

SECURITIES AND EXCHANGE COMMISSION

FORM 10QSB

Optional form for quarterly and transition reports of small business issuers under section 13 or 15(d)

Filing Date: **2004-05-18** | Period of Report: **2004-03-31**
SEC Accession No. **0001144204-04-007083**

([HTML Version](#) on secdatabase.com)

FILER

MOLECULAR DIAGNOSTICS INC

CIK: **75439** | IRS No.: **364296006** | State of Incorporation: **DE** | Fiscal Year End: **1231**
Type: **10QSB** | Act: **34** | File No.: **000-00935** | Film No.: **04814597**
SIC: **3841** Surgical & medical instruments & apparatus

Mailing Address
900 NORTH FRANKLIN
STREET 1
SUITE 210
CHICAGO IL 60610

Business Address
900 NORTH FRANKLIN
STREET
SUITE 210
CHICAGO IL 60610
4078490290

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-QSB

(Mark One)

QUARTERLY REPORT UNDER SECTION 13 OR 15(D) OF THE SECURITIES
EXCHANGE ACT OF 1934.

For the quarterly period ended March 31, 2004

TRANSITION REPORT UNDER SECTION 13 OR 15(D) OF THE EXCHANGE ACT

For the transition period from _____ to _____.

Commission File number 0-935

MOLECULAR DIAGNOSTICS, INC.

(Exact Name of Small Business Issuer as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

36-4296006
(I.R.S. Employer
Identification No.)

414 North Orleans Street, Suite 510
Chicago, IL 60610
(Address of Principal Executive Offices)

(312) 222-9550
(Issuer's Telephone Number, including Area Code)

N/A
(Former Name, Former Address and Former Fiscal Year,
if Changed Since Last Report)

Check whether the issuer (1) filed all reports required to be filed by
Section 13 or 15(d) of the Exchange Act during the past 12 months (or for such
shorter periods that the issuer was required to file such reports), and (2) has
been subject to such filing requirements for the past 90 days. Yes No

The number of shares outstanding of each of the issuer's classes of common
equity, as of the latest practicable date:

Common Stock, \$0.001 par value, AT APRIL 30, 2004: 74,334,760

Transitional Small Business Disclosure Format (Check One): Yes No
--- ---

1

<TABLE>
<CAPTION>

MOLECULAR DIAGNOSTICS, INC.
QUARTERLY REPORT ON FORM 10-QSB
MARCH 31, 2004

TABLE OF CONTENTS

	PAGE
<S>	<C>
PART I. -- FINANCIAL INFORMATION	
Item 1. Financial Statements (Unaudited)	
a) Consolidated Balance Sheets -- March 31, 2004 and December 31, 2003	3
b) Consolidated Statements of Operations -- Three months ended March 31, 2004 and March 31, 2003	4
c) Consolidated Statements of Cash Flows -- Three months ended March 31, 2004 and March 31, 2003	5
d) Notes to Consolidated Financial Statements	6

Item 2. Management's Discussion and Analysis or Plan of Operation	19
Item 3. Controls and Procedures	23
PART II. -- OTHER INFORMATION	
Item 1. Legal Proceedings	23
Item 2. Changes In Securities and Small Business Issuer Purchases of Equity Securities	27
Item 3. Defaults upon Senior Securities	28
Item 4. Submission of Matters to a Vote of Security Holders	28
Item 5. Other Information	28
Item 6. Exhibits and Reports on Form 8-K	29
SIGNATURES	29
EXHIBIT INDEX	30

2

PART I. -- FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

<TABLE>
<CAPTION>

MOLECULAR DIAGNOSTICS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(DOLLARS IN THOUSANDS)

	MARCH 31, 2004 ----	DECEMBER 31, 2003 ----
	(Unaudited)	
ASSETS		
Current Assets:		
<S>	<C>	<C>
Cash and cash equivalents	\$ 45	\$ --
Accounts receivables, net of allowance for doubtful accounts of \$50 at March 31, 2004 and December 31, 2003	38	26
Inventories	100	94
Prepaid financings costs	188	307
Prepaid expenses and other current assets	7	7
	-----	-----
Total current assets	378	434
Fixed Assets, net	279	374
Other Assets:		
Licenses, patents and technology, net of amortization	6,776	6,907
	-----	-----
Total assets	\$ 7,433	\$ 7,715
	=====	=====
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current Liabilities:		
Checks issued in excess of amounts on deposit	\$ --	\$ 5
Accounts payable	4,999	5,540
Accrued payroll costs	1,656	1,745
Accrued expenses	1,299	1,401
Deferred revenue	50	50
Due to stockholder	88	53
Lease obligation	137	279
Notes payable--related party	1,080	1,092
Notes payable	3,980	6,099
	-----	-----
Total current liabilities	13,289	16,264
	-----	-----
Stockholders' Equity (Deficit):		
Preferred stock, \$0.001 par value; shares authorized--10,000,000; shares issued and outstanding -1,601,108 and 2,511,108, at March 31, 2004 and December 31, 2003, respectively (Liquidation value of all classes of preferred stock \$11,906,683)	10,164	12,894
Common stock, \$0.001 par value; shares authorized--100,000,000; shares issued 72,126,529; shares outstanding--71,934,441 and 45,638,840, at March 31, 2004 and December 31, 2003 , respectively	72	46

Additional paid-in-capital	37,612	29,553
Treasury stock; 192,088 shares at March 31, 2004 and December 31, 2003	(327)	(327)
Accumulated deficit	(53,337)	(50,673)
Accumulated comprehensive loss--		
Cumulative translation adjustment	(40)	(42)
	-----	-----
Total stockholders' equity (deficit)	(5,856)	(8,549)
	-----	-----
Total liabilities and stockholders' equity (deficit)	\$ 7,433	\$ 7,715
	=====	=====

</TABLE>

The accompanying notes are an integral part of these consolidated financial statements.

3

<TABLE>
<CAPTION>

MOLECULAR DIAGNOSTICS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(DOLLARS IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)

	FOR THE THREE MONTHS ENDED MARCH 31,	
	2004	2003
	(Unaudited)	
<S>	<C>	<C>
Net revenues.....	\$ 53	\$ 171
Operating expenses		
Cost of revenues.....	--	86
Research and development.....	157	207
Selling, general, and administrative expenses.....	1,514	1,837
	-----	-----
Total operating expenses.....	1,671	2,130
	-----	-----
Operating loss.....	(1,618)	(1,959)
Other income (expense):		
Interest expense -related party.....	(40)	(3)
Interest expense	(660)	(238)
Gain on currency conversion.....	10	--
Gain on sale of fixed assets.....	99	--
Restructuring settlements.....	161	--
Other, net.....	--	2
	-----	-----
Total other income (expense).....	(430)	(239)
	-----	-----
Loss from continuing operations before income taxes.....	(2,048)	(2,198)
Income tax expense.....	--	--
	-----	-----
Loss from continuing operations.....	(2,048)	(2,198)
Results from discontinued operations.....	--	(39)
	-----	-----
Net loss.....	(2,048)	(2,237)
Preferred stock dividend.....	(312)	(424)
	-----	-----
Total dividends.....	(312)	(424)
	-----	-----
Net loss applicable to common stockholders.....	\$ (2,360)	\$ (2,661)
	=====	=====
Basic and diluted net loss per common share.....	\$ (0.04)	\$ (0.07)
	=====	=====
Weighted average number of common shares outstanding.....	55,812,649	40,177,291
	=====	=====

</TABLE>

The accompanying notes are an integral part of these consolidated financial statements.

4

<TABLE>
<CAPTION>

MOLECULAR DIAGNOSTICS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(DOLLARS IN THOUSANDS)

	THREE MONTHS ENDED	
	MARCH 31,	
	2004	2003
	(Unaudited)	
	<C>	<C>
Operating Activities:		
<S>		
Net loss.....	\$ (2,048)	\$ (2,237)
Adjustments to reconcile net loss to net cash used for operating activities:		
Amortization of debt discount.....	464	153
Depreciation and amortization.....	178	240
Amortization of fees.....	119	202
Gain on sale of fixed assets.....	(99)	--
Licensing fees recognized on preferred stock sale.....	--	111
Compensation expense related to stock appreciation rights.....	--	3
Return of fixed assets in exchange for relief of indebtedness.....	149	--
Stocks, warrants and options issued to non-employees for services.....	556	--
Changes in assets and liabilities:		
Accounts receivable, net.....	(13)	(181)
Inventories.....	(6)	201
Due from stockholder.....	35	115
Prepaid expenses and other current assets.....	--	(59)
Checks issued in excess of amounts on deposit.....	(5)	--
Accounts payable.....	(532)	292
Deposits.....	--	30
Lease Obligation.....	(142)	--
Deferred revenue.....	--	(100)
Accrued expenses.....	95	958
	-----	-----
Net cash used for operating activities.....	(1,249)	(272)
	-----	-----
Cash used in investing activities:		
Purchases of fixed assets.....	(29)	--
	-----	-----
Net cash used for investing activities.....	(29)	--
	-----	-----
Cash flows from financing activities:		
Proceeds from issuance of convertible notes payable.....	1,292	350
Proceeds from issuance of convertible notes payable, related party.....	--	100
Note issued in payment of an expense.....	33	21
Payment of notes payable.....	(30)	(236)
Proceeds from sale of fixed assets.....	28	--
	-----	-----
Net cash provided by financing activities.....	1,323	235
	-----	-----
Effect of exchange rate changes on cash and cash equivalents.....	--	1
	-----	-----
Net increase (decrease) in cash and cash equivalents.....	45	(36)
Cash and cash equivalents at the beginning of period.....	--	42
	-----	-----
Cash and cash equivalents at end of period.....	\$ 45	\$ 6
	=====	=====
Supplemental disclosure of cash flow information: Cash paid during the period for:		
Interest.....	\$ 2	\$ 15
Non-cash transactions during the period for:		
Financing costs.....	\$ 108	\$ 173
Preferred stock and cumulative dividends converted into common stock.....	\$ 3,346	\$ 4,218

</TABLE>

The accompanying notes are an integral part of these consolidated financial statements.

NOTE 1. ORGANIZATION

Molecular Diagnostics, Inc. ("MDI" or the "Company") was incorporated as Ampersand Medical Corporation in Delaware in December 1998 as the successor to Bell National Corporation ("Bell National"). Bell National was incorporated in California in 1958.

On September 25, 2001, the Company changed its corporate name to Molecular Diagnostics, Inc. in order to better represent its operations and products. The name change was effected through a merger with a wholly-owned subsidiary. MDI retained its Certificate of Incorporation in the merger, except as amended to reflect its new name, bylaws and capitalization.

On December 4, 1998, Bell National (then a shell corporation without any business activity) acquired InPath, LLC, a development-stage company engaged in the design and development of medical instruments and related tests. In the acquisition, Bell National issued 4,288,790 shares of common stock and warrants to purchase 3,175,850 shares of common stock to the members of InPath in exchange for their units of membership interest in InPath and the senior executives of InPath assumed management control of MDI.

Based upon the terms of the acquisition agreement, for financial reporting and accounting purposes the acquisition was accounted for as a reverse acquisition whereby InPath is deemed to have acquired Bell National. However, Bell National was the continuing legal entity and registrant for both Securities and Exchange Commission filing purposes and income tax filing purposes, until its merger into MDI in May 1999. Because Bell National was a non-operating public shell company with nominal assets and InPath was a private operating company, the acquisition was recorded as the issuance of stock for the net monetary assets of Bell National, accompanied by a recapitalization and no goodwill or other intangible assets were recorded.

On September 17, 2001, Molecular Diagnostics, Inc. completed an acquisition transaction whereby AccuMed International, Inc. ("AccuMed") was merged into a wholly-owned subsidiary of MDI. The value of the transaction was approximately \$14,178,000. Accordingly, the consolidated financial statements presented hereunder include the operations of InPath from March 16, 1998 (inception), the operations of Bell National and Molecular Diagnostics, Inc. from December 4, 1998, and the operations of AccuMed from September 17, 2001, the date of acquisition.

MDI is focused on the design, development and marketing of the InPath System, and related image analysis systems. The InPath System and related products are intended to detect cancer and cancer-related diseases. These products may be used in a laboratory, clinic, or doctor's office.

MDI had another wholly-owned subsidiary, Samba Technologies, Sarl ("Samba"). MDI acquired all of the assets of Samba in January 1999 from Unilog Regions, SA for approximately \$500,000 in cash. Samba designed, developed, and marketed web-enabled software based systems for image analysis, image capture, and image transmission and management for clinical and industrial applications. A majority of reported revenues since inception of MDI were generated by Samba. Commencing December 20, 2002, Samba operated under the protection of the French Commercial Court in compliance with the bankruptcy laws of France. During 2003 MDI was unable to raise sufficient capital to enable it to provide funds to Samba to meet its liability obligations. On December 19, 2003, the French Commercial Court finalized the liquidation sale of the Samba assets. Upon completion of the bankruptcy liquidation sale MDI lost all rights and title to the Samba assets, including Samba software. MDI has reflected the involuntary liquidation of Samba's assets by the French Commercial Court in its December 31, 2003 financial statements and subsequent financial statements as discontinued operations.

The Company has incurred significant operating losses since its inception. Management expects that significant on-going operating expenditures will be necessary to successfully implement MDI's business plan and develop, manufacture and market its products. These circumstances raise substantial doubt about MDI's ability to continue as a going concern. Implementation of its plans and its ability to continue as a going concern depend upon its securing substantial additional financing. During the first quarter of 2004, MDI raised \$1,292,000 through the sale of convertible debt. Management's plans include substantial efforts to obtain additional capital. If the Company is unable to obtain adequate additional financing or generate profitable sales revenues, management may be required to curtail its product development and other activities and may be forced to cease operations.

NOTE 2. BASIS OF PRESENTATION

The consolidated financial statements included herein were prepared by us without audit according to the rules and regulations of the Securities and Exchange Commission. Certain information and footnote disclosures normally

included in financial statements prepared in accordance with accounting principles generally accepted in the United States have been omitted pursuant to such rules and regulations. The consolidated financial statements reflect, in the opinion of management, all adjustments necessary to present fairly the consolidated financial position and consolidated results of operations as of and for the periods indicated and in order to make the financial statements not misleading. The consolidated results of operations for the three months ended March 31, 2004 and 2003 are not necessarily indicative of the results to be expected for the full year or for any other period. The consolidated financial statements include the accounts of Molecular Diagnostics, Inc. and its wholly-owned subsidiaries. All inter-company balances and transactions have been eliminated in consolidation.

These financial statements should be read in conjunction with the audited financial statements and the notes thereto included in our 2003 Annual Report on Form 10-KSB, as filed with the Securities and Exchange Commission.

NOTE 3. LICENSES, PATENTS, TECHNOLOGY AND GOODWILL (in thousands)

	MARCH 31, 2004 (unaudited)	DECEMBER 31, 2003
Licenses.....	\$ 1,013	\$1,013
Patent costs.....	133	133
MDI Technology Agreement.....	7,230	7,230
Dianon Technology Agreement.....	260	260
	-----	-----
Subtotal.....	8,636	8,636
Less accumulated amortization.....	(1,860)	(1,729)
	-----	-----
Total.....	\$ 6,776	\$6,907
	=====	=====

In 2003, MDI recorded an impairment loss of \$283,000. This loss was comprised of the write-off of the full amount of MDI's goodwill recorded on the acquisition of AccuMed. At December 31, 2003, management evaluated several factors, principally that contracts and sales relating to the AccuMed products had failed to materialize, indicating that the carrying value of goodwill from the AccuMed acquisition was impaired and no future cash flows would be realized relating to the goodwill.

Aggregate Amortization Expense

For the three months ended March 31, 2004 and 2003, amortization expense was \$131 and \$612, respectively.

NOTE 4. ACCRUED EXPENSES

Accrued expenses included the following at March 31 and December 31 (in thousands):

	2004 (unaudited)	2003
Accrued interest.....	\$ 573	\$ 704
Accrued interest--related party.....	144	115
Accrued taxes.....	476	476
Other accrued expenses.....	106	106
	-----	-----
Total.....	\$1,299	\$1,401
	=====	=====

MDI was delinquent in filing certain federal and state income tax returns for 2002 and 2001. MDI is also delinquent in paying a portion of federal and state employee and employer payroll taxes for 2003, 2002, and 2001. The delinquent federal payroll taxes relating to 2003 and 2002 were paid in full in April 2004.

The Company owed \$606,000 and \$686,000 as of March 31, 2004 and December 31, 2003, respectively, in 2001 federal payroll taxes, including \$253,000 and \$258,000 respectively in assessed and estimated statutory penalties and interest. MDI submitted an additional payment of \$75,000 in April 2004 against this liability amount and is currently in the process of communicating through counsel with the Internal Revenue Service regarding payment of the balance due. The Company has lost all rights of appeal regarding the outstanding payroll tax liability and could be subject to the seizure of its tangible and intellectual property in the event a payment schedule is not agreed to with the Internal Revenue Service. The amount was included in accrued payroll costs in the accompanying balance sheet.

NOTE 5. NOTES PAYABLE--RELATED PARTIES

Notes payable to related parties at March 31 and December 31 (in thousands) consisted of:

	2004 (unaudited)	2003
<S>	<C>	<C>
Northlea Partners, Ltd., \$25,000 Promissory Note issued August 6, 2001; interest rate 15% per annum.....	\$ 25	\$ 25
Northlea Partners, Ltd., \$15,000 Promissory Note issued September 20, 2001; interest rate 9% per annum.....	15	15
Northlea Partners, Ltd., \$15,000 Bridge II convertible promissory note issued May 1, 2003; interest rate 12% per annum (see description under Bridge II Notes in Note 6-Notes Payable, for other terms and conditions).....	15	15
Peter P. Gombrich, \$305,667 Bridge II convertible promissory note issued December 5, 2003; interest rate 12% per annum (see description under Bridge II Notes in Note 6-Notes Payable, for other terms and conditions).....	--	251
Robert Shaw, \$25,000 Promissory Note issued September 20, 2001; interest rate 9% per annum.....	25	25
Suzanne M. Gombrich, \$1,000,000 convertible promissory note issued April 2, 2003; Maturity date April 2, 2004 or earlier; interest rate 12% per annum; convertible into common stock at \$0.10 per share; beneficial conversion feature valued at \$970,000.....	1,000	761
	-----	-----
	\$1,080	\$1,092
	=====	=====

</TABLE>

On April 2, 2003, MDI issued a \$1,000,000 Convertible Promissory Note to an affiliate, Suzanne M. Gombrich, the wife of Peter Gombrich, MDI's Chairman, in exchange for cash. The note bore interest at the rate of 12% per annum and was convertible into the common stock of MDI at a conversion price of \$0.10 per share. As additional consideration, MDI granted the holder a warrant to purchase 1,000,000 shares of the common stock of MDI at an exercise price of \$0.15 per share. MDI also granted the holder a first priority security interest in all of the Company's assets. The conversion price of the note was less than the market price of the common stock when the note was issued; therefore, the holder was considered to have a beneficial conversion feature. MDI determined the value of the beneficial conversion feature to be \$970,000 using the fair value interest method. The value was recorded as a reduction of the debt and was to be amortized as additional interest over the life of the note. MDI recorded additional interest expense of \$239,123 and \$731,000 to reflect amortization of the discount for the three months ended March 31, 2004 and year ended December 31, 2003, respectively. The initial \$100,000 of cash proceeds of the note was received in March 2003 and was used to fund the cost of an option of the Company to repurchase all of its assets from Round Valley Capital, LLC. The remaining proceeds, received on April 2, 2003, were used to make a \$900,000 payment required to exercise the purchase option in conjunction with the final settlement of a loan with Round Valley Capital, LLC. On April 2, 2004 the Convertible Promissory Note due to Suzanne M. Gombrich was paid in full and her first priority security interest in all the Company's assets was released. (See Footnote 9: Subsequent Events)

8

On March 5, 2004, the Bridge II convertible promissory note (and accrued interest thereon) issued to Peter Gombrich in December 2003 was converted into 2,113,987 common shares.

Further, Peter Gombrich advanced funds to the Company during the three months ended March 31, 2004 and was owed \$88,307 and \$52,953 at March 31, 2004 and December 31, 2003, respectively. MDI has classified the amount due to Mr. Gombrich under the current liabilities heading "Due to stockholder."

The carrying amount of Notes Payable - Related Parties approximated fair value at March 31, 2004 and December 31, 2003.

NOTE 6. NOTES PAYABLE

Notes payable to unrelated parties at March 31 and December 31 (in thousands) consisted of:

	2004 (unaudited)	2003
<S>	<C>	<C>

Bridge I Convertible Promissory Notes; due December 31, 2002; interest rate 7% per annum; convertible into common stock at 75% of the market price on date of conversion; beneficial conversion feature valued at \$1,042,000; Bridge I warrants at an exercise price of \$0.25 per share; Private Warrants at an exercise price equal to 150% of note conversion price.....	\$ 875	\$2,075
Bridge II Convertible Promissory Notes; due July 31, 2003; interest rate 12%/15% per annum; convertible into common stock at \$0.10 or \$0.15 per share; beneficial conversion feature valued at \$792,000 and \$330,000 at March 31, 2003 and December 31, 2002, respectively;		
Bridge II warrants at an exercise price of \$0.15 or \$0.20 per share.....	1,905	2,845
Bridge IV Convertible Promissory Notes; due December 31, 2008; interest rate 10% per annum; convertible into common stock at \$.10 per share; beneficial conversion feature valued at \$1,292,000 at March 31, 2003; Bridge IV warrants at an exercise price of \$.15 per share.....	21	--
Monsun, AS \$500,000 Promissory Note issued November 1, 2000; interest rate 15% per annum, compounded into principal amount; beneficial conversion feature valued at \$125,000.....	674	641
Trek Diagnostic Systems \$80,000 Promissory Note issued July 31, 2002; due in equal installments on September 1, 2002 and December 1, 2002.....	--	15
O.P., LLC \$29,390 Promissory Note issued May 12, 2003; interest at 7% per annum; monthly principal payment of \$1,316 plus interest; due April 2005.....	17	24
Ungaretti and Harris \$211,368 Secured Promissory Note issued May 8, 2003; interest at 12% per annum; due September 30, 2003.....	149	149
Ernst & Young \$30,800 Promissory Note issued July 17, 2003; interest at 12% per annum commencing January 1, 2003; due December 31, 2003.....	31	31
Ventana Medical Systems, Inc. \$62,946 Promissory Note issued November 30, 2003; due December 31, 2003; interest at 8% per annum payable after December 31, 2003.....	54	63
Xillix Technologies Corporation \$361,000 Promissory Note issued June 26, 1998; interest rate Canadian Prime plus 6% per annum; represents a debt of AccuMed International.....	34	34
Western Economic Diversification \$221,000 Promissory Note issued June 1989; no interest; represents a debt of Oncometrics.....	220	222
	-----	-----
	\$3,980	\$6,099

</TABLE>

In 2002, MDI issued \$3,185,000 in series Bridge I Convertible Promissory Notes to accredited investors. The notes bear interest at the rate of 7% per annum and are convertible at any time into the common stock of MDI at a conversion price equal to 75% of the market price of the common stock on the date of conversion. In addition, MDI issued a warrant, which entitled each holder to purchase one share of common stock at an exercise price of \$0.25 per share, for each dollar principal amount of notes. MDI calculated a fair value of \$99,950 for these warrants using the fair value interest rate method and recorded this amount as additional interest expense during 2002. At the time of conversion of the note, the holder is entitled to receive a warrant to purchase one share of common stock for each four shares of common stock into which the note converts at an exercise price equal to 150% of the conversion price of the note. MDI has not determined a value for the warrants as of March 31, 2004.

9

Since the conversion price of the note is at a 25% discount to the market price of the common stock of MDI, the holder is considered to have a beneficial conversion feature. MDI determined the value of the beneficial conversion feature to be \$1,041,666 and recorded this amount as additional interest expense during 2002. In February 2003, a note holder, NeoMed Innovations III, converted \$1,060,000 in principal amount of Bridge I notes into Bridge II notes. In November 2003, two Bridge I note holders converted \$50,000 in principal amount of notes and \$5,287 in accrued interest into 368,579 shares of unregistered common stock. The remaining \$875,000 in principal Bridge I notes remained unconverted and outstanding at March 31, 2004. Management extended a written offer, dated October 10, 2003, to the Bridge I noteholders to convert their notes and accrued interest into common shares at a conversion rate of \$0.15 per share. In addition, the Bridge I holders were also offered warrants to purchase one new share for every four shares acquired by the Bridge noteholder upon exercise of such holder's conversion rights under the notes. As of May 13, 2004, this offer remained outstanding.

For the three months ended March 31, 2004, holders of \$1,200,000 principal amount of Bridge I Convertible Promissory Notes elected to convert their notes and related accrued interest of \$152,000 into 9,010,310 shares of unregistered common stock.

Beginning in October 2002, MDI began an issue of up to \$4,000,000 in series Bridge II Convertible Promissory Notes to accredited investors. MDI issued \$550,000 in Bridge II notes as of December 31, 2002. From January 1, 2003 through the closing of the offering on December 5, 2003, MDI issued Bridge II Convertible Promissory Notes in the principal amount of: \$1,980,200 in exchange for cash, \$1,060,000 as a conversion of a Bridge I Convertible Promissory Note and \$305,667 in exchange for a note payable to Peter P. Gombrich, the Company's Chairman, for a total issuance during fiscal year 2003 of \$3,345,867. The notes bear interest at a rate of 12% per annum payable at the maturity date in kind in

the form of shares of common stock of MDI. The Company granted the holders a junior security position in all of its assets. The notes are convertible at any time into the common stock of MDI. The note conversion price and the value of common shares paid in kind as interest for the first \$1,000,000 in principal amount of cash subscriptions, determined on a "first come - first served basis," is \$0.10 per share. The note conversion price and the value of common shares paid in kind as interest for the remaining \$3,000,000 of principal amount of notes in the series is \$0.15 per share. The conversion prices of the notes issued during 2002 and 2003 were less than the market price of the common stock when the notes were issued; therefore, the holders are considered to have a beneficial conversion feature. MDI determined the value of the beneficial conversion feature to be \$1,777,200 and \$330,000 at December 31, 2003 and December 31, 2002, respectively. The value was recorded as a reduction of the debt and will be amortized as additional interest over the life of the notes. MDI recorded additional interest expense of \$204,507 and \$1,826,743 to reflect amortization of the discount during the three months ended March 31, 2004 and year ended December 31, 2003, respectively. The Bridge II notes automatically convert into shares of common stock (subject to adjustments for stock splits, etc.) upon a "Qualified Financing Transaction," which means a transaction in which the Company closes a new debt or equity financing prior to the maturity date that results in net proceeds to the Company of at least \$4,000,000. At the time MDI completes significant additional funding plans, as outlined in the subscription agreement, each holder of Bridge II notes is entitled to receive a warrant to purchase one share of the common stock of the Company for each four shares of common stock into which the note is convertible at an exercise price of \$0.15 per share for notes in the class pertaining to the first \$1,000,000 in subscriptions and \$0.20 for the remaining \$3,000,000 in note principal subscriptions. In September 2003 an amendment to the Bridge II Convertible Promissory Notes was sent to holders requesting an extension of the notes to July 31, 2004. As additional consideration for the extension, holders were offered an increase in the interest rate from 12% to 15%. In addition, an amendment to the indenture also offered an increase in the warrant coverage ratio from 25% to 33%. The Bridge II offering was closed as of December 5, 2003.

For the three months ended March 31, 2004, holders of \$1,396,000 principal amount of Bridge II Convertible Promissory Notes elected to convert their notes and related accrued interest of \$144,000 into 11,708,118 shares of unregistered common stock. Included in the above conversion amounts are amounts due Peter P. Gombrich, the Company's Chairman, of \$305,667 in Bridge II principal and \$11,431 in accrued interest thereon, which were converted into 2,113,987 shares of unregistered common stock.

Beginning in February 2004, MDI began a separate offering of Bridge IV Convertible Promissory Notes to accredited INVESTORS. The notes bear interest at 10% per annum payable, on a semi-annual basis, in kind in the form of shares of common stock for the first two years and then in cash for the remaining three years until the December 31, 2008 maturity date. The note conversion price and the value of common shares paid in kind as interest is \$0.10 per share. The conversion price of the notes issued to date has been less than the market price of the common stock when the notes were issued; therefore, the holders are considered to have a beneficial conversion feature. MDI determined the value of the beneficial conversion feature to be \$1,292,000 at March 31, 2004. The value was recorded as a reduction of the debt and will be amortized as additional interest over the life of the notes. MDI recorded additional interest expense of \$20,578 to reflect amortization of the discount during the three months ended March 31, 2004. The notes are convertible at any time into the common stock of MDI, although the notes will automatically convert if the last sales price of the stock is \$0.30 or higher for twenty consecutive trading days, the daily average trading volume is 250,000 shares, the underlying shares are registered for sale, and the Convertible Promissory Note to an affiliate, Suzanne M. Gombrich, has been paid or converted into common shares. The holders were also granted a security position in all of the Company's assets. MDI granted each note holder the right to receive a 25% warrant coverage on all money invested; therefore, for every \$100,000 invested, an investor will receive 25,000 warrants to purchase common stock at an exercise price of \$0.15. The warrants will expire on December 31, 2008. Through March 31, 2004 the Company had issued \$1,292,000 in principal amount of Bridge IV Convertible Promissory Notes in exchange for cash.

