Notes in effect on each of those five Trading Days.

(b) Company Notice of Fundamental Change. Within 15 days after the occurrence of a Fundamental Change, the Company shall, if Holders have the right to require the Company to repurchase 2011 Notes hereunder, deliver a written notice of Fundamental Change (the "FUNDAMENTAL CHANGE COMPANY NOTICE") by first-class mail or by overnight courier to the Trustee and to each Holder (and to beneficial owners as required by applicable law). The notice shall include a form of Fundamental Change Repurchase Notice to be completed by the Holder of a 2011 Note and shall state:

(i) the events causing a Fundamental Change and the date of such Fundamental Change;

(ii) the date by which a Holder must deliver a Fundamental Change Repurchase Notice to elect the repurchase option pursuant to this Section 15.01;

(iii) the Fundamental Change Repurchase Date;

(iv) the Fundamental Change Repurchase Price;

(v) whether the Fundamental Change Repurchase Price will be paid in cash, shares of Common Stock or a combination thereof, specifying the percentages of each;

(vi) if shares of Common Stock will be used to pay all or part of the Fundamental Change Repurchase Price, state:

(a) the method for valuing the shares of Common Stock to be delivered in connection with the repurchase; and

(b) that holders of the 2011 Notes will bear the market risk with respect to the value of the shares of Common Stock to be delivered from the date the number of shares is determined;

(vii) the name and address of the Paying Agent and the Conversion Agent;

(viii) the Conversion Rate applicable on the date of the Fundamental Change Company Notice;

(ix) that 2011 Notes as to which a Fundamental Change Repurchase Notice has been given may be converted pursuant to Article 14 hereof only if the Fundamental Change Repurchase Notice has been withdrawn in accordance with the terms of this Indenture;

(x) that 2011 Notes must be surrendered to the Paying Agent for cancellation to collect payment;

(xi) that the Fundamental Change Repurchase Price for any 2011 Note as to which a Fundamental Change Repurchase Notice has been duly given and not withdrawn will be paid promptly following the later of the Fundamental Change Repurchase Date and the time of surrender of

such 2011 Note as described in clause (x) above;

(xii) the procedures the Holder must follow to exercise rights under this Section 15.01;

(xiii) the conversion rights of the 2011 Notes;

(xiv) the procedures for withdrawing a Fundamental Change Repurchase Notice;

(xv) that, unless the Company defaults in making payment of such Fundamental Change Repurchase Price, 2011 Notes covered by any Fundamental Change Repurchase Notice will cease to be outstanding and interest will cease to accrue on and after the Fundamental Change Repurchase Date; and

(xvi) the CUSIP number of the 2011 Notes.

At the Company's request, the Trustee shall give such Fundamental Change Company Notice in the Company's name and at the Company's expense; provided that, in all cases, the text of such Fundamental Change Company Notice shall be prepared by the Company. In connection with delivery of the Fundamental Change Company Notice to the Holders, the Company shall publish a notice containing substantially the same information that is required in the Fundamental Change Company Notice in a newspaper published in the English language, customarily published each Business Day and of general circulation in The City of New York, or publish such information on the Company's website or through such other public medium as the Company may use at such time.

(c) Fundamental Change Repurchase Notice. Holders must deliver to the Paying Agent:

(1) a written notice of repurchase (a "FUNDAMENTAL CHANGE REPURCHASE NOTICE"), substantially in the form of Exhibit A hereto, at any time from the opening of business on the date of the Fundamental Change Company Notice until the close of business on Business Day prior to the Fundamental Change Repurchase Date stating:

(A) the certificate number (if such 2011 Note is held other than in global form) of the 2011 Note which the Holder will deliver to be purchased;

(B) the portion of the Principal Amount of the 2011 Note which the Holder will deliver to be purchased, which portion must be in a Principal Amount of $1,000 or integral multiples thereof; and

(C) that such 2011 Note shall be purchased as of the Fundamental Change Repurchase Date pursuant to the terms and conditions specified in the 2011 Notes and in this Indenture; and

(2) the 2011 Note (if such 2011 Note is held other than in global form) to the Paying Agent for cancellation prior to, on or after the Fundamental Change Repurchase Date (together with all necessary endorsements) at the offices of the Paying Agent, such delivery being a condition to receipt by the Holder of the Fundamental Change Repurchase Price therefor; provided that such Fundamental Change Repurchase Price shall be so paid pursuant to this Section 15.01 only if the 2011 Note so delivered to

the Paying Agent shall conform in all respects to the description

thereof in the related Fundamental Change Repurchase Notice.

The Company shall purchase from the Holder thereof, pursuant to this Section 15.01, a portion of a 2011 Note if the Principal Amount of such portion is $1,000 or an integral multiple of $1,000 if so requested by the Holder. Provisions of this Indenture that apply to the repurchase of all of a 2011 Note also apply to the repurchase of such portion of such 2011 Note.

Any repurchase by the Company contemplated pursuant to the provisions of this Section 15.01 shall be consummated by the delivery to the Paying Agent of the consideration to be received by the Holder promptly following the later of the Fundamental Change Repurchase Date and the time of delivery of the 2011 Note.

Notwithstanding anything herein to the contrary, any Holder delivering to the Paying Agent the Fundamental Change Repurchase Notice contemplated by this Section 15.01(c) shall have the right to withdraw such Fundamental Change Repurchase Notice at any time prior to the close of business on the Business Day prior to the Fundamental Change Repurchase Date by delivery of a written notice of withdrawal to the Paying Agent in accordance with Section 15.02.

The Paying Agent shall promptly notify the Company of the receipt by it of any Fundamental Change Repurchase Notice or written notice of withdrawal thereof.

(d) Payment of Fundamental Change Repurchase Price. The 2011 Notes to be repurchased pursuant to this Section 15.01 shall be paid for in cash; provided that if a Fundamental Change occurs as a result of a Change of Control Event, the 2011 Notes to be repurchased may be paid for, in whole or in part, at the election of the Company, in cash or Common Stock or any combination of cash and Common Stock, subject to the conditions set forth in clause (e) of this Section 15.01.

(e) Conditions for Election to Pay Fundamental Change Repurchase Price in Common Stock. If the Company elects to pay all or any portion of the Fundamental Change Repurchase Price in Common Stock, the number of shares of Common Stock to be paid will equal the quotient obtained by dividing (i) the portion of the Fundamental Change Repurchase Price to be paid in shares of Common Stock by (ii) 97% of the average Closing Price of the shares of Common Stock for the five Trading Day period ending on the second Business Day immediately preceding the Fundamental Change Repurchase Date, appropriately adjusted to take into account the occurrence, during the period commencing on the first of the Trading Days during the five Trading Day period and ending on the Fundamental Change Repurchase Date, of any event described in Section 13.06, subject to the next succeeding paragraph. The Company shall designate, in the Fundamental Change Company Notice delivered pursuant to clause (b) of Section 15.01, whether it will repurchase the 2011 Notes for cash or shares of Common Stock, or, if a combination thereof, the percentages of the Fundamental Change Repurchase Price of 2011 Notes in respect of which it will pay in cash or shares of Common Stock; provided that the Company will pay cash for fractional interests in shares of Common Stock. For purposes of determining the existence of potential fractional interests, all 2011 Notes subject to repurchase by the Company held by a Holder shall be considered together (no matter how many separate

certificates are to be presented). Each holder whose 2011 Notes are repurchased pursuant to this Section 15.01 shall receive the same percentage of cash or shares of Common Stock in payment of the Fundamental Change Repurchase Price for such 2011 Notes, except with regard to the payment of cash in lieu of fractional shares of Common Stock. The Company may not change its election with respect to the consideration (or components or percentages of components thereof) to be paid once the Company has given its Fundamental Change Company Notice to holders except as set forth in the next succeeding paragraph in the event of a failure to satisfy, prior to the close of business on the Business Day prior to the Fundamental Change Repurchase Date, any condition to the payment of the

Fundamental Change Repurchase Price, in whole or in part, in shares of Common Stock.

The Company shall, at least three Business Days prior to delivering the Fundamental Change Company Notice, deliver an Officers' Certificate to the Trustee specifying:

(i) the manner of payment selected by the Company,

(ii) the information required by the Company Repurchase Notice pursuant to clause (b) of Section 15.01,

(iii) if the Company elects to pay the Fundamental Change Repurchase Price, or a specified percentage thereof, in shares of Common Stock, that the conditions to such manner of payment set forth in this clause (e) have been or will be complied with, and

(iv) whether the Company desires the Trustee to give the Fundamental Change Company Notice required by clause (b) of Section 15.01.

The Company's right to exercise its election to repurchase 2011 Notes through the issuance of shares of Common Stock shall be conditioned upon:

(v) the Company's giving a timely Fundamental Change Company Notice containing an election to purchase all or a specified percentage of the 2011 Notes with shares of Common Stock as provided herein;

(vi) the registration of such shares of Common Stock under the 2011 Notes Act and, if required, the Exchange Act;

(vii) the listing of such shares of Common Stock on a United States national securities exchange or the quotation of such shares of Common Stock in an inter-dealer quotation system of any registered United States national securities association, in each case, if the Common Stock is then listed on a national securities exchange or quoted in an inter-dealer quotation system;

(viii) any necessary qualification or registration of such shares of Common Stock under applicable state securities laws or the availability of an exemption from such qualification and registration; and

(ix) the receipt by the Trustee of an (A) Officers' Certificate stating that the terms of the issuance of the shares of Common Stock are in conformity with this Indenture, (B) an Opinion of Counsel to the effect that the shares of Common Stock to be issued by the Company in payment of the Fundamental Change Repurchase Price in respect of the 2011 Notes have been duly authorized and, when issued and delivered pursuant to the terms of this Indenture in payment of the Fundamental Change Repurchase Price in respect of the 2011 Notes, will be validly issued, fully paid and non-assessable and (c) an Officer's Certificate, stating that the conditions to the issuance of the shares of Common Stock have been satisfied.

Such Officers' Certificate shall also set forth the number of shares of Common Stock to be issued for each $1,000 principal amount of 2011 Notes upon their Stated Maturity and the Closing Price of a share of Common Stock on each Trading Day during the period commencing on the fifth Trading Day immediately preceding but ending on the third Business Day prior to the applicable Fundamental Change Repurchase Date. If the foregoing conditions are not satisfied prior to the close of business on the Business Day immediately preceding the Fundamental Change Repurchase Date and the Company has elected to repurchase the 2011 Notes through the issuance of shares of Common Stock, the Company shall pay the entire Fundamental Change Repurchase Price of the 2011

Notes in cash.

Promptly after determination of the actual number of shares of Common Stock to be issued upon repurchase of 2011 Notes, the Company shall be required to disseminate a press release through Dow Jones & Company, Inc. or Bloomberg Business News containing this information or publish the information on the Company's web site or through such other public medium as the Company may use at that time.

All shares of Common Stock delivered upon repurchase of the 2011 Notes shall be duly authorized, validly issued, fully paid and non-assessable.

If a holder of a repurchased 2011 Note is paid in shares of Common Stock, the Company shall pay any documentary, stamp or similar issue or transfer tax due on such issue of Common Stock. However, the holder shall pay any such tax which is due because the holder requests the Common Stock to be issued in a name other than the holder's name. The Trustee (or other paying agent appointed by the Company) may refuse to deliver the certificates representing the shares of Common Stock being issued in a name other than the holder's name until the Trustee (or other paying agent appointed by the Company) receives a sum sufficient to pay any tax which will be due because the shares of Common Stock are to be issued in a name other than the holder's name. Nothing herein shall preclude any income tax withholding required by law or regulations.

(f) Procedure Upon Repurchase. The Company shall deposit cash or Common Stock, if permitted hereunder, at the time and in the manner as provided in Section 15.04, sufficient to pay the aggregate Fundamental Change Repurchase Price of all 2011 Notes to be purchased pursuant to this Section 15.01.

Section 15.02. Effect of Fundamental Change Repurchase Notice.

Upon receipt by the Paying Agent of the Fundamental Change Repurchase Notice specified in clause (b) of Section 15.01, the Holder of the 2011 Note in respect of which such Fundamental Change Repurchase Notice was given shall (unless such Fundamental Change Repurchase Notice is withdrawn as specified in the following two paragraphs) thereafter be entitled to receive solely the Fundamental Change Repurchase Price with respect to such 2011 Note. Such Fundamental Change Repurchase Price shall be paid to such Holder, subject to receipt of funds by the Paying Agent, promptly following the later of (x) the Fundamental Change Repurchase Date with respect to such 2011 Note (provided the conditions in clause (b) of Section 15.01 have been satisfied) and (y) the time of delivery of such 2011 Note to the Paying Agent by the Holder thereof in the manner required by clause (b) of Section 15.01. 2011 Notes in respect of which a Fundamental Change Repurchase Notice has been given by the Holder thereof may not be converted pursuant to Article 14 on or after the date of the delivery of such Fundamental Change Repurchase Notice unless such Fundamental Change Repurchase Notice has first been validly withdrawn as specified in the following two paragraphs.

A Fundamental Change Repurchase Notice may be withdrawn only by means of a written notice of withdrawal delivered to the office of the Paying Agent in accordance with the procedures set forth in the Fundamental Change Company Notice at any time prior to the close of business on the Business Day prior to the Fundamental Change Repurchase Date specifying:

(i) the Principal Amount of the 2011 Note with respect to which such notice of withdrawal is being submitted; and

(ii) the certificate number (if such 2011 Note is held in other than global form) of the 2011 Note in respect of which such notice of withdrawal is being submitted; and

(iii) the Principal Amount, if any, of such 2011 Note which remains subject to the original Fundamental Change Repurchase Notice and which has been or will be delivered for purchase or repurchase by

the Company.

There shall be no repurchase of any 2011 Notes pursuant to Section 15.01 if there has occurred (prior to, on or after, as the case may be, the giving, by the Holders of such 2011 Notes, of the required Fundamental Change Repurchase Notice) and is continuing an Event of Default (other than a default in the payment of the Fundamental Change Repurchase Price with respect to such 2011 Notes). The Paying Agent will promptly return to the respective Holders thereof any 2011 Notes (x) with respect to which a Fundamental Change Repurchase Notice has been withdrawn in compliance with this Indenture, or (y) held by it during the continuance of an Event of Default (other than a default in the payment of the Fundamental Change Repurchase Price with respect to such 2011 Notes) in which case, upon such return, the Fundamental Change Repurchase Notice with respect thereto shall be deemed to have been withdrawn.

Section 15.03. Deposit of Fundamental Change Repurchase Price.

Prior to 10:00 a.m. (local time in The City of New York) on the Business Day following the Fundamental Change Repurchase Date, as the case may be, the Company shall deposit with the Trustee or with the Paying Agent (or, if the Company or a Subsidiary or an Affiliate of either of them is acting as the Paying Agent, shall segregate and hold in trust as provided herein) an amount of money (in immediately available funds if deposited on such Business Day) or Common Stock, if permitted hereunder, sufficient to pay the Fundamental Change Repurchase Price of all the 2011 Notes or portions thereof which are to be repurchased as of the Fundamental Change Repurchase Date. The Company shall promptly notify the Trustee in writing of the amount of any deposits of cash or Common Stock made pursuant to Section 15.03. If the Trustee or the Paying Agent holds, in accordance with the terms hereof, money, and/or shares of Common Stock sufficient to pay the Fundamental Change Repurchase Price of any 2011 Note for which a Fundamental Change Repurchase Notice has been tendered and not withdrawn in accordance with this Indenture then, on the Fundamental Change Repurchase Date, such 2011 Note will cease to be Outstanding and the rights of the Holder in respect thereof shall terminate (other than the right to receive the Fundamental Change Repurchase Price as aforesaid).

Section 15.04. 2011 Notes Repurchased in Whole or in Part.

Any 2011 Note which is to be repurchased, whether in whole or in part, shall be surrendered at the office of the Paying Agent (with, if the Company or the Trustee so requires, due endorsement by, or a written instrument of transfer in form satisfactory to the Company and the Trustee duly executed by, the Holder thereof or such Holder's attorney duly authorized in writing) and the Company shall execute and the Trustee shall authenticate and deliver to the Holder of such 2011 Note, without service charge, a new 2011 Note or 2011 Notes, of any authorized denomination as requested by such Holder in aggregate Principal Amount equal to, and in exchange for, the portion of the Principal Amount of the 2011 Note so surrendered which is not repurchased.

Section 15.05. Covenant to Comply With Securities Laws Upon Repurchase of 2011 Notes.

In connection with any offer to repurchase 2011 Notes under Section 15.01 (provided that such offer or repurchase constitutes an "issuer tender offer" for purposes of Rule 13e-4 (which term, as used herein, includes any successor provision thereto) under the Exchange Act at the time of such offer or repurchase), the Company shall (i) comply with Rule 13e-4 and Rule 14e-1 under the Exchange Act, (ii) file the related Schedule TO (or any successor schedule, form or report) under the Exchange Act, and (iii) otherwise comply with all Federal and state securities laws so as to permit the rights and obligations under Section 15.01 to be exercised in the time and in the manner specified in Section 15.01.

Section 15.06. Repayment to the Company.

The Trustee and the Paying Agent shall return to the Company any cash that remains unclaimed, together with interest or dividends, if any, thereon, held by them for the payment of the Fundamental Change Repurchase Price; provided that to the extent that the aggregate amount of cash or Common Stock deposited by the Company pursuant to Section 15.03 exceeds the aggregate Fundamental Change Repurchase Price of the 2011 Notes or portions thereof which

the Company is obligated to repurchase as of the Fundamental Change Repurchase Date, then as soon as practicable following the Fundamental Change Repurchase Date, the Trustee or the Paying Agent, as the case may be, shall return any such excess to the Company.

