FORM 10KSB

Annual and transition reports of small business issuers [Section 13 or 15(d), not S-B Item 405]

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FILER

PARACELSIAN INC /DE/

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SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-KSB

[X] ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 1996

[ ] TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM _____ TO _____

Commission File No. 0-19844

PARACELSIAN, INC.
(Name of small business issuer in its charter)

Delaware	16-1399565
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

222 Langmuir Laboratories, Cornell Technology Park, Ithaca, New York 14850
(Address of principal executive offices) Zip Code

Issuer's telephone number: (607) 257-4224

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

Securities registered under Section 12(g) of the Act:

Common Stock, $.01 par value
(Title of class)

Redeemable Common Stock Purchase Warrants
(Title of class)

Check whether the issuer (1) filed all reports required to be filed by section 13 or 15(d) of the securities Exchange Act during the past 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the paced days.

Yes X _ No ____

Check if there is no disclosure of delinquent filers in response to Item 405 of Regulation S-B is not contained in this form, and no disclosure will be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-KSB or any amendment to this Form 10-KSB. [ ]

Issuer's revenues for its most recent fiscal year were $59,036.

The aggregate market value of the voting stock (based on the closing price of such stock on NASDAQ) held by non-affiliates of the Registrant at December 18, 1996 was approximately $20,400,000.

There were 11,669,604 shares of Common Stock and 2,042,870 Redeemable Common Stock purchase Warrants outstanding at December 18, 1996.

Item 1. Business

Paracelsian, Inc. (the "Company") is a biotechnology company that develops dietary supplements and prescription therapeutics utilizing a proprietary screening technology. This technology has been developed by the Company to identify potential products that inhibit the biological signals generated by targeted cells that result in controlled or uncontrolled growth and division. The Company's screening technology that evaluates the effects of potential products on intracellular signals is referred to its "Signal Transduction technology". The Company's Signal Transduction Technology is applied to targeted cells such as HIV infected cells and cancer cells.

Cell division is one of the basic processes in biology necessary for normal growth of tissues to support life. The Company's Signal Transduction Technology enables researchers to observe intracellular signals and measure the effects of chemicals contained in synthetic or natural compounds, such as herbs and extracts from herbs, on cell division. In the course of these observations, the Company can distinguish the effects of such chemicals on targeted cells, thereby screening compounds to identify those with promising profiles. (This proprietary technology, including the components, methods, procedures and know-how employed in this screening process, is referred to herein as the "Screening Technology".)

The Company believes that the results of its research coincides with recent scientific advances and could ultimately lead to the improved detection and enhanced well being and treatment of individuals with AIDS, certain cancers, and selected cardiovascular conditions.

The Company's research and product development activities are focused in four (4)principal areas:

Screening Technology. The Company continues to improve its screening Technology in order to increase its efficiency in the identification of active extracts and chemical compounds. This work, which consists of laboratory-based experiments on living cells, is expected to be ongoing throughout fiscal 1997 and thereafter. The focus of this work is to expand the data collected from the initial screens performed by the Company with a series of incremental screens aimed at further specifying the utility of a particular product candidate. The Company has developed a series of proprietary cell lines used to evaluate the effectiveness of candidate extracts and compounds. The Company also utilizes a series of cell lines acquired under a proposed license with the National Cancer Institute and commercial cell lines for such screening. The ultimate objective of the Screening Technology is to identify potential products and their precise mechanism of action. In many cases potentially useful products are identified before the mechanism of action can be determined. In these cases research to determine the precise mechanism of action may continue while the candidate product is developed for commercial application. The Company's Screening Technology has improved during 1996, as the Company is now capable of screening compounds for effect faster for a broad spectrum of situations and with greater precision. The Company continues to refine, enhance and further specify its Screening technology.

Screening Activities. The Company applies its Screening technology to its library of over 2,800 extracts of herbs used in traditional Chinese medicine. Since October 1994, the Company has screened approximately 1,000 extracts from this library. The results of the initial screens have shown over 370 extracts that have demonstrated the ability to inhibit signaling in targeted cells. These first 1,000 extracts were selected for evaluation based on (1) the Company's assessment of the chemical composition, (2)relative bioavailability and toxicity data and (3) the documented historical use of the herbs. The more than 370 extracts with favorable signaling characteristics represent a pipeline of potential products for commercial development.