On August 30, 2002, MDI issued a promissory note to Round Valley Capital, LLC ("RVC") in the amount of \$825,500, representing \$650,000 in cash received by MDI and \$175,500 in unearned interest. The note bore a calculated effective interest rate of 36% per annum and was due June 1, 2003. The note was secured by all of the assets of MDI. MDI issued a certificate representing 5,750,000 shares of the common stock of the Company to RVC as collateral for the loan and paid transaction fees including: cash payments of \$147,063; 711,364 shares of common stock of MDI; and warrants to purchase 681,818 shares of common stock of MDI at an exercise price of \$0.20 per share. MDI recorded the note at a value, net of unearned interest, of \$650,000. A fair value of \$362,795 was calculated for the shares of common stock of MDI issued to RVC using the market price of the common stock on the date the shares were issued. A fair value of \$156,000 was

calculated for the warrants using the Black-Scholes valuation method. The total value of the transaction fees was recorded as prepaid financing costs and was amortized over the life of the note. During 2002, MDI made principal payments against the note of \$350,000. RVC declared MDI to be in default under the terms of the note during 2002 and the parties engaged in litigation and subsequently, settlement negotiations. On April 2, 2003, MDI paid RVC \$900,000 in cash in final settlement of the loan, default penalties and to exercise its rights under an asset purchase option agreement. RVC returned the 5,750,000 shares of common stock issued as collateral under the note, 711,364 shares of common stock issued as financing fees, and warrants to purchase 531,818 shares of common stock also issued as financing fees. MDI cancelled the shares of common stock and the warrants. On February 17, 2003, MDI made additional principal payments amounting to \$250,000. MDI recorded interest expense of \$16,900 and financing costs, including amortization of accrued financing costs, of \$1,009,000 during 2003.

In July 2002, MDI agreed to settle a claim brought by Trek Diagnostic Systems, Inc. ("Trek") against AccuMed regarding breach of representation and warranties in a certain agreement under which Trek purchased the microbiology business of AccuMed in 2000. MDI issued a promissory note to Trek in the amount of \$80,000, payable in two equal installments on September 1, 2002 and December 1, 2002. MDI made the first payment due on September 1, 2002. MDI did not make the second payment causing a default on the note. Through a court ordered action Trek was able to obtain payments totaling \$27,692 during the fourth quarter of 2003. In the first quarter of 2004, a final settlement of \$12,000 was reached for complete and final settlement of the outstanding note balance.

On November 1, 2000, MDI issued a convertible promissory note to Monsun, AS ("Monsun") in exchange for \$500,000 in cash. The note bears interest at the rate of 15% per year and was due twelve months from the date of issue. The note is convertible into common stock, any time after the expiration of the first 180 days of the loan term, at a conversion price of \$1.00 per share.

On October 31, 2001 Monsun, AS and MDI agreed to the first extension of the maturity date of the convertible promissory note until January 31, 2002. As consideration for the first extension agreement, MDI issued a three-year warrant to Monsun, entitling the holder to purchase 100,000 shares of common stock of MDI at an exercise price of \$0.60 per share. On January 31, 2002 Monsun and MDI agreed to the second extension of the maturity date of the note until March 31, 2002. As consideration for the second extension agreement, MDI issued a three-year warrant to Monsun, entitling the holder to purchase 200,000 shares of common stock of MDI at an exercise price of \$0.30 per share. A fair value of \$4,110 for the warrant was calculated using the fair value interest rate method and was recorded as additional interest expense during 2002. On April 1, 2002 Monsun and MDI agreed to the third extension of the maturity date until July 31, 2002. As consideration for the third extension agreement, MDI issued a five-year warrant to Monsun, entitling the holder to purchase 200,000 shares of common stock of MDI at an exercise price of \$0.70 per share. A fair value of \$8,287 for the warrant was calculated using the fair value interest rate method and was recorded as additional interest expense during 2002. In November 2002, MDI

11

issued 200,000 shares of common stock of MDI as a default penalty on the note. A fair value of \$42,000 for the shares was calculated using the market price of the common stock on the date the shares were issued and was recorded as financing expenses during 2002. MDI made payments against the principal of the note amounting to \$117,266 and recorded interest expense, in addition to the amounts mentioned above, of \$80,200 during 2002. Monsun has initiated a legal action against Peter Gombrich, MDI's Chairman, as a personal guarantor on the note, in an attempt to collect the unpaid principal balance of the note. The Board of Directors of MDI has agreed to pay Mr. Gombrich's legal costs to defend him against this action. During the first quarter of 2004 Monsun was successful in obtaining a legal judgment against Peter Gombrich as the personal guarantor of the note. (See Footnote 10 - Legal Proceedings)

Specific events of default have occurred on a significant majority of the outstanding notes payable, including the Bridge I and Bridge II convertible promissory notes, issued by MDI, ranging from failure to make principal payments when due to breach of certain warranties and representations. The notes payable require the holder to notify MDI in writing of a declaration of default at which time a cure period, as specified in each individual note, would commence. There is no guarantee that MDI would be able to cure any event of default if, or when, the holder provides the required written notice. Other than the \$674,000 Monsun convertible promissory note and the Ungaretti and Harris \$149,000 note payable, which are the subject of legal actions described in Footnote 10 - Legal Proceedings, MDI has not received any written declarations of default from holders of its outstanding notes payable.

The carrying amounts of notes payable approximated fair value at March 31, 2004 and December 31, 2003.

<TABLE>
<CAPTION>

NOTE 7. STOCKHOLDERS' EQUITY

Summary of the Company's preferred stock capital table as of:

	MARCH 31, 2004 ----	DECEMBER 31, 2003 ----
OFFERING	SHARES ISSUED & OUTSTANDING (unaudited)	SHARES ISSUED & OUTSTANDING
<S>	<C>	<C>
Series A convertible.....	82,655	82,655
Series B convertible, 10% cumulative dividend.....	799,856	799,856
Series C convertible, 10% cumulative dividend.....	282,833	1,192,833
Series D convertible, 10% cumulative dividend.....	175,000	175,000
Series E convertible, 10% cumulative dividend.....	260,764	260,764
	-----	-----
Total Preferred Stock.....	1,601,108	2,511,108
	=====	=====

</TABLE>

During the first quarter of 2004 several holders converted 910,000 shares of Series C convertible preferred stock, including cumulative dividends due thereon, into 5,577,173 shares of common stock.

SUMMARY OF PREFERRED STOCK TERMS

SERIES A CONVERTIBLE PREFERRED STOCK

Liquidation Value: \$4.50 per share
 Conversion Price: \$10.3034 per share
 Conversion Rate: 0.4367--Liquidation Value divided by Conversion Price (\$4.50/\$10.3034)
 Voting Rights: None
 Dividends: None
 Conversion Period: Any time

SERIES B CONVERTIBLE PREFERRED STOCK

Liquidation Value: \$4.00 per share
 Conversion Price: \$1.00 per share
 Conversion Rate: 4.00--Liquidation Value divided by Conversion Price (\$4.00/\$1.00)

12

Voting Rights: None
 Dividends: 10%--Quarterly--Commencing March 31, 2001
 Conversion Period: Any time
 Cumulative dividends in arrears at March 31, 2004 were \$989,260

SERIES C CONVERTIBLE PREFERRED STOCK

Liquidation Value: \$3.00 per share
 Conversion Price: \$0.60 per share
 Conversion Rate: 5.00--Liquidation Value divided by Conversion Price (\$3.00/\$0.60)
 Voting Rights: None
 Dividends: 10%--Quarterly--Commencing March 31, 2002
 Conversion Period: Any time
 Cumulative dividends in arrears at March 31, 2004 were \$204,977

SERIES D CONVERTIBLE PREFERRED STOCK

Liquidation Value: \$10.00 per share
 Conversion Price: \$1.00 per share
 Conversion Rate: 10.00--Liquidation Value divided by Conversion Price (\$10.00/\$1.00)
 Voting Rights: None
 Dividends: 10%--Quarterly--Commencing April 30, 2002
 Conversion Period: Any time after April 1, 2002
 Cumulative dividends in arrears at March 31, 2004 were \$422,877

SERIES E CONVERTIBLE PREFERRED STOCK

Liquidation Value: \$22.00 per share
 Conversion Price: \$0.80 per share
 Conversion Rate: 27.50--Liquidation Value divided by Conversion Price (\$22.00/\$0.80)
 Voting Rights: Equal in all respects to holders of common shares
 Dividends: 10%--Quarterly--Commencing May 31, 2002
 Conversion Period: Any time after December 1, 2002
 Cumulative dividends in arrears at March 31, 2004 were \$1,296,688

ISSUANCE OF RESTRICTED SHARES FOR SERVICES

Beginning in 1999, the Company has, at various times, awarded restricted shares of its common stock to non-employee consultants for services. Some of the share awards were made for past services and their value was fixed. Other share awards were made as partial consideration for services to be performed under three-year consulting agreements and vest over the life of the agreements. The measurement date of these shares was determined to be July 2003. The shares were fully vested as of March 31, 2004. A fair value of the shares as of March 31, 2003 was \$11,000 based on a calculation using the Black-Scholes valuation model. The Company recorded \$3,400 as expense during the quarter ended March 31, 2003.

ISSUANCE OF WARRANTS FOR SERVICES

In March 2004, MDI issued 67,000 warrants with an exercise price of \$0.17 per share to a non-employee financial consultant for past financial services. MDI valued the warrants at \$13,400 using the Black-Scholes valuation model and recorded the amount as a current quarter administrative expense.

In March 2004, MDI issued 500,000 warrants with an exercise price of \$0.17 per share to a non-employee financial consultant for past financial services. MDI valued the warrants at \$95,000 using the Black-Scholes valuation model and recorded the amount as a current quarter administrative expense.

APPLICATION OF BLACK-SCHOLES VALUATION MODEL

In applying the Black-Scholes valuation model, the Company has used an expected dividend yield of zero, a risk-free interest rate of 4.77% and 6% for the March 31, 2004 and 2003 periods, respectively, volatility factors of 182% and 90%, respectively, and a fair value of the underlying common shares of the closing market price on the date of the grant. The expected life equaled the term of the warrants, options, or restricted shares.

NOTE 8. EQUITY INCENTIVE PLAN AND EMPLOYEE STOCK PURCHASE PLAN

On May 25, 1999, stockholders approved the establishment of the 1999 Equity Incentive Plan (the "Plan") effective as of June 1, 1999. The Plan provides that the Board may grant various forms of equity incentives to directors, employees, and consultants, including but not limited to Incentive Stock Options, Non-Qualified Stock Options, Stock Appreciation Rights, and Restricted Stock Awards. Grants under the Plan are exercisable at fair market value determined as of the date of grant in accordance with the terms of the Plan. Grants vest immediately or ratably over periods ranging from two to five years, and expire five to ten years from the date of grant.

On May 23, 2000, stockholders approved Amendment No. 1 to the Plan, which increased the number of shares of common stock allocated for use in the Plan from 2,000,000 shares to 3,000,000 shares. On June 21, 2002, stockholders approved a second amendment to the Plan, which increased the number of shares allocated for use in the Plan from 3,000,000 shares to 5,500,000 shares.

The Board of Directors has also granted options to purchase common stock of MDI, which are not covered by the terms of the Plan.

MDI applies APB No. 25 "Accounting for Stock Issued to Employees" and related interpretations in accounting for options granted to employees under the Equity Incentive Plan. No compensation cost was recorded during the first quarter of 2004 or 2003 for options granted to employees as the exercise price approximated the fair value of the underlying common stock on the date of the grant. Had stock options been accounted for under the fair value method recommended by SFAS 123 "Stock-Based Compensation", the Company's net loss allocated to common shareholders would have been changed to the pro forma amounts indicated below:

<TABLE>
<CAPTION>

	FOR THE THREE MONTHS ENDED MARCH 31,	
	2004	2003
	(unaudited)	
	(in thousands except for per share amounts)	
<S>	<C>	<C>
NET LOSS APPLICABLE TO COMMON SHAREHOLDERS AS REPORTED.....	\$ (2,360)	\$ (2,661)
Deduct: Total stock-based compensation determined under the fair value based method for all awards and forfeitures, net of related taxes.....	(158)	--
	-----	-----
PRO FORMA NET LOSS APPLICABLE TO COMMON SHAREHOLDERS.....	\$ (2,518)	\$ (2,661)
	=====	=====
Basic and diluted loss per share applicable to common shareholders - as reported.....	\$ (.04)	\$ (.07)

Basic and diluted loss per share applicable to common	=====	=====
shareholders - pro forma.....	\$ (0.05)	\$ (0.07)
	=====	=====

</TABLE>

The fair value for these options was estimated at the date of the grant using a Black-Scholes option pricing model with the following weighted average assumptions: risk-free interest rates of 4.77% and 6% for the March 31, 2004 and 2003 periods, respectively, volatility factors of the expected market price of the Company's common stock of 182% and 90%, respectively, and a fair value of the underlying common shares of the closing market price on the date of the grant. The expected life equaled the term of the options or restricted shares.

A summary of the Company's stock option activity and related information follows:

<TABLE>
<CAPTION>

	OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE
<S>	<C>	<C>
OUTSTANDING AT JANUARY 1, 2003.....	3,507,517	
Granted.....	600,000	\$ 0.3144
Forfeited - assumed in acquisition.....	(17,035)	\$ 4.9169
Forfeited.....	(595,834)	\$ 0.9385

OUTSTANDING AT DECEMBER 31, 2003.....	3,494,648	
Granted.....	1,500,000	\$ 0.1413
Forfeited.....	(116,000)	\$ 0.3937

OUTSTANDING AT MARCH 31, 2004.....	4,878,648	
	=====	
EXERCISABLE AT MARCH 31, 2004.....	3,665,981	\$ 0.9802
	=====	

</TABLE>

At the Annual Meeting on May 25, 1999, the stockholders also approved the Employee Stock Purchase Plan (the "ESPP"). The ESPP offers employees the opportunity to purchase shares of common stock of MDI through a payroll deduction plan at 85% of the fair market value of such shares at specified enrollment measurement dates. The aggregate number of shares available for purchase under the ESPP is 200,000.

NOTE 9. SUBSEQUENT EVENTS

CONVERSIONS OF CONVERTIBLE SECURITIES

In April 2004, a holder of \$25,000 principal amount of Bridge I Convertible Promissory Notes elected to convert a note and related accrued interest of \$3,300 into 188,918 shares of unregistered common stock.

In April 2004, holders of Series B Convertible Preferred Stock elected to convert 422,250 of preferred shares and accrued dividends into 2,211,401 shares of unregistered common stock.

WARRANTS

On July 18, 2003, Mr. Milley, a director of MDI, Azimuth Corporation (of which Mr. Milley is President and Chairman of the Board) and Cadmus Corporation (of which Mr. Milley is President), agreed to cancel seven warrants held by Azimuth and one warrant held by Cadmus, which entitled the holders to purchase a total of 3,125,000 shares of common stock at various exercise prices between \$0.01 and \$1.25 per share. The warrants, issued between December 1999 and August 2001, contained anti-dilution clauses which required MDI to increase the number of shares of common stock the holders were entitled to purchase under the warrants by approximately 1,500,000 shares as of the date of the agreement, with commensurate adjustments in individual exercise prices so that gross proceeds to the Company from exercise of the warrants remained the same. These anti-dilution provisions could have required the Company to make additional adjustments in shares and exercise prices in the future based on the Company's issuance of debt or equity instruments at prices below the adjusted exercise prices of these warrants. In consideration for the parties' agreement to cancel these warrants, including their individual anti-dilution clauses, and the forgiveness of approximately \$120,000 owed to Azimuth and Cadmus, MDI agreed to issue a new five-year warrant entitling the holders to purchase 6,500,000 shares of common stock at an exercise price of \$0.30 per share. MDI also agreed to issue a 120-day warrant entitling the holder to purchase 500,000 shares of common stock at an exercise price of \$0.30. Although an agreement has been reached between

the parties, no definitive agreement has been signed. There can be no guarantee that the definitive documents will be signed.

SECURED CONVERTIBLE NOTE FINANCING

Beginning in January 2004, Bathgate Capital Partners, LLC began an issue of a maximum offering of \$4,000,000 and a minimum of \$1,500,000 in Bridge III Convertible Promissory Notes to accredited investors. The notes bear interest at 10% per annum payable, on a semi-annual basis, in kind in the form of shares of common stock for the first two years and then in cash for the remaining three years until due December 31, 2008. The note conversion price and the value of common shares paid in kind as interest is \$0.10 per share. The notes are convertible at any time into the common stock of MDI, although the notes will automatically convert if the last sales price of the stock is \$0.30 or higher for twenty consecutive trading days, the daily average trading volume is 250,000 shares, the underlying shares are registered for sale, and the Convertible Promissory Note to an affiliate, Suzanne M. Gombrich, has been paid or converted into common shares. The holders were also granted a security position in all of the Company's assets. MDI granted each note holder the right to receive a 25% warrant coverage on all money invested; therefore, for every \$100,000 invested, an investor will receive 25,000 warrants to purchase common stock at an exercise price of \$0.15. The warrants will expire on December 31, 2008. As a requirement of the escrow, the funds would not be released until the following requirements were met:

14

- o A minimum investment of \$1,500,000 had been reached;
- o \$190,000 Suzanne Gombrich's Convertible Promissory Note was converted into common shares;
- o A portion of the Bridge II Convertible Promissory Note holders converted their notes into common shares; and
- o Peter P. Gombrich, MDI's Chairman and CEO, would resign his position as CEO of the Company.

These requirements were satisfied on April 2, 2004 and the Company issued \$1,500,000 in Bridge III convertible promissory notes in exchange for cash. The funds were used for repayment of the Suzanne Gombrich note, payment of IRS taxes, and working capital.

On April 2, 2004, as a condition of the Bathgate Capital Partners issuance, the Convertible Promissory Note due to Suzanne M. Gombrich was paid in full and her first priority security interest in all the Company's assets was released. As of April 2, 2004, the Company paid off \$936,114 of Mrs. Gombrich's \$1,000,000 Convertible Promissory Note and \$126,114 of accrued interest. In addition Mrs. Gombrich converted the remaining \$190,000 into 1,900,000 shares of common stock of the Company, which such shares shall be issued at such time that an increase in the number of authorized shares has been approved and effected.

NOTE 10. LEGAL PROCEEDINGS

SETTLED DURING 2003

The Company and its subsidiaries Samba Sarl and AccuMed International, Inc. (collectively, "MDI") are parties to an Amended License and Development Agreement with Ventana Medical Systems, Inc. ("Ventana") dated October 31, 2001, pursuant to which MDI has licensed certain intellectual property rights and technical information to Ventana. Under the Amended License and Development Agreement, Ventana was to produce an automated pathology imaging system using the intellectual property rights and technical information licensed from MDI, and Ventana was to pay MDI royalties based on the sales of such imaging system, as well as software support fees related to licensed software rights. MDI and Ventana were also parties to a Letter of Intent and Confidentiality Agreement dated July 12, 2002. Disputes arose between MDI and Ventana regarding their respective performance under the Amended License and Development Agreement and the Letter of Intent. In November 2003, MDI and Ventana negotiated a settlement and release, pursuant to which the Amended License and Development Agreement and the Letter of Intent were modified. Under the terms of the settlement and release, among other things, MDI issued a Promissory Note to Ventana in the principal amount of \$62,946 and is also required to deliver two AcCell 2001 workstations. Ventana waived its rights to any prepaid royalties or other fees paid to MDI or its subsidiaries upon the signing of the original agreements.

SETTLED DURING 2004

On May 22, 2001, a judgment in the amount of \$312,000 plus interest was entered against AccuMed (Circuit Court of Cook County (Case No. 97 L 7158)) in favor of Merrill Corporation. The judgment was the result of the settlement of an action brought by Merrill claiming unpaid fees for financial printing

services provided to AccuMed in 1996, and related interest and legal costs totaling in excess of \$400,000. Under terms of the settlement and the related judgment, AccuMed was required to make 12 monthly payments of \$26,000, and a final payment to include all interest accrued on the declining unpaid balance of the judgment over the term of payment. AccuMed made 7 payments in accordance with the terms of the settlement and ceased to make any additional payments. In May 2002, Merrill asserted its rights under the original judgment and filed a citation to discover assets of AccuMed and obtain the remaining amount due. On October 17, 2002, MDI reached an agreement with Merrill whereby MDI assumed responsibility for the remaining unpaid amount of the judgment and related costs totaling \$145,000 and agreed to pay such amount no later than November 15, 2002. In February 2004, MDI settled the amount due to Merrill and fully satisfied all obligations owed to Merrill. The citation proceedings against MDI were dismissed.

On July 31, 2002, MDI entered into a settlement and mutual release agreement with Trek Diagnostic Systems, Inc. ("Trek") related to a claim of breach of representations and warranties included in an agreement under which AccuMed sold its microbiology business and related assets to Trek in 1999. Under the settlement agreement, MDI executed an \$80,000 promissory note in favor of Trek. The note required principal payments of \$40,000 each on September 1 and December 1, 2002. MDI made the initial payment and Trek filed suit against MDI (Court of Common Pleas Cuyahoga County, Ohio (Case No. CV 03 492582)) on January 23, 2003 to collect the remaining \$40,000 plus interest at 8% per annum and legal and other costs. On April 18, 2003, judgment was entered against MDI in the amount of \$40,000 plus interest. Trek initiated citation proceedings against MDI in the Circuit Court of Cook County, Illinois in 2003. In March 2004, MDI entered into a final settlement agreement with Trek and fully satisfied all amounts due to Trek. The citation proceedings against MDI were dismissed.

15

Prior to MDI's acquisition of AccuMed, Garrett Realty, Inc. filed suit against AccuMed for unpaid rent and related expenses under a lease for premises located at 900 and 920 N. Franklin in Chicago, Illinois (Circuit Court of Cook County (Case No. 01 M1 725821)). Garrett originally claimed approximately \$50,000 was due it. Following completion of MDI's acquisition of AccuMed, management vacated AccuMed's leased facility and consolidated its operations into MDI's headquarters facility. However, Garrett continued to claim ongoing rent and amended its complaint in 2002 claiming approximately \$148,000 in unpaid rent and related legal costs through July 2002. On July 18, 2002, judgment was entered in favor of Garrett and against AccuMed in the amount of approximately \$157,000. On December 20, 2002, pursuant to a court order, Garrett seized approximately \$12,500 from an MDI bank account as a partial payment against the judgment amount. The unpaid remainder of the judgment, approximately \$136,000 including interest, will continue to accrue interest until paid in full. Since AccuMed had a continuing obligation for the minimum lease payments, MDI recorded a \$290,000 lease obligation in accounting for the AccuMed merger based on the present value of the future payments. MDI is contesting the right of Garrett to pursue collection of the judgment against the assets of MDI. Management believes that the amount of the accrued lease obligation recorded as of December 31, 2003 is sufficient to cover any remaining expenses of this litigation and the related judgment. During the first quarter of 2004, MDI reached a preliminary settlement on the outstanding judgment, which required six monthly payments of \$13,187 each. MDI has made the first two required monthly payments. MDI also agreed to issue 280,000 shares of its common stock as part of the final settlement. The issuance of the shares is subject to shareholder approval of an increase in the number of authorized shares of common stock of the Company.

On March 28, 2003, The Cleveland Clinic Foundation filed suit against MDI (United States District Court for the Northern District of Ohio, Eastern Division, (Case No. 1:03CV0561)) seeking approximately \$315,000 plus interest and attorney fees and costs. The sum in question pertains to remaining unpaid fees for certain clinical trial work conducted by The Cleveland Clinic Foundation in the Peoples Republic of China on behalf of MDI. On December 8, 2003, a default judgment in the amount of \$260,000 was entered against MDI. At December 31, 2003, MDI had recorded the full amount owing to The Cleveland Clinic Foundation as a liability in its accounts. MDI is currently engaged in settlement discussions with The Cleveland Clinic Foundation.

On January 9, 2003, Monsun, AS ("Monsun") filed suit against Peter Gombrich, our Chairman and former CEO (United States District Court for the Northern District of Illinois Eastern Division (Case No. 03 C 0184)) claiming \$500,000 plus consequential damages for failure to make payment in compliance with the terms of a personal guaranty signed by Mr. Gombrich in relation to Monsun's grant of an extension in the maturity date of a convertible promissory note in the principal amount of \$500,000 issued by MDI on November 1, 2000. The note had an original maturity date of November 1, 2001. The maturity date of the note was initially extended until January 31, 2002 and subsequently to April 1, 2002 and finally to July 31, 2002. Monsun granted the maturity date extensions in exchange for various warrants issued by MDI entitling the holder to purchase shares of common stock at various prices. In November 2002, the board of directors approved the issuance of 200,000 shares of common stock to Monsun to

satisfy a default penalty clause in the guaranty. The terms of the guaranty required that Monsun receive registered shares of our common stock; however, in order to comply with securities laws, MDI issued the shares of common stock to Monsun with a restrictive legend, which permits their sale only in compliance with Rule 144 of the Securities Act of 1933 as amended. MDI has recorded the principal amount of the note plus accrued and unpaid interest to December 31, 2003 as a note payable on its records. In March 2004, Monsun obtained a judgment against Mr. Gombrich in the amount of \$675,000. Monsun is currently seeking to obtain an additional \$545,000 to cover legal fees and costs incurred in enforcing the guaranty agreement. Since Mr. Gombrich's potential liability under the suit, including the failure to deliver registered shares of our common stock, is the result of the failure of MDI to pay the principal amount of its convertible promissory note when due, the board of directors has agreed that MDI will assume responsibility for Mr. Gombrich's obligations under the guaranty, including legal costs. Management and counsel are unable to determine the result of this pending litigation as of March 31, 2004.

MDI is a defendant in several lawsuits brought by current or former unsecured creditors to collect past due amounts for goods and services. MDI has recorded the amounts due in its records and is attempting to settle these suits and unfiled claims.

16

MDI is a defendant in several wage claims brought by former employees seeking to collect amounts due for unpaid wages and severance benefits. MDI has recorded the amounts due in its records and is attempting to settle these actions.

In July 2002, MonoGen, Inc. ("MonoGen") initiated an arbitration proceeding against the Company and its subsidiaries, AccuMed International, Inc. ("AccuMed") and Oncometrics Imaging Corp. ("Oncometrics") (collectively, the "MDI Group"), alleging that the MDI Group had violated MonoGen's rights under certain license agreements (the "License Agreements") separately entered into by the subsidiaries with MonoGen prior to the Company's acquisition of the subsidiaries. In December 2002, the parties to the arbitration entered into an agreement (the "Technology Agreement") that purported to settle the issues that had been raised in the arbitration complaint. However, the Technology Agreement did not have the desired effect of ending the dispute, and in May 2003 the MDI Group filed suit in the Circuit Court of Cook County, Illinois (the "State Court Case") against MonoGen and two individuals affiliated with MonoGen in an attempt to obtain a judicial resolution of the issues that had been raised in the arbitration. The State Court Case also sought to resolve certain allegations of breach of fiduciary duties made by the Company against the President of MonoGen, Norman Pressman, who had been the President of both AccuMed and Oncometrics at the time the License Agreements had been entered into by the parties.

MonoGen resisted the State Court Case by, among other things, insisting that the dispute could only be settled in arbitration, as required in the License Agreements. The claim as to MonoGen was dismissed on that basis. MonoGen subsequently filed amended demands against the MDI Group in the arbitration proceeding, which had never been dismissed. In order to avoid unnecessary litigation expenses, the MDI Group subsequently, in February 2004, agreed to a dismissal of the State Court Case, leaving the arbitration proceeding as the principal venue for a resolution of the dispute over the license rights obtained by MonoGen from the Company's subsidiaries.

The claims asserted in the arbitration proceeding are scheduled to be heard by a panel of American Arbitration Association arbitrators in June 2004. The parties are presently engaged in settlement negotiations, but the Company cannot predict whether those negotiations will be successful.

On April 14, 2003, we received a notification from the attorney for the licensor, Dr. Bruce Patterson, M.D., Ph.D, under the License and Development Agreement covering certain HPV technology, which forms the basis for our In-Cell HPV test, indicating that the licensor intended to terminate the license in accordance with a specific clause of the license, which permits termination in the event the Company makes an assignment for the benefit of creditors or bankruptcy, or otherwise relinquishes or loses control of all its assets. On April 15, 2003, we informed the attorney that the facts used by the licensor to invoke the termination right were incorrect and that we are still in control of all of our assets and that such assets were pledged as security under debt instruments and that such pledges were not included under events which would permit the licensor to terminate the license. MDI believes that MDI would prevail should the licensor attempt to pursue a termination action.

On July 2, 2003, Dr. Patterson and his company Invirion, Inc. filed suit against MDI in the Circuit Court of Cook County, Illinois (Case No. 03 L 7995). Dr. Patterson seeks approximately \$86,000 that he claims is due from MDI under an agreement for his scientific consulting services. This is a dispute with the licensor over completion of the third milestone of the license under which completion requires process and procedure verification by an independent third party. This verification requirement has not been satisfied as of yet, and

therefore, MDI is contesting this claim. Invirion, in a separate claim, seeks approximately \$57,500 for certain HPV test kits that it claims were sold to MDI. MDI is engaged in settlement discussions with Dr. Patterson and Invirion to resolve all outstanding issues.