ARTICLE THREE

MISCELLANEOUS PROVISIONS

SECTION 301. INTEGRAL PART.

This First Supplemental Indenture constitutes an integral part of the Indenture.

SECTION 302. GENERAL DEFINITIONS.

For all purposes of this First Supplemental Indenture:

(a) capitalized terms used herein without definition shall have the meanings specified in the Indenture; and

(b) the terms "herein", "hereof", "hereunder" and other words of similar import refer to this First Supplemental Indenture.

SECTION 303. ADOPTION, RATIFICATION AND CONFIRMATION.

The Indenture, as supplemented and amended by this First Supplemental Indenture, is in all respects hereby adopted, ratified and confirmed.

SECTION 304. COUNTERPARTS.

This First Supplemental Indenture may be executed in any number of counterparts, each of which when so executed shall be deemed an original; and all such counterparts shall together constitute but one and the same instrument.

SECTION 305. GOVERNING LAW.

THIS FIRST SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

IN WITNESS WHEREOF, the parties hereto have caused this First Supplemental Indenture to be duly executed and their respective corporate seals to be hereunto fixed and attested as of the day and year first written above.

TRANSKARYOTIC THERAPIES, INC.

By: /s/ Michael J. Astrue

_____

Name: Michael J. Astrue

_____

Title: President and CEO

_____

THE BANK OF NEW YORK

By: /s/ Kisha A. Holder

_____

Name: Kisha A. Holder

_____

Title: Assistant Vice President

_____

ANNEX A

GLOBAL SECURITY

1.25% SENIOR CONVERTIBLE NOTES
DUE MAY 15, 2011

TRANSKARYOTIC THERAPIES, INC.

Issue Date: _____ Maturity: May 15, 2011

Principal Amount: $_____ CUSIP: _____

Registered: No. ___

Unless this certificate is presented by an authorized representative of The Depository Trust Company (55 Water Street, New York, New York) to the issuer or its agent for registration of transfer, exchange or payment, and any certificate issued is registered in the name of Cede & Co. or such other name as requested by an authorized representative of The Depository Trust Company and any payment is made to Cede & Co., ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL since the registered owner hereof, Cede & Co., has an interest herein.

Unless and until it is exchanged in whole or in part for the individual 2011 Notes represented hereby, this Global Security may not be transferred except as a whole by the Depositary to a nominee of the Depositary or by a nominee of the Depositary to the Depositary or another nominee of the Depositary or by the Depositary or any such nominee to a successor Depositary or a nominee of such successor Depositary.

Transkaryotic Therapies, Inc., a Delaware corporation (herein called the "COMPANY", which term includes any successor corporation under the indenture hereinafter referred to), for value received, hereby promises to pay to Cede & Co., or registered assigns, the principal sum of _____ United States dollars ($_____) (which amount may from time to time be increased or decreased to reflect redemptions, repurchases, conversions, transfers or exchanges permitted under the terms of the Indenture, by adjustment made on the records of the Trustee, as custodian for the Depositary, in accordance with the rules and procedures of the Depositary) on May 15, 2011 at the office or agency of the Company maintained for that purpose in accordance with the terms of the Indenture, in such coin or currency of the United States of America as at the time of payment shall be legal tender for the payment of public and private debts, and to pay interest, semiannually on May 15 and November 15 (each, an "INTEREST PAYMENT DATE") of each year, commencing November 15, 2004, on said principal sum at said office or agency, in like coin or currency, at the rate per annum of 1.25%, from and including May 4, 2004 or from the most recent Interest Payment Date to which interest has been paid or duly provided for.

Except as otherwise provided in the Indenture, the interest payable on the Note pursuant to the Indenture on any May 15 or November 15 will be paid to the Person entitled thereto as it appears in the Security Register at the close of business on the Regular Record Date, which shall

be the May 1 and November 1 (whether or not a Business Day) next preceding such May 15 or November 15; provided that any such interest not punctually paid or duly provided for shall be payable as provided in the Indenture.

Interest on any Security that is payable, and is punctually paid or duly provided for, on any Interest Payment Date shall be paid to the person in whose name that Security is registered at the close of business on the Regular Record Date for such interest at the office or agency of the Company maintained for such purpose. Each installment of interest on any Security shall be paid in same-day funds by transfer to an account maintained by the payee located inside the United States.

The Company shall pay Interest (i) on any Security in certificated form by check mailed to the address of the Person entitled thereto as it appears in the Security Register (or upon written notice received from the registered holder thereof prior to the relevant Regular Record Date, by wire transfer in immediately available funds, if such Person is entitled to interest on Notes with an aggregate principal amount in excess of $2,000,000) or (ii) on any Global Security by wire transfer of immediately available funds to the account of the Depositary or its nominee.

Interest on the Notes shall be computed on the basis of a 360-day year comprised of twelve 30-day months.

This Security is convertible as specified on the other side of this Security.

Reference is hereby made to the further provisions of this Security set forth on the reverse hereof, which further provisions shall for all purposes have the same effect as if set forth at this place.

Unless the certificate of authentication hereon has been executed by the Trustee referred to on the reverse hereof by manual signature, this Security shall not be entitled to any benefit under the Indenture or be valid or obligatory for any purpose.

IN WITNESS WHEREOF, the Company has caused this instrument to be duly executed under its corporate seal.

Dated: _____

TRANSKARYOTIC THERAPIES, INC.

By: _____
Name:
Title:

_____
Corporate Secretary

TRUSTEE'S CERTIFICATE OF AUTHENTICATION

This is one of the 2011 Notes of the series designated therein referred to in the within-mentioned Indenture.

The Bank of New York, as Trustee

_____
Authorized Signature

[FORM OF REVERSE SIDE OF SECURITY]

TRANSKARYOTIC THERAPIES, INC.

1.25% SENIOR CONVERTIBLE NOTE DUE MAY 2011

This Security is one of a duly authorized issue of senior unsecured securities of the Company (herein called the "SECURITIES"), issued and to be issued in one or more series under an Indenture, dated as of May 4, 2004, as amended by the First Supplemental Indenture thereto, dated as of May 4, 2004 (as so amended, herein called the "INDENTURE"), between the Company and The Bank of New York, as Trustee (herein called the "TRUSTEE", which term includes any successor trustee under the Indenture), to which Indenture and all indentures supplemental thereto reference is hereby made for a statement of the respective rights, limitations of rights, duties and immunities thereunder of the Company, the Trustee and the Holders of the Securities and of the terms upon which the Securities are, and are to be, authenticated and delivered. This Security is one of the series designated on the face hereof, limited in an initial aggregate principal amount at Stated Maturity to $100,000,000.

The indebtedness evidenced by the Securities is unsecured and unsubordinated senior indebtedness of the Company and ranks equally with the Company's other unsecured and unsubordinated senior indebtedness.

METHOD OF PAYMENT

Cash payments in respect of principal and interest on the Securities shall be made by the Company in immediately available funds. Payments may be made in stock in certain circumstances as set forth in the Indenture.

SINKING FUND

No sinking fund is provided for the Securities.

REDEMPTION

Provisional Redemption. At any time on or after May 20, 2007 and before May 20, 2009, this Security may be redeemed for cash, in whole or in part, at 100% of the Principal Amount of the Securities (the "REDEMPTION PRICE"), together with accrued and unpaid interest to, but excluding, the Redemption Date, if the closing price of the Company's Common Stock is greater than 145% of the Conversion Price then in effect for at least 20 Trading Days within a period of 30 consecutive Trading Days ending on the Trading Day prior to the date of notice of provisional redemption as described below under "Notice of Redemption by the Company", provided, however, that the notice date is at least 20 days but not more than 60 days prior to the Redemption Date.

Optional Redemption. At any time on or after May 20, 2009, the Securities may be redeemed for cash, in whole or in part, at the option of the Company at the Redemption Price, together with accrued and unpaid interest to, but excluding, the Redemption Date.

If the Company redeems less than all of the outstanding Securities, the Trustee will select the Securities to be redeemed (i) by lot; (ii) pro rata or (iii) by another method the Trustee considers fair and appropriate. If the Trustee selects a portion of a Holder's Securities for partial redemption and the Holder converts a portion of the same Securities, the converted portion will be deemed to be from the portion selected for redemption.

NOTICE OF REDEMPTION BY THE COMPANY

Notice of redemption by the Company will be mailed by first-class mail at least 30 days but not more than 60 days, in the case of Optional Redemption, and at least 20 days but no more than 60 days, in the case of Provisional

Redemption, before the Redemption Date to each Holder of Securities to be redeemed at its registered address. Securities in denominations larger than $1,000 Principal Amount may be redeemed in part, but only in whole multiples of $1,000. On and after the Redemption Date, subject to the deposit with the Paying Agent of funds sufficient to pay the Redemption Price, interest ceases to accrue on Securities or portions thereof called for redemption.

CONVERSION

A Holder of a Security may convert the Security into Common Stock at any time until the close of business on the Business Day prior to the Stated Maturity; provided, however, that if the Security is called for redemption, the conversion right will terminate at the close of business on the Business Day immediately preceding the Redemption Date for such Security or such earlier date as the Holder presents such Security for redemption (unless the Company shall default in making the redemption payment when due, in which case the conversion right shall terminate at the close of business on the date such default is cured and such Security is redeemed). A Security in respect of which a Holder has delivered a Repurchase Notice exercising the option of such Holder to require the Company to purchase such Security may be converted only if such notice of exercise is withdrawn in accordance with the terms of the Indenture. The initial conversion rate is 54.0972 shares of Common Stock per $1,000 Principal Amount of Securities at Stated Maturity, subject to adjustment in certain events described in the Indenture. This is equal to an initial conversion price of $18.49 per share of Common Stock. The Company will deliver cash or a check in lieu of any fractional Common Stock.

Except as provided in the following sentence, holders will not receive any cash payment representing accrued and unpaid interest upon conversion of a Security and accrued and unpaid interest will be deemed paid in full rather than canceled, extinguished or forfeited. Notwithstanding the previous sentence, if a Security shall be surrendered for conversion during the period from close of business on any Regular Record Date for the payment of interest through the close of business on the Business Day next preceding the following Interest Payment Date, the Holder of such Security (or portion thereof being converted) at the close of business on such Regular Record Date shall receive the interest payable on the corresponding Interest Payment Date notwithstanding the conversion. Such a Security must be accompanied by an amount, in funds acceptable to the Company, equal to the interest payable on such Interest Payment Date on the Principal Amount being converted; provided, however, that no such payment shall be required if there shall exist at the time of conversion a default in the payment of interest on the Securities.

Except where Securities surrendered for conversion must be accompanied by payment as described above, no interest on converted Securities will be payable by the Company on any Interest Payment Date subsequent to the date of conversion.

A Holder may convert a portion of a Security if the Principal Amount of such portion is $1,000 or an integral multiple of $1,000. No payment or adjustment will be made for dividends on the Common Stock except as provided in the Indenture.

No fractional shares will be issued upon conversion; in lieu thereof, an amount will be paid in cash based upon the closing price of the Common Stock on the Trading Day immediately prior to the Conversion Date.

To convert a Security, a Holder must (a) complete and manually sign the conversion notice set forth below and deliver such notice to a Conversion Agent, (b) surrender the Security to the Conversion Agent or, in the case of a Global Security, deliver, or cause to be delivered, by book-entry delivery an interest in such Security, (c) furnish appropriate endorsements and transfer documents if required by a Registrar or a Conversion Agent, (d) in the case of a Global Security, complete, or cause to be completed, the appropriate instruction form for conversion pursuant to the Depositary's book-entry conversion program, (e)

pay any amount due in respect of interest, if required, and (f) pay any transfer or similar tax, if required.

PURCHASE OF SECURITIES AT OPTION OF HOLDER UPON A FUNDAMENTAL CHANGE

At the option of the Holder and subject to the terms and conditions of the Indenture, if prior to the Stated Maturity there shall have occurred a Fundamental Change, Securities shall be repurchased by the Company at the Fundamental Change Repurchase Price, equal to 100% of the Principal Amount plus accrued and unpaid interest to, but excluding, the Fundamental Change Repurchase Date, on a date specified by the Company that is not less than 25 days nor more than 35 days after the date of the mailing of a Fundamental Change Company Notice. The Fundamental Change Repurchase Price may be paid, at the option of the Company, in cash or by the issuance of Common Stock as provided in the Indenture, or in any combination thereof. The Holder shall have the right to withdraw any Fundamental Change Repurchase Notice (in whole or in a portion thereof that is $1,000 Principal Amount or an integral multiple of $1,000 in excess thereof) at any time prior to the close of business on the Business Day prior to the Fundamental Change Repurchase Date by delivering a written notice of withdrawal to the Paying Agent in accordance with the terms of the Indenture.

CONVERSION ARRANGEMENT ON CALL FOR REDEMPTION

Any Securities called for redemption, or as to which a Fundamental Change Repurchase Notice has been given but not withdrawn, unless surrendered for conversion before the close of business on the Redemption Date, may be deemed to be purchased from the Holders of such Securities at an amount not less than the Redemption Price, by one or more investment bankers or other purchasers who may agree with the Company to purchase such Securities from the Holders, to convert them into Common Stock of the Company and to make payment for such Securities to the Paying Agent in trust for such Holders.

TRANSFER

As provided in the Indenture and subject to certain limitations therein set forth, the transfer of this Security is registrable in the Security Register, upon surrender of this Security for registration or transfer at the office or agency in a Place of Payment for Securities of this series, duly endorsed by, or accompanied by a written instrument of transfer in form satisfactory to the Company and the Registrar duly executed by, the Holder hereof or his attorney duly authorized in writing, and thereupon one or more new Securities of this series, of any authorized denominations and for the same aggregate principal amount, executed by the Company and authenticated and delivered by the Trustee, will be issued to the designated transferee or transferees.

The Securities of this series are issuable only in registered form without coupons in denominations of $1,000 and any integral multiple thereof. As provided in the Indenture and subject to certain limitations set forth therein and on the face of this Security, Securities of this series are exchangeable for a like aggregate principal amount of Securities of this series of a different authorized denomination as requested by the Holder surrendering the same.

No service charge shall be made for any such registration of transfer or exchange, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith.

Prior to due presentment of this Security for registration of transfer, the Company, the Trustee or any agent of the Company or the Trustee may treat the Person in whose name this Security is registered as the owner hereof for all purposes, whether or not this Security be overdue, and neither the Company, the Trustee nor any such agent shall be affected by notice to the contrary.

INCREASE OR DECREASE IN GLOBAL SECURITY

In the event of a deposit or withdrawal of an interest in this Security, including a redemption, repurchase, conversion, transfer or exchange of this Security in part only, the Trustee, as custodian for the Depositary, shall make an adjustment on its records to reflect such deposit or withdrawal in accordance with the rules and procedures of the Depositary.

AMENDMENT, SUPPLEMENT AND WAIVER

The Indenture permits, with certain exceptions as therein provided, the amendment thereof and the modification of the rights and obligations of the Company and the rights of the Holders of the Securities of each series to be affected under the Indenture at any time by the Company and the Trustee with the consent of the Holders of a majority in principal amount of the Securities at the time Outstanding of each series to be affected. The Indenture also contains provisions permitting the Holders of specified percentages in principal amount of the Securities of each series at the time Outstanding, on behalf of the Holders of all Securities of such series, to waive compliance by the Company with certain past defaults under the Indenture and their consequences. Any such consent or waiver by the Holder of this Security shall be conclusive and binding upon such Holder and upon all future Holders of this Security and of any Security

issued upon the registration of transfer hereof or in exchange hereof or in lieu hereof, whether or not notation of such consent or waiver is made upon this Security.

SUCCESSOR CORPORATION

When a successor corporation assumes all the obligations of its predecessor under the Securities and the Indenture in accordance with the terms and conditions of the Indenture, the predecessor corporation will (except in certain circumstances specified in the Indenture) be released from those obligations.

DEFAULTS AND REMEDIES

If an Event of Default with respect to any Security of this Series shall occur and be continuing, then in accordance with Section 6.01 of the Indenture, the Trustee or the Holders of not less than 25% in principal amount of the Outstanding 2011 Notes may declare 100% of the Principal Amount plus accrued and unpaid interest, if any, to the acceleration date, of all of the 2011 Notes to be due and payable immediately by a notice in writing to the Company (and to the Trustee if given by Holders), and upon any such declaration such specified amount shall become immediately due and payable.

No reference herein to the Indenture and no provision of this Security or of the Indenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the Principal Amount, or Fundamental Change Repurchase Price of or interest, on, this Security at the times, place and rate, and in the coin or currency, herein prescribed.

No Service charge shall be made for any such registration of transfer or exchange, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith.

NO RECOURSE AGAINST OTHERS

No recourse shall be had for the payment of the principal of or the interest, if any, on this Security, for any claim based hereon, or otherwise in respect hereof, or based on or in respect of the Indenture or any indenture supplemental thereto, against any incorporator, shareholder, officer or director, as such, past, present or future, of the Company or of any successor corporation, whether by virtue of any constitution, statute or rule of law or by the enforcement of any assessment of penalty or otherwise, all such liability being, by acceptance hereof and as part of the consideration for the issue

hereof, expressly waived and released.

AUTHENTICATION

This Security shall not be valid until the Trustee or an authenticating agent manually signs the certificate of authentication on the other side of this Security.

INDENTURE TO CONTROL; GOVERNING LAW

In the case of any conflict between the provisions of this Security and the Indenture, the provisions of the Indenture shall control.