Product Development. The Company targets extracts that have shown promising results in the Screening Technology for commercial development. Several development options are available to the Company. The first option considered is the desirability and suitability of a candidate as a dietary supplement. The scientific criteria include an evaluation of the safety profile and data to support how the herb effects structure or function in humans. This option represents the fastest route to a market for a product since a pre-marketing regulatory approval or notification is not required for herbal dietary ingredients marketed in the United States prior to October 15, 1994. "See Government regulation and Approval-Effect of Governmental Regulation on the Company". In addition to the scientific and regulatory suitability described above, a candidate for this development plan must meet all of the other definitional aspects of dietary supplement set forth in the Dietary Supplement and Health Education Act of 1994.

The Company has selected the dietary supplement option and commenced development with respect to two herbal extracts, AndroVir(trademark) to support normalimmune function in HIV+ individuals, and AndroCar(trademark) for the well-being of cancer patients. Both contain extracts of Andrographi spaniculata, an herb from China and India. In laboratory tests conducted and validated at the Frederick Research Center, AndroVir(trademark) has demonstrated the capacity to inhibit the replication of HIV-1 (the virus that causes AIDS) in human lymphocytes. Further laboratory tests at the Frederick Research Center show that AndroVir(trademark) increased the effect of Glaxo-Welcome's AZT in the inhibition of replication of the AIDS virus. During fiscal 1996, the Company conducted a clinical study in 13 patients at Bastyr University. The results of this trial showed that AndroVir(trademark) was well tolerated and that viral loads and CD4 counts improved. In the laboratory, AndroCar(trademark) was demonstrated to have an effect on cancer cells. During fiscal 1996, the Company completed a clinical trial in nine patients. The results showed that AndroCar(trademark) was well tolerated and 80% of the subjects experienced enhanced well being. Additional clinical studies of both AndroVir(trademark) and AndroCar(trademark) are underway or planned as described in the products section below. The Company currently plans to develop these products internally and commence sales as dietary supplements in fiscal 1997 as AndroVir(trademark)-DS and AndroCar(trademark)-DS. Other herbal extracts currently in the pipeline that are judged to be suitable for this type of development plan may be commercialized internally or licensed for development and sales by third parties.

In addition to the dietary supplement development option, the Company also evaluates the suitability of these and other compounds for therapeutic development. The Company intends to pursue this option while also pursuing the plan for development as a dietary supplement. Toward this end, the Company has elected to pursue therapeutic development of both AndroVir(trademark) and AndroCar(trademark). The Company's plan is to develop the dietary supplement and launch the product and commence commercial sales and distribution prior to licensing these compounds for therapeutic development by third parties or conducting pre-clinical tests, filing for an investigational New Drug exemption or applying for a New Drug Application under the Federal Food, Drug, and Cosmetic Act. Once the development options have been selected, the Company then evaluates whether to out source the development or develop the products internally. With regard to AndroVir(trademark) and AndroCar(trademark), the Company has elected to develop the dietary supplements for marketing under DSHEA internally. With regard tithe therapeutic development plan, the Company has not yet elected whether to develop the products internally or license the development and marketing rights to third parties. The Company expects to make this election during fiscal 1997.

Diagnostic Tools and Assays. The fourth focus of the Company is the product support for diagnostic tools and assays to detect cancer and chemical carcinogens that have been licensed to third parties. The Company has developed a product that is a biomarker for human prostate cancer as well as canine osteosarcomas, lung tumors and lymphosarcomas. Additionally, the Company's CDK2 serum and CDK1 tissue assays can be used to detect chemically-induced cancer in laboratory animals. The Company licensed these products to CN Biosciences during fiscal 1996. The Company also has developed the Ah-IMMUNOASSAY(trademark), an in vitro bio-immunoassay that detects the amount of potentially toxic chemicals in the environment from several classes of compounds, including dioxins and polychlorinated biphenyls (PCBs). The Company has licensed rights to this assay to Dow Environmental, a subsidiary of Dow Chemical Co. The Company has also licensed rights to its veterinary cancer diagnostic to IDEXX Laboratories. The Company provides technical support to licensees to assist in the marketing and distribution of these products in return for royalties on the sales of such products by the licensees.