On November 18, 2003, the Medical College of Georgia Research Institute, Inc. filed suit against MDI in the Superior Court of Richmond County, Georgia (Case No. 2003-RCCV-1211) to collect amounts allegedly due pursuant to an agreement to provide a clinical study for MDI. Georgia Research Institute claims that the principal amount of the obligation due from MDI is approximately \$86,700. However, Georgia Research Institute is seeking to collect approximately \$315,300 pursuant to an interest provision of 10% per month. MDI is contesting this lawsuit, but has made attempts to resolve this dispute by settlement.

On February 18, 2004, current and former employees Daniel Kussworm, Jennifer Kawaguchi, and Susan Keesee filed suit against MDI and one of its officers in the Circuit Court of Cook County, Illinois (04 L 1941). These individuals are seeking to recover wages and other compensation allegedly due to them. Mr. Kussworm seeks approximately \$68,600, Ms. Kawaguchi seeks approximately \$37,200, and Ms. Keesee seeks approximately \$124,800; all amounts exclude interest, court costs, and attorney fees. MDI is engaged in settlement discussions with these three individuals to resolve all outstanding issues.

17

MDI received information that on January 29, 2004, the law firm Ungaretti & Harris filed suit against AccuMed International Inc. in the Circuit Court of Cook County, Illinois (04 L 1101), to collect fees for services rendered prior to December 31, 2003. Although AccuMed has not been formally served with summons and has not seen the legal complaint, it is believed that Ungaretti & Harris is seeking to collect approximately \$180,000.

PENDING CASES THAT WERE SETTLED AFTER MARCH 31, 2004

On January 2, 2003, Bowne of Chicago, Inc. ("Bowne") filed suit against MDI (Circuit Court of Cook County, County Department-Law Division (Case No. 03 L 000009)) claiming approximately \$342,000, plus interest and attorney fees and costs, related to financial printing service fees provided by Bowne during the period October 25, 2001 through November 7, 2002. MDI recently entered into a settlement agreement with Bowne, which requires 24 payments of \$16,667, or a total sum of \$200,000. As part of the settlement, MDI agreed to have a judgment in the amount of \$342,061 entered against it. As long as MDI honors the agreed-upon monthly payments, Bowne agreed to refrain from enforcing the entire agreed judgment amount.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OR PLAN OF OPERATION

FORWARD-LOOKING STATEMENTS

Certain statements contained in this discussion and analysis that are not related to historical results are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Statements that are predictive, that depend upon or refer to future events or conditions, or that include words such as "expects," "anticipates," "intends," "plans," "believes," "estimates," "hopes," and similar expressions constitute forward-looking statements. In addition, any statements concerning future financial performance (including future revenues, earnings or growth rates), ongoing business strategies or prospects, or possible future actions by us are also forward-looking statements.

These forward-looking statements are based on beliefs of our management as well as current expectations, projections and assumptions currently available to the Company and are subject to certain risks and uncertainties that could cause actual results to differ materially from historical results or those anticipated or implied by such forward-looking statements. These risks are described more fully in our most recent Annual Report on Form 10-K under the caption "Risk Factors" and in subsequent reports filed with the Securities and Exchange Commission. Should one or more of those risks or uncertainties materialize or should underlying expectations, projections and assumptions prove incorrect, actual results may vary materially from those described. Those events and uncertainties are difficult to predict accurately and many are beyond our control. We assume no obligation to update these forward-looking statements to reflect events or circumstances that occur after the date of these statements except as specifically required by law. Accordingly, past results and trends should not be used to anticipate future results or trends.

The following discussion and analysis should be read in conjunction with our consolidated financial statements presented in Part I, Item 1 of this quarterly report and our consolidated financial statements and Management' Discussion and Analysis of Financial Condition and Results of Operations contained in our Annual Report on Form 10-KSB for the year ended December 31, 2003.

Molecular Diagnostics, Inc., formerly Ampersand Medical Corporation, is a biomolecular diagnostics company engaged in the design, development and commercialization of cost-effective screening systems to assist in the early detection of cancer for use around the world.

The science of medical diagnostics has advanced significantly during the past decade. Much of this advance has come as a result of new knowledge of the human genome and related proteins, which form the foundation of cell biology and the human body. Our goal is to utilize this research as a base to develop screening and diagnostic testing products for cancer and cancer-related diseases. We believe that the success of these products will improve patient care through more accurate test performance, wider availability and cost effective service delivery. We are developing an initial series of products to address these criteria including sample collection devices, chemical and biological tests, and analysis instruments and related software.

18

Our strategy is to develop products through internal development processes, strategic partnerships, licenses and acquisitions of companies. This strategy has required and will continue to require additional capital. As a result, we will incur substantial operating losses until we are able to successfully market some, or all, of our products.

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation. The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All inter-company balances and transactions have been eliminated in consolidation.

Use of Estimates. The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Revenue Recognition. MDI recognizes revenue upon shipment of product or license to customers and no remaining Company obligations or contingencies exist; persuasive evidence of an arrangement exists; sufficient vendor-specific objective evidence exists to support allocating the total fee to all elements of the arrangement; the fee is fixed or determinable; and collection is probable.

Revenue from ongoing client maintenance is recognized ratably over the post-contract support term, which is generally twelve months. Revenue from training services and professional services is recognized when the service is completed. Revenue from implementation and installation services is recognized using the percentage of completion method. Revenue from prepayments under licenses is recognized over the license period. Samba calculated percentage of completion based on the estimated total number of hours of service required to complete an implementation project and the number of actual hours of service rendered. Implementation and installation services are generally completed within 120 days. All revenue recognition related to Samba ceased on December 19, 2003 in accordance with the liquidation sale of Samba's assets by the French Commercial Court.

Licenses, Patents and Technology. Licenses, patents, and purchased technology are recorded at their acquisition cost. Costs to prepare patent filings are expensed when incurred. Costs related to abandoned patents are written off at the time of abandonment. Amortization is begun as of the date of acquisition or upon the grant of the final patent. Costs are amortized over the asset's useful life, which ranges from two to seventeen years. The Company assesses licenses, patents, and technology quarterly for impairment.

Goodwill. The Company has adopted SFAS 142, "Goodwill and Other Intangibles," which sets forth guidelines for discontinuing periodic goodwill amortization costs in results of operations and for establishing an annual goodwill impairment review and related net realizable value asset write-down methodology.

Research and Development Costs. Research and development costs are charged to operations as incurred. MDI conducts a portion of its research activities under contractual arrangements with scientists, researchers, universities, and other independent third parties.

Foreign Currency Translation. The functional currency of MDI's foreign operations is the local currency. Accordingly, all assets and liabilities are translated into United States dollars using period-end exchange rates, and all revenues and expenses are translated using average exchange rates during the period. The amount of foreign currency translation is not material to the results of operations and the financial position of the Company.

Other Comprehensive Income (Loss). Translation adjustments related to MDI's foreign operations are included in other comprehensive loss and reported separately in stockholders' equity (deficit).

Stock-Based Compensation. As permitted by SFAS No. 123, "Accounting for Stock-Based Compensation", MDI uses the intrinsic value method to account for stock options as set forth in APB No. 25, "Accounting for Stock Issued to Employees."

19

Impairment. At each balance sheet date or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, management of the Company evaluates recoverability of such assets. An impairment loss is recognized if the amount of undiscounted cash flows is less than the carrying amount of the asset in which case the asset is written down to fair value. The fair value of the asset is measured by either quoted market prices or the present value of estimated expected future cash flows using a discount rate commensurate with the risks involved.

Application of Black-Scholes Valuation Model. In applying the Black-Scholes valuation model, we have used an expected dividend yield of zero, a risk-free interest rate of 4.77% and 6% for 2004 and 2003, respectively, a volatility factor of 182% and 90% for 2004 and 2003, respectively, and the closing market price of the underlying common stock on the date of the grant. There were 1,500,000 and 200,000 in plan option grants and restricted stock shares, respectively, issued during the first three months of 2004. The expected life equaled the term of the warrants, options, or restricted shares.

RESULTS OF OPERATIONS

REVENUE

Revenues for the three months ended March 31, 2004 decreased \$118,000, or 69.0%, to \$53,000 from revenues of \$171,000 for the same period in 2003. This decrease was the result of decreases in the sales of AccuMed related products and services. Revenues and related costs and expenses have been adjusted to reflect the liquidation of MDI's French subsidiary, Samba, and its reclassification as a discontinued operation.

COSTS AND EXPENSES

Cost of Goods Sold

Cost of goods sold for the quarter ended March 31, 2004 were zero, a decrease of \$86,000, or 100% over the same period in 2003. The reduction was due to receipt of royalty-related income only for the period based on an AccuMed system under a license agreement.

Research and Development

We devote a substantial amount of our resources to research and development ("R&D") related to new products, including markers, tests, instruments and software applications, as well as modifications and refinements of our existing products.

For the quarter ended March 31, 2004, our R&D expenses were \$157,000, a decrease of \$50,000, or 24.2%, over the same period in 2003. This decrease was the result of reduced operating capacity due to capital and liquidity constraints. This reduction has led to delays in the finalization of development, completion of clinical trial validation, Food and Drug Administration submissions, market introduction, and sale of some of our products. R&D expenses consist of costs related to specific development programs with scientists and researchers at universities and hospitals; full scale device development contracts begun during 1999 with industrial design and manufacturing companies covering the disposable and instrument components of the InPath System; payments to medical and engineering consultants for advice related to the design and development of our products and their potential uses in the medical technology marketplace; instrumentation, disposables, clinical consumables, clinical supplies and regulatory costs to develop clinical trial reference laboratories and to recruit and test patients in support of our various FDA clinical trials; and payroll related costs for in-house engineering, scientific, laboratory, software development and research management staff.

Selling, General and Administrative

For the quarter ended March 31, 2004, selling, general and administrative expenses ("SG&A") were \$1,514,000, a decrease of \$323,000, or 17.6%, over expenses of \$1,837,000 for the same period in 2003. This decrease included a reduction of \$341,000 in financing costs, \$70,000 in other general and administrative costs and was offset by an increase of \$117,000 in legal and professional fees.

Significant components of SG&A are compensation costs for executive, sales and administrative personnel, professional fees primarily related to legal and accounting services, travel costs, fees for public and/or investor relations services, insurance premiums, facilities and office expenses, marketing-related costs, and amortization/depreciation charges.

OTHER INCOME AND EXPENSE

Interest Expense

For the first quarter ended March 31, 2004, our interest expense amounted to \$700,000, an increase of \$459,000, or 190.5%, over the same period in 2003. The increase related primarily to increased Bridge I and Bridge II convertible promissory note loan amounts relative to the previous period and the increased interest rate and amortization of debt discount arising from the beneficial conversion feature of the notes.

Restructuring Settlements

For the quarter ended March 31, 2004, MDI recorded a \$161,000 gain from the settlement of various litigation and credit payment matters.

NET LOSS

MDI's net loss before preferred dividends for the three months ended March 31, 2004 totaled \$2,048,000. Cumulative dividends on the outstanding Series B convertible preferred stock, Series C convertible preferred stock, Series D convertible preferred stock and Series E convertible preferred stock totaled \$312,000. The combined net loss applicable to common stockholders amounted to \$2,360,000, or \$0.04 net loss per share on 55,812,649 weighted average shares outstanding for the three months ended March 31, 2004.

The weighted average shares outstanding during the quarter ended March 31, 2004 include the conversion of Series B, Series C, and Series E convertible preferred stock during 2003, and Bridge I and II convertible promissory notes and Series C convertible preferred shares during the first quarter of 2004. The Bridge I and II common share conversions resulted in 20,178,000 additional common shares and the Series C convertible preferred shares resulted in 5,577,000 additional common shares.

Our net loss before preferred dividends for the three months ended March 31, 2003 totaled \$2,237,000. Cumulative dividends on the outstanding Series B convertible preferred stock, Series C convertible preferred stock, Series D convertible preferred stock, and Series E convertible preferred stock totaled \$424,000. The combined net loss applicable to common stockholders was \$2,661,000, or \$0.07 net loss per share on 40,177,291 weighted average shares outstanding for the three months ended March 31, 2003.

The weighted average shares outstanding as of March 31, 2003 included 5,750,000 shares of common stock issued to Round Valley Capital as additional loan collateral in September 2002. The shares were returned to MDI in April of 2003 and cancelled.

LIQUIDITY AND CAPITAL RESOURCES

Research and development, clinical trials and other studies of the components of our InPath System, conversions from designs and prototypes into product manufacturing, initial sales and marketing efforts, medical consultants and advisors, and research, administrative, and executive personnel are and will continue to be the principal basis for our cash requirements. We have provided operating funds for the business since its inception through private offerings of debt and equity to limited numbers of U.S. and foreign accredited investors. We may be required to make additional offerings in the future to support the operations of the business until some or all of our products are introduced into the market. We used \$1,249,000 and \$272,000 for the first quarter ended March 31, 2004 and 2003, respectively, in operating activities.

As of the quarter ended March 31, 2004 we had cash on hand of \$45,000, an increase of \$45,000 over cash on hand at December 31, 2003 of zero. This increase results from the receipt of bridge financing during the quarter as discussed below.

Beginning in February 2004, MDI began a separate offering of Bridge IV Convertible Promissory Notes to accredited INVESTORS. The notes bear interest at 10% per annum payable, on a semi-annual basis, in kind in the form of shares of common stock for the first two years and then in cash for the remaining three

years until the December 31, 2008 maturity date. The note conversion price and the value of common shares paid in kind as interest is \$0.10 per share. The conversion price of the notes issued to date has been less than the market price of the common stock when the notes were issued; therefore, the holders are considered to have a beneficial conversion feature. MDI determined the value of the beneficial conversion feature to be \$1,292,000 at March 31, 2004. The value was recorded as a reduction of the debt and will be amortized as additional interest over the life of the note. MDI recorded additional interest expense of \$20,578 to reflect amortization of the discount during the three months ended March 31, 2004. The notes are convertible at any time into the common stock of MDI, although the notes will automatically convert if the last sales price of the stock is \$0.30 or higher for twenty consecutive trading days, the daily average trading volume is 250,000 shares, the underlying shares are registered for sale, and the Convertible Promissory Note to an affiliate, Suzanne M. Gombrich, has been paid or converted into common shares. The holders were also granted a security position in all of the Company's assets. MDI granted each note holder the right to receive a 25% warrant coverage on all money invested; therefore, for every \$100,000 invested, an investor will receive 25,000 warrants to purchase common stock at an exercise price of \$0.15. The warrants will expire on December 31, 2008. Through March 31, 2004 the Company had issued \$1,292,000 in principal amount of Bridge IV Convertible Promissory Notes in exchange for cash.

We incurred approximately \$29,000 in capital expenditures during the first quarter of 2004 versus capital expenditures of zero for the first quarter 2003, a increase of 100%. Capital expenditures are defined as disbursements for laboratory equipment, leasehold improvements, software, and furniture/fixtures with a purchase price in excess of \$1,000 per item and useful life in excess of one year. MDI is striving to keep capital expenditures to a minimum due to capital and liquidity constraints.

Our operations have been, and will continue to be, dependent upon management's ability to raise operating capital in the form of debt or equity. We have incurred significant operating losses since inception. We expect that significant on-going operating expenditures will be necessary to successfully implement our business plan and develop, manufacture and market our products. As a result of capital and liquidity constraints, we significantly reduced our staff and all other operating expenditures during 2003 and will continue that focus during 2004 and beyond. These circumstances raise substantial doubt about our ability to continue as a going concern. There can be no assurance that we will be able to obtain additional capital to meet our current operating needs or to complete pending or contemplated licenses or acquisitions of technologies. If we are unable to raise sufficient adequate additional capital or generate profitable sales revenues, we may be forced to substantially curtail product research and development, clinical trials and other activities and may be forced to cease operations.

ITEM 3. CONTROLS AND PROCEDURES

EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

Our principal executive officer and principal financial officer have reviewed and evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) as of the end of the period covered by this quarterly report. Our principal executive officer and principal financial officer have concluded, based on that evaluation, which included inquiries made to certain other employees of the Company, that our disclosure controls and procedures are effective to ensure that information required to be disclosed by MDI in the reports filed or submitted by us under the Exchange Act is recorded, processed, summarized and reported within the time periods specified by the SEC's rules and forms. Our former independent auditors, Ernst & Young, LLP, issued a report at the completion of their audit of our consolidated financial statements for the year ended December 31, 2001 detailing certain deficiencies in our internal control systems and procedures. During 2002, we hired an independent consultant, Tatum CFO Partners, LLP ("Tatum"), to address the issues raised by Ernst & Young, LLP. In August of 2002, Tatum reported to the Audit Committee that it had assisted management in developing procedures, forms, checklists and reporting packages to address these deficiencies, and that progress had been made to improve our system of internal controls.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

During the quarter to which this report relates, there was no change in our internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

During the first half of 2003, certain accounting personnel departed the Company. These positions were filled soon thereafter, including that of our

Chief Financial Officer, who began on June 1, 2003. Since our Chief Financial Officer was not affiliated with MDI for the entire period covered by our annual report on Form 10-KSB, he was required to rely on our books and records and on review and discussions with independent consultants who participated in the preparation of that report and with other members of management. Altschuler, Melvoin and Glasser LLP issued a report at the end of their December 31, 2002 audit which indicated certain material weaknesses and deficiencies in internal controls and the Company is taking corrective action regarding these items.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

SETTLED DURING 2003

The Company and its subsidiaries Samba Sarl and AccuMed International, Inc. (collectively, "MDI") are parties to an Amended License and Development Agreement with Ventana Medical Systems, Inc. ("Ventana") dated October 31, 2001, pursuant to which MDI has licensed certain intellectual property rights and technical information to Ventana. Under the Amended License and Development Agreement, Ventana was to produce an automated pathology imaging system using the intellectual property rights and technical information licensed from MDI, and Ventana was to pay MDI royalties based on the sales of such imaging system, as well as software support fees related to licensed software rights. MDI and Ventana were also parties to a Letter of Intent and Confidentiality Agreement dated July 12, 2002. Disputes arose between MDI and Ventana regarding their respective performance under the Amended License and Development Agreement and the Letter of Intent. In November 2003, MDI and Ventana negotiated a settlement and release, pursuant to which the Amended License and Development Agreement and the Letter of Intent were modified. Under the terms of the settlement and release, among other things, MDI issued a Promissory Note to Ventana in the principal amount of \$62,946 and is also required to deliver two AcCell 2001 workstations. Ventana waived its rights to any prepaid royalties or other fees paid to MDI or its subsidiaries upon the signing of the original agreements.

SETTLED DURING 2004

On May 22, 2001, a judgment in the amount of \$312,000 plus interest was entered against AccuMed (Circuit Court of Cook County (Case No. 97 L 7158)) in favor of Merrill Corporation. The judgment was the result of the settlement of an action brought by Merrill claiming unpaid fees for financial printing services provided to AccuMed in 1996, and related interest and legal costs totaling in excess of \$400,000. Under terms of the settlement and the related judgment, AccuMed was required to make 12 monthly payments of \$26,000, and a final payment to include all interest accrued on the declining unpaid balance of the judgment over the term of payment. AccuMed made 7 payments in accordance with the terms of the settlement and ceased to make any additional payments. In May 2002, Merrill asserted its rights under the original judgment and filed a citation to discover assets of AccuMed and obtain the remaining amount due. On October 17, 2002, MDI reached an agreement with Merrill whereby MDI assumed responsibility for the remaining unpaid amount of the judgment and related costs totaling \$145,000 and agreed to pay such amount no later than November 15, 2002. In February 2004, MDI settled the amount due to Merrill and fully satisfied all obligations owed to Merrill. The citation proceedings against MDI were dismissed.

On July 31, 2002, MDI entered into a settlement and mutual release agreement with Trek Diagnostic Systems, Inc. ("Trek") related to a claim of breach of representations and warranties included in an agreement under which AccuMed sold its microbiology business and related assets to Trek in 1999. Under the settlement agreement, MDI executed an \$80,000 promissory note in favor of Trek. The note required principal payments of \$40,000 each on September 1 and December 1, 2002. MDI made the initial payment and Trek filed suit against MDI (Court of Common Pleas Cuyahoga County, Ohio (Case No. CV 03 492582)) on January 23, 2003 to collect the remaining \$40,000 plus interest at 8% per annum and legal and other costs. On April 18, 2003, judgment was entered against MDI in the amount of \$40,000 plus interest. Trek initiated citation proceedings against MDI in the Circuit Court of Cook County, Illinois in 2003. In March 2004, MDI entered into a final settlement agreement with Trek and fully satisfied all amounts due to Trek. The citation proceedings against MDI were dismissed.

Prior to MDI's acquisition of AccuMed, Garrett Realty, Inc. filed suit against AccuMed for unpaid rent and related expenses under a lease for premises located at 900 and 920 N. Franklin in Chicago, Illinois (Circuit Court of Cook County (Case No. 01 M1 725821)). Garrett originally claimed approximately \$50,000 was due it. Following completion of MDI's acquisition of AccuMed, management vacated AccuMed's leased facility and consolidated its operations into MDI's headquarters facility. However, Garrett continued to claim ongoing rent and amended its complaint in 2002 claiming approximately \$148,000 in unpaid rent and related legal costs through July 2002. On July 18, 2002, judgment was entered in favor of Garrett and against AccuMed in the amount of approximately

\$157,000. On December 20, 2002, pursuant to a court order, Garrett seized approximately \$12,500 from an MDI bank account as a partial payment against the judgment amount. The unpaid remainder of the judgment, approximately \$136,000 including interest, will continue to accrue interest until paid in full. Since AccuMed had a continuing obligation for the minimum lease payments, MDI recorded a \$290,000 lease obligation in accounting for the AccuMed merger based on the present value of the future payments. MDI is contesting the right of Garrett to pursue collection of the judgment against the assets of MDI. Management believes that the amount of the accrued lease obligation recorded as of December 31, 2003 is sufficient to cover any remaining expenses of this litigation and the related judgment. During the first quarter of 2004, MDI reached a preliminary settlement on the outstanding judgment, which required six monthly payments of \$13,187 each. MDI has made the first two required monthly payments. MDI also agreed to issue 280,000 shares of its common stock as part of the final settlement. The issuance of the shares is subject to shareholder approval of an increase in the number of authorized shares of common stock of the Company.

On March 28, 2003, The Cleveland Clinic Foundation filed suit against MDI (United States District Court for the Northern District of Ohio, Eastern Division, (Case No. 1:03CV0561)) seeking approximately \$315,000 plus interest and attorney fees and costs. The sum in question pertains to remaining unpaid fees for certain clinical trial work conducted by The Cleveland Clinic Foundation in the Peoples Republic of China on behalf of MDI. On December 8, 2003, a default judgment in the amount of \$260,000 was entered against MDI. At December 31, 2003, MDI had recorded the full amount owing to The Cleveland Clinic Foundation as a liability in its accounts. MDI is currently engaged in settlement discussions with The Cleveland Clinic Foundation.

On January 9, 2003, Monsun, AS ("Monsun") filed suit against Peter Gombrich, our Chairman and former CEO (United States District Court for the Northern District of Illinois Eastern Division (Case No. 03 C 0184)) claiming \$500,000 plus consequential damages for failure to make payment in compliance with the terms of a personal guaranty signed by Mr. Gombrich in relation to Monsun's grant of an extension in the maturity date of a convertible promissory note in the principal amount of \$500,000 issued by MDI on November 1, 2000. The note had an original maturity date of November 1, 2001. The maturity date of the note was initially extended until January 31, 2002 and subsequently to April 1, 2002 and finally to July 31, 2002. Monsun granted the maturity date extensions in exchange for various warrants issued by MDI entitling the holder to purchase shares of common stock at various prices. In November 2002, the board of directors approved the issuance of 200,000 shares of our common stock to Monsun to satisfy a default penalty clause in the guaranty. The terms of the guaranty required that Monsun receive registered shares of our common stock; however, in order to comply with securities laws, MDI issued the shares of common stock to Monsun with a restrictive legend, which permits their sale only in compliance with Rule 144 of the Securities Act of 1933 as amended. MDI has recorded the principal amount of the note plus accrued and unpaid interest to December 31, 2003 as a note payable on its records. In March 2004, Monsun obtained a judgment against Mr. Gombrich in the amount of \$675,000. Monsun is currently seeking to obtain an additional \$545,000 to cover legal fees and costs incurred in enforcing the guaranty agreement. Since Mr. Gombrich's potential liability under the suit, including the failure to deliver registered shares of our common stock, is the result of the failure of MDI to pay the principal amount of its convertible promissory note when due, the board of directors has agreed that MDI will assume responsibility for Mr. Gombrich's obligations under the guaranty, including legal costs. Management and counsel are unable to determine the result of this pending litigation as of March 31, 2004.

MDI is a defendant in several lawsuits brought by current or former unsecured creditors to collect past due amounts for goods and services. MDI has recorded the amounts due in its records and is attempting to settle these suits and unfiled claims.

MDI is a defendant in several wage claims brought by former employees seeking to collect amounts due for unpaid wages and severance benefits. MDI has recorded the amounts due in its records and is attempting to settle these actions.

In July 2002, MonoGen, Inc. ("MonoGen") initiated an arbitration proceeding against the Company and its subsidiaries, AccuMed International, Inc. ("AccuMed") and Oncometrics Imaging Corp. ("Oncometrics") (collectively, the "MDI Group"), alleging that the MDI Group had violated MonoGen's rights under certain license agreements (the "License Agreements") separately entered into by the subsidiaries with MonoGen prior to the Company's acquisition of the subsidiaries. In December 2002, the parties to the arbitration entered into an agreement (the "Technology Agreement") that purported to settle the issues that had been raised in the arbitration complaint. However, the Technology Agreement did not have the desired effect of ending the dispute, and in May 2003 the MDI Group filed suit in the Circuit Court of Cook County, Illinois (the "State Court Case") against MonoGen and two individuals affiliated with MonoGen in an attempt to obtain a judicial resolution of the issues that had been raised in the

arbitration. The State Court Case also sought to resolve certain allegations of breach of fiduciary duties made by the Company against the President of MonoGen, Norman Pressman, who had been the President of both AccuMed and Oncometrics at the time the License Agreements had been entered into by the parties.

MonoGen resisted the State Court Case by, among other things, insisting that the dispute could only be settled in arbitration, as required in the License Agreements. The claim as to MonoGen was dismissed on that basis. MonoGen subsequently filed amended demands against the MDI Group in the arbitration proceeding, which had never been dismissed. In order to avoid unnecessary litigation expenses, the MDI Group subsequently, in February 2004, agreed to a dismissal of the State Court Case, leaving the arbitration proceeding as the principal venue for a resolution of the dispute over the license rights obtained by MonoGen from the Company's subsidiaries.

The claims asserted in the arbitration proceeding are scheduled to be heard by a panel of American Arbitration Association arbitrators in June 2004. The parties are presently engaged in settlement negotiations, but the Company cannot predict whether those negotiations will be successful.

On April 14, 2003, we received a notification from the attorney for the licensor, Dr. Bruce Patterson, M.D., Ph.D, under the License and Development Agreement covering certain HPV technology, which forms the basis for our In-Cell HPV test, indicating that the licensor intended to terminate the license in accordance with a specific clause of the license, which permits termination in the event the Company makes an assignment for the benefit of creditors or bankruptcy, or otherwise relinquishes or loses control of all its assets. On April 15, 2003, we informed the attorney that the facts used by the licensor to invoke the termination right were incorrect and that we are still in control of all of our assets and that such assets were pledged as security under debt instruments and that such pledges were not included under events which would permit the licensor to terminate the license. MDI believes that MDI would prevail should the licensor attempt to pursue a termination action.

On July 2, 2003, Dr. Patterson and his company Invirion, Inc. filed suit against MDI in the Circuit Court of Cook County, Illinois (Case No. 03 L 7995). Dr. Patterson seeks approximately \$86,000 that he claims is due from MDI under an agreement for his scientific consulting services. This is a dispute with the licensor over completion of the third milestone of the license under which completion requires process and procedure verification by an independent third party. This verification requirement has not been satisfied as of yet, and therefore, MDI is contesting this claim. Invirion, in a separate claim, seeks approximately \$57,500 for certain HPV test kits that it claims were sold to MDI. MDI is engaged in settlement discussions with Dr. Patterson and Invirion to resolve all outstanding issues.

On November 18, 2003, the Medical College of Georgia Research Institute, Inc. filed suit against MDI in the Superior Court of Richmond County, Georgia (Case No. 2003-RCCV-1211) to collect amounts allegedly due pursuant to an agreement to provide a clinical study for MDI. Georgia Research Institute claims that the principal amount of the obligation due from MDI is approximately \$86,700. However, Georgia Research Institute is seeking to collect approximately \$315,300 pursuant to an interest provision of 10% per month. MDI is contesting this lawsuit, but has made attempts to resolve this dispute by settlement.