THE INDENTURE AND THE SECURITIES SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

ABBREVIATIONS AND DEFINITIONS

Customary abbreviations may be used in the name of the Holder or an assignee, such as:

TEN COM (= tenants in common), TEN ENT (= tenants by the entireties), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian) and U/G/M/A (= Uniform Gifts to Minors Act).

All terms defined in the Indenture and used in this Security but not specifically defined herein are defined in the Indenture and are used herein as so defined.

CONVERSION NOTICE

To convert this Security into Common Stock of the Company, check the box: [ ]

To convert only part of this Security, state the Principal Amount to be converted (must be $1,000 or a multiple of $1,000): $_____

If you want the stock certificate made out in another person's name, fill in the form below:

_____

(Insert other person's soc. sec. or tax I.D. no.)

_____

(Print or type other person's name, address and zip code)

Your Signature: _____ Date: _____

(Sign exactly as your name appears on the other side of this Security)

*Signature guaranteed by: _____

By: _____

*The signature must be guaranteed by an institution which is a member of one of the following recognized signature guaranty programs: (i) the Securities Transfer Agent Medallion Program (STAMP); (ii) the New York Stock Exchange Medallion Program (MSP); (iii) the Stock Exchange Medallion Program (SEMP); or (iv) such other guaranty program acceptable to the Trustee.

EXHIBIT A

Form of Fundamental Change Repurchase Notice

The Bank of New York
101 Barclay Street, Floor 8 West
New York, NY 10286
Attention: Corporate Trust Administration

Transkaryotic Therapies, Inc., (the "COMPANY")
1.25% Senior Convertible Notes Due 2011

This is a Fundamental Change Repurchase Notice as defined in Section 15.01 of the Indenture dated as of May 4, 2004 (the "INDENTURE"), between the Company and The Bank of New York, as trustee (the "TRUSTEE"), as supplemented by the First Supplemental Indenture dated as of May 4, 2004 between the Company and the Trustee. Terms used but not defined herein shall have the meanings ascribed to them in the Indenture.

Certificate No(s). of Securities: _____

I intend to deliver the following aggregate Principal Amount of Securities for repurchase by the Company pursuant to Section 15.01 of the Indenture (in multiples of $1,000):

$_____

I hereby agree that the Securities will be purchased as of the Fundamental Change Repurchase Date pursuant to the terms and conditions thereof and of the Indenture.

Signed:

_____

[EXCESS PLAN LOGO]

EXHIBIT 10.18

THE EXECUTIVE

NONQUALIFIED "EXCESS" PLAN (TM)

PLAN DOCUMENT

4140 ParkLake Avenue, Suite 500
Raleigh, NC 27612

[EBS EXECUTIVE BENEFIT SERVICES LOGO]

[EXCESS PLAN LOGO]

THE EXECUTIVE
NONQUALIFIED "EXCESS" PLAN(TM)

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[EXCESS PLAN LOGO]

THE EXECUTIVE NONQUALIFIED "EXCESS" PLAN (TM)

SECTION 1. PURPOSE:

By execution of the Adoption Agreement, the Employer has adopted the Plan set forth herein to provide a means by which certain management Employees and Independent Contractors of the Employer may elect to defer receipt of current Compensation from the Employer in order to provide Retirement and other benefits on behalf of such Employees and Independent Contractors of the Employer, as selected in the Adoption Agreement. The Plan is not intended to be a tax-qualified retirement plan under Section 401(a) of the Internal Revenue Code (the "Code"). The Plan is intended to be an unfunded plan maintained primarily for the purpose of providing deferred compensation benefits for a select group of management or highly compensated employees under Sections 201(2), 301(a)(3) and 401(a)(1) of the Employee Retirement Income Security Act of 1974 and independent contractors.

SECTION 2. DEFINITIONS:

As used in the Plan, including this Section 2, references to one gender shall include the other and, unless otherwise indicated by the context:

2.1 "ACCRUED BENEFIT" means, with respect to each Participant, the balance credited to his Deferred Compensation Account.

2.2 "ACTIVE PARTICIPANT" means, with respect to any day or date, a Participant who is in Service on such day or date; provided, that a Participant shall cease to be an Active Participant immediately upon a determination by the Committee that the Participant has ceased to be an Employee or Independent Contractor, or that the Participant no longer meets the eligibility requirements of the Plan.

2.3 "ADOPTION AGREEMENT" means the written agreement pursuant to which the Employer adopts the Plan. The Adoption Agreement is a part of the Plan as applied to the Employer.

2.4 "BENEFICIARY" means the person, persons, entity or entities designated or determined pursuant to the provisions of Section 16 of the Plan.

2.5 "BOARD" means the Board of Directors of the Employer, if the Employer is a corporation. If the Employer is not a corporation, "Board" shall mean the Employer.

2.6 "COMMITTEE" means the administrative committee provided for in Section 12.

2.7 "COMPENSATION" shall have the meaning designated in the Adoption Agreement.

2.8 "CREDITING DATE" means the date designated in the Adoption Agreement for crediting the amount of any Salary Deferral Credits to the Deferred Compensation Account of a Participant. Employer Credits may be credited to the Deferred Compensation Account of a Participant on any day that securities are traded on a national securities exchange.

2.9 "DEFERRED COMPENSATION ACCOUNT" means the sum of the amounts credited to the Retirement Account, the In-Service Account and the Education Account of each Participant, as applicable. The Deferred Compensation Account of each Participant shall be adjusted as provided in Section 9.

2.10 "DISABILITY" means disability as defined in the Adoption Agreement.

2.11 "EDUCATION ACCOUNT" means a separate account to be kept for each Participant that can be divided into one or more Education Subaccounts as described in Section 6.4. The Education Account shall be established, adjusted for payments, credited with Salary Deferral Credits, and credited or debited for

deemed investment gains or losses in the same manner and at the same time as such adjustments are made to the Deferred Compensation Account under Section 9 and in accordance with the rules and elections in effect under Section 9.

2.12 "EDUCATION SUBACCOUNT" means the subaccount of the Education Account which is maintained with respect to an Education Recipient. If the Participant does not designate more than one Education Recipient, the Education Account shall be the Education Subaccount with respect to such Education Recipient.

2.13 "EDUCATION RECIPIENT" means the individual designated by the Participant in the Salary Deferral Agreement with respect to whom the Participant will create an Education Subaccount.

2.14 "EFFECTIVE DATE" shall be the date designated in the Adoption Agreement as of which the Plan first becomes effective.

2.15 "EMPLOYEE" means an individual in the Service of the Employer if the relationship between the individual and the Employer is the legal relationship of employer and employee and if the individual is a highly compensated or management employee of the Employer. An individual shall cease to be an Employee upon the Employee's termination of Service.

2.16 "EMPLOYER" means the Employer identified in the Adoption Agreement, and any Participating Employer which adopts this Plan. The Employer may be a corporation, a limited liability company, a partnership or sole proprietorship. All references herein to the Employer shall be applied separately to each such Employer as if the Plan were solely the Plan of that Employer.

2.17 "EMPLOYER CREDITS" means the amounts credited to the Participant's Retirement Account by the Employer pursuant to the provisions of Section 4.2.

2.18 "INDEPENDENT CONTRACTOR" means an individual in the Service of the Employer if the relationship between the individual and the Employer is not the legal relationship of employer and employee. An individual shall cease to be an Independent Contractor upon the termination of the Independent Contractor's Service. An Independent Contractor shall include a director of the Employer who is not an Employee.

2.19 "IN-SERVICE ACCOUNT" means a separate account to be kept for each Participant, as described in Section 6.1. The In-Service Account shall be established, adjusted for payments, credited with Salary Deferral Credits, and credited or debited for deemed investment gains or losses in the same manner and at the same time as such adjustments are made to the Deferred Compensation Account under Section 9 and in accordance with the rules and elections in effect under Section 9.

2.20 "NORMAL RETIREMENT DATE" of a Participant is designated in the Adoption Agreement. The "Retirement Date" of a Participant means the date the Participant attains his Retirement Age.

2.21 "PARTICIPANT" means with respect to any Plan Year an Employee or Independent Contractor who has been designated by the Committee as a Participant and who has entered the Plan or who has an Accrued Benefit under the Plan.

2.22 "PARTICIPATING EMPLOYER" means any trade or business (whether or not incorporated) which adopts this Plan with the consent of the Employer identified in the Adoption Agreement.

2.23 "PLAN" means The Executive Nonqualified Excess Plan(TM), as herein set out or as duly amended. The name of the Plan as applied to the Employer shall be designated in the Adoption Agreement.

2.24 "PLAN ADMINISTRATOR" means the person designated in the Adoption Agreement. If the Plan Administrator designated in the Adoption Agreement is unable to serve, the Employer shall be the Plan Administrator.

2.25 "PLAN YEAR" means the twelve-month period ending on the last day of the month designated in the Adoption Agreement.

2.26 "QUALIFYING DISTRIBUTION EVENT" means the Participant's Retirement or the termination of Participant's Service with the Employer for any reason, including as a result of his death or Disability, as described in Section 5.

2.27 "RETIRE" OR "RETIREMENT" means Retirement within the meaning of

Section 5.4.

2.28 "RETIREMENT ACCOUNT" means a separate account to be kept for each Participant, as described in Section 4.3. The Retirement Account shall be established, adjusted for payments, credited with Salary Deferral Credits and Employer Credits, and credited or debited for deemed investment gains or losses in the same manner and at the same time as such

adjustments are made to the Deferred Compensation Account under Section 9 and in accordance with the rules and elections in effect under Section 9.

2.29 "SALARY DEFERRAL AGREEMENT" means a written agreement entered into between a Participant and the Employer pursuant to the provisions of Section 4.1

2.30 "SALARY DEFERRAL CREDITS" means the amounts credited to the Participant's Deferred Compensation Account by the Employer pursuant to the provisions of Section 4.1.

2.31 "SERVICE" means employment by the Employer as an Employee. If the Participant is an Independent Contractor, "Service" shall mean the period during which the contractual relationship exists between the Employer and the Participant.

2.32 "SPONSOR" means Executive Benefit Services, Inc.

2.33 "SPOUSE" or "SURVIVING SPOUSE" means, except as otherwise provided in the Plan, the legally married spouse or surviving spouse of a Participant.

2.34 "TRUST" means the trust fund established pursuant to Section 13.2, if designated by the Employer in the Adoption Agreement.

2.35 "TRUSTEE" means the trustee, if any, named in the agreement establishing the Trust and such successor or additional trustee as may be named pursuant to the terms of the agreement establishing the Trust.

2.36 "YEARS OF SERVICE" means each Plan Year of Service completed by the Participant. For vesting purposes, Years of Service shall be calculated from the date designated in the Adoption Agreement.

SECTION 3. PARTICIPATION:

The Committee in its discretion shall designate each Employee or Independent Contractor who is eligible to participate in the Plan. An Employee or Independent Contractor designated by the Committee as a Participant who has not otherwise entered the Plan shall enter the Plan and become a Participant as of the date determined by the Committee. A Participant who separates from Service with the Employer and who later returns to Service will not be an Active Participant under the Plan except upon satisfaction of such terms and conditions as the Committee shall establish upon the Participant's return to Service, whether or not the Participant shall have an Accrued Benefit remaining under the Plan on the date of his return to Service.

SECTION 4. CREDITS TO DEFERRED COMPENSATION ACCOUNT:

4.1 SALARY DEFERRAL CREDITS. To the extent provided in the Adoption Agreement, each Active Participant may elect, by entering into a Salary Deferral Agreement with the Employer, to defer his Compensation from the Employer by a dollar amount or percentage specified in the Salary Deferral Agreement. The amount of the Participant's Salary Deferral Credit shall be credited by the Employer to the Deferred Compensation Account maintained for the Participant pursuant to Section 9. The following special provisions shall apply with respect to the Salary Deferral Credits of a Participant:

4.1.1 The Employer shall credit to the Participant's Deferred Compensation Account on each Crediting Date an amount equal to the total Salary Deferral Credit for the period ending on such Crediting Date.

4.1.2 An election pursuant to Section 4.1 shall be made by the Participant by executing and delivering a Salary Deferral Agreement to the Committee. The Salary Deferral Agreement shall become effective with respect to such Participant as of the first full payroll period commencing on or immediately following the first day of the Plan Year which occurs after the date such Salary Deferral Agreement is received by the Committee; provided, that a Participant who first becomes a Participant in the Plan during a Plan Year may enter into a Salary Deferral Agreement to be effective as of the first payroll period next following the date he enters the Plan. A Participant's election shall continue

in effect, unless earlier modified by the Participant, until the Service of the Participant is terminated, or, if earlier, until the Participant ceases to be an Active Participant under the Plan.

4.1.3 A Participant may unilaterally modify a Salary Deferral Agreement (either to increase or decrease the portion of his future Compensation which is subject to salary deferral within the percentage limits set forth in Section 4.1 of the Adoption Agreement) by providing a written modification of the Salary Deferral Agreement to the Employer. The modification shall become effective as of the first full payroll period commencing on or immediately following the first day of the Plan Year which occurs after the date such written modification is received by the Committee. The Participant may terminate the Salary Deferral Agreement effective as of the date designated in the Adoption Agreement.

4.1.4 The Committee may from time to time establish policies or rules governing the manner in which Salary Deferral Credits may be made.

4.2 EMPLOYER CREDITS. If designated by the Employer in the Adoption Agreement, the Employer shall cause the Committee to credit to the Deferred Compensation Account of each Active Participant an Employer Credit as determined in accordance with the Adoption Agreement.

4.3 DEFERRED COMPENSATION ACCOUNT. Unless otherwise designated by the Participant in the Salary Deferral Agreement, all Salary Deferral Credits made pursuant to Section 4.1 shall be credited to the Retirement Account of the Participant. All Employer Credits made pursuant to Section 4.2 shall be made to the Retirement Account of the Participant. The Retirement Account is a part of the Deferred Compensation Account of a Participant and shall be distributed upon a Qualifying Distribution Event.

SECTION 5. QUALIFYING DISTRIBUTION EVENTS:

5.1 DEATH OF A PARTICIPANT. If a Participant dies while in Service, the Employer shall pay a benefit to the Participant's Beneficiary in the amount designated in the Adoption Agreement. Payment of such benefit shall be made by the Employer pursuant to Section 7. If a Participant dies following his Retirement or termination of Service for any

reason, including Disability, and before all payments to him under the Plan have been made, the balance of the Participant's vested Accrued Benefit shall be paid by the Employer to the Participant's Beneficiary pursuant to Section 7, and such balance shall be determined as of the commencement date of the payments.

5.2 DISABILITY OF A PARTICIPANT. If a Participant suffers a Disability while in Service prior to his Normal Retirement Date, he shall terminate Service with the Employer as of the date of the establishment of his Disability, whereupon he shall commence receiving payment of his vested Accrued Benefit, determined as of the commencement date of the payments. Such benefit shall be paid by the Employer as provided in Section 7.

5.3 TERMINATION OF SERVICE. If the Service of a Participant with the Employer shall be terminated for any reason other than Retirement, Disability or death, his vested Accrued Benefit shall be paid to him by the Employer as provided in Section 7, and such Accrued Benefit shall be determined as of the commencement date of the payments. If a Participant's Accrued Benefit is not fully vested at his termination of employment, he shall forfeit that portion of his Accrued Benefit that is not fully vested. If he subsequently returns to Service with the Employer, he shall be treated as a new Participant for purposes of determining the vested portion of his Accrued Benefit.

5.4 RETIREMENT. A Participant who is in Service on or after his Normal Retirement Date shall be eligible to Retire and commence receiving payment of his Accrued Benefit. Payment of such benefit shall be made by the Employer pursuant to Section 7.

SECTION 6. DISTRIBUTIONS WHILE IN SERVICE:

6.1 IN-SERVICE WITHDRAWALS. If the Employer designates in the Adoption Agreement that in-service withdrawals are permitted under the Plan, a Participant may elect in the Salary Deferral Agreement to withdraw a designated amount from his Deferred

Compensation Account at the specified time or times designated by the Participant in the Salary Deferral Agreement, and the Participant's In-Service

Account shall be credited with the amount designated for in-service withdrawals. The following special provisions shall apply with respect to the In-Service Account:

6.1.1 Notwithstanding any provision in this Section 6 to the contrary, if Participant incurs a Qualifying Distribution Event prior to the date on which the entire balance of his In-Service Account has been distributed to him, then the balance in the In-Service Account on the date of the Qualifying Distribution Event shall be distributed to him in the same manner and at the same time as his Deferred Compensation Account is distributed to him under Section 7 and in accordance with the rules and elections in effect under Section 7.

6.1.2 If permitted by the Employer in the Adoption Agreement, a Participant may defer the date of any withdrawal from the In-Service Account by giving notice of the new withdrawal date to the Committee within the time limits specified in the Adoption Agreement.

6.2 FINANCIAL HARDSHIP WITHDRAWALS. If the Employer designates in the Adoption Agreement that financial hardship withdrawals are permitted under the Plan, a distribution of the Deferred Compensation Account may be made to a Participant on account of financial hardship, subject to the following provisions:

6.2.1 A Participant may, at any time prior to his Retirement or termination of Service for any reason, including Disability, make application to the Committee to receive a distribution in a lump sum of all or a portion of the vested Accrued Benefit credited to his Deferred Compensation Account (determined as of the date the distribution, if any, is made under this Section 6.2) because of an unforeseeable emergency that results in severe financial hardship to the Participant. A distribution because of an unforeseeable emergency shall not exceed the amount required to meet the immediate financial need created by the unforeseeable emergency and not otherwise reasonably available from other resources of the Participant. Examples of an unforeseeable emergency shall include but shall not be limited to those financial needs arising on account of a sudden or unexpected illness or accident of the Participant or of a dependent of the Participant, loss of the Participant's property due to casualty, or other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Participant.