On February 18, 2004, current and former employees Daniel Kussworm, Jennifer Kawaguchi, and Susan Keese filed suit against MDI and one of its officers in the Circuit Court of Cook County, Illinois (04 L 1941). These individuals are seeking to recover wages and other compensation allegedly due to them. Mr. Kussworm seeks approximately \$68,600, Ms. Kawaguchi seeks approximately \$37,200, and Ms. Keese seeks approximately \$124,800; all amounts exclude interest, court costs, and attorney fees. MDI is engaged in settlement discussions with these three individuals to resolve all outstanding issues.

25

MDI received information that on January 29, 2004, the law firm Ungaretti & Harris filed suit against AccuMed International Inc. in the Circuit Court of Cook County, Illinois (04 L 1101), to collect fees for services rendered prior to December 31, 2003. Although AccuMed has not been formally served with summons and has not seen the legal complaint, it is believed that Ungaretti & Harris is seeking to collect approximately \$180,000.

PENDING CASES THAT WERE SETTLED AFTER MARCH 31, 2004

On January 2, 2003, Bowne of Chicago, Inc. ("Bowne") filed suit against MDI (Circuit Court of Cook County, County Department-Law Division (Case No. 03 L 000009)) claiming approximately \$342,000, plus interest and attorney fees and costs, related to financial printing service fees provided by Bowne during the period October 25, 2001 through November 7, 2002. MDI recently entered into a settlement agreement with Bowne, which requires 24 payments of \$16,667, or a total sum of \$200,000. As part of the settlement MDI agreed to have a judgment in the amount of \$342,061 entered against it. As long as MDI honors the

agreed-upon monthly payments, Bowne agreed to refrain from enforcing the entire agreed judgment amount.

ITEM 2. CHANGES IN SECURITIES AND SMALL BUSINESS ISSUER PURCHASES OF EQUITY SECURITIES

From January 1, 2004 through March 31, 2004, holders of \$1,200,000 principal amount of Bridge I Convertible Promissory Notes elected to convert their notes and related accrued interest of \$152,000 into 9,010,310 shares of unregistered common stock.

From January 1, 2004 through March 31, 2004, holders of \$1,396,000 principal amount of Bridge II Convertible Promissory Notes elected to convert their notes and related accrued interest of \$144,000 into 11,708,118 shares of unregistered common stock. Included in the above conversion amounts are amounts due Peter P. Gombrich, the Company's Chairman, of \$305,667 in Bridge II principal and \$11,431 in accrued interest thereon, which were converted into 2,113,987 shares of unregistered common stock.

During the first quarter of 2003, several holders converted 910,000 shares of Series C convertible preferred stock, including cumulative dividends due thereon, into 5,577,173 shares of common stock.

Beginning in January 2004, Bathgate Capital Partners, LLC began an issue of a maximum offering of \$4,000,000 and a minimum of \$1,500,000 in Bridge III Convertible Promissory Notes to accredited investors. The notes bear interest at 10% per annum payable, on a semi-annual basis, in kind in the form of shares of common stock for the first two years and then in cash for the remaining three years until due December 31, 2008. The note conversion price and the value of common shares paid in kind as interest is \$0.10 per share. The notes are convertible at any time into the common stock of MDI, although the notes will automatically convert if the last sales price of the stock is \$0.30 or higher for twenty trading days, the daily average trading volume is 250,000, the underlying shares are registered for sale, and the Convertible Promissory Note to an affiliate Suzanne M. Gombrich has been paid or converted into common shares. The holders were also granted a security position in all of the Company's assets. MDI granted each note holder the right to receive a 25% warrant coverage on all money invested; therefore, for every \$100,000 invested, an investor will receive 25,000 warrants to purchase common stock at an exercise price of \$0.15. The warrants will expire on December 31, 2008. In April 2, 2004, the Company issued \$1,500,000 in Bridge III convertible promissory notes in exchange for cash.

Beginning in February 2004, MDI began a separate offering of Bridge IV Convertible Promissory Notes to accredited INVESTORS. The notes bear interest at 10% per annum payable, on a semi-annual basis, in kind in the form of shares of common stock for the first two years and then in cash for the remaining three years until the December 31, 2008 maturity date. The note conversion price and the value of common shares paid in kind as interest is \$0.10 per share. The conversion price of the notes issued to date has been less than the market price of the common stock when the notes were issued; therefore, the holders are considered to have a beneficial conversion feature. MDI determined the value of the beneficial conversion feature to be \$1,292,000 at March 31, 2004. The value was recorded as a reduction of the debt and will be amortized as additional interest over the life of the note. MDI recorded additional interest expense of \$20,578 to reflect amortization of the discount during the three months ended March 31, 2004. The notes are convertible at any time into the common stock of MDI, although the notes will automatically convert if the last sales price of the stock is \$0.30 or higher for twenty consecutive trading days, the daily average trading volume is 250,000 shares, the underlying shares are registered for sale, and the Convertible Promissory Note to an affiliate, Suzanne M. Gombrich, has been paid or converted into common shares. The holders were also granted a security position in all of the Company's assets. MDI granted each note holder the right to receive a 25% warrant coverage on all money invested; therefore, for every \$100,000 invested, an investor will receive 25,000 warrants to purchase common stock at an exercise price of \$0.15. The warrants will expire on December 31, 2008. Through March 31, 2004 the Company had issued \$1,292,000 in principal amount of Bridge IV Convertible Promissory Notes in exchange for cash.

26

In March 2004, MDI issued 67,000 warrants with an exercise price of \$0.17 per share to a non-employee financial consultant for past financial services. MDI valued the warrants at \$13,400 using the Black-Scholes valuation model and recorded the amount as a current quarter administrative expense.

In March 2004, MDI issued 500,000 warrants with an exercise price of \$0.17 per share to a non-employee financial consultant for past financial services. MDI valued the warrants at \$95,000 using the Black-Scholes valuation model and recorded the amount as a current quarter administrative expense.

MDI is issuing such securities in reliance on the safe harbor and

exemptions from registration provided under Rule 506 of Regulation D and Section 4(2) of the Securities Act of 1933, as amended. No advertising or general solicitation was employed in offering the securities. The offerings and sales or issuances were made to a limited number of persons, all of whom were accredited investors, and transfer was restricted by the Company in accordance with the requirements of such act. In addition to representations by the above-referenced persons, the Company has made independent determinations that all of the investors were accredited or sophisticated investors, and that they were capable of analyzing the merits and risks of their investment, and that they understood the speculative nature of their investment. Furthermore, these investors were provided with access to our Securities and Exchange Commission filings.

See also Footnote 6 - Notes Payable, Footnote 7 - Stockholders' Equity, and Footnote 9 - Subsequent Events for a fuller description of the Company's securities and related events that occurred prior and subsequent to the first quarter ending March 31, 2004.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

MDI has failed to make the required principal and interest payments, constituting events of default, on the following notes payable:

- o \$875,000 in Bridge I convertible promissory notes;
- o \$2,499,200 in Bridge II convertible promissory notes;
- o \$674,000 Monsun AS convertible promissory note;
- o \$148,932 Ungaretti & Harris secured promissory note;
- o \$30,800 Ernst & Young promissory note; and
- o \$54,201 Ventana Medical Systems, Inc. promissory note

The notes payable require the holder to notify MDI in writing of a declaration of default at which time a cure period, as specified in each individual note, would commence. There is no guarantee that MDI would be able to cure any event of default if, or when, the holder provides the required written notice. Other than the Monsun AS convertible promissory note and the note payable to Ungaretti & Harris, which are the subject of legal actions described under Part II Item 1 above and in Notes to Consolidated Financial Statements, Footnote 10 - Legal Proceedings, MDI has not received any written declarations of default from holders of outstanding notes payable.

ITEM 4. SUBMISSION OF MATTERS TO VOTE OF SECURITY HOLDERS

None

ITEM 5. OTHER INFORMATION

27

On February 19, 2004, Peter P. Gombrich resigned as Chief Executive Officer and was appointed Executive Vice President of the Company. Also on February 19, 2004, the Board of Directors appointed Denis M. O'Donnell M.D., a current Director of MDI, to be President and Chief Executive Officer of the Company.

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K

(a) Exhibits

See Exhibit Index

(b) Reports on Form 8-K

None

SIGNATURES

In accordance with the requirements of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Molecular Diagnostics, Inc.

/s/ Denis M. O'Donnell, M.D.

Denis M. O'Donnell, M.D.
Chief Executive Officer and President

/s/ Dennis L. Bergquist

Dennis L. Bergquist
Chief Financial Officer

Date: May 17, 2004

28

<TABLE>
<CAPTION>

EXHIBIT INDEX

EXHIBIT NUMBER -----	DESCRIPTION -----
<S>	<C>
4.1	Form of common stock purchase warrant issued to consultant on March 4, 2004 representing the right to purchase 67,000 shares of common stock of the Company.
4.2	Form of common stock purchase warrant issued to consultant on March 19, 2004 representing the right to purchase 500,000 shares of common stock of the Company.
4.3	Subscription Agreement in connection with the sale 60 Units, each comprising one \$25,000 principal amount, 10% secured convertible debentures and warrants to purchase 6,250 shares of common stock
4.4	Form of Note in connection with the sale 60 Units, each comprising one \$25,000 principal amount, 10% secured convertible debentures and warrants to purchase 6,250 shares of common stock
4.6	Form of General Security Agreement in connection with the sale 60 Units, each comprising one \$25,000 principal amount, 10% secured convertible debentures and warrants to purchase 6,250 shares of common stock
4.7	Form of Registration Rights Agreement in connection with the sale 60 Units, each comprising one \$25,000 principal amount, 10% secured convertible debentures and warrants to purchase 6,250 shares of common stock
31.1	Section 302 certification by principal executive officer.
31.2	Section 302 certification by principal financial officer.
32.1	Section 906 certification by principal executive officer.
32.2	Section 906 certification by principal financial officer.

29

THIS WARRANT AND THE UNDERLYING SHARES OF COMMON STOCK REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "ACT"), AND ARE "RESTRICTED SECURITIES" AS THAT TERM IS DEFINED IN RULE 144 UNDER THE ACT. THE SECURITIES MAY NOT BE OFFERED FOR SALE, SOLD OR OTHERWISE TRANSFERRED EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE ACT, OR PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE ACT, THE AVAILABILITY OF WHICH IS TO BE ESTABLISHED TO THE SATISFACTION OF MOLECULAR DIAGNOSTICS, INC.

Warrant No. DB3

WARRANT TO PURCHASE SHARES OF COMMON STOCK

WARRANT TO PURCHASE 500,000 SHARES
(SUBJECT TO ADJUSTMENT AS SET FORTH HEREIN)

EXERCISE PRICE \$0.17 PER SHARE
(SUBJECT TO ADJUSTMENT AS SET FORTH HEREIN)

ISSUE DATE: MARCH 19, 2004

VOID AFTER 3:00 P.M., CENTRAL TIME, ON THE FIFTH ANNIVERSARY OF THE ISSUE DATE

THIS CERTIFIES THAT Dan Burns, P.O. Box 1086, Del Mar, CA 92014-1086 is entitled to purchase from Molecular Diagnostics, Inc., a Delaware corporation (hereinafter called the "Company"), with its principal office located at 414 North Orleans Street, Suite 510, Chicago, Illinois 60610, at any time after the Exercise Date (as defined below), but before 3:00 P.M., Central Time, on the Expiration Date (as defined below), at the Exercise Price (as defined below), the number of shares (the "Warrant Shares") of the Company's common stock, par value \$0.001 per share (the "Common Stock") set forth above. The number of Shares purchasable upon exercise of this Warrant and the Exercise Price per Share shall be subject to adjustment from time to time as set forth in Section 4 below. As consideration for this Warrant, the Warrant holder agrees to forgive all outstanding indebtedness of the Company to the Warrant holder.

SECTION 1. DEFINITIONS

The following terms used in this Warrant shall have the following meanings (unless otherwise expressly provided herein):

The "Act." The Securities Act of 1933, as amended.

The "Commission." The Securities and Exchange Commission.

The "Company." Molecular Diagnostics, Inc.

"Common Stock." The Company's Common Stock, par value \$0.001 per share.

"Current Market Price." The Current Market Price shall be determined as follows:

(a) if the security at issue is listed on a national securities exchange or admitted to unlisted trading privileges on such an exchange or quoted on either the National Market System or the Small Cap Market of the automated quotation service operated by The Nasdaq Stock Market, Inc. ("Nasdaq"), the current value shall be the last reported sale price of that security on such exchange or system on the day for which the Current Market Price is to be determined or, if no such sale is made on such day, the average of the highest closing bid and lowest asked price for such day on such exchange or system; or

(b) if the security at issue is not so listed or quoted or admitted to unlisted trading privileges, the Current Market Value shall be the average of the last reported highest bid and lowest asked prices quoted on the Nasdaq Electronic Bulletin Board, or, if not so quoted, then by the National Quotation Bureau, Inc. on the last business day prior to the day for which the Current Market Price is to be determined; or

(c) if the security at issue is not so listed or quoted or admitted to unlisted trading privileges and bid and asked prices are not reported, the current market value shall be determined in such reasonable manner as may be prescribed from time to time by the Board of Directors of the Company, subject to the objection procedures hereinafter described.

"Exercise Date." Immediate

"Exercise Price." \$0.17 per Share, as modified from time to time in accordance with the provisions of this Warrant.

"Expiration Date." The fifth anniversary of the Issue Date indicated on the first page of this Warrant.

"Holder" or "Warrantholder." The person to whom this Warrant is issued and any valid transferee thereof pursuant to Section 3.1 below.

"NASD." The National Association of Securities Dealers, Inc.

"Nasdaq." The automated quotation system operated by the Nasdaq Stock Market, Inc.

"Termination of Business." Any sale, lease or exchange of all, or substantially all, of the Company's assets or business or any dissolution, liquidation or winding up of the Company.

"Warrant." This Warrant and any other warrants issued in substitution for

or replacement thereof, including those evidenced by a certificate or certificates originally issued or issued upon division, exchange, substitution or transfer pursuant to this Warrant.

"Warrant Shares." The Common Stock purchasable upon exercise of this Warrant including the Common Stock underlying unexercised portions of this Warrant.

SECTION 2. TERM OF WARRANTS; EXERCISE OF WARRANT

2.1. Exercise of Warrant.

(a) Subject to the terms of this Warrant, the Holder shall have the right, at any time beginning on the Exercise Date but prior to 3:00 p.m., Central Time, on the Expiration Date, to purchase from the Company up to the number of fully paid and nonassessable Warrant Shares to which the Holder may at the time be entitled to purchase pursuant to this Warrant, upon surrender to the Company, at its principal office, of the Warrant to be exercised, together with the purchase form on the reverse thereof, duly filled in and signed, and upon payment to the Company of the Exercise Price for the number of Warrant Shares in respect of which the Warrant is then exercised, but in no event for less than 100 Warrant Shares (unless fewer than an aggregate of 100 Warrant Shares are then purchasable under all outstanding Warrants held by a Holder).

(b) In lieu of payment of the Exercise Price, the Holder may require the Company to convert this Warrant into shares of Common Stock (the "Conversion Right") as provided for in this Section 2.1(b). Upon exercise of the Conversion Right, the Company shall deliver to the Holder (without payment by the Holder of any of the Exercise Price) that number of shares of Common Stock equal to the quotient obtained by dividing (x) the value of the Warrant at the time the Conversion Right is exercised (determined by subtracting the aggregate Exercise Price in effect immediately prior to the exercise of the Conversion Right from the aggregate Current Market Price for the Common Stock immediately prior to the exercise of the Conversion Right) by (y) the Current Market Price of the Common Stock.

2.2. Payment of Exercise Price. Payment of the aggregate Exercise Price may be made in cash or by check, or any combination thereof.

2.3. Issuance of Shares. Upon surrender of this Warrant and payment of the applicable Exercise Price, the Company shall issue and cause to be delivered with all reasonable dispatch to or upon the written order of the Holder and in the name or names the Holder may designate, a certificate or certificates for the number of full Warrant Shares so purchased upon the exercise of this Warrant, together with cash, as provided in Section 12 hereof, in respect of any fraction of a Warrant Share that would otherwise have been issuable upon exercise of this Warrant.

2.4. Status as Holder of Shares. Upon receipt of this Warrant by the company following any exercise by the Holder, the Holder shall be deemed to be the holder of record of the Warrant Shares issuable upon exercise, notwithstanding that the transfer books of the Company may then be closed or that certificates representing the Warrant Shares may not have been prepared or actually delivered to the Holder.

SECTION 3. TRANSFERABILITY AND FORM OF WARRANT

3.1. Limitation on Transfer. Any assignment or transfer of this Warrant shall be made by presentation and surrender hereof to the Company at its principal office or the office of its transfer agent, if any, accompanied by a duly executed Assignment Form. Upon the presentation and surrender of these items to the Company, the Company, at its sole expense, shall execute and deliver to the transferee or transferees of this Warrant a new Warrant or Warrants, in the name of the transferee or transferees named in the Assignment Form, and this Warrant shall at that time be canceled.

3.2. Exchange of Certificate. This Warrant may be exchanged for another Warrant or Warrants entitling the Warrantholder to purchase a like aggregate number of Warrant Shares as the Warrant or Warrants surrendered then entitled the Warrantholder to purchase. Any Warrantholder desiring to exchange a Warrant shall make a request in writing delivered to the Company, and shall surrender, properly endorsed, with signatures guaranteed, the Warrant to be exchanged. Thereupon, the Company shall execute and deliver to the person entitled thereto a new Warrant as requested.

3.3. Mutilated, Lost, Stolen, or Destroyed Certificate. In case the certificate evidencing this Warrant shall be mutilated, lost, stolen or destroyed, the Company shall, at the request of the Warrantholder, issue and deliver in exchange and substitution for and upon cancellation of the mutilated certificate, or in lieu of and substitution for the certificate lost, stolen or destroyed, a new Warrant of like tenor representing an equivalent right or interest, but only upon receipt of evidence satisfactory to the Company of the loss, theft or destruction of the Warrant and a bond of indemnity, if requested, also satisfactory in form and amount, at the applicant's cost. Applicants for substitute Warrants shall also comply with any other reasonable regulations and pay any other reasonable charges the Company may request.

SECTION 4. ADJUSTMENT OF NUMBER OF SHARES

The number and kind of securities purchasable upon the exercise of this Warrant and the Exercise Price payable shall be subject to adjustment from time to time upon the happening of certain events, as follows:

4.1. Adjustments. The number of Warrant Shares purchasable upon the exercise of this Warrant and the Exercise Price shall be subject to adjustments as follows:

- (a) In case the Company shall (i) pay a dividend in Common Stock or make a distribution to its stockholders in Common Stock, (ii)

subdivide its outstanding Common Stock, (iii) combine its outstanding Common Stock into a smaller number of shares of Common Stock, or (iv) issue by classification of its Common Stock other securities of the Company, then in any of the foregoing cases, the number of Warrant Shares purchasable upon exercise of the Warrant immediately prior thereto shall be adjusted so that the Warrantholder shall be entitled to receive the kind and number of Warrant Shares or other securities of the Company that it would have owned or would have been entitled to receive immediately after the happening of any of the events described above, had the Warrant been exercised immediately prior to the happening of the event or any record date with respect thereto. Any adjustment made pursuant to this subsection 4.1(a) shall become effective immediately after the effective date of the event retroactive to the record date, if any, for the event.

(b) If the Company shall distribute to all or substantially all holders of its Common Stock evidences of its indebtedness or assets (excluding cash dividends or distributions out of earnings) or rights, options, warrants, or convertible securities containing the right to subscribe for or purchase Common Stock, then in each case the number of Warrant Shares thereafter purchasable upon the exercise of this Warrant shall be determined by multiplying the number of Warrant Shares theretofore purchasable upon exercise of this Warrant by a fraction, of which the numerator shall be the then Current Market Price on the date of distribution, and the denominator of which shall be the Current Market Price on the date of distribution minus the then fair value (determined as provided in subparagraph (d) below) of the portion of the assets or evidences of indebtedness so distributed or of the subscription rights, options, warrants, or convertible securities applicable to one share. The adjustment shall be made whenever any distribution is made and shall become effective on the date of distribution retroactive to the record date for the determination of stockholders entitled to receive the distribution.

(c) No adjustment in the number of Warrant Shares purchasable pursuant to this Warrant shall be required unless the adjustment would require an increase or decrease of at least one percent in the number of Warrant Shares then purchasable upon the exercise of this Warrant or, if this Warrant is not then exercisable, the number of Warrant Shares purchasable upon the exercise of this Warrant on the first date thereafter that this Warrant becomes exercisable; provided, however, that any adjustments which by reason of this subsection (4.1(c)) are not required to be made immediately shall be carried forward and taken into account in any subsequent adjustment.

(d) Whenever the number of Warrant Shares purchasable upon the exercise of this Warrant is adjusted, as herein provided, the Exercise Price payable upon exercise of this Warrant shall be adjusted by multiplying the Exercise Price immediately prior to the

adjustment by a fraction, the numerator of which shall be the number of Warrant Shares purchasable upon the exercise of the Warrant immediately prior to the adjustment, and the denominator of which shall be the number of Warrant Shares so purchasable immediately thereafter.

(e) Whenever the number of Warrant Shares purchasable upon exercise of this Warrant is adjusted as herein provided, the Company shall cause to be promptly mailed to the Warrantholder by first class mail, postage prepaid, notice of the adjustment and a certificate of the chief financial officer of the Company setting forth the number of Warrant Shares purchasable upon the exercise of this Warrant after the adjustment, a brief statement of the facts requiring the adjustment and the computation by which the adjustment was made.

(f) For the purpose of this Section 4.1, the term "Common Stock" shall mean (i) the class of stock designated as the Common Stock of the Company as of the Issue Date of this Warrant, or (ii) any other class of stock resulting from successive changes or reclassifications of the Common Stock consisting solely of changes in par value, or from par value to no par value, or from no par value to par value. If, at any time, as a result of an adjustment made pursuant to this Section 4, the Warrantholder shall become entitled to purchase any securities of the Company other than Common Stock, then (y) if the Warrantholder's right to purchase is on any other basis than that available to all holders of the Company's Common Stock, the Company shall obtain an opinion of an independent investment banking firm valuing the other securities and (z) thereafter the number of other securities so purchasable upon exercise of this Warrant shall be subject to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to the Warrant Shares contained in this Section 4.

(g) Upon the expiration of any rights, options, warrants, or conversion privileges, if they shall have not been exercised, the number of Warrant Shares purchasable upon exercise of the Warrants, to the extent the Warrants have not then been exercised, shall, upon such expiration, be readjusted and shall thereafter be as they would have been had they been originally adjusted (or had the original adjustment not been required, as the case may be) on the basis of (i) the fact that the only shares of Common Stock so issued were the shares of Common Stock, if any, actually issued or sold upon the exercise of the rights, options, warrants, or conversion privileges, and (ii) the fact that the shares of Common Stock, if any, were issued or sold for the consideration actually received by the Company upon the exercise plus the consideration, if any, actually received by the Company for the issuance, sale or grant of all such rights, options, warrants, or conversion privileges whether or not exercised; provided, however, that no readjustment shall have the effect of decreasing the number of Warrant Shares purchasable upon

exercise of this Warrant by an amount in excess of the amount of the adjustment initially made in respect of the issuance, sale, or grant of such rights, options, warrants, or conversion rights.

4.2. No Adjustment for Dividends. Except as provided in Section 4.1, no adjustment in respect of any dividends or distributions out of earnings shall be made during the term, or upon the exercise, of this Warrant.

4.3. No Adjustment in Certain Cases. No adjustments shall be made pursuant to Section 4 hereof in connection with the grant or exercise of presently authorized or outstanding options to purchase, or the issuance of shares of Common Stock under, the Company's director or employee benefit plan.

4.4. Preservation of Purchase Rights upon Reclassification, Consolidation, etc. In case of any consolidation of the Company with or merger of the Company into another corporation, or in case of any sale or conveyance to another corporation of the property, assets, or business of the Company as an entirety or substantially as an entirety, the Company or successor or purchasing corporation, as the case may be, shall execute with the Warrantholder an agreement that the Warrantholder shall have the right thereafter upon payment of the Exercise Price in effect immediately prior to the action to purchase, upon exercise of this Warrant, the kind and amount of shares and other securities and property that it would have owned or have been entitled to receive after the happening of the consolidation, merger, sale, or conveyance had this Warrant been exercised immediately prior to the action. In the event of a merger described in Section 368(a)(2)(E) of the Internal Revenue Code of 1986, in which the Company is the surviving corporation, the right to purchase Shares under the Warrants shall terminate on the date of such merger and thereupon the Warrants shall become null and void, but only if the controlling corporation shall agree to substitute for the Warrants, its warrants which entitle the holder thereof to purchase upon their exercise the kind and amount of shares and other securities and property which it would have owned or been entitled to receive had the Warrants been exercised immediately prior to such merger. Any such agreements referred to in this Section 4.4 shall provide for adjustments, which shall be as nearly equivalent as may be practicable to the adjustments provided for in Section 4 hereof. The provisions of this Section (4.4) shall similarly apply to successive consolidations, mergers, sales, or conveyances.

4.5. Par Value of Shares of Common Stock. Before taking any action which would cause an adjustment effectively reducing the portion of the Exercise Price allocable to each Share below the par value per share of the Common Stock issuable upon exercise of the Warrants, the Company will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Company may validly and legally issue fully paid and nonassessable Common Stock upon exercise of the Warrants.

4.6. Independent Public Accountants. The Company may retain a firm of independent public accountants of recognized national standing (which may be any such firm regularly employed by the Company) to make any computation required under this Section 4, and a certificate signed by the firm shall be conclusive evidence of the correctness of any computation made under this Section 4.

4.7. Treasury Stock. For purposes of this Section 4, shares of Common Stock owned or held at any relevant time by, or for the account of, the Company, in its treasury or otherwise, shall not be deemed to be outstanding for purposes of the calculations and adjustments described.

SECTION 5. NOTICE TO HOLDERS

If, prior to the expiration of this Warrant either by its terms or by its exercise in full, any of the following shall occur:

- (a) the Company shall declare a dividend or authorize any other distribution on its Common Stock; or
- (b) the Company shall authorize the granting to the shareholders of its Common Stock of rights to subscribe for or purchase any securities or any other similar rights; or
- (c) any reclassification, reorganization or similar change of the Common Stock, or any consolidation or merger to which the Company is a party, or the sale, lease, or exchange of any significant portion of the assets of the Company; or
- (d) the voluntary or involuntary dissolution, liquidation or winding up of the Company; or
- (e) any purchase, retirement or redemption by the Company of its Common Stock;

then, and in any such case, the Company shall deliver to the Holder or Holders written notice thereof at least 30 days prior to the earliest applicable date specified below with respect to which notice is to be given, which notice shall state the following:

- (x) the date on which a record is to be taken for the purpose of the dividend, distribution or rights, or, if a record is not to be taken, the date as of which the holders of Common Stock of record entitled to the dividend, distribution or rights will be determined;
- (y) the date on which any reclassification, reorganization, consolidation, merger, sale, transfer, dissolution, liquidation, winding up or purchase, retirement or redemption is expected to become effective, and the date, if any, as of which the Company's holders of Common Stock of record shall be entitled to exchange their Common Stock for securities or other property deliverable upon the reclassification, reorganization, consolidation, merger, sale, transfer, dissolution, liquidation, winding up, purchase, retirement or redemption; and
- (z) if any matters referred to in the foregoing clauses (x) and (y) are to be voted upon by holders of Common Stock, the date as of

which the shareholders entitled to vote will be determined.

SECTION 6. OFFICERS' CERTIFICATE

Whenever the Exercise Price or the aggregate number of Warrant Shares purchasable pursuant to this Warrant shall be adjusted as required by the provisions of Section 4 above, the Company shall promptly file with its Secretary or an Assistant Secretary at its principal office, and with its transfer agent, if any, an officers' certificate executed by the Company's President and Secretary or Assistant Secretary, describing the adjustment and setting forth, in reasonable detail, the facts requiring the adjustment and the basis for and calculation of the adjustment in accordance with the provisions of this Warrant. Each such officers' certificate shall be made available to the Holder or Holders of this Warrant for inspection at all reasonable times, and the Company, after each adjustment, shall promptly deliver a copy of the officers' certificate relating to that adjustment to the Holder or Holders of this Warrant. The officers' certificate described in this Section 6 shall be deemed to be conclusive as to the correctness of the adjustment reflected therein if, and only if, no Holder of this Warrant delivers written notice to the Company of an objection to the adjustment within 30 days after the officers' certificate is delivered to the Holder or Holders of this Warrant. The Company will make its books and records available for inspection and copying during normal business hours by the Holder so as to permit a determination as to the correctness of the adjustment. Failure to prepare or provide the officers' certificate shall not modify the parties' rights hereunder.

SECTION 7. RESERVATION OF WARRANT SHARES

As soon as an increase in the number of authorized shares is approved by the stockholders of the Company, the Company shall at all times thereafter keep reserved so long as this Warrant remains outstanding, out of its authorized and unissued Common Stock, a number of shares of Common Stock sufficient to support the full exercise hereof. Every transfer agent for the Common Stock and other securities of the Company issuable upon the exercise of this Warrant will be irrevocably authorized and directed at all times to reserve a number of authorized shares and other securities as shall be requisite for such purpose. The Company will keep a copy of this Warrant on file with every transfer agent for the Common Stock and other securities of the Company issuable upon the exercise of this Warrant. The Company will supply every transfer agent with duly executed stock and other certificates, as appropriate, for such purpose and will provide or otherwise make available any cash which may be payable as provided in Section 11 hereof.

SECTION 8. RESTRICTIONS ON TRANSFER.

The Warrantholder agrees that prior to making any disposition of this Warrant or the Warrant Shares, the Warrantholder shall give written notice to the Company describing briefly the manner in which any proposed disposition is to be made; and no disposition shall be made if the Company has notified the Warrantholder that, in the opinion of counsel reasonably satisfactory to the Warrantholder, a registration statement or other notification or post-effective

amendment thereto (hereinafter collectively a "Registration Statement") under the Act is required with respect to the disposition and no Registration Statement has been filed by the Company with, and declared effective, if necessary, by, the Commission.

SECTION 9. PAYMENT OF TAXES

The Company will pay all documentary stamp taxes, if any, attributable to the initial issuance of this Warrant or the shares of Common Stock comprising the Warrant Shares; provided, however, the Company shall not be required to pay any tax that may be payable in respect of any transfer of the Warrants or Warrant Shares.

SECTION 10. TRANSFER TO COMPLY WITH THE SECURITIES ACT OF 1933

This Warrant, the Warrant Shares, and any other securities issued or issuable upon exercise of this Warrant, may not be offered, sold or transferred, in whole or in part, except in compliance with the Act, and except in compliance with all applicable state securities laws. The Company may cause substantially the following legends, or their equivalents, to be set forth on each certificate representing the Warrant Shares and any other security issued or issuable upon exercise of this Warrant, not theretofore distributed to the public or sold to underwriters, as defined by the Act, for distribution to the public:

(a) "THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 OR ANY STATE SECURITIES LAWS AND MAY NOT BE SOLD, EXCHANGED, HYPOTHECATED OR TRANSFERRED IN ANY MANNER EXCEPT IN COMPLIANCE WITH SUCH LAWS AND THE WARRANT PURSUANT TO WHICH THEY WERE ISSUED."

(b) Any legend required by applicable state securities laws.

Any certificate issued at any time in exchange or substitution for any certificate bearing such legends (except a new certificate issued upon completion of a public distribution pursuant to a registration statement under the Securities Act of 1933, as amended (the "Act"), or the securities represented thereby) shall also bear the above legends unless, in the opinion of the Company's counsel, the securities represented thereby need no longer be subject to such restrictions.

SECTION 11. FRACTIONAL SHARES

No fractional shares or scrip representing fractional shares shall be issued upon the exercise of all or any part of this Warrant. With respect to any fraction of a share of any security called for upon any exercise of this Warrant, the Company shall pay to the Holder an amount in money equal to that fraction multiplied by the Current Market Price of that share.

SECTION 12. NO RIGHTS AS STOCKHOLDER; NOTICES TO WARRANTHOLDER

Nothing contained in this Warrant shall be construed as conferring upon

the Warrantholder or its transferees any rights as a stockholder of the Company, including the right to vote, receive dividends, consent or receive notices as a stockholder in respect to any meeting of stockholders for the election of directors of the Company or any other matter. The Company covenants, however, that for so long as this Warrant is at least partially unexercised, it will furnish any Holder of this Warrant with copies of all reports and communications furnished to the shareholders of the Company. In addition, if at any time prior to the expiration of the Warrants and prior to their exercise, any one or more of the following events shall occur:

(a) any action which would require an adjustment pursuant to Section 4.1 (except subsections 4.1(e) and 4.1(h) or 4.4); or

(b) a dissolution, liquidation, or winding up of the Company (other than in connection with a consolidation, merger, or sale of its property, assets, and business as an entirety or substantially as an entirety) shall be proposed:

then the Company shall give notice in writing of the event to the Warrantholder, as provided in Section 15 hereof, at least 20 days prior to the date fixed as a record date or the date of closing the transfer books for the determination of the stockholders entitled to any relevant dividend, distribution, subscription rights or other rights or for the determination of stockholders entitled to vote on such proposed dissolution, liquidation, or winding up. The notice shall specify the record date or the date of closing the transfer books, as the case may be. Failure to mail or receive notice or any defect therein shall not affect the validity of any action taken with respect thereto.

SECTION 13. CHARGES DUE UPON EXERCISE

The Company shall pay any and all issue or transfer taxes, including, but not limited to, all federal or state taxes, that may be payable with respect to the transfer of this Warrant or the issue or delivery of Warrant Shares upon the exercise of this Warrant.

SECTION 14. WARRANT SHARES TO BE FULLY PAID

The Company covenants that all Warrant Shares that may be issued and delivered to a Holder of this Warrant upon the exercise of this Warrant and payment of the Exercise Price will be, upon such delivery, validly and duly issued, fully paid and nonassessable.

SECTION 15. NOTICES

Any notice pursuant to this Warrant by the Company or by a Warrantholder or a holder of Shares shall be in writing and shall be deemed to have been duly given if delivered or mailed by certified mail, return receipt requested:

(i) If to a Warrantholder or a holder of Shares, addressed to the address set forth above.

(ii) If to the Company addressed to it at 414 North Orleans Street, Suite 800, Chicago, Illinois 60610, Attention: President.

Each party may from time to time change the address to which notices to it are to be delivered or mailed hereunder by notice in accordance herewith to the other party.

SECTION 16. MERGER OR CONSOLIDATION OF THE COMPANY

The Company will not merge or consolidate with or into any other corporation or sell all or substantially all of its property to another corporation, unless in connection therewith, the Company complies with the provisions of Section 4.4 hereof.

SECTION 17. APPLICABLE LAW

This Warrant shall be governed by and construed in accordance with the internal laws (as opposed to conflicts of law provisions) of the State of Illinois, and courts located in Illinois shall have exclusive jurisdiction over all disputes arising hereunder.

SECTION 18. ACCEPTANCE OF TERMS; SUCCESSORS.

By its acceptance of this Warrant, the Holder accepts and agrees to comply with all of the terms and provisions hereof. All the covenants and provisions of this Warrant by or for the benefit of the Company or the Holder shall bind and inure to the benefit of their respective successors and assigns hereunder.

SECTION 19. MISCELLANEOUS PROVISIONS

(a) Subject to the terms and conditions contained herein, this Warrant shall be binding on the Company and its successors and shall inure to the benefit of the original Holder, its successors and assigns and all holders of Warrant Shares and the exercise of this Warrant in full shall not terminate the provisions of this Warrant as it relates to holders of Warrant Shares.

(b) If the Company fails to perform any of its obligations hereunder, it shall be liable to the Holder for all damages, costs and expenses resulting from the failure, including, but not limited to, all reasonable attorney's fees and disbursements.

(c) This Warrant cannot be changed or terminated or any performance or condition waived in whole or in part except by an agreement in writing signed by the party against whom enforcement of the change, termination or waiver is sought; provided, however, that any provisions hereof may be amended, waived, discharged or terminated upon the written consent of the Company and the Company.

(d) If any provision of this Warrant shall be held to be invalid, illegal or unenforceable, the provision shall be severed, enforced to the extent possible, or modified in such a way as to make it enforceable, and the

invalidity, illegality or unenforceability shall not affect the remainder of this Warrant.

(e) The Company agrees to execute any further agreements, conveyances, certificates and other documents as may be reasonably requested by the Holder to effectuate the intent and provisions of this Warrant.

(f) Paragraph headings used in this Warrant are for convenience only and shall not be taken or construed to define or limit any of the terms or provisions of this Warrant. Unless otherwise provided, or unless the context shall otherwise require, the use of the singular shall include the plural and the use of any gender shall include all genders.

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed and issued as of the Issue Date first set forth above.

MOLECULAR DIAGNOSTICS, INC.

By:

Denis O'Donnell M.D.
Chief Executive Officer

PURCHASE FORM

Dated _____, _____

The undersigned hereby irrevocably elects to exercise this Warrant to the extent of purchasing _____ shares of the Common Stock of Molecular Diagnostics, Inc. and tenders payment of the exercise price thereof.

INSTRUCTIONS FOR REGISTRATION OF STOCK

Name _____

(Please type or print in block letters)

Address _____

.....

ASSIGNMENT FORM

FOR VALUE RECEIVED, _____, hereby sells, assigns and transfers unto

Name _____
(Please type or print in block letters)

Address _____

the right to purchase ___ shares Common Stock of Molecular Diagnostics, Inc. (the "Company") represented by this Warrant and does hereby irrevocably constitute and appoint the Company as its attorney-in-fact, to transfer the same on the books of the Company with full power of substitution in the premises.

Signature _____

Dated _____

Notice: the signature on this assignment must correspond with the name as it appears upon the face of this Warrant in every particular, without alteration or enlargement or any change whatever.

D-1

THIS WARRANT AND THE UNDERLYING SHARES OF COMMON STOCK REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "ACT"), AND ARE "RESTRICTED SECURITIES" AS THAT TERM IS DEFINED IN RULE 144 UNDER THE ACT. THE SECURITIES MAY NOT BE OFFERED FOR SALE, SOLD OR OTHERWISE TRANSFERRED EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE ACT, OR PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE ACT, THE AVAILABILITY OF WHICH IS TO BE ESTABLISHED TO THE SATISFACTION OF MOLECULAR DIAGNOSTICS, INC.

Warrant No. DB3

WARRANT TO PURCHASE SHARES OF COMMON STOCK

WARRANT TO PURCHASE 67,000 SHARES

EXERCISE PRICE \$0.17 PER SHARE
(SUBJECT TO ADJUSTMENT AS SET FORTH HEREIN)]

ISSUE DATE: MARCH 4, 2004

VOID AFTER 3:00 P.M., CENTRAL TIME, ON THE FIFTH ANNIVERSARY OF THE ISSUE DATE

THIS CERTIFIES THAT Dan Burns, PO Box 1086, Del Mar, CA 92014 is entitled to purchase from Molecular Diagnostics, Inc., a Delaware corporation (hereinafter called the "Company") with its principal office located at 414 North Orleans Street, Suite 510, Chicago, Illinois 60610, at any time after the Exercise Date (as defined below), but before 3:00 P.M., Central Time, on the Expiration Date (as defined below), at the Exercise Price (as defined below), the number of shares (the "Warrant Shares") of the Company's common stock, par value \$0.001 per share (the "Common Stock") set forth above. The number of Shares purchasable upon exercise of this Warrant and the Exercise Price per Share shall be subject to adjustment from time to time as set forth in Section 4 below.

SECTION 1. DEFINITIONS

The following terms used in this Warrant shall have the following meanings (unless otherwise expressly provided herein):

The "Act." The Securities Act of 1933, as amended.

The "Commission." The Securities and Exchange Commission.

The "Company." Molecular Diagnostics, Inc.

"Common Stock." The Company's Common Stock, par value \$0.001 per share.

"Current Market Price." The Current Market Price shall be determined as follows:

(a) if the security at issue is listed on a national securities exchange or admitted to unlisted trading privileges on such an exchange or quoted on either the National Market System or the Small Cap Market of the automated quotation service operated by The Nasdaq Stock Market, Inc. ("Nasdaq"), the current value shall be the last reported sale price of that security on such exchange or system on the day for which the Current Market Price is to be determined or, if no such sale is made on such day, the average of the highest closing bid and lowest asked price for such day on such exchange or system; or

(b) if the security at issue is not so listed or quoted or admitted to unlisted trading privileges, the Current Market Value shall be the average of the last reported highest bid and lowest asked prices quoted on the Nasdaq Electronic Bulletin Board, or, if not so quoted, then by the National Quotation Bureau, Inc. on the last business day prior to the day for which the Current Market Price is to be determined; or

(c) if the security at issue is not so listed or quoted or admitted to unlisted trading privileges and bid and asked prices are not reported, the current market value shall be determined in such reasonable manner as may be prescribed from time to time by the Board of Directors of the Company, subject to the objection procedures hereinafter described.

"Exercise Date." March 4, 2004.

"Exercise Price." [\$0.17] per Share, as modified from time to time in accordance with the provisions of this Warrant.

"Expiration Date." The fifth anniversary of the Issue Date indicated on the first page of this Warrant.

"Holder" or "Warrantholder." The person to whom this Warrant is issued and

any valid transferee thereof pursuant to Section 3.1 below.

"NASD." The National Association of Securities Dealers, Inc.

"Nasdaq." The automated quotation system operated by the Nasdaq Stock Market, Inc.

"Termination of Business." Any sale, lease or exchange of all, or substantially all, of the Company's assets or business or any dissolution, liquidation or winding up of the Company.

"Warrant." This Warrant and any other warrants issued in substitution for or replacement thereof, including those evidenced by a certificate or certificates originally issued or issued upon division, exchange, substitution or transfer pursuant to this Warrant.

"Warrant Shares." The Common Stock purchasable upon exercise of this Warrant including the Common Stock underlying unexercised portions of this Warrant.

SECTION 2. TERM OF WARRANTS; EXERCISE OF WARRANT

2.1. Exercise of Warrant.

(a) Subject to the terms of this Warrant, the Holder shall have the right, at any time beginning on the Exercise Date but prior to 3:00 p.m., Central Time, on the Expiration Date, to purchase from the Company up to the number of fully paid and nonassessable Warrant Shares to which the Holder may at the time be entitled to purchase pursuant to this Warrant, upon surrender to the Company, at its principal office, of the Warrant to be exercised, together with the purchase form on the reverse thereof, duly filled in and signed, and upon payment to the Company of the Exercise Price for the number of Warrant Shares in respect of which the Warrant is then exercised, but in no event for less than 100 Warrant Shares (unless fewer than an aggregate of 100 Warrant Shares are then purchasable under all outstanding Warrants held by a Holder).

(b) In lieu of payment of the Exercise Price, the Holder may require the Company to convert this Warrant into shares of Common Stock (the "Conversion Right") as provided for in this Section 2.1(b). Upon exercise of the Conversion Right, the Company shall deliver to the Holder (without payment by the Holder of any of the Exercise Price) that number of shares of Common Stock equal to the quotient obtained by dividing (x) the value of the Warrant at the time the Conversion Right is exercised (determined by subtracting the aggregate Exercise Price in effect immediately prior to the exercise of the Conversion Right from the aggregate Current Market Price for the Common Stock immediately prior to the exercise of the Conversion Right by (y) the Current Market Price of the Common Stock.

2.2. Payment of Exercise Price. Payment of the aggregate Exercise Price may be made in cash or by check, or any combination thereof.

2.3. Issuance of Shares. Upon surrender of this Warrant and payment of the applicable Exercise Price, the Company shall issue and cause to be delivered with all reasonable dispatch to or upon the written order of the Holder and in the name or names the Holder may designate, a certificate or certificates for the number of full Warrant Shares so purchased upon the exercise of this Warrant, together with cash, as provided in Section 12 hereof, in respect of any fraction of a Warrant Share that would otherwise have been issuable upon exercise of this Warrant.

2.4. Status as Holder of Shares. Upon receipt of this Warrant by the company following any exercise by the Holder, the Holder shall be deemed to be the holder of record of the Warrant Shares issuable upon exercise, notwithstanding that the transfer books of the Company may then be closed or that certificates representing the Warrant Shares may not have been prepared or actually delivered to the Holder.

SECTION 3. TRANSFERABILITY AND FORM OF WARRANT

3.1. Limitation on Transfer. Any assignment or transfer of this Warrant shall be made by presentation and surrender hereof to the Company at its principal office or the office of its transfer agent, if any, accompanied by a duly executed Assignment Form. Upon the presentation and surrender of these items to the Company, the Company, at its sole expense, shall execute and deliver to the transferee or transferees of this Warrant a new Warrant or Warrants, in the name of the transferee or transferees named in the Assignment Form, and this Warrant shall at that time be canceled.

3.2. Exchange of Certificate. This Warrant may be exchanged for another Warrant or Warrants entitling the Warrantholder to purchase a like aggregate number of Warrant Shares as the Warrant or Warrants surrendered then entitled the Warrantholder to purchase. Any Warrantholder desiring to exchange a Warrant shall make a request in writing delivered to the Company, and shall surrender, properly endorsed, with signatures guaranteed, the Warrant to be exchanged. Thereupon, the Company shall execute and deliver to the person entitled thereto a new Warrant as requested.

3.3. Mutilated, Lost, Stolen, or Destroyed Certificate. In case the certificate evidencing this Warrant shall be mutilated, lost, stolen or destroyed, the Company shall, at the request of the Warrantholder, issue and deliver in exchange and substitution for and upon cancellation of the mutilated certificate, or in lieu of and substitution for the certificate lost, stolen or destroyed, a new Warrant of like tenor representing an equivalent right or interest, but only upon receipt of evidence satisfactory to the Company of the loss, theft or destruction of the Warrant and a bond of indemnity, if requested, also satisfactory in form and amount, at the applicant's cost. Applicants for substitute Warrants shall also comply with any other reasonable regulations and pay any other reasonable charges the Company may request.

SECTION 4. ADJUSTMENT OF NUMBER OF SHARES

The number and kind of securities purchasable upon the exercise of this Warrant and the Exercise Price payable shall be subject to adjustment from time to time upon the happening of certain events, as follows:

4.1. Adjustments. The number of Warrant Shares purchasable upon the exercise of this Warrant and the Exercise Price shall be subject to adjustments as follows:

(a) In case the Company shall (i) pay a dividend in Common Stock or make a distribution to its stockholders in Common Stock, (ii) subdivide its outstanding Common Stock, (iii) combine its outstanding Common Stock into a smaller number of shares of Common Stock, or (iv) issue by classification of its Common Stock other securities of the Company, then in any of the foregoing cases, the number of Warrant Shares purchasable upon exercise of the Warrant immediately prior thereto shall be adjusted so that the Warrantholder shall be entitled to receive the kind and number of Warrant Shares or other securities of the Company that it would have owned or would have been entitled to receive immediately after the happening of any of the events described above, had the Warrant been exercised immediately prior to the happening of the event or any record date with respect thereto. Any adjustment made pursuant to this subsection 4.1(a) shall become effective immediately after the effective date of the event retroactive to the record date, if any, for the event.

(b) If the Company shall issue rights, options, warrants, or convertible securities to all or substantially all holders of its Common Stock, without any charge to the holders, entitling them to subscribe for or purchase Common Stock at a price per share that is lower at the record date mentioned below than the then Current Market Price, the number of Warrant Shares thereafter purchasable upon the exercise of this Warrant shall be determined by multiplying the number of Warrant Shares theretofore purchasable upon exercise of this Warrant by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to the issuance of the rights, options, warrants or convertible securities, plus the number of additional shares of Common Stock offered for subscription or purchase, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to the issuance of the rights, options, warrants, or convertible securities, plus the number of shares of Common Stock that the aggregate offering price of the total number of shares offered would purchase at the Current Market Price as of the record date. The adjustment shall be made whenever rights, options, warrants, or convertible securities are issued, and shall become effective immediately and retroactively to the record date for the determination of stockholders entitled to receive the rights, options, warrants, or convertible securities.

(c) If the Company shall distribute to all or substantially all holders of its Common Stock evidences of its indebtedness or assets (excluding cash dividends or distributions out of earnings) or rights, options, warrants, or convertible securities containing the right to

subscribe for or purchase Common Stock (excluding those referred to in subsection 4.1(b) above), then in each case the number of Warrant Shares thereafter purchasable upon the exercise of this Warrant shall be determined by multiplying the number of Warrant Shares theretofore purchasable upon exercise of this Warrant by a fraction, of which the numerator shall be the then Current Market Price on the date of distribution, and the denominator of which shall be the Current Market Price on the date of distribution minus the then fair value (determined as provided in subparagraph (e) below) of the portion of the assets or evidences of indebtedness so distributed or of the subscription rights, options, warrants, or convertible securities applicable to one share. The adjustment shall be made whenever any distribution is made and shall become effective on the date of distribution retroactive to the record date for the determination of stockholders entitled to receive the distribution.

(d) No adjustment in the number of Warrant Shares purchasable pursuant to this Warrant shall be required unless the adjustment would require an increase or decrease of at least one percent in the number of Warrant Shares then purchasable upon the exercise of this Warrant or, if this Warrant is not then exercisable, the number of Warrant Shares purchasable upon the exercise of this Warrant on the first date thereafter that this Warrant becomes exercisable; provided, however, that any adjustments which by reason of this subsection (4.1(d)) are not required to be made immediately shall be carried forward and taken into account in any subsequent adjustment.

(e) Whenever the number of Warrant Shares purchasable upon the exercise of this Warrant is adjusted, as herein provided, the Exercise Price payable upon exercise of this Warrant shall be adjusted by multiplying the Exercise Price immediately prior to the adjustment by a fraction, the numerator of which shall be the number of Warrant Shares purchasable upon the exercise of the Warrant immediately prior to the adjustment, and the denominator of which shall be the number of Warrant Shares so purchasable immediately thereafter.

(f) Whenever the number of Warrant Shares purchasable upon exercise of this Warrant is adjusted as herein provided, the Company shall cause to be promptly mailed to the Warrantholder by first class mail, postage prepaid, notice of the adjustment and a certificate of the chief financial officer of the Company setting forth the number of Warrant Shares purchasable upon the exercise of this Warrant after the adjustment, a brief statement of the facts requiring the adjustment and the computation by which the adjustment was made.

(g) For the purpose of this Section 4.1, the term "Common Stock" shall mean (i) the class of stock designated as the Common Stock of the Company as of the Issue Date of this Warrant, or (ii) any other class of stock resulting from successive changes or reclassifications of the Common Stock consisting solely of changes in par value, or from par value to no par value, or from no par value to par value. If, at any time, as a result

of an adjustment made pursuant to this Section 4, the Warrantholder shall become entitled to purchase any securities of the Company other than Common Stock, then (y) if the Warrantholder's right to purchase is on any other basis than that available to all holders of the Company's Common Stock, the Company shall obtain an opinion of an independent investment banking firm valuing the other securities and (z) thereafter the number of other securities so purchasable upon exercise of this Warrant shall be subject to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to the Warrant Shares contained in this Section 4.

(h) Upon the expiration of any rights, options, warrants, or conversion privileges, if they shall have not been exercised, the number of Warrant Shares purchasable upon exercise of the Warrants, to the extent the Warrants have not then been exercised, shall, upon such expiration, be readjusted and shall thereafter be as they would have been had they been originally adjusted (or had the original adjustment not been required, as the case may be) on the basis of (i) the fact that the only shares of Common Stock so issued were the shares of Common Stock, if any, actually issued or sold upon the exercise of the rights, options, warrants, or conversion privileges, and (ii) the fact that the shares of Common Stock, if any, were issued or sold for the consideration actually received by the Company upon the exercise plus the consideration, if any, actually received by the Company for the issuance, sale or grant of all such rights, options, warrants, or conversion privileges whether or not exercised; provided, however, that no readjustment shall have the effect of decreasing the number of Warrant Shares purchasable upon exercise of this Warrant by an amount in excess of the amount of the adjustment initially made in respect of the issuance, sale, or grant of such rights, options, warrants, or conversion rights.

4.2. No Adjustment for Dividends. Except as provided in Section 4.1, no adjustment in respect of any dividends or distributions out of earnings shall be made during the term, or upon the exercise, of this Warrant.

4.3. No Adjustment in Certain Cases. No adjustments shall be made pursuant to Section 4 hereof in connection with the issuance of the Common Stock upon the conversion, if any, of the Company's 12% Secured Convertible Promissory Notes or exercise of any warrants issued to the holders thereof in connection therewith. No adjustments shall be made pursuant to Section 4 hereof in connection with the grant or exercise of presently authorized or outstanding options to purchase, or the issuance of shares of Common Stock under, the Company's director or employee benefit plan.

4.4. Preservation of Purchase Rights upon Reclassification, Consolidation, etc. In case of any consolidation of the Company with or merger of the Company into another corporation, or in case of any sale or conveyance to another corporation of the property, assets, or business of the Company as an entirety or substantially as an entirety, the Company or successor or purchasing corporation, as the case may be, shall execute with the Warrantholder an agreement that the Warrantholder shall have the right thereafter upon payment of

the Exercise Price in effect immediately prior to the action to purchase, upon exercise of this Warrant, the kind and amount of shares and other securities and property that it would have owned or have been entitled to receive after the happening of the consolidation, merger, sale, or conveyance had this Warrant been exercised immediately prior to the action. In the event of a merger described in Section 368(a)(2)(E) of the Internal Revenue Code of 1986, in which the Company is the surviving corporation, the right to purchase Shares under the Warrants shall terminate on the date of such merger and thereupon the Warrants shall become null and void, but only if the controlling corporation shall agree to substitute for the Warrants, its warrants which entitle the holder thereof to purchase upon their exercise the kind and amount of shares and other securities and property which it would have owned or been entitled to receive had the Warrants been exercised immediately prior to such merger. Any such agreements referred to in this Section 4.4 shall provide for adjustments, which shall be as nearly equivalent as may be practicable to the adjustments provided for in Section 4 hereof. The provisions of this Section (4.4) shall similarly apply to successive consolidations, mergers, sales, or conveyances.

4.5. Par Value of Shares of Common Stock. Before taking any action which would cause an adjustment effectively reducing the portion of the Exercise Price allocable to each Share below the par value per share of the Common Stock issuable upon exercise of the Warrants, the Company will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Company may validly and legally issue fully paid and nonassessable Common Stock upon exercise of the Warrants.

4.6. Independent Public Accountants. The Company may retain a firm of independent public accountants of recognized national standing (which may be any such firm regularly employed by the Company) to make any computation required under this Section 4, and a certificate signed by the firm shall be conclusive evidence of the correctness of any computation made under this Section 4.

4.7. Treasury Stock. For purposes of this Section 4, shares of Common Stock owned or held at any relevant time by, or for the account of, the Company, in its treasury or otherwise, shall not be deemed to be outstanding for purposes of the calculations and adjustments described.

SECTION 5. NOTICE TO HOLDERS

If, prior to the expiration of this Warrant either by its terms or by its exercise in full, any of the following shall occur:

(a) the Company shall declare a dividend or authorize any other distribution on its Common Stock; or

(b) the Company shall authorize the granting to the shareholders of its Common Stock of rights to subscribe for or purchase any securities or any other similar rights; or

(c) any reclassification, reorganization or similar change of the Common Stock, or any consolidation or merger to which the Company is a

party, or the sale, lease, or exchange of any significant portion of the assets of the Company; or

(d) the voluntary or involuntary dissolution, liquidation or winding up of the Company; or

(e) any purchase, retirement or redemption by the Company of its Common Stock;

then, and in any such case, the Company shall deliver to the Holder or Holders written notice thereof at least 30 days prior to the earliest applicable date specified below with respect to which notice is to be given, which notice shall state the following:

(x) the date on which a record is to be taken for the purpose of the dividend, distribution or rights, or, if a record is not to be taken, the date as of which the holders of Common Stock of record entitled to the dividend, distribution or rights will be determined;

(y) the date on which any reclassification, reorganization, consolidation, merger, sale, transfer, dissolution, liquidation, winding up or purchase, retirement or redemption is expected to become effective, and the date, if any, as of which the Company's holders of Common Stock of record shall be entitled to exchange their Common Stock for securities or other property deliverable upon the reclassification, reorganization, consolidation, merger, sale, transfer, dissolution, liquidation, winding up, purchase, retirement or redemption; and

(z) if any matters referred to in the foregoing clauses (x) and (y) are to be voted upon by holders of Common Stock, the date as of which the shareholders entitled to vote will be determined.

SECTION 6. OFFICERS' CERTIFICATE

Whenever the Exercise Price or the aggregate number of Warrant Shares purchasable pursuant to this Warrant shall be adjusted as required by the provisions of Section 4 above, the Company shall promptly file with its Secretary or an Assistant Secretary at its principal office, and with its transfer agent, if any, an officers' certificate executed by the Company's President and Secretary or Assistant Secretary, describing the adjustment and setting forth, in reasonable detail, the facts requiring the adjustment and the basis for and calculation of the adjustment in accordance with the provisions of this Warrant. Each such officers' certificate shall be made available to the Holder or Holders of this Warrant for inspection at all reasonable times, and the Company, after each adjustment, shall promptly deliver a copy of the officers' certificate relating to that adjustment to the Holder or Holders of this Warrant. The officers' certificate described in this Section 6 shall be deemed to be conclusive as to the correctness of the adjustment reflected therein if, and only if, no Holder of this Warrant delivers written notice to the Company of an objection to the adjustment within 30 days after the officers' certificate is delivered to the Holder or Holders of this Warrant. The Company

will make its books and records available for inspection and copying during normal business hours by the Holder so as to permit a determination as to the correctness of the adjustment. Failure to prepare or provide the officers' certificate shall not modify the parties' rights hereunder.