6.2.2 The Participant's request for a distribution on account of financial hardship must be made in writing to the Committee. The request must specify the nature of the financial hardship, the total amount requested to be distributed from the Deferred Compensation Account, and the total amount of the actual expense incurred or to be incurred on account of financial hardship.

6.2.3 If a distribution under this Section 6.2 is approved by the Committee, such distribution will be made as soon as practicable following the date it is approved. The processing of the request shall be completed as soon as practicable from the date on which the Committee receives the properly completed written request for a distribution on account of a financial hardship. If a Participant's termination of Service occurs after a request is approved in accordance with this Section 6.2.3, but prior to distribution of the full amount approved, the approval of the request shall be automatically null and void and the benefits which the Participant is entitled to receive under the Plan shall be distributed in accordance with the applicable distribution provisions of the Plan. Only one financial hardship distribution shall be made within any Plan Year.

6.2.4 The Committee may from time to time adopt additional policies or rules governing the manner in which such distributions may be made so that the Plan may be conveniently administered.

6.3 "HAIRCUT" WITHDRAWALS. If the Employer designates in the Adoption Agreement that "haircut" withdrawals are permitted under the Plan, a Participant in Service may at his option make one or more withdrawals from his Deferred Compensation Account by written request to the Committee; provided, however, that a Participant who requests a withdrawal under this Section 6.3 shall incur a penalty (the "haircut") equal to a percentage (not less than 10%), as designated by the Employer in the Adoption Agreement, of the amount withdrawn, and this penalty shall be forfeited from the Deferred Compensation Account of the Participant notwithstanding the provisions of Section 8.

6.4 EDUCATION WITHDRAWALS. If the Employer designates in the Adoption Agreement that education withdrawals are permitted under the Plan, a Participant may elect in the Salary Deferral Agreement for a designated percentage or dollar amount of the Salary Deferral Credits to be credited to the Education Account of the Education Recipient designated by the Participant. If the Participant designates more than one Education Recipient, the

Education Account shall be divided into Education Subaccounts for each Education Recipient, and the Participant may designate in the Salary Deferral Agreement the percentage or dollar amount of each Salary Deferral Credit to be credited to each Education Subaccount. In the absence of a clear designation, all credits made to the Education Account shall be equally allocated to each Education Subaccount. As soon as practicable after the date designated by the Participant in the Salary Deferral Agreement, the Employer shall pay to the Participant the balance in the Education Subaccount with respect to such Education Recipient in the manner designated by the Participant in the Salary Deferral Agreement and permitted by the Employer in the Adoption Agreement. The following special provisions shall apply with respect to the Education Account:

6.4.1 Notwithstanding any provision in this Section 6 to the contrary, if a Participant incurs a Qualifying Distribution Event prior to the date on which the entire balance of the Education Account has been distributed to him, then the balance in the Education Account on the date of the Qualifying Distribution Event shall be distributed to him in the same manner and at the same time as his Deferred Compensation Account is distributed to him under Section 7 and in accordance with the rules and elections in effect under Section 7.

6.4.2 If permitted by the Employer in the Adoption Agreement, a Participant may defer the date of any withdrawal from the Education Account by giving notice of the new withdrawal date to the Committee within the time limits specified in the Adoption Agreement.

SECTION 7. QUALIFYING DISTRIBUTION EVENTS PAYMENT OPTIONS:

7.1 PAYMENT OPTIONS. The Employer shall designate in the Adoption Agreement the payment options available upon a Qualifying Distribution Event. Upon a Participant's entry into the Plan, the Participant shall elect among these designated payment options the method under which his vested Accrued Benefit or, in the event of his death, any benefit payable as a result, will be distributed; provided, however, that if permitted by the Employer in the Adoption Agreement, a Participant may change the method of payment by

giving notice of the new payment method to the Committee within the time limits specified in the Adoption Agreement. In the event the Participant fails to make a valid designation of the payment method, the distribution will be made in a single lump sum payment. Notwithstanding any election made by the Participant, the vested Accrued Benefit of the Participant will be distributed in a single lump sum payment if the amount of such benefit does not exceed the dollar limit specified by the Employer in the Adoption Agreement, if applicable.

7.2 PREPAYMENT. Notwithstanding any other provisions of this Plan, if a Participant or any other person (a "recipient") is entitled to receive payments under the Plan, the Committee in its sole discretion may direct the Employer to prepay all or any part of the payments remaining to be made to or on behalf of the recipient, or to shorten the payment period. The amount of such prepayment shall be in full satisfaction of the Employer's obligations hereunder to the recipient and to all persons claiming under or through the recipient with respect to the payments being prepaid. In the event of a partial prepayment, the Committee shall designate which installments are being prepaid and, if applicable, the accounts of the Participant from which such prepayments shall be debited. The Committee's determinations under this Section 7.2 shall be final and conclusive upon all parties claiming benefits under this Plan.

SECTION 8. VESTING:

A Participant shall be fully vested in the portion of his Deferred Compensation Account attributable to Salary Deferral Credits, and all income, gains and losses attributable thereto. A Participant shall become fully vested in the portion of his Deferred Compensation Account attributable to Employer Credits, and income, gains and losses attributable thereto, in accordance with the vesting schedule and provisions designated by the Employer in the Adoption Agreement.

SECTION 9. ACCOUNTS; DEEMED INVESTMENT; ADJUSTMENTS TO ACCOUNT:

9.1 ACCOUNTS. The Committee shall establish a book reserve account, entitled the "Deferred Compensation Account," on behalf of each Participant. The Committee shall also establish a Retirement Account, In-Service Account and Education Account as a part of the Deferred Compensation Account of each Participant, if applicable. The amount credited to the Deferred Compensation Account shall be adjusted pursuant to the provisions of Section 9.3.

9.2 DEEMED INVESTMENTS. The Deferred Compensation Account of a Participant shall be credited with an investment return determined as if the account were invested in one or more investment funds made available by the Committee. The Participant shall elect the investment funds in which his Deferred Compensation Account shall be deemed to be invested. Such election shall be made in the manner prescribed by the Committee and shall take effect upon the entry of the Participant into the Plan. The investment election of the Participant shall remain in effect until a new election is made by the Participant. In the event the Participant fails for any reason to make an effective election of the investment return to be credited to his account, the investment return shall be determined by the Committee.

9.3 ADJUSTMENTS TO DEFERRED COMPENSATION ACCOUNT. With respect to each Participant who has a Deferred Compensation Account under the Plan, the amount credited to such account shall be adjusted by the following debits and credits, at the times and in the order stated:

9.3.1 The Deferred Compensation Account shall be debited each business day with the total amount of any payments made from such account since the last preceding business day to him or for his benefit.

9.3.2 The Deferred Compensation Account shall be credited on each Crediting Date with the total amount of any Salary Deferral Credits and Employer Credits to such account since the last preceding Crediting Date.

9.3.3 The Deferred Compensation Account shall be credited or debited on each day securities are traded on a national stock exchange with the amount of deemed investment gain or loss resulting from the performance of the investment funds elected by the Participant in accordance with Section 9.2. The amount of such deemed investment gain or loss shall be determined by the Committee and such determination shall be final and conclusive upon all concerned.

SECTION 10. BENEFIT EXCHANGE:

If elected by the Employer in the Adoption Agreement, the Employer and the Participant may enter into an agreement under which the Participant's vested Accrued Benefit may be exchanged for another nonqualified benefit in accordance with rules established by the Committee.

SECTION 11. TRANSFER TO QUALIFIED PLAN:

If elected by the Employer in the Adoption Agreement and directed by the Participant in the Salary Deferral Agreement, the Employer shall transfer amounts from the Deferred Compensation Account of the Participant to the account of the Participant under a tax-qualified retirement plan maintained by the Employer and identified in the Adoption Agreement (the "Qualified Plan") in accordance with the following procedures:

11.1 MAXIMIZE QUALIFIED PLAN DEFERRALS. As soon as administratively feasible after the end of each Plan Year, the Employer shall determine the amount of Salary Deferral Credits made to the Deferred Compensation Account of the Participant for the Plan Year (excluding the amount of deemed investment gain or loss with respect thereto) which is eligible for transfer to the Qualified Plan. Such amount shall be determined so as to permit the maximum allocation to the account of the Participant under the Qualified Plan for the Plan Year without exceeding the limitations applicable to the Qualified Plan (including by way of illustration and not limitation, the limitations under Sections 402(g) and 401(k)(3) of the Code, and any successors thereto).

11.2 MAXIMIZE QUALIFIED PLAN MATCH. As soon as administratively feasible after the end of each Plan Year, the Employer shall determine the amount of any Employer Credits made as a matching amount to the Deferred Compensation Account of the Participant for the Plan Year (excluding the amount of deemed investment gain or loss with respect thereto) which is eligible for transfer to the Qualified Plan. Such amount shall be determined so as to permit the maximum allocation to the account of the Participant under the Qualified Plan for the Plan Year without exceeding the limitations applicable to the Qualified Plan (including by way of illustration and not limitation, the limitation under Section 401(m)(2) of the Code, and any successors thereto).

11.3 TRANSFER DEFERRAL TO QUALIFIED PLAN. No later than two and one-half months following the end of the Plan Year, the Employer shall debit the amount determined under Section 11.1 from the Deferred Compensation Account of the Participant. If the Participant has directed in the Salary Deferral Agreement that such transfer be made, the Employer shall allocate such amount to the account of the Participant under the Qualified Plan. If the Participant has not directed such transfer, the Employer shall distribute such amount from the

Deferred Compensation Account to the Participant.

11.4 CREDIT MATCH TO QUALIFIED PLAN. No later than two and one-half months following the end of the Plan Year, the Employer shall debit the amount determined under Section 11.2 from the Deferred Compensation Account of the Participant. If the transfer described in Section 11.3 is made, the Employer shall allocate the amount determined under Section 11.2 to the account of the Participant under the Qualified Plan. If such transfer is not made and the Participant receives a distribution of the amount determined under Section 11.1, the Participant shall forfeit the amount determined under Section 11.2.

11.5 COMPLIANCE WITH QUALIFIED PLAN. In its sole discretion, the Employer may make multiple transfers or distributions under this Section 11 during the Plan Year; provided, however, that no transfers shall be made under this Section 11 if precluded by the terms of the Qualified Plan.

SECTION 12. ADMINISTRATION BY COMMITTEE:

12.1 MEMBERSHIP OF COMMITTEE. The Committee shall consist of at least three individuals who shall be appointed by the Board to serve at the pleasure of the Board. Any member of the Committee may resign, and his successor, if any, shall be appointed by the Board. The Committee shall be responsible for the general administration and interpretation of the Plan and for carrying out its provisions, except to the extent all or any of such obligations are specifically imposed on the Board.

12.2 COMMITTEE OFFICERS; SUBCOMMITTEE. The members of the Committee may elect Chairman and may elect an acting Chairman. They may also elect a Secretary and may elect an acting Secretary, either of whom may be but need not be a member of the Committee. The Committee may appoint from its membership such subcommittees with such powers as the Committee shall determine, and may authorize one or more of its members or any agent to execute or deliver any instruments or to make any payment on behalf of the Committee.

12.3 COMMITTEE MEETINGS. The Committee shall hold such meetings upon such notice, at such places and at such intervals as it may from time to time determine. Notice of meetings shall not be required if notice is waived in writing by all the members of the Committee at the time in office, or if all such members are present at the meeting.

12.4 TRANSACTION OF BUSINESS. A majority of the members of the Committee at the time in office shall constitute a quorum for the transaction of business. All resolutions or other actions taken by the Committee at any meeting shall be by vote of a majority of those present at any such meeting and entitled to vote. Resolutions may be adopted or other action taken without a meeting upon written consent thereto signed by all of the members of the Committee.

12.5 COMMITTEE RECORDS. The Committee shall maintain full and complete records of its deliberations and decisions. The minutes of its proceedings shall be conclusive proof of the facts of the operation of the Plan.

12.6 ESTABLISHMENT OF RULES. Subject to the limitations of the Plan, the Committee may from time to time establish rules or by-laws for the administration of the Plan and the transaction of its business.

12.7 CONFLICTS OF INTEREST. No individual member of the Committee shall have any right to vote or decide upon any matter relating solely to himself or to any of his rights or benefits under the Plan (except that such member may sign unanimous written consent to resolutions adopted or other action taken without a meeting), except relating to the terms of his Salary Deferral Agreement.

12.8 CORRECTION OF ERRORS. The Committee may correct errors and, so far as practicable, may adjust any benefit or credit or payment accordingly. The Committee may in its discretion waive any notice requirements in the Plan; provided, that a waiver of notice in one or more cases shall not be deemed to constitute a waiver of notice in any other case. With respect to any power or authority which the Committee has discretion to exercise under the Plan, such discretion shall be exercised in a nondiscriminatory manner.

12.9 AUTHORITY TO INTERPRET PLAN. Subject to the claims procedure set forth in Section 18 the Plan Administrator and the Committee shall have the duty and discretionary authority to interpret and construe the provisions of the Plan and to decide any dispute which may arise regarding the rights of Participants hereunder, including the discretionary authority to construe the Plan and to make determinations as to eligibility and benefits under the Plan.

Determinations by the Plan Administrator and the Committee shall apply uniformly to all persons similarly situated and shall be binding and conclusive upon all interested persons.

12.10 THIRD PARTY ADVISORS. The Committee may engage an attorney, accountant, actuary or any other technical advisor on matters regarding the operation of the Plan and to perform such other duties as shall be required in connection therewith, and may employ such clerical and related personnel as the Committee shall deem requisite or desirable in carrying out the provisions of the Plan. The Committee shall from time to time, but no less frequently than annually, review the financial condition of the Plan and determine the financial and liquidity needs of the Plan. The Committee shall communicate such needs to the Employer so that its policies may be appropriately coordinated to meet such needs.

12.11 COMPENSATION OF MEMBERS. No fee or compensation shall be paid to any member of the Committee for his Service as such.

12.12 EXPENSE REIMBURSEMENT. The Committee shall be entitled to reimbursement by the Employer for its reasonable expenses properly and actually incurred in the performance of its duties in the administration of the Plan.

12.13 INDEMNIFICATION. No member of the Committee shall be personally liable by reason of any contract or other instrument executed by him or on his behalf as a member of the Committee nor for any mistake of judgment made in good faith, and the Employer shall

indemnify and hold harmless, directly from its own assets (including the proceeds of any insurance policy the premiums for which are paid from the Employer's own assets), each member of the Committee and each other officer, employee, or director of the Employer to whom any duty or power relating to the administration or interpretation of the Plan may be delegated or allocated, against any unreimbursed or uninsured cost or expense (including any sum paid in settlement of a claim with the prior written approval of the Board) arising out of any act or omission to act in connection with the Plan unless arising out of such person's own fraud, bad faith, willful misconduct or gross negligence.

SECTION 13. CONTRACTUAL LIABILITY; TRUST:

13.1 CONTRACTUAL LIABILITY. The obligation of the Employer to make payments hereunder shall constitute a contractual liability of the Employer to the Participant. Such payments shall be made from the general funds of the Employer, and the Employer shall not be required to establish or maintain any special or separate fund, or otherwise to segregate assets to assure that such payments shall be made, and the Participant shall not have any interest in any particular assets of the Employer by reason of its obligations hereunder. To the extent that any person acquires a right to receive payment from the Employer, such right shall be no greater than the right of an unsecured creditor of the Employer.

13.2 TRUST. If so designated in Section 2.34 of the Adoption Agreement, the Employer may establish a Trust with the Trustee, pursuant to such terms and conditions as are set forth in the Trust Agreement. The Trust, if and when established, is intended to be treated as a grantor trust for purposes of the Code. The establishment of the Trust is not intended to cause Participants to realize current income on amounts contributed thereto, and the Trust shall be so interpreted and administered.

SECTION 14. ALLOCATION OF RESPONSIBILITIES:

The persons responsible for the Plan and the duties and responsibilities allocated to each are as follows:

14.1 BOARD.

(i) To amend the Plan;

(ii) To appoint and remove members of the Committee; and

(iii) To terminate the Plan.

14.2 COMMITTEE.

(i) To designate Participants;

(ii) To interpret the provisions of the Plan and to determine the rights of the Participants under the Plan, except to the extent otherwise provided in Section 19 relating to claims procedure;

(iii) To administer the Plan in accordance with its terms, except to the extent powers to administer the Plan are specifically delegated to another person or persons as provided in the Plan;

(iv) To account for the Accrued Benefits of Participants; and

(v) To direct the Employer in the payment of benefits.

14.3 PLAN ADMINISTRATOR.

(i) To file such reports as may be required with the United States Department of Labor, the Internal Revenue Service and any other government agency to which reports may be required to be submitted from time to time; and

(ii) To administer the claims procedure to the extent provided in Section 19.

SECTION 15. BENEFITS NOT ASSIGNABLE; FACILITY OF PAYMENTS:

15.1 BENEFITS NOT ASSIGNABLE. No portion of any benefit credited or paid under the Plan with respect to any Participant shall be subject in any manner to anticipation, alienation, sale, transfer, assignment, pledge, encumbrance or charge, and any attempt so to anticipate, alienate, sell, transfer, assign, pledge, encumber or charge the same shall be void, nor shall any

portion of such benefit be in any manner payable to any assignee, receiver or any one trustee, or be liable for his debts, contracts, liabilities, engagements or torts. Notwithstanding the foregoing, in the event that all or any portion of the benefit of a Participant is transferred to the former spouse of the Participant incident to a divorce, the Committee shall maintain such amount for the benefit of the former spouse until distributed in the manner required by an order of any court having jurisdiction over the divorce, and the former spouse shall be entitled to the same rights as the Participant with respect to such benefit.

15.2 PAYMENTS TO MINORS AND OTHERS. If any individual entitled to receive a payment under the Plan shall be physically, mentally or legally incapable of receiving or acknowledging receipt of such payment, the Committee, upon the receipt of satisfactory evidence of his incapacity and satisfactory evidence that another person or institution is main-taining him and that no guardian or committee has been appointed for him, may cause any payment otherwise payable to him to be made to such person or institution so maintaining him. Payment to such person or institution shall be in full satisfaction of all claims by or through the Participant to the extent of the amount thereof.

SECTION 16. BENEFICIARY:

The Participant's Beneficiary shall be the person or persons designated by the Participant on the Beneficiary designation form provided by and filed with the Committee or its designee. If the Participant does not designate a Beneficiary, the Beneficiary shall be his Surviving Spouse. If the Participant does not designate a Beneficiary and has no Surviving Spouse, the Beneficiary shall be the Participant's estate. The designation of a Beneficiary may be changed or revoked only by filing a new Beneficiary designation form with the Committee or its designee. If a Beneficiary (the "primary Beneficiary") is receiving or is entitled to receive payments under the Plan and dies before receiving all of the payments due him, the balance to

which he is entitled shall be paid to the contingent Beneficiary, if any, named in the Participant's current Beneficiary designation form. If there is no contingent Beneficiary, the balance shall be paid to the estate of the primary Beneficiary. Any Beneficiary may disclaim all or any part of any benefit to which such Beneficiary shall be entitled hereunder by filing a written disclaimer with the Committee before payment of such benefit is to be made. Such a disclaimer shall be made in a form satisfactory to the Committee and shall be irrevocable when filed. Any benefit disclaimed shall be payable from the Plan in the same manner as if the Beneficiary who filed the disclaimer had died on the date of such filing.

SECTION 17. AMENDMENT AND TERMINATION OF PLAN:

The Board may amend any provision of the Plan or terminate the Plan at any time; provided, that in no event shall such amendment or termination reduce any Participant's Accrued Benefit as of the date of such amendment or termination, nor shall any such amendment affect the terms of the Plan relating to the payment of such Accrued Benefit.

Notwithstanding the foregoing, the Plan shall be terminated upon the occurrence of one or more of the events designated in the Adoption Agreement. Upon the occurrence of a termination event, the Accrued Benefit of each Participant may become fully vested and payable to the Participant in a lump sum if designated by the Employer in the Adoption Agreement.

SECTION 18. COMMUNICATION TO PARTICIPANTS:

The Employer shall make a copy of the Plan available for inspection by Participants and their beneficiaries during reasonable hours at the principal office of the Employer.

SECTION 19. CLAIMS PROCEDURE:

The following claims procedure shall apply with respect to the Plan:

19.1 FILING OF A CLAIM FOR BENEFITS. If a Participant or Beneficiary (the "claimant") believes that he is entitled to benefits under the Plan which are not being paid to him or which are not being accrued for his benefit, he shall file a written claim therefor with the Plan Administrator. In the event the Plan Administrator shall be the claimant, all actions which are required to be taken by the Plan Administrator pursuant to this Section 19 shall be taken instead by another member of the Committee designated by the Committee.

19.2 NOTIFICATION TO CLAIMANT OF DECISION. Within 90 days after receipt of a claim by the Plan Administrator (or within 180 days if special circumstances require an extension of time), the Plan Administrator shall notify the claimant of his decision with regard to the claim. In the event of such special circumstances requiring an extension of time, there shall be furnished to the claimant prior to expiration of the initial 90-day period written notice of the extension, which notice shall set forth the special circumstances and the date by which the decision shall be furnished. If such claim shall be wholly or partially denied, notice thereof shall be in writing and worded in a manner calculated to be understood by the claimant, and shall set forth: (i) the specific reason or reasons for the denial; (ii) specific reference to pertinent pro-visions of the Plan on which the denial is based; (iii) a description of any additional material or information necessary for the claimant to perfect the claim and an explanation of why such material or information is necessary; and (iv) an explanation of the procedure for review of the denial and the time limits applicable to such procedures, including a statement of the claimant's right to bring a civil action under ERISA following an adverse benefit determination on review.

19.3 PROCEDURE FOR REVIEW. Within 60 days following receipt by the claimant of notice denying his claim, in whole or in part, or, if such notice shall not be given, within 60 days following the latest date on which such notice could have been timely given, the claimant shall appeal denial of the claim by filing a written application for review with the Committee. Following such request for review, the Committee shall fully and fairly review the decision denying the claim. Prior to the decision of the Committee, the claimant shall be given an opportunity to review pertinent documents and to submit issues and comments in writing.

19.4 DECISION ON REVIEW. The decision on review of a claim denied in whole or in part by the Plan Administrator shall be made in the following manner:

19.4.1 Within 60 days following receipt by the Committee of the request for review (or within 120 days if special circumstances require an extension of time), the Committee shall notify the claimant in writing of its decision with regard to the claim. In the event of such special circumstances requiring an extension of time, written notice of the extension shall be furnished to the claimant prior to the commencement of the extension. If the decision on review is not furnished in a timely manner, the claim shall be deemed denied as of the close of the initial 60-day period (or the close of the extension period, if applicable).

19.4.2 With respect to a claim that is denied in whole or in part, the decision on review shall set forth specific reasons for the decision, shall be written in a manner calculated to be understood by the claimant, and shall cite specific references to the pertinent Plan provisions on which the decision is based.

19.4.3 The decision of the Committee shall be final and conclusive.

19.5 ACTION BY AUTHORIZED REPRESENTATIVE OF CLAIMANT. All actions set forth in this Section 19 to be taken by the claimant may likewise be taken by a representative of the claimant duly authorized by him to act in his behalf on such matters. The Plan Administrator and the Committee may require such

evidence as either may reasonably deem necessary or advisable of the authority to act of any such representative.

SECTION 20. MISCELLANEOUS PROVISIONS:

20.1 SET OFF. Notwithstanding any other provision of this Plan, the Employer may reduce the amount of any payment otherwise payable to or on behalf of a Participant hereunder by the amount of any loan, cash advance, extension of credit or other obligation of the Participant to the Employer that is then due and payable, and the Participant shall be deemed to have consented to such reduction.

20.2 NOTICES. Each Participant who is not in Service and each Beneficiary shall be responsible for furnishing the Committee or its designee with his current address for the mailing of notices and benefit payments. Any notice required or permitted to be given to such Participant or Beneficiary shall be deemed given if directed to such address and mailed by regular United States mail, first class, postage prepaid. If any check mailed to such address is returned as undeliverable to the addressee, mailing of checks will be suspended until the Participant or Beneficiary furnishes the proper address. This provision shall not be construed as requiring the mailing of any notice or notification otherwise permitted to be given by posting or by other publication.

20.3 LOST DISTRIBUTEES. A benefit shall be deemed forfeited if the Plan Administrator is unable to locate the Participant or Beneficiary to whom payment is due on or before the fifth anniversary of the date payment is to be made or commence; provided, that the deemed investment rate of return pursuant to Section 9.2 shall cease to be applied to the Participant's account following the first anniversary of such date; provided further, however, that such benefit shall be reinstated if a valid claim is made by or on behalf of the Participant or Beneficiary for all or part of the forfeited benefit.

20.4 RELIANCE ON DATA. The Employer, the Committee and the Plan Administrator shall have the right to rely on any data provided by the Participant or by any Beneficiary. Representations of such data shall be binding upon any party seeking to claim a benefit through a Participant, and the Employer, the Committee and the Plan Administrator shall have no obligation to inquire into the accuracy of any representation made at any time by a Participant or Beneficiary.

20.5 RECEIPT AND RELEASE FOR PAYMENTS. Subject to the provisions of Section 20.1, any payment made from the Plan to or with respect to any Participant or Beneficiary, or pursuant to a disclaimer by a Beneficiary, shall, to the extent thereof, be in full satisfaction of all claims hereunder against the Plan and the Employer with respect to the Plan. The recipient of any payment from the Plan may be required by the Committee, as a condition precedent to such payment, to execute a receipt and release with respect thereto in such form as shall be acceptable to the Committee.

20.6 HEADINGS. The headings and subheadings of the Plan have been inserted for convenience of reference and are to be ignored in any construction of the provisions hereof.

20.7 CONTINUATION OF EMPLOYMENT. The establishment of the Plan shall not be construed as conferring any legal or other rights upon any Employee or any persons for continuation of employment, nor shall it interfere with the right of the Employer to discharge any Employee or to deal with him without regard to the effect thereof under the Plan.

20.8 MERGER OR CONSOLIDATION; ASSUMPTION OF PLAN. No employer-party to the Plan shall consolidate or merge into or with another corporation or entity, or transfer all or substantially all of its assets to another corporation, partnership, trust or other entity (a "Successor Entity") unless such Successor Entity shall assume the rights, obligations and liabilities of the employer-party under the Plan and upon such assumption, the Successor Entity shall become obligated to perform the terms and conditions of the Plan. Nothing herein shall prohibit the assumption of the obligations and liabilities of the Employer under the Plan by any Successor Entity.

20.9 CONSTRUCTION. The Employer shall designate in the Adoption Agreement the state according to whose laws the provisions of the Plan shall be construed and enforced, except to the extent that such laws are superseded by ERISA.

[EXCESS PLAN LOGO] [EXECUTIVE BENEFIT SERVICES LOGO]

THE EXECUTIVE
NONQUALIFIED "EXCESS" PLAN(TM)

ADOPTION AGREEMENT

THIS AGREEMENT is made the 1st day of February, 2004, by TRANSKARYOTIC THERAPIES, INC. (the "Employer"), having its principal office at 700 MAIN ST., CAMBRIDGE, MA 02139 and EXECUTIVE BENEFIT SERVICES, INC. (the "Sponsor"), having its principal office at 4140 ParkLake Avenue, Suite 500, Raleigh, NC 27612.

W I T N E S S E T H:

WHEREAS, the Sponsor has established The Executive Nonqualified Excess Plan(TM) (the "Plan"); and

WHEREAS, the Employer desires to adopt the Plan as an unfunded, nonqualified deferred compensation plan; and

WHEREAS, the Employer has been advised by the Sponsor to obtain legal and tax advice from its professional advisors before adopting the Plan, and that the Sponsor disclaims all liability for the legal and tax consequences which result from the elections made by the Employer in this Adoption Agreement;

NOW, THEREFORE, the Employer hereby adopts the Plan in accordance with the terms and conditions set forth in this Adoption Agreement:

ARTICLE I

Terms used in this Adoption Agreement shall have the same meaning as in the Plan, unless some other meaning is expressly herein set forth. The Employer hereby represents and warrants that the Plan has been adopted by the Employer upon proper authorization and the Employer hereby elects to adopt the Plan for the benefit of its Participants as referred to in the Plan. By the execution of this Adoption Agreement, the Employer hereby agrees to be bound by the terms of the Plan.

This Adoption Agreement may only be used in connection with The Executive Nonqualified Excess Plan(TM). The Sponsor will inform the Employer of any amendments to the Plan or of the discontinuance or abandonment of the Plan. For questions concerning the Plan, the Employer may call the Sponsor at (919) 833-1042.

ARTICLE II

The Employer hereby makes the following designations or elections for the purpose of the Plan [Section references below correspond to Section references in the Plan]:

2.7 COMPENSATION: The "Compensation" of a Participant shall mean all of each Participant's [check desired option(s)]:

__ (A) Compensation received as an Employee reportable in box 1, Wages, Tips and other Compensation, on Form W-2.

XX (B) Annual base salary.

XX (C) Annual bonus.

__ (D) Long term incentive plan compensation.

__ (E) Compensation received as an Independent Contractor reportable on Form 1099.

XX (F) Commissions.

__ (G) other [specify]: _____

Notwithstanding the foregoing, Compensation [x] SHALL [ ] SHALL NOT include Salary Deferral Credits under this Plan and amounts contributed by the Participant pursuant to a Salary Deferral Agreement to another employee benefit plan of the Employer which are not includible in the gross income of the Employee under Section 125, 132(f)(4), 402(e)(3), 402(h) or 403(b) of the Code.

2.8 CREDITING DATE: The Deferred Compensation Account of a Participant shall be credited with the amount of any Salary Deferral Credits to such account

at the time designated below [check desired Crediting Date]:

__ (A) The last business day of each Plan Year.

__ (B) The last business day of each calendar quarter during the Plan Year.

XX (C) The last business day of each month during the Plan Year.

__ (D) The last business day of each payroll period during the Plan Year.

__ (E) Any business day on which Salary Deferral Credits are received by the Sponsor.

__ (F) Other [specify]: _____

2.10 DISABILITY: The disability of a Participant shall be determined as follows:

XX (A) The Participant shall be considered to be disabled when he has been determined to be disabled for the purposes of any long term disability insurance covering the Participant that is sponsored by the Employer.

__ (B) The Participant shall be considered to be disabled when he has been determined to be disabled for purposes of the Federal Social Security Act.

__ (C) Other: _____
_____
_____

2.14 EFFECTIVE DATE [check desired option]:

XX (A) This is a newly-established Plan, and the Effective Date of the Plan is FEBRUARY 1, 2004.

__ (B) This is an amendment and restatement of a plan named _____ with an effective date of _____. The Effective Date of this amended and restated Plan is _____.

This is amendment number _____.

2.20 NORMAL RETIREMENT DATE: The Normal Retirement Date of a Participant shall be: [check desired option]:

XX (A) The attainment of age 65.

__ (B) The later of age ___ or the ___ anniversary of the participation commencement date. The participation commencement date is the first day of the first Plan Year in which the Participant commenced participation in the Plan.

__ (C) The completion of ___ Years of Service.

__ (D) The completion of ___ Years of Service and attainment of age ___.

2.22 PARTICIPATING EMPLOYER(S): As of the Effective Date, the following Participating Employer(s) are parties to the Plan [list all employer-parties, including the Employer]:

<Table>
<Caption>

Name of Employer	Address	Telephone No.	EIN
<S><C><C><C>			
Transkaryotic Therapies, Inc.	700 Main St. Cambridge, MA 02139	(617) 349-0200	04-3027191

</Table>

2.23 PLAN: The name of the Plan as applied to the Employer is:
THE TKT DEFERRED COMPENSATION PLAN.

2.24 PLAN ADMINISTRATOR: The Plan Administrator shall be [check desired option]:

(A) Committee.
--

XX (B) Employer.
--

(C) Other (specify): .
--

2.25 PLAN YEAR: The Plan Year shall be the 12 consecutive calendar month period ending on the last day of the month of December, and each anniversary thereof.

2.34 TRUST: [check desired option]:

XX (A) The Employer DOES DESIRE to establish a "rabbi" trust for the purpose
-- of setting aside assets of the Employer contributed thereto for the payment of benefits under the Plan.

(B) The employer DOES NOT DESIRE to establish a "rabbi" trust for the
-- purpose of setting aside assets of the Employer contributed thereto for the payment of benefits under the Plan.

(C) The Employer desires to establish a "rabbi" trust for the purpose of
-- setting aside assets of the Employer contributed thereto for the payment of benefits under the Plan upon the occurrence of the following event(s):

4.1 SALARY DEFERRAL CREDITS: A Participant may elect to have his Compensation (as selected in Section 2.7 of this Adoption Agreement) reduced by the following annual percentage or amount as designated in writing to the Committee [check the applicable options]:

XX (A) ANNUAL BASE SALARY:

[Complete the following blanks ONLY if a minimum or maximum deferral is desired]:

Minimum deferral: $ _____ or $_____ %
Maximum deferral: $ _____ or $_____ %

XX (B) ANNUAL BONUS:

[Complete the following blanks ONLY if a minimum or maximum deferral is desired]:

Minimum deferral: $ _____ or $_____ %
Maximum deferral: $ _____ or $_____ %

XX (C) OTHER [please specify type, as selected in Section 2.7 of this Adoption Agreement]: COMMISSIONS.

[Complete the following blanks ONLY if a minimum or maximum deferral is desired]:

Minimum deferral: $ _____ or $_____ %
Maximum deferral: $ _____ or $_____ %

___ (D) NOT APPLICABLE - no salary deferral provision.

4.1.2 TERMINATION OF SALARY DEFERRALS: A Participant may terminate his Salary Deferral Agreement effective as of [check desired option]:

XX (A) The first full payroll period commencing after the date written notice of the termination is received by the Committee.

___ (B) The first day of the Plan Year occurring after the date written notice of the termination is received by the Committee.

___ (C) Not applicable - no salary deferral provision.

4.2 EMPLOYER CREDITS: The Employer will make Employer Credits in the following manner [check a maximum of 2 desired option(s)]

XX (A) EMPLOYER MATCHING CREDITS: The Employer may make matching credits to
__ the Deferred Compensation Account of each Participant in an amount determined as follows [check desired option(s)]:

__ (i) _____% of the Participant's Salary Deferral Credits.

__ (ii) _____% of the first _____% of the Participant's Compensation which is elected as a Salary Deferral Credit.

XX (iii) An amount determined each Plan Year by the Employer.
__

__ (iv) The Employer shall not match amounts provided above in excess of $_____ or in excess of ____% of the Participant's Compensation per Plan Year.