SECTION 7. RESERVATION OF WARRANT SHARES

There has been reserved, and the Company shall at all times keep reserved so long as this Warrant remains outstanding, out of its authorized and unissued Common Stock, a number of shares of Common Stock sufficient to support the full exercise hereof. Every transfer agent for the Common Stock and other securities of the Company issuable upon the exercise of this Warrant will be irrevocably authorized and directed at all times to reserve a number of authorized shares and other securities as shall be requisite for such purpose. The Company will keep a copy of this Warrant on file with every transfer agent for the Common Stock and other securities of the Company issuable upon the exercise of this Warrant. The Company will supply every transfer agent with duly executed stock and other certificates, as appropriate, for such purpose and will provide or otherwise make available any cash which may be payable as provided in Section 11 hereof.

SECTION 8. RESTRICTIONS ON TRANSFER.

The Warrantholder agrees that prior to making any disposition of this Warrant or the Warrant Shares, the Warrantholder shall give written notice to the Company describing briefly the manner in which any proposed disposition is to be made; and no disposition shall be made if the Company has notified the Warrantholder that, in the opinion of counsel reasonably satisfactory to the Warrantholder, a registration statement or other notification or post-effective amendment thereto (hereinafter collectively a "Registration Statement") under the Act is required with respect to the disposition and no Registration Statement has been filed by the Company with, and declared effective, if necessary, by, the Commission.

SECTION 9. PAYMENT OF TAXES

The Company will pay all documentary stamp taxes, if any, attributable to the initial issuance of this Warrant or the shares of Common Stock comprising the Warrant Shares; provided, however, the Company shall not be required to pay any tax that may be payable in respect of any transfer of the Warrants or Warrant Shares.

SECTION 10. TRANSFER TO COMPLY WITH THE SECURITIES ACT OF 1933

This Warrant, the Warrant Shares, and any other securities issued or issuable upon exercise of this Warrant, may not be offered, sold or transferred, in whole or in part, except in compliance with the Act, and except in compliance with all applicable state securities laws. The Company may cause substantially the following legends, or their equivalents, to be set forth on each certificate representing the Warrant Shares and any other security issued or issuable upon exercise of this Warrant, not theretofore distributed to the public or sold to

underwriters, as defined by the Act, for distribution to the public:

(a) "THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 OR ANY STATE SECURITIES LAWS AND MAY NOT BE SOLD, EXCHANGED, HYPOTHECATED OR TRANSFERRED IN ANY MANNER EXCEPT IN COMPLIANCE WITH SUCH LAWS AND THE WARRANT PURSUANT TO WHICH THEY WERE ISSUED."

(b) Any legend required by applicable state securities laws.

Any certificate issued at any time in exchange or substitution for any certificate bearing such legends (except a new certificate issued upon completion of a public distribution pursuant to a registration statement under the Securities Act of 1933, as amended (the "Act"), or the securities represented thereby) shall also bear the above legends unless, in the opinion of the Company's counsel, the securities represented thereby need no longer be subject to such restrictions.

SECTION 11. FRACTIONAL SHARES

No fractional shares or scrip representing fractional shares shall be issued upon the exercise of all or any part of this Warrant. With respect to any fraction of a share of any security called for upon any exercise of this Warrant, the Company shall pay to the Holder an amount in money equal to that fraction multiplied by the Current Market Price of that share.

SECTION 12. NO RIGHTS AS STOCKHOLDER; NOTICES TO WARRANTHOLDER

Nothing contained in this Warrant shall be construed as conferring upon the Warrantholder or its transferees any rights as a stockholder of the Company, including the right to vote, receive dividends, consent or receive notices as a stockholder in respect to any meeting of stockholders for the election of directors of the Company or any other matter. The Company covenants, however, that for so long as this Warrant is at least partially unexercised, it will furnish any Holder of this Warrant with copies of all reports and communications furnished to the shareholders of the Company. In addition, if at any time prior to the expiration of the Warrants and prior to their exercise, any one or more of the following events shall occur:

(a) any action which would require an adjustment pursuant to Section 4.1 (except subsections 4.1(e) and 4.1(h) or 4.4; or

(b) a dissolution, liquidation, or winding up of the Company (other than in connection with a consolidation, merger, or sale of its property, assets, and business as an entirety or substantially as an entirety) shall be proposed:

then the Company shall give notice in writing of the event to the Warrantholder, as provided in Section 15 hereof, at least 20 days prior to the date fixed as a record date or the date of closing the transfer books for the determination of the stockholders entitled to any relevant dividend, distribution, subscription

rights or other rights or for the determination of stockholders entitled to vote on such proposed dissolution, liquidation, or winding up. The notice shall specify the record date or the date of closing the transfer books, as the case may be. Failure to mail or receive notice or any defect therein shall not affect the validity of any action taken with respect thereto.

SECTION 13. CHARGES DUE UPON EXERCISE

The Company shall pay any and all issue or transfer taxes, including, but not limited to, all federal or state taxes, that may be payable with respect to the transfer of this Warrant or the issue or delivery of Warrant Shares upon the exercise of this Warrant.

SECTION 14. WARRANT SHARES TO BE FULLY PAID

The Company covenants that all Warrant Shares that may be issued and delivered to a Holder of this Warrant upon the exercise of this Warrant and payment of the Exercise Price will be, upon such delivery, validly and duly issued, fully paid and nonassessable.

SECTION 15. NOTICES

Any notice pursuant to this Warrant by the Company or by a Warrantholder or a holder of Shares shall be in writing and shall be deemed to have been duly given if delivered or mailed by certified mail, return receipt requested:

(i) If to a Warrantholder or a holder of Shares, addressed to the address set forth above.

(ii) If to the Company addressed to it at 414 North Orleans Street, Suite 510, Chicago, Illinois 60610, Attention: President.

Each party may from time to time change the address to which notices to it are to be delivered or mailed hereunder by notice in accordance herewith to the other party.

SECTION 16. MERGER OR CONSOLIDATION OF THE COMPANY

The Company will not merge or consolidate with or into any other corporation or sell all or substantially all of its property to another corporation, unless in connection therewith, the Company complies with the provisions of Section 4.4 hereof.

SECTION 17. APPLICABLE LAW

This Warrant shall be governed by and construed in accordance with the internal laws (as opposed to conflicts of law provisions) of the State of Illinois, and courts located in Illinois shall have exclusive jurisdiction over all disputes arising hereunder.

SECTION 18. ACCEPTANCE OF TERMS; SUCCESSORS.

By its acceptance of this Warrant, the Holder accepts and agrees to comply with all of the terms and provisions hereof. All the covenants and provisions of this Warrant by or for the benefit of the Company or the Holder shall bind and inure to the benefit of their respective successors and assigns hereunder.

SECTION 19. MISCELLANEOUS PROVISIONS

(a) Subject to the terms and conditions contained herein, this Warrant shall be binding on the Company and its successors and shall inure to the benefit of the original Holder, its successors and assigns and all holders of Warrant Shares and the exercise of this Warrant in full shall not terminate the provisions of this Warrant as it relates to holders of Warrant Shares.

(b) If the Company fails to perform any of its obligations hereunder, it shall be liable to the Holder for all damages, costs and expenses resulting from the failure, including, but not limited to, all reasonable attorney's fees and disbursements.

(c) This Warrant cannot be changed or terminated or any performance or condition waived in whole or in part except by an agreement in writing signed by the party against whom enforcement of the change, termination or waiver is sought; provided, however, that any provisions hereof may be amended, waived, discharged or terminated upon the written consent of the Company and the Company.

(d) If any provision of this Warrant shall be held to be invalid, illegal or unenforceable, the provision shall be severed, enforced to the extent possible, or modified in such a way as to make it enforceable, and the invalidity, illegality or unenforceability shall not affect the remainder of this Warrant.

(e) The Company agrees to execute any further agreements, conveyances, certificates and other documents as may be reasonably requested by the Holder to effectuate the intent and provisions of this Warrant.

(f) Paragraph headings used in this Warrant are for convenience only and shall not be taken or construed to define or limit any of the terms or provisions of this Warrant. Unless otherwise provided, or unless the context shall otherwise require, the use of the singular shall include the plural and the use of any gender shall include all genders.

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed and issued as of the Issue Date first set forth above.

MOLECULAR DIAGNOSTICS, INC.

By:

Denis O'Donnell
Chief Executive Officer

PURCHASE FORM

Dated _____, ____

The undersigned hereby irrevocably elects to exercise this Warrant to the extent of purchasing _____ shares of the Common Stock of Molecular Diagnostics, Inc. and tenders payment of the exercise price thereof.

INSTRUCTIONS FOR REGISTRATION OF STOCK

Name _____
(Please type or print in block letters)

Address _____

.....
ASSIGNMENT FORM

FOR VALUE RECEIVED, _____, hereby sells, assigns and transfers unto

Name _____
(Please type or print in block letters)

Address _____

the right to purchase _____ shares Common Stock of Molecular Diagnostics, Inc. (the "Company") represented by this Warrant and does hereby irrevocably constitute and appoint the Company as its attorney-in-fact, to transfer the same on the books of the Company with full power of substitution in the premises.

Signature _____

Dated _____

NOTICE: THE SIGNATURE ON THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS IT APPEARS UPON THE FACE OF THIS WARRANT IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATEVER.

SUBSCRIPTION AGREEMENT

MOLECULAR DIAGNOSTICS, INC.

Molecular Diagnostics, Inc. (the "Company") has authorized for sale 60 Units, each comprising one \$25,000 principal amount, 10% secured convertible debentures ("Notes") and warrants ("Warrants") to purchase 6,250 shares of the Company's \$.001 par value common stock ("Common Stock"). The minimum investment is \$25,000.

The undersigned hereby subscribes for _____ Units (\$_____) (the "Subscription Price").

The Common Stock included in the Unit or issuable upon conversion of the Note shall be registered for public sale with the Securities and Exchange Commission (the "Commission"), in accordance with the terms set forth in the registration rights agreement (the "Registration Agreement"), entered into between the holder of the Note (the "Holder") and the Company of even date.

The undersigned agrees to pay the aggregate Subscription Price for the Unit being purchased hereunder. The entire purchase price is due and payable upon the submission of this Subscription Agreement

The Company has the right to reject this subscription in whole or in part.

The undersigned acknowledges that the Unit being purchased hereunder and its component securities will not be registered under the Securities Act of 1933 (the "Act"), or the securities laws of any state (the "State Acts"), in reliance upon an exemption from the registration requirements of the Act and the State Acts; that absent an exemption from registration contained in the Act and the State Acts, the Unit, Note and Common Stock would require registration; and that the Company's reliance upon such exemptions is based, in material part, upon the undersigned's representations, warranties, and agreements contained in this Subscription Agreement and the Registration Rights Agreement (collectively, the "Subscription Documents").

1. The undersigned represents, warrants, and agrees as follows:

a. The undersigned agrees that this Subscription Agreement is and shall be irrevocable.

b. The undersigned has carefully read the Form of Secured Convertible Promissory Note, the Form of Warrant, and the Form of General Security Agreement, a list of litigation in which the Company is involved, and the unaudited financial statements of the Company dated November 21, 2003, each of which has been provided to the undersigned; and the following filings

made by the Company with the Securities and Exchange Commission ("SEC"), all of which are available on the Internet at www.sec.gov, including the Form 10-K Annual Report filed with the SEC on July 21, 2003, the Form 10-QSB Quarterly Report filed with the SEC on August 1, 2003, the Form 10-QSB Quarterly Report filed with the SEC on August 13, 2003, the Form 10-QSB Quarterly Report filed with the SEC on November 19, 2003, the Form 8-K Current Report filed with the SEC on November 21, 2003 and the Form 10-QSB/A Quarterly Report filed with the SEC on November 21, 2003 (collectively, the "Disclosure Materials") and of which the undersigned acknowledges will obtain from the SEC's web site at www.sec.gov. The undersigned has been given the opportunity to ask questions of, and receive answers from, the Company concerning the terms and conditions of this Offering and the Disclosure Materials and to obtain such additional information, to the extent the Company possesses such information or can acquire it without unreasonable effort or expense, necessary to verify the accuracy of same as the undersigned reasonably desires in order to evaluate the investment. The undersigned understands the Disclosure Materials, and the undersigned has had the opportunity to discuss any questions regarding any of the Disclosure Materials with his counsel or other advisor. Notwithstanding the foregoing, the only information upon which the undersigned has relied is that set forth in the Disclosure Materials. The undersigned has received no representations or warranties from the Company, its employees, agents or attorneys, in making this investment decision other than as set forth in the Disclosure Materials. The undersigned does not desire to receive any further information.

c. The undersigned is aware that the purchase of the Unit is a speculative investment involving a high degree of risk, that there is no guarantee that the undersigned will realize any gain from this investment, and that the undersigned could lose the total amount of this investment.

d. The undersigned understands that no federal or state agency has made any finding or determination regarding the fairness of the Unit for investment, or any recommendation or endorsement of the Unit.

e. The undersigned is purchasing the Units for the undersigned's own account, with the intention of holding the Units with no present intention of dividing or allowing others to participate in this investment or of reselling or otherwise participating, directly or indirectly, in a distribution of the Units or the securities underlying the Units, and shall not make any sale, transfer, or pledge thereof without registration under the Act and any applicable securities laws of any state or unless an exemption from registration is available under those laws.

f. The undersigned represents that if an individual, he has adequate means of providing for his or her current needs and personal and family contingencies and has no need for liquidity in this investment in the Units. The undersigned has no reason to anticipate any material change in his or her personal financial condition for the foreseeable future.

g. The undersigned is financially able to bear the economic risk of

this investment, including the ability to hold the Units indefinitely, or to afford a complete loss of his investment in the Units.

h. The undersigned represents that the undersigned's overall commitment to investments which are not readily marketable is not disproportionate to the undersigned's net worth, and the undersigned's investment in the Units will not cause such overall commitment to become excessive. The undersigned understands that the statutory basis on which the Units are being sold to the undersigned and others would not be available if the undersigned's present intention were to hold the Units for a fixed period or until the occurrence of a certain event. The undersigned realizes that in the view of the Commission, a purchase now with a present intent to resell by reason of a foreseeable specific contingency or any anticipated change in the market value, or in the condition of the Company, or that of the industry in which the business of the Company is engaged or in connection with a contemplated liquidation, or settlement of any loan obtained by the undersigned for the acquisition of the Units, and for which such Units may be pledged as security or as donations to religious or charitable institutions for the purpose of securing a deduction on an income tax return, would, in fact, represent a purchase with an intent inconsistent with the undersigned's representations to the Company, and the Commission would then regard such sale as a sale for which the exemption from registration is not available. The undersigned will not pledge, transfer or assign this Subscription Agreement.

i. The undersigned represents that the funds provided for this investment are either separate property of the undersigned, community property over which the undersigned has the right of control, or are otherwise funds as to which the undersigned has the sole right of management. The undersigned is purchasing the Units with the funds of the undersigned and not with the funds of any other person, firm, or entity and is acquiring the Units for the undersigned's account. No person other than the undersigned has any beneficial interest in the Units being purchased hereunder.

j. The address shown under the undersigned's signature at the end of this Subscription Agreement is the undersigned's principal residence if he or she is an individual, or its principal business address if it is a corporation or other entity.

l. The undersigned has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of an investment in the Units.

m. The undersigned acknowledges that the certificates for the securities comprising the Unit which the undersigned will receive will contain a legend substantially as follows:

THE SECURITIES WHICH ARE REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). THE SECURITIES HAVE BEEN ACQUIRED FOR

INVESTMENT PURPOSES ONLY AND NOT WITH A VIEW TO DISTRIBUTION OR RESALE, AND MAY NOT BE SOLD, TRANSFERRED, MADE SUBJECT TO A SECURITY INTEREST, PLEDGED, HYPOTHECATED OR OTHERWISE DISPOSED OF UNLESS AND UNTIL REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "ACT"), AS AMENDED, OR EVIDENCE SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER SUCH ACT.

The undersigned further acknowledges that a stop transfer order will be placed upon the certificates for the securities in accordance with the Act. The undersigned further acknowledges that the Company is under no obligation to aid the undersigned in obtaining any exemption from registration requirements.

n. The undersigned represents that he is an "accredited investor" as that term is defined under the Act.

2. The undersigned expressly acknowledges and agrees that the Company is relying upon the undersigned's representations contained in the Subscription Documents.

3. The Company has been duly and validly incorporated and is validly existing and in good standing as a corporation under the laws of the State of Delaware. The Company represents that it has all requisite power and authority, and all necessary authorizations, approvals and orders required as of the date hereof to own its properties and conduct its business as described in the Disclosure Materials and to enter into this Subscription Agreement and to be bound by the provisions and conditions hereof; provided, however, the Company must file a Certificate of Amendment to the Certificate of Incorporation ("Certificate of Amendment") with the State of Delaware increasing its authorized capital to enable the Company to reserve and issue all of the shares of common stock issuable in connection with the sale of the Units.

4. Intentionally Left Blank.

5. Except as otherwise specifically provided for hereunder, no party shall be deemed to have waived any of his or its rights hereunder or under any other agreement, instrument or papers signed by any of them with respect to the subject matter hereof unless such waiver is in writing and signed by the party waiving said right. Except as otherwise specifically provided for hereunder, no delay or omission by any party in exercising any right with respect to the subject matter hereof shall operate as a waiver of such right or of any such other right. A waiver on any one occasion with respect to the subject matter hereof shall not be construed as a bar to, or waiver of, any right or remedy on any future occasion. All rights and remedies with respect to the subject matter hereof, whether evidenced hereby or by any other agreement, instrument, or paper, will be cumulative, and may be exercised separately or concurrently.

6. The parties have not made any representations or warranties with respect to the subject matter hereof not set forth herein, and this Subscription Agreement, together with any instruments or documents executed simultaneously herewith in connection with this offering, constitutes the entire agreement between them with respect to the subject matter hereof. All understandings and

agreements heretofore had between the parties with respect to the subject matter hereof are merged in this Subscription Agreement and any such instruments and documents, which alone fully and completely expresses their agreement.

7. This Subscription Agreement may not be changed, modified, extended, terminated or discharged orally, but only by an agreement in writing, which is signed by all of the parties to this Subscription Agreement.

8. The parties agree to execute any and all such other further instruments and documents, and to take any and all such further actions reasonably required to effectuate this Subscription Agreement and the intent and purposes hereof.

9. This Subscription Agreement shall be governed by and construed in accordance with the laws of the State of Illinois and the undersigned hereby consents to the jurisdiction of the courts of the State of Illinois and the United States District Courts situated therein.

[Intentionally Left Blank]

EXECUTION BY SUBSCRIBER

\$

Exact Name in Which Title is to be Held

(Signature)

Name (Please Print)

Residence: Number and Street

City

State

Zip Code

Social Security Number or Tax Identification Number

Accepted this _____ day of _____, 2004, on behalf of Molecular
Diagnostics, Inc.

By:

Denis M. O'Donnell, CEO

FORM OF NOTE

EXHIBIT 4.4

THIS NOTE HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "1933 ACT"), OR UNDER THE PROVISIONS OF ANY APPLICABLE STATE SECURITIES LAWS, BUT HAS BEEN ACQUIRED BY THE REGISTERED HOLDER HEREOF FOR PURPOSES OF INVESTMENT AND IN RELIANCE ON STATUTORY EXEMPTIONS UNDER THE 1933 ACT, AND UNDER ANY APPLICABLE STATE SECURITIES LAWS. THIS NOTE MAY NOT BE SOLD, PLEDGED, TRANSFERRED OR ASSIGNED EXCEPT IN A TRANSACTION WHICH IS EXEMPT UNDER PROVISIONS OF THE 1933 ACT AND ANY APPLICABLE STATE SECURITIES LAWS OR PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT; AND IN THE CASE OF AN EXEMPTION, ONLY IF THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT SUCH TRANSACTION DOES NOT REQUIRE REGISTRATION OF THIS NOTE.

MOLECULAR DIAGNOSTICS, INC.

_____, 2004

Chicago, Illinois

\$.00

10% CONVERTIBLE PROMISSORY NOTE

Molecular Diagnostics, Inc., a Delaware corporation (the "Company"), for value received, hereby promises to pay to _____, or registered assigns (the "Holder") on December 31, 2008 (the "Maturity Date"), at the Holder's address on the books of the Company (the "Holder's Address"), the principal sum of _____ Thousand Dollars (\$_____,000) 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 on the outstanding principal sum hereof at the rate of ten percent (10%) per annum (the "Note"). Principal shall be payable on the Maturity Date in like coin or currency to the Holder hereof at the office of the Company as hereinafter set forth, provided that any payment otherwise due on a Saturday, Sunday or legal Bank holiday may be paid on the following business day. Interest accrued through December 31, 2006 shall be payable on a semi-annual basis on June 30 and December 31 in shares of common stock of the Company at the moving average last sales price of the Company's common stock for the 20 trading days immediately preceding the interest payment date. Interest accrued from January 31, 2007 through December 31, 2008 shall be payable on a semi-annual basis on June 30 and December 31 in like coin or currency to the Holder hereof at the Holder's Address, provided that any payment otherwise due on a Saturday, Sunday or legal Bank holiday may be paid on the following business day. In the event that for any reason whatsoever any interest or other consideration payable with respect to this Note shall be deemed to be usurious by a court of competent jurisdiction under the laws of the State of Illinois or the laws of any other state governing the repayment hereof, then so much of such interest or other consideration as shall be deemed to be usurious shall be held by the holder as security for the repayment of the principal amount hereof and shall otherwise be waived. This

Note is one of a series of Notes aggregating up to \$4,000,000 in principal. Any conversion of this Note is subject to filing the Certificate of Amendment as set forth in Section 3 of the Subscription Agreement of even date herewith.

1. TRANSFERS OF NOTE TO COMPLY WITH THE 1933 ACT

The Holder agrees that this Note may not be sold, transferred, pledged, hypothecated or otherwise disposed of except as follows: (1) to a person whom the Note may legally be transferred without registration and without delivery of a current prospectus under the 1933 Act with respect thereto and then only against receipt of an agreement of such person to comply with the provisions of this Section 1 with respect to any resale or other disposition of the Note; or (2) to any person upon delivery of a prospectus then meeting the requirements of the 1933 Act relating to such securities and the offering thereof for such sale or disposition, and thereafter to all successive assignees.

2. PREPAYMENT; AUTOMATIC CONVERSION; CONVERSION

The principal amount of this Note may be prepaid by the Company, in whole or in part without premium or penalty, at any time. Upon any prepayment of the entire principal amount of this Note, all accrued, but unpaid interest shall be paid to the Holder on the date of prepayment.

At any time prior to or at the time of repayment of this Note by the Company, the Holder may elect to convert some or all of the principal and interest owing on this Note into shares of the Company's common stock, subject to the restrictions contained herein. The conversion rate shall equal the amount to be converted, divided by \$.10 per share. Such election to convert shall be evidenced by completion of the conversion notice attached hereto and delivery of such notice to the Company. The Holder's right to convert the obligations due under this Note to common stock shall supercede the Company's right to repay such obligations in cash, subject to the restrictions contained herein.

At anytime prior to the Maturity Date, this Note is automatically converted into shares of common stock of the Company in the event that (i) if the closing sales price of the Company's common stock is equal to or in excess of \$.30 for a period of twenty (20) consecutive trading days; (ii) the daily average trading volume for those twenty (20) days is equal to or in excess of 250,000; (iii) the Common Stock underlying the Notes and Warrants is registered for resale under the 1933 Act; (iv) the Company has sufficient shares of Common Stock authorized to issue for the converted notes; and (v) Suzanne Gombrich's secured convertible promissory note has been converted to equity or paid in full.

In the event the Company intends to prepay any or all of the outstanding principal or interest on this Note, the Company must provide written notice to the Holder at least ten (10) days prior to the proposed prepayment date ("Prepayment Date"). If the Holder wishes to convert any or all of the outstanding principal or interest on this Note rather than receiving payment in cash, the Holder must notify the Company no later than five (5) days prior to

the Prepayment Date by delivering to the Company a completed copy of the conversion notice attached hereto. If the Holder wishes to convert any or all of the outstanding principal or interest on this Note prior to the Maturity Date, rather than receiving payment in cash, the Holder must notify the Company no later than five (5) days prior to the Maturity Date by delivering to the Company a completed copy of the conversion notice attached hereto.

In the event the Holder elects to convert a portion of the principal or interest on this Note, or the Company prepays any portion of the principal or interest on this Note, the Holder shall deliver this Note to the Company and the Company shall issue a new Note to the Holder evidencing the reduction of principal or interest.

3. SECURITY. This Note is subject to a General Security Agreement of even date between the Company and the Holder.

4. COVENANTS OF COMPANY

The Company covenants and agrees that, so long as any principal of, or interest on, this Note shall remain unpaid, unless the Holder shall otherwise consent in writing, it will comply with the following terms:

(a) REPORTING REQUIREMENTS. The Company will furnish to the Holder:

(i) as soon as possible, and in any event within ten (10) days after obtaining knowledge of the occurrence of (A) an "Event of Default," as hereinafter defined, (B) an event which, with the giving of notice or the lapse of time or both, would constitute an Event of Default, or (C) a material adverse change in the condition or operations, financial or otherwise, of the Company, taken as whole, the written statement of the Chief Executive Officer or the Chief Financial Officer of the Company, setting forth the details of such Event of Default, event or material adverse change and the action which the Company proposes to take with respect thereto;

(ii) promptly after the sending or filing thereof, copies of all financial statements, reports, certificates of its Chief Executive Officer, Chief Financial Officer or accountants and other information which the Company or any subsidiary sends to any holders (other than the Notes) of its securities;

(iii) promptly after the commencement thereof, notice of each action, suit or proceeding before any court or other governmental authority or other regulatory body or any arbitrator as to which there is a reasonable possibility of a determination that would (A) materially impact the ability of the Company or any subsidiary to conduct its business, (B) materially and adversely affect the business, operations or financial condition of the Company taken as a whole, or (C) impair the validity or enforceability of the Notes or the ability of the Company to perform its obligations under the Notes.

(b) COMPLIANCE WITH LAWS. The Company will comply, in all material respects with all applicable laws, rules, regulations and orders, except to the extent that noncompliance would not have a material adverse effect upon the

business, operations or financial condition of the Company taken as a whole.

(c) PRESERVATION OF EXISTENCE. The Company will maintain and preserve, and cause each subsidiary, if any, to maintain and preserve, its existence, and become or remain duly qualified and in good standing in each jurisdiction in which the failure to be so qualified would have a material adverse effect on the business, operations or financial condition of the Company, taken as a whole.

(d) MAINTENANCE OF PROPERTIES. The Company will maintain and preserve, all of its properties which are necessary in the proper conduct of its business in good working order and condition, ordinary wear and tear excepted, and comply, at all times with the provisions of all leases to which it is a party as lessee or under which it occupies property, so as to prevent any forfeiture or material loss thereof or thereunder.

(e) MAINTENANCE OF INSURANCE. The Company will maintain, with responsible and reputable insurers, insurance with respect to its properties and business, in such amounts and covering such risks, as is carried generally in accordance with sound business practice by companies in similar businesses in the same localities in which the Company is situated.

(f) KEEPING OF RECORDS AND BOOKS OF ACCOUNT. The Company will keep adequate records and books of account, with complete entries made in accordance with generally accepted accounting principles, reflecting all of its financial and other business transactions.

(g) COMPLIANCE WITH THE SECURITIES EXCHANGE ACT OF 1934. The Company shall comply in all respects with the requirements of the Securities Exchange Act of 1934, including the filing of all reports due thereunder.

(h) RESERVATION OF COMMON STOCK. Subject to filing the Certificate of Amendment as set forth in Section 3 of the Subscription Agreement of even date herewith, the Company further covenants and agrees that the Company will at all times have authorized and reserved, free from preemptive rights, a sufficient number of shares of its common stock to provide for the conversion of this Note in full.

5. EVENTS OF DEFAULT AND REMEDIES

(a) Any one or more of the following events which shall have occurred and be continuing shall constitute an event of default ("Event of Default"):

(i) Default in the payment of interest upon this Note, as and when the same shall become due; or

(ii) Default in the payment of the principal of this Note, as and when the same shall become due; or

(iii) The Company shall fail to perform or observe any

affirmative covenant contained in this Note or the subscription agreement executed by the Company and the Holder as of the date hereof and such Default, if capable of being remedied, shall not have been remedied ten (10) days after written notice thereof shall have been given by the Holder to the Company; or

(iv) The Company or any subsidiary (A) shall institute any proceeding or voluntary case seeking to adjudicate it bankrupt or insolvent, or seeking dissolution, liquidation, winding up, reorganization, arrangement, adjustment, protection, relief or composition of it or its debts under any law relating to bankruptcy, insolvency or reorganization or relief of debtors, or seeking the entry of any order for relief or the appointment of a receiver, trustee, custodian or other similar official for such the Company or any subsidiary or for any substantial part of its property, or shall consent to the commencement against it of such a proceeding or case, or shall file an answer in any such case or proceeding commenced against it consenting to or acquiescing in the commencement of such case or proceeding, or shall consent to or acquiesce in the appointment of such a receiver, trustee, custodian or similar official; (B) shall be unable to pay its debts as such debts become due, or shall admit in writing its inability to apply its debts generally; (C) shall make a general assignment for the benefit of creditors; or (D) shall take any action to authorize or effect any of the actions set forth above in this subsection 3 (iv); or

(v) Any proceeding shall be instituted against the Company seeking to adjudicate it a bankrupt or insolvent, or seeking dissolution, liquidation, winding up, reorganization, arrangement, adjustment, protection, relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian or other similar official for the Company or for any substantial part of its property, and either such proceeding shall not have been dismissed or shall not have been stayed for a period of sixty (60) days or any of the actions sought in such proceeding (including, without limitation, the entry of any order for relief against it or the appointment of a receiver, trustee, custodian or other similar official for it or for any substantial part of its property) shall occur; or

(vi) One or more final judgments or orders for the payment of money in excess of \$100,000 in the aggregate shall be rendered against the Company, and either (A) enforcement proceedings shall have been commenced by any creditor upon any such judgment or order, or (B) there shall be any period of thirty (30) days during which enforcement of any such judgment or order shall not be discharged, stayed or fully satisfied.