__ (v) Other: _____

_____

__ (vi) Not applicable - no Employer matching credits provision.

XX (B) EMPLOYER PROFIT SHARING CREDITS: The Employer may make profit
__ sharing credits to the Deferred Compensation Account of each Active Participant in an amount determined as follows:

__ (i) Such amount out of the current or accumulated net profit of the Employer for such year as the Employer in its sole discretion shall determine.

XX (ii) Such amount as the Employer in its sole discretion shall
__ determine without regard to current or accumulated net profit.

__ (iii) The Employer shall not make profit sharing credits in excess of $_____, or in excess of _____% of the Participant's Compensation per Plan Year.

__ (iv) Other: _____

_____

__ (v) Not applicable - no Employer profit sharing provision.

__ (C) OTHER [DESCRIBE]:

_____

_____

_____

5.1 DEATH OF A PARTICIPANT: If the Participant dies while in Service, the Employer shall pay a benefit to the Beneficiary in an amount equal to the Accrued Benefit of the Participant determined as of the date payments to the Beneficiary commence, plus [check if desired]:

-- (A) An amount to be determined by the Committee.

XX (B) Other [specify]: TWO TIMES BASE SALARY UP TO $750,000.

-- (C) No additional benefits.

6.1 IN-SERVICE WITHDRAWALS: In-service withdrawals may be made from the Plan [check desired option]:

XX (A) Yes.

(i) The In-Service Account may be withdrawn only after the account has been established for [check desired option]:

XX (a) A minimum of 2 years (insert minimum of 2 years.)

-- (b) Not applicable.

(ii) A Participant may defer the date of any scheduled in-service withdrawal by giving notice of the new withdrawal date to the Committee [check desired option]:

XX (a) At least 12 (insert minimum of 12) months prior to the scheduled withdrawal date.

-- (b) Not applicable.

-- (B) No in-service withdrawals.

6.2 FINANCIAL HARDSHIP WITHDRAWALS: Financial hardship withdrawals may be made from the Plan [check desired option]:

XX (A) Yes.

-- (B) No.

6.3 "HAIRCUT" WITHDRAWALS: "Haircut" withdrawals may be made from the Plan [check desired option]:

-- (A) Yes. If a Participant obtains a "haircut" withdrawal, the Participant shall forfeit 10% (specify percentage not less than 10%) of the amount of withdrawal.

XX (B) No "haircut" withdrawals.

6.4 EDUCATION WITHDRAWALS: Education withdrawals may be made from the Plan [check desired option]:

XX (A) Yes.

(i) Education withdrawals may be made in installment payments over no more than 6 years.

(ii) A Participant may defer the date of any scheduled education withdrawal by giving notice of the new withdrawal date to the Committee [check desired option]

X (a) At least 12 (insert minimum of 12) months prior to the scheduled withdrawal date.

(b) Not applicable.

--

(B) No education withdrawals.

--

7.1 PAYMENT OPTIONS: Any benefit payable under the Plan upon a Qualifying Distribution Event may be made to the Participant or his Beneficiary (as applicable) in any of the following payment forms, as selected by the Participant upon his entry into the Plan [check desired option(s)]:

XX (A) A lump sum in cash as soon as practicable following the date of the Qualifying Distribution Event.

__ (B) Approximately equal annual installments over a term no longer than ___ years as elected by the Participant upon his entry into the Plan.

__ (i) Payment of the benefit shall commence as soon as practicable after the following date [select desired option]:

__ (a) The first day of the CALENDAR YEAR following the date of the Qualifying Distribution Event.

__ (b) The first business day of the CALENDAR QUARTER following the date of the Qualifying Distribution Event.

__ (c) The first business day of the CALENDAR MONTH following the date of the Qualifying Distribution Event.

The payment of each annual installment shall be made on the anniversary of the date selected for the commencement of the installment payments in this subsection (i). The amount of the annual installment shall be adjusted on each anniversary date of the commencement of the installment payments for credits or debits to the Participant's account pursuant to Section 9 of the Plan. Such adjustment shall be made by dividing the balance in the Deferred Compensation Account on each such date (following adjustment on such date) by the number of annual installments remaining to be paid hereunder; provided that the last annual installment due under the Plan shall be the entire amount credited to the Participant's account on the date of the payment.

__ (ii) Notwithstanding the payment option elected by the Participant, the vested Accrued Benefit of the Participant will be distributed in a single lump payment if the amount of such benefit on the date that payment is to commence does not exceed [check desired option]:

$_____ (Insert desired cash out amount).

__ (C) A Participant may defer the date of any scheduled payment by giving notice of the new payment date to the Committee [check desired option]:

At least __ (insert minimum of 12) months prior to the scheduled payment date.

__ (D) Other [specify]: _____.

8. VESTING: An Active Participant shall be fully vested in the Employer Credits made to the Deferred Compensation Account upon occurrence of the following events [check or complete all that apply]:

XX (A) Normal Retirement Date.

XX (B) Death.

XX (C) Disability.

XX (D) Completion of that number of Years of Service specified below:

XX (i) EMPLOYER MATCHING CREDITS [complete if applicable]:

__ (a) Immediate 100% vesting.

__ (b) 100% vesting after ___ Years of Service.

__ (c) 100% vesting at age ___.

XX (d) Number of Years Vested

of Service	Percentage
Less than 1	0%
1	20%
2	40%
3	60%
4	80%
5	100%
6	___%
7	___%
8	___%
9	___%
10 or more	___%

For this purpose, Years of Service of a Participant shall be calculated from the date designated below [check desired option]:

XX (1) First Day of Service.

__ (2) Effective Date of the Plan Participation.

__ (3) Each Crediting Date. Under this option (3), each Employer matching Credit shall vest based on the Years of Service of a Participant from the Crediting Date on which each Employer Credit is made to his or her Deferred Compensation Account.

XX (ii) EMPLOYER PROFIT SHARING CREDITS [complete if applicable]:

__ (a) Immediate 100% vesting.

__ (b) 100% vesting after __ Years of Service.

__ (c) 100% vesting at age __.

<Table>
<Caption>

XX __ (d) Number of Years of Service	Vested Percentage
<S> <C> Less than 1	<C> 0%
1	20%
2	40%
3	60%
4	80%
5	100%
6	%
7	%
8	%
9	%
10 or more	%

</Table>

For this purpose, Years of Service of a Participant shall be calculated from the date designated below [check desired option]:

X
___ (1) First Day of Service

___ (2) Effective Date of the Plan Participation.

___ (3) Each Crediting Date. Under this option (3), each Employer Profit Sharing Credit shall vest based on the Years of Service of a Participant from the Crediting Date on which each Employer Credit is made to his or her Deferred Compensation Account.

__ (iii) OTHER EMPLOYER CREDITS [complete if applicable]:

__ (a) Immediate 100% vesting.

__ (b) 100% vesting after __ Years of Service.

__ (c) 100% vesting at age __.

__ (d) Number of Years of Service / Vested Percentage

Number of Years of Service	Vested Percentage
Less than 1	__%
1	__%
2	__%
3	__%
4	__%
5	__%
6	__%
7	__%
8	__%
9	__%
10 or more	__%

For this purpose, Years of Service of a Participant shall be calculated from the date designated below [check desired option]:

__ (1) First Day of Service.

__ (2) Effective Date of the Plan Participation.

__ (3) Each Crediting Date. Under this option (3), each Other Employer Credit shall vest based on the Years of Service of a Participant from the Crediting Date on which each Employer Credit is made to his or her Deferred Compensation Account.

10. BENEFIT EXCHANGE: The Employer elects to permit the Participant to exchange all or any portion of the vested Accrued Benefit under the Plan for another type of nonqualified benefit [check desired option]:

__ (A) Yes.

XX (B) No.
__

11. TRANSFER TO QUALIFIED PLAN: The Employer elects to permit the Participant to direct the transfer of a portion of his benefit under this Plan to a tax-qualified retirement plan maintained by the Employer [check desired option]:

__ (A) Yes. Insert name of Qualified Plan: _____

XX (B) No.
__

17. AMENDMENT OR TERMINATION OF PLAN: [check or complete all that apply]:

__ (A) Notwithstanding any provision in this Adoption Agreement or the Plan to the contrary, Section ___ of the Plan shall be amended to read as follows:

See attached Exhibit ___.

__ (B) The Plan shall be terminated upon the occurrence of one or more of the following events [check if desired]:

__ (i) The amount of shareholders equity shown on the financial statements of the Employer for each of the two most recent fiscal years is less than $_____.

__ (ii) The aggregate net loss (after tax) as reported on the financial statements of the Employer for the two most recent fiscal years is greater than $_____.

__ (iii) There is a change of control of the Employer. For this purpose, a "change of control" shall be deemed to have occurred if: (A) any person other than an officer who is an Employee of the Employer for at least one year preceding the change of control, acquires or becomes the beneficial owner, directly or indirectly, of securities of the Employer representing ___% [insert percentage] or more of the combined voting power of the Employer's then outstanding securities and thereafter, the membership of the Board becomes such that a majority are persons

who were not members of the Board at the time of the acquisition of securities; or (B) the Employer, or its assets, are acquired by or combined with another entity and less than a majority of the outstanding voting shares of such entity after the acquisition or combination are owned, immediately after the acquisition or combination, by the owners of voting shares of the Employer immediately prior to the acquisition or combination.

__ (iv) Other [specify]: _____

_____

_____

_____

__ (C) In the event of a termination of the Plan, the Employer elects that [check if desired]:

__ (i) Each Active Participant will become fully vested in the Deferred Compensation Account. [If not checked, the vesting provisions of Section 8 will continue to apply.]

__ (ii) The Deferred Compensation Account will be immediately distributed to each Participant in a single lump sum payment. [If not checked the payment provisions of Section 7 will continue to apply.]

20.9 CONSTRUCTION: The provisions of the Plan and Trust (if any) shall be construed and enforced according to the laws of the State of DELAWARE, except to the extent that such laws are superseded by ERISA.

IN WITNESS WHEREOF, this Agreement has been executed as of the day and year first above stated.

TRANSKARVOTIC THERAPIES, INC.

Name of Employer

By: /s/ Linda H. Pettingell

Authorized Person

Vice President, Human Resources and Corporate Services

Title

NOTE: EXECUTION OF THIS ADOPTION AGREEMENT CREATES A LEGAL LIABILITY OF THE EMPLOYER WITH SIGNIFICANT TAX CONSEQUENCES TO THE EMPLOYER AND PARTICIPANTS. THE EMPLOYER SHOULD OBTAIN LEGAL AND TAX ADVICE FROM ITS PROFESSIONAL ADVISORS BEFORE ADOPTING THE PLAN. THE SPONSOR DISCLAIMS ALL LIABILITY FOR THE LEGAL AND TAX CONSEQUENCES WHICH RESULT FROM THE ELECTIONS MADE BY THE EMPLOYER IN THIS ADOPTION AGREEMENT.

(EXCESS PLAN LOGO) (EBS LOGO)

THE EXECUTIVE
NONQUALIFIED "EXCESS" PLAN(TM)

SERVICE AGREEMENT - COLI FINANCING

This agreement is between Executive Benefit Services, Inc. ("EBS"), a North Carolina corporation, located at 4140 ParkLake Avenue, Suite 500, Raleigh, NC 27612 and Transkaryotic Therapies, Inc., located at 700 Main St., Cambridge, MA 02139 ("Company"). Whereas, the Company wishes to use the administrative services of EBS to provide plan level administrative services for The Executive Nonqualified "Excess" Plan(TM), hereinafter referred to as the "Plan".

NOW, THEREFORE, in consideration of the terms and conditions contained herein, the parties hereto agree as follows:

1.0 PLAN IMPLEMENTATION:

EBS will provide the following services in coordination with the servicing representative(s) to assist the Company in the implementation of the Plan:

a) Coordinate the preparation of the enrollment material, review executive communication and organize enrollment meetings and presentations.

b) Coordinate and implement Plan financing (Investments, Corporate Owned Life Insurance - maximum of 40 investment options for plan liability regardless of financing).

c) Review Plan documents to make sure they are coordinated with Plan administrative service capabilities.

d) Coordinate with Company representative(s) the transfer of data to EBS that is necessary to administer the plan.

2.0 PLAN LEVEL ADMINISTRATIVE SERVICES:

(a) Executive Level Administrative Services:

(i) Daily valuation of Excess Plan accounts.

(ii) Executive statements identifying their account values, asset allocation, share prices and supplemental supporting information.

(iii) Internet access to account values and asset allocations.

(iv) Toll free number for account inquiry during business hours.

(b) Company Level Administrative Services:

(i) EBS Internet access to view executive values and allocations.

(ii) Plan liability report to account for Deferred Compensation expense.

(iii) Plan financing report identifying plan assets, if corporate owned life insurance or securities managed by EBS is used.

(iv) General payroll and accounting guidance as necessary.

3.0 CLIENT REPRESENTATIVES:

a) COMPANY shall provide EBS the most recent copy of the Plan documents, Retirement Committee administrative procedures affecting the Plan and any such documents needed for EBS to administer the Plan.

b) COMPANY shall provide EBS current participant data and other information as needed to perform its duties. All information provided EBS by the COMPANY or its agents may be relied upon by EBS as being complete and accurate.

c) COMPANY shall appoint one or more employees to act as a representative for the COMPANY to coordinate the administrative services of the Plan with EBS.

4.0 ACKNOWLEDGMENTS:

a) Limitation of Liability. EBS shall not be responsible for any losses or damages to the Plan or the COMPANY other than those resulting directly from EBS' gross negligence or willful disregard of its duties under this Agreement; provided, however, that in no event shall EBS be liable for any error or inaccuracy in the transmission of information because of a breakdown or failure of transmission or communication facilities.

b) The EBS website is intended to provide summary information only and does not supersede reports, confirmations or other primary source documents.

c) EBS does not provide legal or accounting advice.

d) EBS may provide general information on the Employee Retirement Income Security Act of 1974 ("ERISA") but it is solely up to the client and

its advisors on how the Plan is treated under ERISA. It is acknowledged and agreed that EBS is not the Plan Administrator or fiduciary of the Plan as those terms are defined in ERISA.

e) EBS may provide general information on tax consequences of the Plan but it is solely the responsibility of the COMPANY to determine actual tax consequences associated with the Plan.

f) EBS may provide general information as to Plan registration under the Securities Act of 1933. However, it is solely the responsibility of the COMPANY to determine whether registration is required.

g) EBS may provide the COMPANY model documents but it is solely the responsibility of the COMPANY to determine whether documents are appropriate for the Plan.

5.0 TERM OF AGREEMENT:

a) This Agreement shall commence as of the date of this Agreement and continue thereafter, subject to the right by either party to terminate such Agreement upon providing ninety (90) days written notice.

b) EBS reserves the right to terminate this agreement for non-payment of any fees due by COMPANY to EBS. Fees are due upon receipt and there is a ninety-day (90) grace period.

c) In the event COMPANY or EBS files a petition for bankruptcy, or loses any licenses required in order to perform the services contained herein, this Agreement shall be deemed to immediately terminate.

6.0 ADMINISTRATIVE SERVICES AND FEES:

[X] PLAN SET UP FEES*:

- One Time Plan Set up Fee: $ 500.00

- Per Enrollment Kit Fee: $ 5.00 (Waived if enrollment kits are emailed.)

* PLAN SETUP FEES ARE NONREFUNDABLE.

[X] ANNUAL RECORD KEEPING FEES: (BILLED QUARTERLY)

- Plan Record Keeping Fee: $1,000.00

- Participant Fee:

	# OF ACTIVE PARTICIPANTS		
	first	next	next
	1-25	26-100	100+
	$100.00	$75.00	$50.00

[X] MISCELLANEOUS SERVICES FEES:

Amendment of the executed Adoption Agreement:	$100.00/amendment
Custom requests:	$150.00/hour $0.35/page mailed (No charge for emailed reports)

OPTIONAL SERVICES: (CHECK DESIRED SERVICES)

[ ] Statements mailed to residences
($1.00 each statement mailed)

[ ] Semi-Annual frequency for Executive Statements and Corporate Report
(25% discount on Participant Fee)

[ ] Annual frequency for Executive Statements and Corporate Report
(50% discount on Participant Fee)

THE FEES LISTED ARE ANNUAL FEES (EXCEPT FOR THE MISCELLANEOUS SERVICES FEES) AND ARE BILLED QUARTERLY AND DUE UPON RECEIPT.

7.0 ASSET ADMINISTRATIVE SERVICES: (PLEASE CHOOSE ONE OPTION)

[ ] COMPANY WILL ADMINISTER SUPPORTING ASSETS. It will be the responsibility of Company to monitor the relationship between the Plan Liability portfolio and the supporting asset portfolio. EBS will provide Company with an Allocation Comparison report on a quarterly basis. Company will contact the institution holding the assets and direct fund transfers as it deems appropriate.

[X] EBS WILL ADMINISTER SUPPORTING ASSETS. By checking this box and signing this form, Company gives EBS the authority to direct COLI fund transfers in an attempt to maintain a balance between the overall asset and liability portfolios. An "attempt to maintain a balance" does not mean that the asset portfolio will always mirror the liability portfolio. The relationship between the asset and liability portfolios will be monitored monthly and adjustments to the assets will be made. No action will be taken by EBS unless a fund is off balance by more than 5%. Confirmation statements will be generated and mailed to Company by the asset institution after every COLI fund transfer.

8.0 STATEMENT OF SPONSORED CONTRIBUTIONS/BILLINGS:

[ ] By checking this box the Company elects not to receive billing statements from Principal Life Insurance Company for Corporate Owned Life Insurance premiums. Instead, participants' periodic salary deferrals define Company contributions.

CHOICE OF LAW: This Agreement will be governed by the laws of the State of North Carolina.

IN WITNESS WHEREOF, this Agreement is executed at Cambridge (City), Mass (State). This 12th (Day) day of January (Month), 2004 (Year).

/s/ Linda H. Pettingell
(Signature of Company)

(Signature of EBS)

V.P. Human Resources & Corp Services
(Title)

(Title)

EXHIBIT 10.21

February 26, 2002

Renato Fuchs, Ph.D
128 Kingswood Circle
Danville, CA 94506-6045

REVISED

Dear Renato:

On behalf of TKT, I am pleased to extend the offer outlined below for you to become the Senior Vice President, Manufacturing and Operations of Transkaryotic Therapies, Inc. ("TKT"). I believe you will have a critical role in the continued development of TKT and look forward to the broad impact you will have on the Company.

The terms of this offer are as follows:

1. Title of Position: Senior Vice President, Manufacturing and Operations reporting to Dr. Richard Selden, Founder and CEO.

2. Gross Annual Base Salary: $280,000.00 to be paid semi-monthly at the rate of $11,666.67 gross per pay period.

3. Annual Target Bonus: You will participate in the Management Incentive Bonus Program. Your annual bonus target will be 20% of your base compensation and will reflect your individual and departmental performance as well as TKT's overall performance.

4. Stock Option Grant: You will receive an option to purchase 100,000 shares of TKT Common Stock (exercise price is the bid price of the stock as of the close of business on the last trading day before your official start date) which you will fully attain after a six (6) year vesting provision. 10,000 options will vest immediately upon your start date. In addition, if you choose to step down as the Senior Vice President, Manufacturing after five (5) years of employment with TKT, you will continue to vest the last year of your options provided that you are professionally available to TKT during that period of time.

5. Benefits: You will participate in those benefit programs which are in effect and for which you meet eligibility requirements during your employment with TKT, including a 401(k) company match of up to $5,500 per year, and Deferred Compensation company match of up to $20,000 per year. A description of these benefits is attached.

6. Relocation: You will be eligible to receive relocation assistance per the attached document. It is expected that you will complete your relocation

to the Boston area within one and a half (1.5) years after beginning employment with TKT. TKT will also provide up to four (4) months of temporary housing in the Cambridge, Massachusetts area. In addition, we will pay costs related to the temporary storage of your household goods in New Jersey for a reasonable period of time.

7. Relocation Assistance Payment: You will receive a one-time, sign-on bonus of $100,000 (less appropriate withholdings). This bonus will be paid to you promptly after the start of your employment.

8. In the event of termination: Should your employment with TKT be terminated without cause or in the event of change of control of the Company, you will be eligible for severance pay for up to one (1) year at up to 100% of base pay (less appropriate withholdings). During this period of time, TKT will pay for your continued medical and dental benefits under Cobra, as well as for your disability and life insurances.

9. You will be subject to a non-compete provision consistent with that of other TKT executives, calling for a non-compete term of two years in the field of gene activation, niche proteins and non-viral gene therapy as it relates to products or processes directly competitive with TKT's. This non-compete will be revoked in the event of TKT's acquisition.

10. As a condition of employment, you will be expected to sign an agreement of Confidentiality, Inventions and Noncompetition which is signed by all employees of Transkaryotic Therapies. Enclosed is this agreement for your review and signature.

11. This offer of employment is contingent upon your being legally able to work in the United States. Federal Law requires that you provide proof of employment eligibility within three days of your employment.

If you agree to the terms outlined in this offer, please sign and return one (1) copy of this offer letter along with one (1) copy of the Confidentiality, Inventions and Noncompetition Agreement. We anticipate your start date to be March 18, 2002. In the event that you begin working on behalf of TKT as a consultant prior to March 18, 2002, TKT will pay you daily at a pro-rata basis based on your annual salary. In addition, TKT will reimburse you for related expenses including those related to travel and short-term extension of your California lease.

We have enjoyed our discussions with you and believe that your addition to TKT's management team will have a profound impact on our ability to make TKT's vision a reality. I look forward to a long, mutually beneficial, and enjoyable working relationship.

Thank you for your time and consideration.

Sincerely,

/s/ Michael J. Astrue

Michael J. Astrue
Senior Vice President,
Administration and General Counsel

EXHIBIT 10.21

Agreed to and Accepted: /s/ Renato Fuchs

Renato Fuchs

Date: March 11, 2002

EXHIBIT 10.21

RELOCATION GUIDELINES - TKT

1. POLICY

- It is the policy of Transkaryotic Therapies, Inc., to assist newly-hired employees and their dependents with certain specified expenses that may occur as a result of a result of a relocation from a primary residence made at the Company's request. It should be noted that it is not the Company's intent to fully indemnify, compensate or reimburse an employee for all expenses which may occur in connection with a relocation.

- The Company will provide year-end tax gross-up for all relocation expenses. This gross-up does not apply to any one-time, lump-sum bonuses.

- Original receipts issued by the supplier of the services rendered, adequately documenting the nature and amount of any goods or services rendered, are required in all cases, unless otherwise specified.

2. HOUSEHUNTING EXPENSES

- The Company will reimburse expenses for two round trips not to exceed seven days in total.

- Eligible expenses include:

- Air Fare (coach)

- Public ground transportation

- Automobile mileage, tolls, and parking

- Car rental

- Lodging

- Reasonable cost of meals

3. TEMPORARY LIVING EXPENSES

- The Company will provide temporary living accommodations and reimburse reasonable and necessary living expenses of the employee for up to four (4) months duration, provided the employee has duplicate living expenses during the same period (e.g. mortgage at previous location, rent for family still living in previous location).

4. DUPLICATE MORTGAGE ASSISTANCE

- In the event the employee has not yet sold his-her primary residence in the former location and is required to take possession-title of a home in the new location prior to selling the former residence, the Company will provide duplicate mortgage assistance provided the employee is responsible for carrying costs for both residences.

- Reimbursement is limited to interest and taxes only on the smaller mortgage payment and is not to exceed three (3) months.

- Relocating employees are not eligible for both temporary living and duplicate mortgage assistance.

5. RETURN TRIPS HOME

- The Company will reimburse the employee for up to a total of three round trips home by the employee.

6. PERSONAL MOVE

- The Company will reimburse the employee the one-time cost of relocating to the Boston area.

7. PERSONAL & HOUSEHOLD GOOD TRANSPORTATION

- The Company will pay all reasonable costs of transporting normal household and personal effects from the former residence to the new residence.

- Insurance protection against loss and/or damage to household goods and

personal effects during transit will be provided by the Company up to a full value replacement maximum of $50,000. If the employee desires additional insurance, he/she will be responsible for contacting the carrier directly and for covering any additional costs.

- The Company will not be responsible for the cost of providing the following services or transporting the following items (Arrangements and payments of these relocated items must be made by the employee directly with the carrier and are the responsibility of the employee):

- Removal or installation of wall-to-wall carpeting, ceiling fans, electrical fixtures, or related items

- Pick up and delivery charges at locations other than the primary residence

- The disassembly and assembly of fixtures and utilities such as wood stoves, water softeners, gym sets, utility sheds, above-ground pools, aerobic equipment, waterbeds, etc.

- Transporting high-weight, low-value items such as firewood, coal, building materials, etc.

- Transporting of firearms and/or ammunition

- Transporting perishable foods, liquor, or plants

- Transporting combustible items such as oil-based paints, kerosene, gasoline, poison, and other flammable liquids and fuel

- Transporting large vehicles (except automobiles) such as RVs, campers, trailers and boats in excess of 10 feet; and

- Transporting articles of great monetary or sentimental value such as jewelry, furs collections, stocks/bonds, wills, photos, or other important documents.

8. STORAGE IN TRANSIT

- In the event of delayed occupancy of your permanent residence, the Company will cover the cost of storing household goods in a warehouse for a reasonable period of time.

- The Company will pay costs related to the temporary storage of your household goods in New Jersey for a reasonable period of time.

9. CLOSING COSTS

- Reasonable closing costs associated with the sale of the former residence, including the following:

- Real Estate Commission (not to exceed 6% of the selling price)

- Transfer Tax

- Attorney's Fees

- Deed Preparation

- Title Insurance

- Escrow Company Fees

- Filing & Recording Fees

- Required Service Fees

- Reasonable closing costs associated with the purchase of the new residence include the following:

- One Point

- Attorney's Fees

- Title Search Insurance Costs

- Document Preparation Fees

- Survey Fees

- Lender Inspection Fees in connection with obtaining a mortgage

- Recording Fees

- Inspections required by local ordinance or by community

- Other Statutory Fees

10. EFFECT OF VOLUNTARY TERMINATION OF EMPLOYMENT FROM NEW POSITION WITHIN ONE YEAR OF RELOCATION

- If an employee voluntarily chooses to leave the Company within one (1) year of relocation, he/she will be responsible for refunding the Company all the moneys received as reimbursement for relocation expenses. The employee will be required to acknowledge this responsibility by signing a document promising to repay the Company prior to taking advantage of any aspect of this policy. (See attachment entitled "Agreement to Reimburse")

EXHIBIT 10.21

AGREEMENT TO REIMBURSE

In consideration of the agreement of Transkaryotic Therapies, Inc., (TKT) to pay certain relocation expenses on my behalf, I agree to reimburse TKT for all such expenses in the event that I voluntarily resign from my employment with TKT within one year after the date on which TKT issues the first check in payment of a relocation expense in my behalf.

In the event that I voluntarily resign from my employment with TKT within one year after such relocation, I hereby authorize Transkaryotic Therapies, Inc., to deduct relocation moneys I owe to TKT from any moneys TKT owes me (including my final paycheck). I understand that I must repay to TKT any balance remaining after that deduction is made.

Renato Fuchs

/s/ Renato Fuchs

Employee signature

March 11, 2002

Date

EXHIBIT 10.38

TRANSKARYOTIC THERAPIES, INC.

Amendment to Amended and Restated 1993 Long-Term Incentive Plan

Approved by the Board of Directors on June 30, 2004

1. Section 7.2(f) of the Amended and Restated 1993 Long-Term Incentive Plan is deleted in its entirety and the following section is inserted in lieu thereof:

"7.2 (f) Transferability. Except as the Committee may otherwise determine or provide in an Award, Awards shall not be sold, assigned, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an Incentive Option, pursuant to a qualified domestic relations order, and during the life of the Participant, shall be exercisable only by the Participant. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees."

2. Section 13.2 of the Amended and Restated 1993 Long-Term Incentive Plan is deleted in its entirety and the following section is inserted in lieu thereof:

"13.2 Reorganization and Change in Control Events.

(1) Definitions

(a) A "Reorganization Event" shall mean:

(i) any merger or consolidation of the Company with or into another entity as a result of which all the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property or is cancelled; or

(ii) any exchange of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange transaction.

(b) A "Change in Control Event" shall mean:

(i) the acquisition by an individual, entity or

group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) (a "Person"), of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of any capital stock of the Company if, after such acquisition, such Person would beneficially own 50% or more of the combined voting power of the then-outstanding securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); provided, however, that for purposes of this subsection (i), the following acquisitions shall not constitute a Change in Control:

(A) any acquisition directly from the Company (excluding an acquisition pursuant to the exercise, conversion or exchange of any security exercisable for, convertible into or exchangeable for common stock or voting securities of the Company, unless the Person exercising, converting or exchanging such security acquired such security directly from the Company or an underwriter or agent of the Company),

(B) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Company or any corporation controlled by the Company, or

(C) any acquisition by any corporation pursuant to a Business Combination (as defined below) which complies with clauses (A) and (B) of subsection (iii) of this definition; or

(ii) such time as the Continuing Directors (as defined below) do not constitute a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to

the Company), where the term "Continuing Director" means at any date a member of the Board (A) who was a member of the Board as of June 30, 2004 or (B) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election; provided, however, that

there shall be excluded from this clause (B) any individual whose initial assumption of office occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; or

(iii) the consummation of a merger, consolidation, reorganization, recapitalization or share exchange involving the Company or a sale or other disposition of all or substantially all of the assets of the Company (a "Business Combination"), unless, immediately following such Business Combination, each of the following two conditions is satisfied:

(A) all or substantially all of the individuals and entities who were the beneficial owners of the Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the combined voting power of the then-outstanding securities entitled to vote generally in the election of directors of the resulting or acquiring corporation in such Business Combination (which shall include, without limitation, a corporation which as a result of such transaction owns the Company or substantially all of the Company's

assets either directly or through one or more subsidiaries) (such resulting or acquiring corporation is referred to herein as the "Acquiring Corporation") in substantially the same proportions as their ownership of the Outstanding Company Voting Securities immediately prior to such Business Combination, and

(B) no Person (excluding any employee benefit plan (or related trust) maintained or sponsored by the Company or by the Acquiring Corporation) beneficially owns, directly or indirectly, 50% or more of the combined voting power of the then-outstanding securities of such corporation entitled to vote generally in the election of directors (except to the extent that such ownership existed prior to the Business Combination).

(c) "Good Reason" shall mean any significant diminution in the Participant's title, authority, or responsibilities from and after the occurrence of a Reorganization Event or Change in Control Event, as the case may be, or any reduction in the annual cash compensation payable to the Participant from and after such Reorganization Event or Change in Control Event, as the case may be, or the relocation of the place of business at which the Participant is principally located to a location that is greater than 50 miles from its location immediately prior to such Reorganization Event or Change in Control Event.

(d) "Cause" shall mean any (i) willful failure by the Participant, which failure is not cured within 30 days of written notice to the Participant from the Company, to perform his or her material responsibilities to the Company or (ii) willful misconduct by the Participant which affects the business reputation of the Company.

(2) Effect on Options

(a) Reorganization Event. Upon the occurrence of a Reorganization Event (regardless of whether such event also constitutes a Change in Control Event), or the execution by the Company of any agreement with respect to a Reorganization Event (regardless of whether such event will result in a Change in Control Event), the Commitee shall provide that all outstanding Options shall be assumed, or equivalent options shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof); provided that if such Reorganization Event also constitutes a Change in Control Event, except to the extent specifically provided to the contrary in the instrument evidencing any Option or any other agreement between a Participant and the Company, such assumed or substituted options shall become immediately exercisable in full if, on or prior to the date 18 months after the date on which the Reorganization Event is consummated, the Participant's employment with the Company or the acquiring or succeeding corporation is terminated for Good Reason by the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation. For purposes hereof, an Option shall be considered to be

assumed if, following consummation of the Reorganization Event, the Option confers the right to purchase, for each share of Common Stock subject to the Option immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); provided, however, that if the consideration received as a result of the Reorganization Event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise of Options to consist

solely of common stock of the acquiring or succeeding corporation (or an affiliate thereof) equivalent in fair market value to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.

Notwithstanding the foregoing, if the acquiring or succeeding corporation (or an affiliate thereof) does not agree to assume, or substitute for, such Options, the Committee shall, upon written notice to the Participants, provide that all then unexercised Options will become exercisable in full as of a specified time prior to the Reorganization Event and will terminate immediately prior to the consummation of such Reorganization Event, except to the extent exercised by the Participants before the consummation of such Reorganization Event, which period of exercisability shall not be less than 20 days or more than 60 days; provided, however, that in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share of Common Stock surrendered pursuant to such Reorganization Event (the "Acquisition Price"), then the Committee may instead provide that all outstanding Options shall terminate upon consummation of such Reorganization Event and that each Participant shall receive, in exchange therefor, a cash payment equal to the amount, if any, by which (A) the Acquisition Price multiplied by the number of shares of Common Stock subject to such outstanding Options (whether or not then

exercisable), exceeds (B) the aggregate exercise price of such Options.

(b) Change in Control Event that is not a Reorganization Event. Upon the occurrence of a Change in Control Event that does not also constitute a Reorganization Event, except to the extent specifically provided to the contrary in the instrument evidencing any Option or any other agreement between a Participant and the Company, each such Option shall become immediately exercisable in full if, on or prior to the date 18 months after the date on which

the Change in Control Event is consummated, the Participant's employment with the Company or the acquiring or succeeding corporation is terminated for Good Reason by the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation.

(3) Effect on Restricted Stock Award

(a) Reorganization Event that is not a Change in Control Event. Upon the occurrence of a Reorganization Event that is not a Change in Control Event, the repurchase and other rights of the Company under each outstanding Restricted Stock Award shall inure to the benefit of the Company's successor and shall apply to the cash, securities or other property which the Common Stock was converted into or exchanged for pursuant to such Reorganization Event in the same manner and to the same extent as they applied to the Common Stock subject to such Restricted Stock Award.

(b) Change in Control Event. Upon the occurrence of a Change in Control Event (regardless of whether such event also constitutes a Reorganization Event), except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock Award or any other agreement between a Participant and the Company, each such Restricted Stock Award shall immediately become free from all conditions or restrictions if, on or prior to the date 18 months after the date on which the Change of Control Event is consummated, the Participant's employment with the Company or the acquiring or succeeding corporation is terminated for Good Reason by the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation.

EXHIBIT 10.39

TRANSKARYOTIC THERAPIES, INC.

Amendment to 2001 Non-Officer, Non-Director Employee Stock Incentive Plan

Approved by the Board of Directors on June 30, 2004

1. Section 7(c) of the 2001 Non-Officer, Non-Director Employee Stock Incentive Plan is deleted in its entirety and the following section is inserted in lieu thereof:

"7(c) Reorganization and Change in Control Events.