(b) If an Event of Default described above has occurred, then the Holder may, without further notice to the Company, declare the principal amount of this Note at the time outstanding, together with accrued unpaid interest thereon, and all other amounts payable under this Note to be forthwith due and payable, whereupon such principal, interest and all such amounts shall become and be forthwith due and payable.

(c) The Company covenants that in case the principal of, and accrued interest on, the Note becomes due and payable by declaration or otherwise, then

the Company will pay in cash to the Holder of this Note, the whole amount that then shall have become due and payable on this Note for principal or interest, as the case may be, and in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including reasonable fees and disbursements of the Holder's legal counsel. In case the Company shall fail forthwith to pay such amount, the Holder may commence an action or proceeding 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 against Company or other obligor upon this Note, wherever situated, the monies adjudicated or decreed to be payable.

6. MISCELLANEOUS

(a) This Note has been issued by the Company pursuant to authorization of the Board of Directors of the Company.

(b) The Company may consider and treat the entity in whose name this Note shall be registered as the absolute owner thereof for all purposes whatsoever (whether or not this Note shall be overdue) and the Company shall not be affected by any notice to the contrary. Subject to the limitations herein stated, the registered owner of this Note shall have the right to transfer this Note by assignment, and the transferee thereof shall, upon his registration as owner of this Note, become vested with all the powers and rights of the transferor. Registration of any new owners shall take place upon presentation of this Note to the Company at its principal offices, together with a duly authenticated assignment. In case of transfer by operation of law, the transferee agrees to notify the Company of such transfer and of his address, and to submit appropriate evidence regarding the transfer so that this Note may be registered in the name of the transferee. This Note is transferable only on the books of the Company by the holder hereof, in person or by attorney, on the surrender hereof, duly endorsed. Communications sent to any registered owner shall be effective as against all holders or transferees of the Note not registered at the time of sending the communication.

(c) Payments of principal and interest shall be made as specified above to the registered owner of this Note. No interest shall be due on this Note for such period of time that may elapse between the maturity of this Note and its presentation for payment.

(d) The Holder shall not, by virtue, hereof, be entitled to any rights of a shareholder in the Company, whether at law or in equity, and the rights of the Holder are limited to those expressed in this Note.

(e) Upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Note, and (in the case of loss, theft or destruction) of reasonably satisfactory indemnification, and upon surrender and cancellation of this Note, if mutilated, the Company shall execute and deliver a new Note of like tenor and date.

(f) This Note shall be construed and enforced in accordance with the laws of the State of Illinois. The Company and the Holder hereby

consent to the jurisdiction of the Courts of the State of Illinois and the United States District Courts situated therein in connection with any action concerning the provisions of this Note instituted by the Holder against the Company.

IN WITNESS WHEREOF, Molecular Diagnostics, Inc. caused this Note to be signed in its name by its Chief Executive Officer.

Molecular Diagnostics, Inc.

By:

Denis M. O'Donnell
Chief Executive Officer

NOTICE OF CONVERSION

(To be executed by the Registered Holder in order to convert the Note)

The undersigned hereby elects to convert \$_____ of the principal and \$_____ of the interest due on the Note issued by Molecular Diagnostics, Inc. into Shares of Common Stock according to the conditions set forth in such Note, as of the date written below. The undersigned further affirms that as of the date hereof, the representations and warranties made by the undersigned in the subscription agreement of even date with the promissory note being converted, are true and correct as if such representations and warranties were made as of the date hereof.

Date of Conversion: _____

Conversion Price: \$_____ per share

Shares To Be Delivered: _____

Signature: _____

Print Name: _____

Address: _____

FORM OF WARRANT

NEITHER THIS WARRANT NOR THE SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE HEREOF HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY APPLICABLE STATE SECURITIES LAW AND NEITHER MAY BE SOLD OR OTHERWISE TRANSFERRED UNTIL (I) A REGISTRATION STATEMENT UNDER SUCH SECURITIES ACT AND SUCH APPLICABLE STATE SECURITIES LAWS SHALL HAVE BECOME EFFECTIVE WITH REGARD THERETO, OR (II) THE COMPANY SHALL HAVE RECEIVED A WRITTEN OPINION OF COUNSEL ACCEPTABLE TO THE COMPANY TO THE EFFECT THAT REGISTRATION UNDER SUCH SECURITIES ACT AND SUCH APPLICABLE STATE SECURITIES LAWS IS NOT REQUIRED IN CONNECTION WITH SUCH PROPOSED TRANSFER.

MOLECULAR DIAGNOSTICS, INC.

COMMON STOCK PURCHASE WARRANT

Warrant _____ shares

Original Issue Date: _____, 2004

THIS CERTIFIES THAT, FOR VALUE RECEIVED, _____ or its registered assigns ("HOLDER") is entitled to purchase, on the terms and conditions hereinafter set forth, at any time or from time to time from the date hereof until 5:00 p.m., Eastern Time, on fifth anniversary of the Original Issue Date set forth above, or if such date is not a day on which the Company (as hereinafter defined) is open for business, then the next succeeding day on which the Company is open for business (such date is the "EXPIRATION DATE"), but not thereafter, to purchase up to _____ (_____) shares of the Common Stock, \$.001 par value (the "COMMON STOCK"), of Molecular Diagnostics, Inc., a Delaware corporation (the "COMPANY"), at a purchase price of fifteen cents (\$0.15) per share (the "EXERCISE PRICE"), such number of shares and Exercise Price being subject to adjustment upon the occurrence of the contingencies set forth in this Warrant. Each share of Common Stock as to which this Warrant is exercisable is a "WARRANT SHARE" and all such shares are collectively referred to as the "WARRANT SHARES."

SECTION 1. EXERCISE OF WARRANT; CONVERSION OF WARRANT.

(a) Subject to filing the Certificate of Amendment as set forth in Section 3 of the Subscription Agreement, of even date herewith, this Warrant may, at the option of Holder, be exercised in whole or in part from time to time by delivery to the Company at its principal office, Attention: President, on or before 5:00 p.m., Eastern Time, on the Expiration Date, (i) a written notice of such Holder's election to exercise this Warrant (the "EXERCISE NOTICE"), which notice

may be in the form of the Notice of Exercise attached hereto, properly executed and completed by Holder or an authorized officer thereof, (ii) payment for the Warrant Shares ("Payment"), as further described in Section 1(b), below, AND (iii) this Warrant (the items specified in (i), (ii), and (iii) are collectively the "EXERCISE MATERIALS").

(b) Payment may be made either in (i) a check payable to the order of the Company, in an amount equal to the product of the Exercise Price MULTIPLIED BY the number of Warrant Shares specified in the Exercise Notice, (ii) by delivery of Warrants, Common Stock and/or Common Stock receivable upon exercise of the Warrants in accordance with Section 1(c) below, or (iii) by a combination of any of the foregoing methods) for the number of Common Shares specified in such form (as such exercise number shall be adjusted to reflect any adjustment in the total number of shares of Common Stock issuable to the holder per the terms of this Warrant) and the holder shall thereupon be entitled to receive the number of duly authorized, validly issued, fully-paid and non-assessable shares of Common Stock (or Other Securities) determined as provided herein.

(c) Notwithstanding any provisions herein to the contrary, if the Fair Market Value of one share of Common Stock is greater than the Purchase Price (at the date of calculation as set forth below), in lieu of exercising this Warrant for cash the holder may elect to receive shares equal to the value (as determined below) of this Warrant (or the portion thereof being cancelled) by surrender of this Warrant at the principal office of the Company together with the properly endorsed Subscription Form in which event the Company shall issue to the holder a number of shares of Common Stock computed using the following formula:

$$X = \frac{Y(A - B)}{A}$$

Where X= the number of shares of Common Stock to be issued to the holder

Y= the number of shares of Common Stock purchasable under the Warrant or, if only a portion of the Warrant is being exercised, the portion of the Warrant being exercised (at the date of such calculation)

A= the Fair Market Value of one share of the Company's Common Stock (at the date of such calculation)

B= Purchase Price (as adjusted to the date of such calculation)

(d) Anything contained herein to the contrary notwithstanding, the Holder, at his option, may exercise the Warrants, in whole or in part, during the Exercise Term by delivering to the Company a confirmation slip issued by a brokerage firm that is a member of the National Association of Securities

Dealers, Inc. with respect to the sale of those number of Warrant Shares for which the Warrants are being exercised, and, in such case, the Company shall deliver certificates representing such Warrant Shares on settlement date at the office of the Company's stock transfer agent against payment for such Warrant Shares by such brokerage firm or its clearing broker, made payable to the Company or made payable to the order of the Holder and endorsed by the Holder to the Company.

(e) As promptly as practicable, and in any event within two (2) business days after its receipt of the Exercise Materials, Company shall execute or cause to be executed and delivered to Holder a certificate or certificates representing the number of Warrant Shares specified in the Exercise Notice, together with cash in lieu of any fraction of a share, and if this Warrant is partially exercised, a new warrant on the same terms for the unexercised balance of the Warrant Shares. The stock certificate or certificates shall be registered in the name of Holder or such other name or names as shall be designated in the Exercise Notice. The date on which the Warrant shall be deemed to have been exercised (the "EFFECTIVE DATE"), and the date the person in whose name any certificate evidencing the Common Stock issued upon the exercise hereof is issued shall be deemed to have become the holder of record of such shares, shall be the date the Company receives the Exercise Materials, irrespective of the date of delivery of a certificate or certificates evidencing the Common Stock issued upon the exercise or conversion hereof, PROVIDED, HOWEVER, that if the Exercise Materials are received by the Company on a date on which the stock transfer books of the Company are closed, the Effective Date shall be the next succeeding date on which the stock transfer books are open. All shares of Common Stock issued upon the exercise or conversion of this Warrant will, upon issuance, be fully paid and nonassessable and free from all taxes, liens, and charges with respect thereto.

SECTION 2. ADJUSTMENTS TO WARRANT SHARES. The number of Warrant Shares issuable upon the exercise hereof shall be subject to adjustment as follows:

(a) In the event the Company is a party to a consolidation, share exchange, or merger, or the sale of all or substantially all of the assets of the Company to, any person, or in the case of any consolidation or merger of another corporation into the Company in which the Company is the surviving corporation, and in which there is a reclassification or change of the shares of Common Stock of the Company, this Warrant shall after such consolidation, share exchange, merger, or sale be exercisable for the kind and number of securities or amount and kind of property of the Company or the corporation or other entity resulting from such share exchange, merger, or consolidation, or to which such sale shall be made, as the case may be (the "SUCCESSOR COMPANY"), to which a holder of the number of shares of Common Stock deliverable upon the exercise (immediately prior to the time of such consolidation, share exchange, merger, or sale) of this Warrant would have been entitled upon such consolidation, share exchange, merger, or sale; and in any such case appropriate adjustments shall be made in the application of the provisions set forth herein with respect to the rights and interests of Holder, such that the provisions set forth herein shall thereafter correspondingly be made applicable, as nearly as may reasonably be,

in relation to the number and kind of securities or the type and amount of property thereafter deliverable upon the exercise of this Warrant. The above provisions shall similarly apply to successive consolidations, share exchanges, mergers, and sales. Any adjustment required by this Section 2 (a) because of a consolidation, share exchange, merger, or sale shall be set forth in an undertaking delivered to Holder and executed by the Successor Company which provides that Holder shall have the right to exercise this Warrant for the kind and number of securities or amount and kind of property of the Successor Company or to which the holder of a number of shares of Common Stock deliverable upon exercise (immediately prior to the time of such consolidation, share exchange, merger, or sale) of this Warrant would have been entitled upon such consolidation, share exchange, merger, or sale. Such undertaking shall also provide for future adjustments to the number of Warrant Shares and the Exercise Price in accordance with the provisions set forth in Section 2 hereof.

(b) In the event the Company should at any time, or from time to time after the Original Issue Date, fix a record date for the effectuation of a stock split or subdivision of the outstanding shares of Common Stock or the determination of holders of Common Stock entitled to receive a dividend or other distribution payable in additional shares of Common Stock, or securities or rights convertible into, or entitling the holder thereof to receive directly or indirectly, additional shares of Common Stock (hereinafter referred to as "COMMON STOCK EQUIVALENTS") without payment of any consideration by such holder for the additional shares of Common Stock or the Common Stock Equivalents (including the additional shares of Common Stock issuable upon exercise or exercise thereof), then, as of such record date (or the date of such dividend, distribution, split, or subdivision if no record date is fixed), the number of Warrant Shares issuable upon the exercise hereof shall be proportionately increased and the Exercise Price shall be appropriately decreased by the same proportion as the increase in the number of outstanding Common Stock Equivalents of the Company resulting from the dividend, distribution, split, or subdivision. Notwithstanding the preceding sentence, no adjustment shall be made to decrease the Exercise Price below \$.001 per Share.

(c) In the event the Company should at any time or from time to time after the Original Issue Date, fix a record date for the effectuation of a reverse stock split, or a transaction having a similar effect on the number of outstanding shares of Common Stock of the Company, then, as of such record date (or the date of such reverse stock split or similar transaction if no record date is fixed), the number of Warrant Shares issuable upon the exercise hereof shall be proportionately decreased and the Exercise Price shall be appropriately increased by the same proportion as the decrease of the number of outstanding Common Stock Equivalents resulting from the reverse stock split or similar transaction.

(d) In the event the Company should at any time or from time to time after the Original Issue Date, fix a record date for a reclassification of its Common Stock, then, as of such record date (or the date of the reclassification if no record date is set), this Warrant shall thereafter be convertible into such number and kind of securities as would have been issuable as the result of such reclassification to a holder of a number of shares of Common Stock equal to

the number of Warrant Shares issuable upon exercise of this Warrant immediately prior to such reclassification, and the Exercise Price shall be unchanged.

(e) The Company will not, by amendment of its Certificate of Incorporation or through reorganization, consolidation, merger, dissolution, issue, or sale of securities, sale of assets or any other voluntary action, void or seek to avoid the observance or performance of any of the terms of the Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate in order to protect the rights of Holder against dilution or other impairment. Without limiting the generality of the foregoing, the Company (x) will not create a par value of any share of stock receivable upon the exercise of the Warrant above the amount payable therefor upon such exercise, and (y) will take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable shares upon the exercise of the Warrant.

(f) When any adjustment is required to be made in the number or kind of shares purchasable upon exercise of the Warrant, or in the Exercise Price, the Company shall promptly notify Holder of such event and of the number of shares of Common Stock or other securities or property thereafter purchasable upon exercise of the Warrants and of the Exercise Price, together with the computation resulting in such adjustment.

(g) The Company covenants and agrees that all Warrant Shares which may be issued will, upon issuance, be validly issued, fully paid, and non-assessable. The Company further covenants and agrees that the Company will at all times have authorized and reserved, free from preemptive rights, a sufficient number of shares of its Common Stock to provide for the exercise of the Warrant in full.

SECTION 3. NO STOCKHOLDER RIGHTS. This Warrant shall not entitle Holder hereof to any voting rights or other rights as a stockholder of the Company.

SECTION 4. TRANSFER OF SECURITIES.

(a) This Warrant and the Warrant Shares and any shares of capital stock received in respect thereof, whether by reason of a stock split or share reclassification thereof, a stock dividend thereon, or otherwise, shall not be transferable except upon compliance with the provisions of the Securities Act of 1933, as amended (the "SECURITIES ACT") and applicable state securities laws with respect to the transfer of such securities. The Holder, by acceptance of this Warrant, agrees to be bound by the provisions of Section 4 hereof and to indemnify and hold harmless the Company against any loss or liability arising from the disposition of this Warrant or the Warrant Shares issuable upon exercise hereof or any interest in either thereof in violation of the provisions of this Warrant.

(b) Each certificate for the Warrant Shares and any shares of capital stock received in respect thereof, whether by reason of a stock split or share

reclassification thereof, a stock dividend thereon or otherwise, and each certificate for any such securities issued to subsequent transferees of any such certificate shall (unless otherwise permitted by the provisions hereof) be stamped or otherwise imprinted with a legend in substantially the following form:

"NEITHER THIS WARRANT NOR THE SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE HEREOF HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY APPLICABLE STATE SECURITIES LAW AND NEITHER MAY BE SOLD OR OTHERWISE TRANSFERRED UNTIL (I) A REGISTRATION STATEMENT UNDER SUCH SECURITIES ACT AND SUCH APPLICABLE STATE SECURITIES LAWS SHALL HAVE BECOME EFFECTIVE WITH REGARD THERETO, OR (II) THE COMPANY SHALL HAVE RECEIVED A WRITTEN OPINION OF COUNSEL ACCEPTABLE TO THE COMPANY TO THE EFFECT THAT REGISTRATION UNDER SUCH SECURITIES ACT AND SUCH APPLICABLE STATE SECURITIES LAWS IS NOT REQUIRED IN CONNECTION WITH SUCH PROPOSED TRANSFER."

SECTION 5. REGISTRATION.

All Warrant Shares are subject to the rights and privileges granted to the participants in the private placement offering pursuant to which this Warrant was issued.

SECTION 5. MISCELLANEOUS.

(a) The terms of this Warrant shall be binding upon and shall inure to the benefit of any successors or permitted assigns of the Company and Holder.

(b) Except as otherwise provided herein, this Warrant and all rights hereunder are transferable by the registered holder hereof in person or by duly authorized attorney on the books of the Company upon surrender of this Warrant, properly endorsed, to the Company. The Company may deem and treat the registered holder of this Warrant at any time as the absolute owner hereof for all purposes and shall not be affected by any notice to the contrary.

(c) Notwithstanding any provision herein to the contrary, Holder may not exercise, sell, transfer, or otherwise assign this Warrant unless the Company is provided with an opinion of counsel satisfactory in form and substance to the Company, to the effect that such exercise, sale, transfer, or assignment would not violate the Securities Act or applicable state securities laws.

(d) This Warrant may be divided into separate warrants covering one share of Common Stock or any whole multiple thereof, for the total number of shares of Common Stock then subject to this Warrant at any time, or from time to time, upon the request of the registered holder of this Warrant and the surrender of the same to the Company for such purpose. Such subdivided Warrants shall be issued promptly by the Company following any such request and shall be of the same form and tenor as this Warrant, except for any requested change in the name of the registered holder stated herein.

(e) Any notices, consents, waivers, or other communications required or permitted to be given under the terms of this Warrant must be in writing and will be deemed to have been delivered (a) upon receipt, when delivered personally, (b) upon receipt, when sent by facsimile, PROVIDED a copy is mailed by U.S. certified mail, return receipt requested, (c) three (3) days after being sent by U.S. certified mail, return receipt requested, or (d) one (1) day after deposit with a nationally recognized overnight delivery service, in each case properly addressed to the party to receive the same.

If to Holder, to the registered address of Holder appearing on the books of the Company. Each party shall provide five (5) days prior written notice to the other party of any change in address, which change shall not be effective until actual receipt thereof

(f) This Warrant shall be construed and enforced in accordance with the laws of the State of Illinois. The Company and the Holder hereby consent to the jurisdiction of the Courts of the State of Illinois and the United States District Courts situated therein in connection with any action concerning the provisions of this Note instituted by the Holder against the Company.

[Signatures on the following page]

SIGNATURE PAGE
TO
COMPANY
COMMON STOCK PURCHASE WARRANT

IN WITNESS WHEREOF, the Company, has caused this Warrant to be executed in its name by its duly authorized officers under seal, and to be dated as of the date first above written.

MOLECULAR DIAGNOSTICS, INC.

By:

Name: Denis M. O'Donnell
Title: Chief Executive Officer

ASSIGNMENT

(To be Executed by the Registered Holder to effect a Transfer of the foregoing Warrant)

FOR VALUE RECEIVED, the undersigned hereby sells, and assigns and transfers unto ----- the foregoing Warrant and the rights represented thereto to purchase shares of Common Stock of MOLECULAR DIAGNOSTICS, INC. in accordance with terms and conditions thereof, and does hereby irrevocably constitute and appoint _____ Attorney to transfer the said Warrant on the books of the Company, with full power of substitution.

Holder:

Address

Dated: _____, 20__

In the presence of:

EXERCISE OR CONVERSION NOTICE

[To be signed only upon exercise of Warrant]

To: MOLECULAR DIAGNOSTICS, INC.

The undersigned Holder of the attached Warrant hereby irrevocably elects to exercise the Warrant for, and to purchase thereunder, _____ shares of Common Stock of MOLECULAR DIAGNOSTICS, INC., issuable upon exercise of said Warrant and hereby surrenders said Warrant.

The undersigned herewith requests that the certificates for such shares be issued in the name of, and delivered to the undersigned, whose address is -----.

If electronic book entry transfer, complete the following:

Account Number: _____

Transaction Code Number:

Dated: _____

Holder:

By:

Name:

Title:

NOTICE

The signature above must correspond to the name as written upon the face of the within Warrant in every particular, without alteration or enlargement or any change whatsoever.

GENERAL SECURITY AGREEMENT

General Security Agreement dated _____, 2004, made by Molecular Diagnostics, Inc. a Delaware corporation ("Debtor") in favor of the parties listed on Schedule B attached hereto (the "Secured Parties").

Debtor hereby agrees in favor of Secured Parties as follows:

1. In consideration for loans made or to be made to Debtor substantially for the benefit of Debtor by Secured Parties, evidenced by the Promissory Notes of Debtor in the principal amounts set forth on Schedule B hereto, payable to the order of Secured Parties (such notes, as amended, modified, supplemented, replaced or substituted from time to time, being herein referred to as the "Notes"), Debtor hereby grants to Secured Parties a continuing security interest in, lien upon and a right of setoff against, and Debtor hereby assigns to Secured Parties, all of Debtor's right, title and interest in and to the Collateral described in Section 2, to secure the full and prompt payment, performance and observance of all present and future indebtedness, obligations, liabilities and agreements of any kind of Debtor to Secured Parties arising under or in connection with the Notes, which is existing now or hereafter (all of the foregoing being herein referred to as the "Obligations").

2. The Collateral is described on Schedule A annexed hereto as part hereof and on any separate schedule(s) identified as Collateral at any time or from time to time furnished by Debtor to Secured Parties (all of which are hereby deemed part of this Security Agreement) and includes claims of Debtor against third parties for loss or damage to or destruction of any Collateral.

3. Debtor hereby warrants, represents, covenants and agrees (as of the date hereof and so long as any Obligation remains outstanding) that: (a) the chief executive office and other places of business of Debtor, the books and records relating to the Collateral (except for such records as are in the possession or control of Secured Parties) and the Collateral are located at the address set forth below and Debtor will not change any of the same, or merge or consolidate with any person or change its name or conduct its business under any trade, assumed or fictitious name, without prior written notice to and consent of Secured Parties; (b) the Collateral is and will be used in the business of Debtor and not for personal, family, household or farming use; (c) the Collateral is now, and at all times will be, owned by Debtor free and clear of all liens, security interests, claims and encumbrances, except as are created by this Security

Agreement and those that are set forth on Schedule C; (d) Debtor will not abandon or assign, sell, lease, transfer or otherwise dispose of, other than in the ordinary course of Debtor's business, nor will Debtor suffer or permit any of the same to occur with respect to, any Collateral, without prior written

notice to and consent of a designated representative of the Secured Parties; (e) Debtor will make payment or will provide for the payment, when due, of all taxes, assessments or contributions or other public or private charges which have been or may be levied or assessed against Debtor, whether with respect to the Collateral, to any wages or salaries paid by Debtor, or otherwise, will deliver to Secured Parties, on demand, certificates or other evidence satisfactory to Secured Parties attesting thereto and shall cause Debtor's subsidiaries to take any such action as described under this section 3(e); (f) Debtor will use the Collateral for lawful purposes only, with all reasonable care and caution and in conformity in all material respects with all applicable laws, ordinances and regulations; (g) Debtor will, at Debtor's sole cost and expense, keep the Collateral in good order, repair, running condition and in substantially the same condition as on the date hereof, reasonable wear and tear excepted, and Debtor will not, without the prior written consent of Secured Parties, alter or remove any identifying symbol or number upon any of the Collateral; (h) Secured Parties shall at all times have free access to and right of inspection of any Collateral and any papers, instruments and records pertaining thereto (and the right to make extracts from and to receive from Debtor originals or true copies of such records, papers and instruments upon request therefor) and Debtor hereby grants to Secured Parties a security interest in all such records, papers and instruments to secure the payment, performance and observance of the Obligations; (i) the Collateral is now and shall remain personal or intangible property, and Debtor will not permit any Collateral to become a fixture without prior written notice to and consent of Secured Parties and without first making all arrangements, and delivering, or causing to be delivered, to Secured Parties all instruments and documents, including, without limitation, waivers and subordination agreements by any landlords or mortgagees, requested by and satisfactory to Secured Parties to preserve and protect the primary security interest granted herein against all persons; (j) Debtor will, at its sole cost and expense, perform all acts and execute all documents requested by Secured Parties from time to time to evidence, perfect, maintain or enforce Secured Parties' first priority security interest granted herein or otherwise in furtherance of the provisions of this Security Agreement; (k) at any time and from time to time, Debtor shall, at its sole cost and expense, execute and deliver to Secured Parties such financing statements pursuant to the Uniform Commercial Code ("UCC"), applications for certificate of title and other papers, documents or instruments as may be requested by Secured Parties in connection with this Security Agreement, and to the extent permitted by applicable law, Debtor hereby authorizes Secured Parties to execute and file at any time and from time to time one or more financing statements or copies thereof or of this Security Agreement with respect to the Collateral signed only by Secured Parties, and Debtor agrees to pay any recording tax or similar tax arising in connection with the filing of any such financing statement and further agrees to pay any additional recording or similar tax which is incurred in connection therewith; (l) Debtor assumes all responsibility and liability arising from the Collateral; (m) in their discretion, Secured Parties may, at any time and from time to time, upon the occurrence and during the continuance of a Default (as hereinafter defined), demand, sue for, collect or receive any money or property at any time payable or receivable on account of or in exchange for, or make any compromise or settlement deemed desirable by Secured Parties with respect to, any Collateral,

and/or extend the time of payment, arrange for payment in installments, or otherwise modify the terms of, or release, any of the Obligations and/or the Collateral, or any obligor, maker, endorser, acceptor, surety or guarantor of, or any Parties to, any of the Obligations or the Collateral, all without notice to or consent by Debtor and without otherwise discharging or affecting the Obligations, the Collateral or the first priority security interest granted herein; (n) in their discretion, Secured Parties may, at any time and from time to time, for the account of Debtor, pay any amount or do any act required of Debtor hereunder and which Debtor fails to do or pay, and any such payment shall be deemed an advance by Secured Parties to Debtor payable on demand together with interest at the highest rate then payable on any of the Obligations; (o) Debtor will promptly pay Secured Parties for any and all sums, costs, and expenses which Secured Parties may pay or incur pursuant to the provisions of this Security Agreement or in perfecting, defending, protecting or enforcing this Security Agreement or the first priority security interest granted herein or in enforcing payment of the Obligations or otherwise in connection with the provisions hereof, including but not limited to all search, filing and recording fees, taxes, fees and expenses for the service and filing of papers, premium on bonds and undertakings, fees of marshals, sheriffs, custodians, auctioneers, court costs, collection charges, travel expenses, and reasonable attorneys' fees, all of which together with interest at the highest rate then payable on any of the Obligations, shall be part of the Obligations and be payable on demand; (p) upon the occurrence and during the continuance of a Default, any proceeds of the Collateral received by Debtor shall not be commingled with other property of Debtor, but shall be segregated, held by Debtor in trust for Secured Parties, and immediately delivered to Secured Parties in the form received, duly endorsed in blank where appropriate to effectuate the provisions hereof, the same to be held by Secured Parties as additional Collateral hereunder or, at Secured Parties' option, to be applied to payment of the Obligations, whether or not due and in any order; (q) in their sole discretion, Secured Parties may, at any time and from time to time, assign, transfer or deliver to any transferee of any Obligations, any Collateral, whereupon Secured Parties shall be fully discharged from all responsibility and the transferee shall be vested with all powers and rights of Secured Parties hereunder with respect thereto, but Secured Parties shall retain all rights and powers with respect to any Collateral not assigned, transferred or delivered; and (r) upon request of Secured Parties, at any time and from time to time, Debtor shall, at its cost and expense, execute and deliver to Secured Parties reports as to the Collateral listing all items thereof, describing the condition of same and setting forth the value thereof (lower of cost or market) all in form and substance reasonably satisfactory to Secured Parties.