(1) Definitions

(a) A "Reorganization Event" shall mean:

(i) any merger or consolidation of the Company with or into another entity as a result of which all the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property or is cancelled; or

(ii) any exchange of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange transaction.

(b) A "Change in Control Event" shall mean:

(i) the acquisition by an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) (a "Person"), of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of any capital stock of the Company if, after such acquisition, such Person would beneficially own 50% or more of the combined voting power of the then-outstanding securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); provided, however, that for purposes of this subsection (i), the following acquisitions shall not constitute a Change in Control:

(A) any acquisition directly from the Company

(excluding an acquisition pursuant to the exercise, conversion or exchange of any security exercisable for, convertible into or exchangeable for common stock or voting securities of the Company, unless the Person exercising, converting or exchanging such security acquired such security directly from the Company or an underwriter or agent of the Company),

(B) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Company or any corporation controlled by the Company, or

(C) any acquisition by any corporation pursuant to a Business Combination (as defined below) which complies with clauses (A) and (B) of subsection (iii) of this definition; or

(ii) such time as the Continuing Directors (as defined below) do not constitute a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to the Company), where the term "Continuing Director" means at any date a member of the Board (A) who was a member of the Board as of June 30, 2004 or (B) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election; provided, however, that there shall be excluded from this clause (B) any individual whose initial assumption of office occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; or

(iii) the consummation of a merger, consolidation, reorganization, recapitalization or share exchange involving the Company or a sale or other disposition of all or substantially all of the assets of

the Company (a "Business Combination"), unless, immediately following such Business Combination, each of the following two conditions is satisfied:

(A) all or substantially all of the individuals and entities who were the beneficial owners of the Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the combined voting power of the then-outstanding securities entitled to vote generally in the election of directors of the resulting or acquiring corporation in such Business Combination (which shall include, without limitation, a corporation which as a result of such transaction owns the Company or substantially all of the Company's assets either directly or through one or more subsidiaries) (such resulting or acquiring corporation is referred to herein as the "Acquiring Corporation") in substantially the same proportions as their ownership of the Outstanding Company Voting Securities immediately prior to such Business Combination, and

(B) no Person (excluding any employee benefit plan (or related trust) maintained or sponsored by the Company or by the Acquiring Corporation) beneficially owns, directly or indirectly, 50% or more of the combined voting power of the then-outstanding securities of such corporation entitled to vote generally in the election of directors (except to the extent that such ownership existed prior to the Business Combination).

(c) "Good Reason" shall mean any significant diminution in the Participant's title, authority, or responsibilities from and after the occurrence of a Reorganization Event or Change in Control Event, as the case may be, or any reduction in the annual cash compensation payable to the Participant from and after such Reorganization Event or Change in Control Event, as the case may be, or the relocation of the place of business at which the Participant is principally

located to a location that is greater than 50 miles from its location immediately prior to such Reorganization Event or Change in Control Event.

(d) "Cause" shall mean any (i) willful failure by the Participant, which failure is not cured within 30 days of written notice to the Participant from the Company, to perform his or her material responsibilities to the Company or (ii) willful misconduct by the Participant which affects the business reputation of the Company.

(2) Effect on Options

(a) Reorganization Event. Upon the occurrence of a Reorganization Event (regardless of whether such event also constitutes a Change in Control Event), or the execution by the Company of any agreement with respect to a Reorganization Event (regardless of whether such event will result in a Change in Control Event), the Board shall provide that all outstanding Options shall be assumed, or equivalent options shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof); provided that if such Reorganization Event also constitutes a Change in Control Event, except to the extent specifically provided to the contrary in the instrument evidencing any Option or any other agreement between a Participant and the Company, such assumed or substituted options shall become immediately exercisable in full if, on or prior to the date 18 months after the date on which the Reorganization Event is consummated, the Participant's employment with the Company or the acquiring or succeeding corporation is terminated for Good Reason by the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation. For purposes hereof, an Option shall be considered to be assumed if, following consummation of the Reorganization Event, the Option confers the right to purchase, for each share of Common Stock subject to the Option immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); provided, however, that if the consideration

received as a result of the Reorganization Event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise of Options to consist solely of common stock of the acquiring or succeeding corporation (or an affiliate thereof) equivalent in fair market value to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.

Notwithstanding the foregoing, if the acquiring or succeeding corporation (or an affiliate thereof) does not agree to assume, or substitute for, such Options, the Board shall, upon written notice to the Participants, provide that all then unexercised Options will become exercisable in full as of a specified time prior to the Reorganization Event and will terminate immediately prior to the consummation of such Reorganization Event, except to the extent exercised by the Participants before the consummation of such Reorganization Event; provided, however, that in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share of Common Stock surrendered pursuant to such Reorganization Event (the "Acquisition Price"), then the Board may instead provide that all outstanding Options shall terminate upon consummation of such Reorganization Event and that each Participant shall receive, in exchange therefor, a cash payment equal to the amount, if any, by which (A) the Acquisition Price multiplied by the number of shares of Common Stock subject to such outstanding Options (whether or not then exercisable), exceeds (B) the aggregate exercise price of such Options. To the extent all or any portion of an Option becomes exercisable solely as a result of the first sentence of this paragraph, upon exercise of such Option the Participant shall receive shares subject to a right of repurchase by the Company or its successor at the Option exercise price. Such repurchase right (1) shall lapse at the same rate as the Option would have become exercisable under its terms and (2) shall not apply to any shares subject to the Option that were exercisable under its terms without regard to the first sentence of this paragraph; provided that if the Reorganization Event is also a Change in Control Event, the shares issued upon exercise of each such Option shall immediately become free from

all

conditions or restrictions if, on or prior to the date 18 months after the date on which the Change in Control Event is consummated, the Participant's employment with the Company or the acquiring or succeeding corporation is terminated for Good Reason by the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation.

(b) Change in Control Event that is not a Reorganization Event. Upon the occurrence of a Change in Control Event that does not also constitute a Reorganization Event, except to the extent specifically provided to the contrary in the instrument evidencing any Option or any other agreement between a Participant and the Company, each such Option shall become immediately exercisable in full if, on or prior to the date 18 months after the date on which the Change in Control Event is consummated, the Participant's employment with the Company or the acquiring or succeeding corporation is terminated for Good Reason by the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation.

(3) Effect on Restricted Stock Award

(a) Reorganization Event that is not a Change in Control Event. Upon the occurrence of a Reorganization Event that is not a Change in Control Event, the repurchase and other rights of the Company under each outstanding Restricted Stock Award shall inure to the benefit of the Company's successor and shall apply to the cash, securities or other property which the Common Stock was converted into or exchanged for pursuant to such Reorganization Event in the same manner and to the same extent as they applied to the Common Stock subject to such Restricted Stock Award.

(b) Change in Control Event. Upon the occurrence of a Change in Control Event (regardless of whether such event also constitutes a Reorganization Event), except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock Award or any other agreement between a Participant and the Company, each such Restricted Stock Award shall immediately become free from all conditions or restrictions if, on or prior to the date 18 months after the date on which the Change of Control Event is consummated, the

Participant's employment with the Company or the acquiring or succeeding corporation is terminated for Good Reason by

the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation."

2. Section 8(a) of the 2001 Non-Officer, Non-Director Employee Stock Incentive Plan is deleted in its entirety and the following section is inserted in lieu thereof:

"8(a) Transferability of Awards. Except as the Board may otherwise determine or provide in an Award, Awards shall not be sold, assigned, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an Incentive Stock Option, pursuant to a qualified domestic relations order, and during the life of the Participant, shall be exercisable only by the Participant. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees."

EXHIBIT 10.40

Transkaryotic Therapies, Inc.

Amendment to 2002 Stock Incentive Plan

Approved by the Board of Directors on June 30, 2004

1. Section 7(c) of the 2002 Stock Incentive Plan is deleted in its entirety and the following section is inserted in lieu thereof:

"7(c) Reorganization and Change in Control Events.

(1) Definitions

(a) A "Reorganization Event" shall mean:

(i) any merger or consolidation of the Company with or into another entity as a result of which all the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property or is cancelled; or

(ii) any exchange of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange transaction.

(b) A "Change in Control Event" shall mean:

(i) the acquisition by an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) (a "Person"), of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of any capital stock of the Company if, after such acquisition, such Person would beneficially own 50% or more of the combined voting power of the then-outstanding securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); provided, however, that for purposes of this subsection (i), the following acquisitions shall not constitute a Change in Control:

(A) any acquisition directly from the Company (excluding an acquisition pursuant to the

exercise, conversion or exchange of any security exercisable for, convertible into or exchangeable for common stock or voting securities of the Company, unless the Person exercising, converting or exchanging such security acquired such security directly from the Company or an underwriter or agent of the Company),

(B) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Company or any corporation controlled by the Company, or

(C) any acquisition by any corporation pursuant to a Business Combination (as defined below) which complies with clauses (A) and (B) of subsection (iii) of this definition; or

(ii) such time as the Continuing Directors (as defined below) do not constitute a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to the Company), where the term "Continuing Director" means at any date a member of the Board (A) who was a member of the Board as of June 30, 2004 or (B) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election; provided, however, that there shall be excluded from this clause (B) any individual whose initial assumption of office occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; or

(iii) the consummation of a merger, consolidation, reorganization, recapitalization or share exchange involving the Company or a sale or other disposition of all or substantially all of the assets of

the Company (a "Business Combination"), unless,

immediately following such Business Combination, each of the following two conditions is satisfied:

(A) all or substantially all of the individuals and entities who were the beneficial owners of the Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the combined voting power of the then-outstanding securities entitled to vote generally in the election of directors of the resulting or acquiring corporation in such Business Combination (which shall include, without limitation, a corporation which as a result of such transaction owns the Company or substantially all of the Company's assets either directly or through one or more subsidiaries) (such resulting or acquiring corporation is referred to herein as the "Acquiring Corporation") in substantially the same proportions as their ownership of the Outstanding Company Voting Securities immediately prior to such Business Combination, and

(B) no Person (excluding any employee benefit plan (or related trust) maintained or sponsored by the Company or by the Acquiring Corporation) beneficially owns, directly or indirectly, 50% or more of the combined voting power of the then-outstanding securities of such corporation entitled to vote generally in the election of directors (except to the extent that such ownership existed prior to the Business Combination).

(c) "Good Reason" shall mean any significant diminution in the Participant's title, authority, or responsibilities from and after the occurrence of a Reorganization Event or Change in Control Event, as the case may be, or any reduction in the annual cash compensation payable to the Participant from and after such Reorganization Event or Change in Control Event, as the case may be, or the relocation of the place of business at which the Participant is principally

located to a location that is greater than 50 miles from its location immediately prior to such Reorganization

Event or Change in Control Event.

(d) "Cause" shall mean any (i) willful failure by the Participant, which failure is not cured within 30 days of written notice to the Participant from the Company, to perform his or her material responsibilities to the Company or (ii) willful misconduct by the Participant which affects the business reputation of the Company.

(2) Effect on Options

(a) Reorganization Event. Upon the occurrence of a Reorganization Event (regardless of whether such event also constitutes a Change in Control Event), or the execution by the Company of any agreement with respect to a Reorganization Event (regardless of whether such event will result in a Change in Control Event), the Board shall provide that all outstanding Options shall be assumed, or equivalent options shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof); provided that if such Reorganization Event also constitutes a Change in Control Event, except to the extent specifically provided to the contrary in the instrument evidencing any Option or any other agreement between a Participant and the Company, such assumed or substituted options shall become immediately exercisable in full if, on or prior to the date 18 months after the date on which the Reorganization Event is consummated, the Participant's employment with the Company or the acquiring or succeeding corporation is terminated for Good Reason by the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation. For purposes hereof, an Option shall be considered to be assumed if, following consummation of the Reorganization Event, the Option confers the right to purchase, for each share of Common Stock subject to the Option immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); provided, however, that if the consideration

received as a result of the Reorganization Event is not

solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise of Options to consist solely of common stock of the acquiring or succeeding corporation (or an affiliate thereof) equivalent in fair market value to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.

Notwithstanding the foregoing, if the acquiring or succeeding corporation (or an affiliate thereof) does not agree to assume, or substitute for, such Options, the Board shall, upon written notice to the Participants, provide that all then unexercised Options will become exercisable in full as of a specified time prior to the Reorganization Event and will terminate immediately prior to the consummation of such Reorganization Event, except to the extent exercised by the Participants before the consummation of such Reorganization Event; provided, however, that in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share of Common Stock surrendered pursuant to such Reorganization Event (the "Acquisition Price"), then the Board may instead provide that all outstanding Options shall terminate upon consummation of such Reorganization Event and that each Participant shall receive, in exchange therefor, a cash payment equal to the amount, if any, by which (A) the Acquisition Price multiplied by the number of shares of Common Stock subject to such outstanding Options (whether or not then exercisable), exceeds (B) the aggregate exercise price of such Options. To the extent all or any portion of an Option becomes exercisable solely as a result of the first sentence of this paragraph, upon exercise of such Option the Participant shall receive shares subject to a right of repurchase by the Company or its successor at the Option exercise price. Such repurchase right (1) shall lapse at the same rate as the Option would have become exercisable under its terms and (2) shall not apply to any shares subject to the Option that were exercisable under its terms without regard to the first sentence of this paragraph; provided that if the Reorganization Event is also a Change in Control Event, the shares issued upon exercise of each such Option shall immediately become free from all

conditions or restrictions if, on or prior to the date 18 months after the date on which the Change in Control Event is consummated, the Participant's employment with the Company or the acquiring or succeeding corporation is terminated for Good Reason by the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation.

(b) Change in Control Event that is not a Reorganization Event. Upon the occurrence of a Change in Control Event that does not also constitute a Reorganization Event, except to the extent specifically provided to the contrary in the instrument evidencing any Option or any other agreement between a Participant and the Company, each such Option shall become immediately exercisable in full if, on or prior to the date 18 months after the date on which the Change in Control Event is consummated, the Participant's employment with the Company or the acquiring or succeeding corporation is terminated for Good Reason by the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation.

(3) Effect on Restricted Stock Award

(a) Reorganization Event that is not a Change in Control Event. Upon the occurrence of a Reorganization Event that is not a Change in Control Event, the repurchase and other rights of the Company under each outstanding Restricted Stock Award shall inure to the benefit of the Company's successor and shall apply to the cash, securities or other property which the Common Stock was converted into or exchanged for pursuant to such Reorganization Event in the same manner and to the same extent as they applied to the Common Stock subject to such Restricted Stock Award.

(b) Change in Control Event. Upon the occurrence of a Change in Control Event (regardless of whether such event also constitutes a Reorganization Event), except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock Award or any other agreement between a Participant and the Company, each such Restricted Stock Award shall immediately become free from all conditions or restrictions if, on or prior to the date 18 months after the date on which the Change of Control Event is consummated, the Participant's employment with the Company or the acquiring or succeeding corporation is terminated for

Good Reason by

the Participant or is terminated without Cause by the Company or the acquiring or succeeding corporation."

2. Section 8(a) of the 2002 Stock Incentive Plan is deleted in its entirety and the following section is inserted in lieu thereof:

"8(a) Transferability of Awards. Except as the Board may otherwise determine or provide in an Award, Awards shall not be sold, assigned, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an Incentive Stock Option, pursuant to a qualified domestic relations order, and during the life of the Participant, shall be exercisable only by the Participant. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees."

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EXHIBIT 21.1

SUBSIDIARIES OF THE REGISTRANT

<TABLE>
<CAPTION>

NAME	JURISDICTION OF INCORPORATION
<S>	<C>
TKT Canada Inc.	Canada
TKT Europe	Sweden
TKT Securities Corp.	Massachusetts
TKT UK Ltd.	United Kingdom
TKT Argentina SRL	Argentina
Eminent Biopharmaceutical Services, LLC	Delaware

</TABLE>

Each subsidiary, except Eminent Biopharmaceutical Services, LLC, is a wholly-owned subsidiary of the Registrant.

EXHIBIT 23.2

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statements (Form S-3 No. 333-51772 and Form S-8 Nos. 333-82221, 333-19915, 333-19917, 333-59910 and 333-104820) of Transkaryotic Therapies, Inc. and in the related Prospectuses of our report dated April 29, 2005, with respect to Transkaryotic Therapies, Inc.'s management's assessment of the effectiveness of internal control over financial reporting, and the effectiveness of internal control over financial reporting of Transkaryotic Therapies, Inc., included in this Form 10-K/A.

/s/ Ernst & Young LLP

Boston, Massachusetts
April 29, 2005

EXHIBIT 31.1

CERTIFICATIONS

I, David D. Pendergast, certify that:

1. I have reviewed this Amendment No. 1 on Form 10-K/A to the Annual Report on Form 10-K of Transkaryotic Therapies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the

registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 2, 2005

/s/ David D. Pendergast

David D. Pendergast
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATIONS

I, Gregory D. Perry, certify that:

1. I have reviewed this Amendment No. 1 on Form 10-K/A to the Annual Report on Form 10-K of Transkaryotic Therapies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the

registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 2, 2005

/s/ Gregory D. Perry

Gregory D. Perry
Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report on Form 10-K/A of Transkaryotic Therapies, Inc. (the "Company") for the period ended December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, David D. Pendergast, President and Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 2, 2005

/s/ David D. Pendergast

David D. Pendergast
President, Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report on Form 10-K/A of Transkaryotic Therapies, Inc. (the "Company") for the period ended December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Gregory D. Perry , Senior Vice President and Chief Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 2, 2005

/s/ Gregory D. Perry

Gregory D. Perry
Chief Financial Officer
(Principal Financial Officer)