4. The term Default as used in this Security Agreement shall mean any event of default, as such term is defined in the Notes.

5. Upon the occurrence and during the continuance of any Default, Secured Parties may, without notice to (except as herein set forth) or demand upon Debtor, declare any Obligations immediately due and payable and Secured Parties shall have the following rights and remedies (to the extent permitted by applicable law) in addition to all rights and remedies of a Secured Parties under the UCC or of Secured Parties under the Obligations, all such rights and

remedies being cumulative, not exclusive and enforceable alternatively, successively or concurrently:

(a) Secured Parties may, at any time and from time to time, with or without judicial process or the aid and assistance of others, (i) enter upon any premises in which any Collateral may be located and, without resistance or interference by Debtor, take possession of the Collateral, (ii) dispose of any part or all of the Collateral on any such premises, (iii) require Debtor to assemble and make available to Secured Parties at the expense of Debtor any part or all of the Collateral at any place and time designated by Secured Parties which is reasonably convenient to both parties, (iv) remove any part or all of the Collateral from any such premises for the purpose of effecting sale or other disposition thereof (and if any of the Collateral consists of motor vehicles, Secured Parties may use Debtor's license plates), and (v) sell, resell, lease, assign and deliver, grant options for or otherwise dispose of any part or all of the Collateral in its then condition or following any commercially reasonable preparation or processing, at public or private sale or proceedings or otherwise, by one or more contracts, in one or more parcels, at the same or different times, with or without having the Collateral at the place of sale or other disposition, for cash and/or credit, and upon any terms, at such place(s) and time(s) and to such person(s) as Secured Parties deems best, all without demand, notice or advertisement whatsoever except that where an applicable statute requires reasonable notice of sale or other disposition Debtor hereby agrees that the sending of ten days' notice by overnight mail, postage prepaid, to any address of Debtor set forth in this Security Agreement shall be deemed reasonable notice thereof. If any Collateral is sold by Secured Parties upon credit or for future delivery, Secured Parties shall not be liable for the failure of the purchaser to pay for same and in such event Secured Parties may resell or otherwise dispose of such Collateral. Secured Parties may buy any part or all of the Collateral at any public sale and, if any part or all of the Collateral is of a type customarily sold in a recognized market or is of the type which is the subject of widely distributed standard price quotations, Secured Parties may buy such Collateral at private sale and in each case may make payment therefor by any means, whether by credit against the Obligations or otherwise. Secured Parties may apply the cash proceeds actually received from any sale or other disposition to the reasonable expenses of retaking, holding, preparing for sale, selling, leasing and the like, to reasonable attorneys' fees and all legal, travel and other expenses which may be incurred by Secured Parties in attempting to collect the Obligations, proceed against the Collateral or enforce this Security Agreement or in the prosecution or defense of any action or proceeding related to the Obligations, the Collateral or this Security Agreement; and then to the Obligations in such order and as to principal or interest as Secured Parties may desire; and Debtor shall remain liable and will pay Secured Parties on demand any deficiency remaining, together with interest thereon at the highest rate then payable on the Obligations and the balance of any expenses unpaid, with any surplus to be paid to Debtor, subject to any duty of Secured Parties imposed by law to the holder of any subordinate security interest in the Collateral known to Secured Parties.

(b) Secured Parties may, at any time and from time to time, as appropriate, set off and apply to the payment of the Obligations, any Collateral

in or coming into the possession of Secured Parties or their agents, without notice to Debtor and in such manner as Secured Parties may in their discretion determine.

6. Intentionally Left Blank.

7. With respect to the enforcement of Secured Parties' rights under this Security Agreement, Debtor hereby releases Secured Parties from any claims, causes of action and demands at any time arising out of or with respect to this Security Agreement, the Obligations, the Collateral and its use and/or any actions taken or omitted to be taken by Secured Parties in good faith with respect thereto, and Debtor hereby agrees to hold Secured Parties harmless from and with respect to any and all such claims, causes of action and demands.

8. Secured Parties' prior recourse to any Collateral shall not constitute a condition of any demand, suit or proceeding for payment or collection of the Obligations nor shall any demand, suit or proceeding for payment or collection of the Obligations constitute a condition of any recourse by Secured Parties to the Collateral. Any suit or proceeding by Secured Parties to recover any of the Obligations shall not be deemed a waiver of, or bar against, subsequent proceedings by Secured Parties with respect to any other Obligations and/or with respect to the Collateral. No act, omission or delay by Secured Parties shall constitute a waiver of their rights and remedies hereunder or otherwise. No single or partial waiver by Secured Parties of any covenant, warranty, representation, Default or right or remedy which they may have shall operate as a waiver of any other covenant, warranty, representation, Default, right or remedy or of the same covenant, warranty, representation, Default, right or remedy on a future occasion. Debtor hereby waives presentment, notice of dishonor and protest of all instruments included in or evidencing any Obligations or Collateral, and all other notices and demands whatsoever (except as expressly provided herein).

9. Debtor hereby agrees to pay, on demand, all out-of-pocket expenses incurred by Secured Parties in connection with the enforcement of the Notes, this Security Agreement, and the Obligations and in connection with any amendment, including, without limitation, the fees and disbursements of counsel to Secured Parties.

10. In the event of any litigation with respect to any matter connected with this Security Agreement, the Obligations, the Collateral or the Notes, Debtor hereby waives the right to a trial by jury and all rights of setoff. Debtor hereby waives personal service of any process in connection with any such action or proceeding and agrees that the service thereof may be made by certified or registered mail directed to Debtor at any address of Debtor set forth in this Security Agreement. Debtor so served shall appear or answer to such process within thirty days after the mailing thereof. Should Debtor so served fail to appear or answer within said thirty-day period, Debtor shall be deemed in default and judgment may be entered by Secured Parties against Debtor for the amount or such other relief as may be demanded in any process so served. In the alternative, Secured Parties may in their discretion effect service upon Debtor in any other form or manner permitted by law.

11. Debtor shall deliver to Secured Parties on the date of execution of this Security Agreement duly executed UCC-1 financing statements with respect to the Collateral. Upon the payment in full or conversion of the Notes and satisfaction of all Obligations in accordance with the Notes, the security interest granted hereby in the Collateral shall terminate and all rights to the Collateral under this Agreement shall revert to Debtor. Upon any such termination, the Secured Parties shall execute and deliver UCC -3 financing statement releases or other documents of release reasonably requested by Debtor.

12. Secured Parties may assign their rights and obligation hereunder to any Affiliate of Secured Parties provided that such Affiliate assumes all of the liabilities or obligations of Secured Parties hereunder. For purposes of this section, "Affiliate" of any person means any other person or entity which, directly or indirectly, controls or is controlled by that person, or is under common control with that person or entity. "Control" (including, with correlative meaning, the terms "controlled by" and "under common control with"), as used with respect to any person or entity, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such person or entity, whether through the ownership of voting securities, by contract or otherwise.

13. All terms herein shall have the meanings as defined in the UCC, unless the context otherwise requires. No provision hereof shall be modified, altered, waived, released, terminated or limited except by a written instrument expressly referring to this Security Agreement and to such provision, and executed by the Parties to be charged. The execution and delivery of this Security Agreement has been authorized by the Board of Directors of Debtor and by any necessary vote or consent of stockholders of Debtor. This Security Agreement and all Obligations shall be binding upon the successors and assigns of Debtor and shall, together with the rights and remedies of Secured Parties hereunder, inure to the benefit of Secured Parties, their executors, administrators, successors, endorsees and assigns. This Security Agreement and the Obligations shall be governed in all respects by the laws of the State of Illinois applicable to contracts executed and to be performed in such state. If any term of this Security Agreement shall be held to be invalid, illegal or unenforceable, the validity of all other terms hereof shall in no way be affected thereby. Secured Parties is authorized to annex hereto any schedules referred to herein. Debtor acknowledges receipt of a copy of this Security Agreement.

14. All notices and other communications under this Agreement shall be in writing and shall be deemed given when delivered personally, by overnight mail or mailed by certified mail, return receipt requested, to the parties (and shall also be transmitted by facsimile to the persons receiving copies thereof) at the following addresses (or to such other address as a party may have specified by notice given to the other party pursuant to this provision):

If to Debtor: Molecular Diagnostics, Inc.
 414 North Orleans Street, Suite 510
 Chicago, IL 60610

Attn: Mr. Peter Gombrich

With a copy to: Sichenzia Ross Friedman Ference LLP
1065 Avenue of the Americas
New York, New York 10018
Attn: Gregory Sichenzia, Esq.

If to Secured Parties: to the address set forth on the
Subscription Agreement

IN WITNESS WHEREOF, the undersigned has executed or caused this
security agreement to be executed in the State of New York on the date first
above set forth.

MOLECULAR DIAGNOSTICS, INC.

By _____
Denis M. O'Donnell,
Chief Executive Officer

SCHEDULE A

The property covered by this Security Agreement consists of covers all of
Debtor's right, title and interest in, to and under the following properties,
assets and rights of the Debtor, in each case whether now or hereafter existing
or arising or in which Debtor now has or hereafter owns, acquires or develops an
interest and wherever located (collectively, the "Collateral"):

(i) all patents and patent applications, domestic or foreign, all licenses
relating to any of the foregoing and all income and royalties with respect to
any licenses, all rights to sue for past, present or future infringement
thereof, all rights arising therefrom and pertaining thereto and all reissues,
divisions, continuations, renewals, extensions and continuations in-part
thereof;

(ii) all general intangibles and all intangible intellectual or other
similar property of Debtor of any kind or nature, associated with or arising out
of any of the aforementioned properties and assets and not otherwise described
above;

(iii) all personal and fixture property of every kind and nature including
without limitation all goods (including inventory, equipment and any accessions
thereto), instruments (including promissory notes), documents, accounts, chattel

paper (whether tangible or electronic), deposit accounts, letter-of-credit rights (whether or not the letter of credit is evidenced by a writing), securities and all other investment property, supporting obligations, any other contract rights or rights to the payment of money, insurance claims and proceeds, and all general intangibles (including all payment intangibles); and

(iv) all proceeds of any and all of the foregoing Collateral (including license royalties, rights to payment, accounts and proceeds of infringement suits) and, to the extent not otherwise included, all payments under insurance (whether or not Secured Party is the loss payee thereof) or any indemnity, warranty or guaranty payable by reason of loss or damage to or otherwise with respect to the foregoing Collateral).

Schedule B

Name of Investor -----	Address of Investor -----	Amount of Promissory Notes -----
---------------------------	------------------------------	-------------------------------------

Schedule C

Liens

- o Debtor is delinquent in filing certain Federal and State Income Tax returns for 2002 and 2001. Debtor is also delinquent in paying a portion of Federal and State employee and employer payroll taxes for 2003, 2002 and 2001. Debtor owed \$736,000 and \$678,000 as of September 30, 2003 and December 31, 2002, respectively, in past-due payroll taxes, including \$241,000 and \$250,000 respectively in assessed and estimated statutory penalties and interest. The Internal Revenue Service has filed a lien against Debtor's assets to secure the unpaid payroll taxes. Debtor is currently in the process of communicating through counsel with the Internal Revenue Service to resolve this matter. The amount is included in accrued payroll costs in the accompanying balance sheet. Debtor is also delinquent in paying various state franchise taxes.
- o On April 2, 2003, Debtor issued a \$1,000,000 Convertible Promissory Note to an affiliate, Suzanne M. Gombrich, the wife of Peter Gombrich, Debtor's Chairman and CEO, in exchange for cash. The note bears interest at the rate of 12% per annum and is convertible into the common stock of MDI at a conversion price of \$0.10 per share. Debtor also granted the holder a first priority security interest in all of Debtor's assets.
- o Beginning in October 2002, Debtor began an issue of up to \$4,000,000 in series Bridge II Convertible Promissory Notes to accredited investors. The notes bear interest at 12 % per annum payable at maturity date in kind in the form of shares of common stock and were due July 31, 2003. The notes are convertible at any time into the common stock of Debtor. Debtor granted a junior security position in all of the Debtor's assets to the holders of the Bridge II convertible promissory notes. The Bridge II notes

automatically convert into shares of Common Stock (subject to adjustments for stock splits, etc.) upon a "Qualified Financing Transaction," which means a transaction in which the Company closes a new debt or equity financing prior to the maturity date that results in net proceeds to the Company of at least four million dollars (\$4,000,000). Through September 30, 2003, Debtor issued \$1,858,200 in principal amount of Bridge II convertible promissory notes in exchange for cash. Between October 1, 2003 and November 10, 2003, MDI issued an additional \$122,000 in principal amount of Bridge II convertible promissory notes in exchange for cash. In September 2003 an amendment to the Bridge II Convertible Promissory Notes was sent to holders requesting an extension of the notes to July 31, 2004. As additional consideration for the extension, holders were offered an increase in the interest rate from 12% to 15%. In addition, an amendment to the indenture offered an increase in the warrant coverage ratio from 25% to 33%.

- o Beginning in February 2004, Debtor began an issue of up to \$4,000,000 in Convertible Promissory Notes to accredited investors. The notes bear interest at 10 % per annum payable at maturity date in kind in the form of shares of common stock and are due December 31, 2008. The notes are convertible at any time into the common stock of Debtor. Debtor granted a junior security position in all of the Debtor's assets to the holders of the convertible promissory notes.

REGISTRATION RIGHTS AGREEMENT

THIS REGISTRATION RIGHTS AGREEMENT, by and between Molecular Diagnostics, Inc., a Delaware corporation (the "Company"), and the person whose name appears on the signature page attached hereto (the "Holder").

WHEREAS, pursuant to a subscription agreement (the "Subscription Agreement"), in connection with the proposed private placement of 60 of the Company's units ("Units") consisting of (i) a \$25,000 principal amount, 10% secured convertible promissory note (the "Note"); and (ii) 6,250 warrants to purchase shares of the Company's common stock (the "Warrants");

WHEREAS, pursuant to the terms of and in order to induce the Holder to enter into a certain subscription agreement dated the date hereof between the Company and the Holder (the "Subscription Agreement") to purchase the Units, the Company and the Holder have agreed to enter into this Agreement; and

WHEREAS, it is intended by the Company and the Holder that this Agreement shall become effective immediately upon the acquisition by the Holder of the Units;

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the Company hereby agrees as follows:

1. REGISTRATION RIGHTS.

a. PIGGYBACK REGISTRATION. If the Company at any time proposes to register any of its securities under the Securities Act of 1933, as amended (the "1933 Act") (other than pursuant to a registration statement filed on Form S-8 or other comparable form) ("Company Registration"), the Company shall include the shares of common stock underlying the Units and the Warrants (referred to as the "Registerable Securities") in such registration. Provided, however, that if, at any time after giving such written notice of the Company's intention to register any of the Holder's Registerable Securities and prior to the effective date of the registration statement filed in connection with such registration, the Company shall determine for any reason not to register or to delay the Company Registration, the Company may give written notice of such determination to each Holder and thereupon shall be relieved of its obligation to register any Registerable Securities issued or issuable in connection with such registration (but not from its obligation to pay registration expenses in connection therewith or to register the Registerable Securities in a subsequent registration); and in the case of a determination to delay a registration shall thereupon be permitted to delay registering any Registerable Securities for the same period as the delay in respect of securities being registered for the Company's own account.

b. REQUIRED FILING. The Company shall prepare and file by 90 days from the date of filing the Certificate of Amendment as set forth in Section 3 of the Subscription Agreement (the "Filing Date") a registration statement (the "Registration Statement") covering the resale of the Registrable Securities. The Company shall use its best efforts to cause the Registration Statement to be declared effective by the SEC.

2. COOPERATION WITH COMPANY. Holder will cooperate with the Company in all respects in connection with this Agreement, including, timely supplying all information reasonably requested by the Company and executing and returning all documents reasonably requested in connection with the registration and sale of the Registerable Securities.

3. REGISTRATION PROCEDURES. If and whenever the Company is required by any of the provisions of this Agreement to use its best efforts to effect the registration of any of the Registerable Securities under the 1933 Act, the Company shall (except as otherwise provided in this Agreement), as expeditiously as possible:

a. prepare and file with the Securities and Exchange Commission (the "Commission") a registration statement and shall use its best efforts to cause such registration statement to become effective and remain effective until all the Registerable Securities are sold or become capable of being publicly sold without registration under the 1933 Act.

b. prepare and file with the Commission such amendments and supplements to such registration statement and the prospectus used in connection therewith as may be necessary to keep such registration statement effective and to comply with the provisions of the 1933 Act with respect to the sale or other disposition of all securities covered by such registration statement whenever the Holder or Holders of such securities shall desire to sell or otherwise dispose of the same (including prospectus supplements with respect to the sales of securities from time to time in connection with a registration statement pursuant to Rule 415 of the Commission);

c. furnish to each Holder such numbers of copies of a summary prospectus or other prospectus, including a preliminary prospectus or any amendment or supplement to any prospectus, in conformity with the requirements of the 1933 Act, and such other documents, as such Holder may reasonably request in order to facilitate the public sale or other disposition of the securities owned by such Holder;

d. use its best efforts to register and qualify the securities covered by such registration statement under such other securities or blue sky laws of such jurisdictions as each Holder shall reasonably request, and do any and all other acts and things which may be necessary or advisable to enable such Holder to consummate the public sale or other disposition in such jurisdiction of the securities owned by such Holder, except that the Company shall not for any such purpose be required to qualify to do business as a foreign corporation in any jurisdiction wherein it is not so qualified or to file therein any

general consent to service of process;

e. use its best efforts to list such securities on any securities exchange on which any securities of the Company is then listed, if the listing of such securities is then permitted under the rules of such exchange;

f. enter into and perform its obligations under an underwriting agreement, if the offering is an underwritten offering, in usual and customary form, with the managing underwriter or underwriters of such underwritten offering;

g. notify each Holder of Registerable Securities covered by such registration statement, at any time when a prospectus relating thereto covered by such registration statement is required to be delivered under the 1933 Act, of the happening of any event of which it has knowledge as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing; and

h. furnish, at the request of any Holder on the date such Registerable Securities are delivered to the underwriters for sale pursuant to such registration or, if such Registerable Securities are not being sold through underwriters, on the date the registration statement with respect to such Registerable Securities becomes effective, (i) an opinion, dated such date, of the counsel representing the Company for the purpose of such registration, addressed to the underwriters, if any, and to the Holder making such request, covering such legal matters with respect to the registration in respect of which such opinion is being given as the Holder of such Registerable Securities may reasonably request and are customarily included in such an opinion and (ii) letters, dated, respectively, (1) the effective date of the registration statement and (2) the date such Registerable Securities are delivered to the underwriters, if any, for sale pursuant to such registration from a firm of independent certified public accountants of recognized standing selected by the Company, addressed to the underwriters, if any, and to the Holder making such request, covering such financial, statistical and accounting matters with respect to the registration in respect of which such letters are being given as the Holder of such Registerable Securities may reasonably request and are customarily included in such letters.

4. EXPENSES. All expenses incurred in any registration of the Holder's Registerable Securities under this Agreement shall be paid by the Company, including, without limitation, printing expenses, fees and disbursements of counsel for the Company, expenses of any audits to which the Company shall agree or which shall be necessary to comply with governmental requirements in connection with any such registration, all registration and filing fees for the Holder's Registerable Securities under federal and State securities laws, and expenses of complying with the securities or blue sky laws of any jurisdictions pursuant to Section 3(h)(i); provided, however, the Company shall not be liable for (a) any discounts or commissions to any underwriter; (b)

any stock transfer taxes incurred with respect to Registerable Securities sold in the Offering or (c) the fees and expenses of counsel for any Holder, provided that the Company will pay the costs and expenses of Company counsel when the Company's counsel is representing any or all selling security holders.

5. INDEMNIFICATION. In the event any Registerable Securities are included in a registration statement pursuant to this Agreement:

a. COMPANY INDEMNITY. Without limitation of any other indemnity provided to any Holder, either in connection with the Offering or otherwise, to the extent permitted by law, the Company shall indemnify and hold harmless each Holder, the affiliates, officers, directors and partners of each Holder, any underwriter (as defined in the 1933 Act) for such Holder, and each person, if any, who controls such Holder or underwriter (within the meaning of the 1933 Act or the Securities Exchange Act of 1934 (the "Exchange Act"), against any losses, claims, damages or liabilities (joint or several) to which they may become subject under the 1933 Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any of the following statements, omissions or violations (collectively a "Violation"): (i) any alleged untrue statement of a material fact contained in such registration statement including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto, (ii) the alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein, (iii) any violation or alleged violation by the Company of the 1933 Act, the Exchange Act, or (iv) any state securities law or any rule or regulation promulgated under the 1933 Act, the Exchange Act or any state securities law, and the Company shall reimburse each such Holder, affiliate, officer or director or partner, underwriter or controlling person for any legal or other expenses incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action; provided, however, that the Company shall not be liable to any Holder in any such case for any such loss, claim, damage, liability or action to the extent that it arises out of or is based upon a violation which occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by any such Holder or any other officer, director or controlling person thereof.

b. HOLDER INDEMNITY. Each Holder shall indemnify and hold harmless the Company, its affiliates, its counsel, officers, directors and representatives, any underwriter (as defined in the 1933 Act) and each person, if any, who controls the Company or the underwriter (within the meaning of the 1933 Act or liabilities (joint or several) to which they may become subject under the 1933 Act, the Exchange Act or any state securities law, and the Company shall reimburse each such Holder, affiliate, officer or director or partner, underwriter or controlling person for any legal or other expenses incurred by them in connection with investigating or defending any loss, claim, damage, liability or action; insofar as such losses, claims, damages or liabilities (or actions and respect thereof) to the extent that it arises out of or is based upon a violation which occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such

registration by any such Holder or any other officer, director or controlling person thereof.

..

c. NOTICE; RIGHT TO DEFEND. Promptly after receipt by an indemnified party under this Section 6 of notice of the commencement of any action (including any governmental action), such indemnified party shall, if a claim in respect thereof is to be made against any indemnifying party under this Section 8 deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in and if the indemnifying party agrees in writing that it will be responsible for any costs, expenses, judgments, damages and losses incurred by the indemnified party with respect to such claim, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party shall have the right to retain its own counsel, with the fees and expenses to be paid by the indemnifying party, if the indemnified party reasonably believes that representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Agreement only if and to the extent that such failure is prejudicial to its ability to defend such action, and the omission so to deliver written notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Agreement.

d. CONTRIBUTION. If the indemnification provided for in this Agreement is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any loss, liability, claim, damage or expense referred to therein, then the indemnifying party, in lieu of indemnifying such indemnified party thereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such loss, liability, claim, damage or expense in such proportion as is appropriate to reflect the indemnified party on the other hand in connection with the statements or omissions which resulted in such loss, liability, claim, damage or expense as well as any other relevant equitable considerations. The relevant fault of the indemnifying party and the indemnified party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. Notwithstanding the foregoing, the amount any Holder shall be obligated to contribute pursuant to the Agreement shall be limited to an amount equal to the proceeds to such Holder of the Registerable Securities sold pursuant to the registration statement which gives rise to such obligation to contribute (less the aggregate amount of any damages which the Holder has otherwise been required to pay in respect of such loss, claim, damage, liability or action or any substantially similar loss, claim, damage, liability or action arising from the sale of such Registerable Securities).

e. SURVIVAL OF INDEMNITY. The indemnification provided by this Agreement shall be a continuing right to indemnification and shall survive the registration and sale of any Registerable Securities by any person entitled to indemnification hereunder and the expiration or termination of this Agreement.

6. REMEDIES.

a. TIME IS OF ESSENCE. The Company agrees that time is of the essence of each of the covenants contained herein and that, in the event of a dispute hereunder, this Agreement is to be interpreted and construed in a manner that will enable the Holder to sell their Registerable Securities as quickly as possible after such Holder have indicated to the Company that they desire their Registerable Securities to be registered. Any delay on the part of the Company not expressly permitted under this Agreement, whether material or not, shall be deemed a material breach of this Agreement.

b. REMEDIES UPON DEFAULT OR DELAY. The Company acknowledges the breach of any part of this Agreement may cause irreparable harm to a Holder and that monetary damages alone may be inadequate. The Company therefore agrees that the Holder shall be entitled to injunctive relief or such other applicable remedy as a court of competent jurisdiction may provide. Nothing contained herein will be construed to limit a Holder's right to any remedies at law, including recovery of damages for breach of any part of this Agreement.

7. NOTICES.

a. All communications under this Agreement shall be in writing and shall be mailed by first class mail, postage prepaid, or telegraphed or telexed with confirmation of receipt or delivered by hand or by overnight delivery service,

b. If to the Company, at:

Molecular Diagnostics, Inc.
414 North Orleans Street, Suite 510
Chicago, IL 60610

or at such other address as it may have furnished in writing to the Holder of Registerable Securities at the time outstanding, or

c. if to the Holder of any Registerable Securities, to the address of such Holder as it appears in the stock ledger of the Company.

d. Any notice so addressed, when mailed by registered or certified mail shall be deemed to be given three days after so mailed, when telegraphed or telexed shall be deemed to be given when transmitted, or when delivered by hand or overnight shall be deemed to be given when delivered.

8. SUCCESSORS AND ASSIGNS. Except as otherwise expressly provided

herein, this Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the Holder.

9. AMENDMENT AND WAIVER. This Agreement may be amended, and the observance of any term of this Agreement may be waived, but only with the written consent of the Company and the Holder of securities representing a majority of the Registerable Securities; provided, however, that no such amendment or waiver shall take away any registration right of any Holder of Registerable Securities or reduce the amount of reimbursable costs to any Holder of Registerable Securities in connection with any registration hereunder without the consent of such Holder; further provided, however, that without the consent of any other Holder of Registerable Securities, any Holder may from time to time enter into one or more agreements amending, modifying or waiving the provisions of this Agreement if such action does not adversely affect the rights or interest of any other Holder of Registerable Securities. No delay on the part of any party in the exercise of any right, power or remedy shall operate as a waiver thereof, nor shall any single or partial exercise by any party of any right, power or remedy preclude any other or further exercise thereof, or the exercise of any other right, power or remedy.

10. COUNTERPARTS. One or more counterparts of this Agreement may be signed by the parties, each of which shall be an original but all of which together shall constitute one and same instrument.

11. GOVERNING LAW. This Agreement shall be construed in accordance with and governed by the internal laws of the State of Illinois, without giving effect to conflicts of law principles.

12. INVALIDITY OF PROVISIONS. If any provision of this Agreement is or becomes invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not be affected thereby.

13. HEADINGS. The headings in this Agreement are for convenience of reference only and shall not be deemed to alter or affect the meaning or interpretation of any provisions hereof.

IN WITNESS WHEREOF, the undersigned has executed this Agreement as of the ___ day of _____, 2004.

HOLDER

MOLECULAR DIAGNOSTICS, INC.

By:

Name:

Denis M. O'Donnell
Chief Executive Officer

CERTIFICATION

I, Denis O'Donnell, M.D., certify that:

1. I have reviewed this Form 10-QSB of Molecular Diagnostics, 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 small business issuer as of, and for, the periods presented in this report;
4. The small business issuer's other certifying officer(s) 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 small business issuer 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 small business issuer, 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 small business issuer'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 small business issuer's internal control over financial reporting that occurred during the small business issuer's most recent fiscal quarter (the small business issuer's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the small business issuer's internal control over financial reporting; and

5. The small business issuer's other certifying officer(s) and I have disclosed,

based on our most recent evaluation of internal control over financial reporting, to the small business issuer's auditors and the audit committee of the small business issuer'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 small business issuer'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 small business issuer's internal control over financial reporting.

Date: May 17, 2004

/s/ Denis O'Donnell, M.D.

Denis O'Donnell, M.D.

Chief Executive Officer

CERTIFICATION

I, Dennis Bergquist, certify that:

1. I have reviewed this Form 10-QSB of Molecular Diagnostics, 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 small business issuer as of, and for, the periods presented in this report;
4. The small business issuer's other certifying officer(s) 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 small business issuer 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 small business issuer, 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 small business issuer'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 small business issuer's internal control over financial reporting that occurred during the small business issuer's most recent fiscal quarter (the small business issuer's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the small business issuer's internal control over financial reporting; and

5. The small business issuer's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the small business issuer's auditors and the audit committee of the small business issuer'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 small business issuer'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 small business issuer's internal control over financial reporting.

Date: May 17, 2004

/s/ Dennis Bergquist

Dennis Bergquist
Chief 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

I, Denis O'Donnell, M.D., the Chief Executive Officer of Molecular Diagnostics, Inc. (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that to the best of my knowledge:

(1) the Quarterly Report on Form 10-QSB of the Company for the fiscal quarter ended March 31, 2004 (the "Report") fully complies with the requirements of Section 13 (a) or 15 (d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 17, 2004

/s/ Denis O'Donnell, M.D.

Name: Denis O'Donnell, M.D.

Title: Chief 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

I, Dennis Bergquist, the Chief Financial Officer of Molecular Diagnostics, Inc. (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that to the best of my knowledge:

(1) the Quarterly Report on Form 10-QSB of the Company for the fiscal quarter ended March 31, 2004 (the "Report") fully complies with the requirements of Section 13 (a) or 15 (d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 17, 2004

/s/ Dennis Bergquist

Name: Dennis Bergquist

Title: Chief Financial Officer