Other Activities. In addition to the foregoing, the Company has acquired an option to purchase all of the capital stock of East West Herbs, Ltd.("EWH"), an operating Company with sales of approximately $2 million, founded in 1987 with its head office located in the United Kingdom ("UK"). EWH sells and distributes herbs and related products to professional health care providers practicing complementary medicine throughout the UK, Europe and the US. EWH is a leader in the highly fragmented herb distribution industry that differentiates itself from competitors by providing a ready supply of a wide variety of products all manufactured to the highest quality standards. EWH also invests in new product research and development and has clinical trials underway for two new products for cancer patients under the direction of Oxford University. Under the terms of the option, the Company has the right, but not the obligation, to acquire EWH on or before April 6, 1997.

Signal Transduction and Product Discovery

Scientific Background

Over the past few years cell biologists have made remarkable progress in identifying the molecules that drive the cell cycle: the carefully choreographed series of events that culminates in cell division. In doing so they have not only provided a better understanding of one of the most fundamental of the cell's activities, they have also opened a new direction for research aimed at pinpointing the pathogenicity of cancer, certain cardiovascular diseases, AIDS and Alzheimer's. The reason for this intriguing convergence is that accumulating evidence by the Company and others indicates that derangements in the cell cycle signal transduction processes may contribute to pathology of a number of apparently unrelated diseases.

p34cdc2 kinase

A family of cell division control enzymes termed cyclin-dependent kinases ("CDKs"), along with the cyclin proteins, serve to control and coordinate the molecular events of cell division in all eukaryotic cells. Although twelve CDKs have been described, the p34cdc2 kinase remains the most actively studied due to its central role in the control of cell division in plant and animal cells.

In normal resting cells p34cdc2 (CDK1) is either not expressed or expressed at very low levels, but concentrations of p34cdc2 increase as the cell enters and passes through G1 and the G1/S transition. p34cdc2 concentrations reach maximal levels in the S, G2 and M phases. In association with cyclin B, p34cdc2 is the serine/threonine kinase sub-unit of M-phase-promoting factor (MPF); active MPF triggers the G2/M transition in species ranging from yeast to humans. Several studies also suggest that p34cdc2 functions in the control of the G1/S transition and as well as the initiation of mitosis.

The role of CDK proteins in the cell cycle (see Figure 1 below) is completely dependent upon their kinase activity. p34cdc2 kinase activity during the cell cycle is regulated through cycles of phosphorylation and dephosphorylation and interactions with cyclins. Intracellular compartment translocation has also been demonstrated by the Company and others to regulate the substrate availability of the p34cdc2 protein.

Essential Steps in the Regulation of Cell Division

Figure 1: Schematic of Cell Cycle Regulation Indicating Central Role of CDKs

The functioning of p34cdc2 involves the coordination of all events relating to cell division. In this role p34cdc2 is the central information processing protein. As the cell moves through the cell cycle, information concerning the activities of the cell are sent to p34cdc2 and, as long as these signals indicate proper functioning of the cell, movement through the cell cycle continues. The cellular expression of p34cdc2 is governed by exposure to cytokines and hormones; the expression of p34cdc2 is one signal to the cell to initiate the events of cell division.

Extract Screening And Product Discovery

The Company's product discovery approach is unique within the biotechnology industry. Utilizing a combination of cellular and biochemical responses in the first tier of screening, the Company is able to identify herbs and extracts that (I) affect targeted cell cycle proteins, (ii) have the capacity to enter the cell and (iii) do not interact with nontarget proteins. For extracts that produce a positive response, historical use patterns in China of the herbs from which those extracts were derived are then examined. Those herbs and extracts that have exhibited significant toxicity in humans are ranked lower than herbs and extracts having a history of low toxicity. By using the information available to the Company from traditional use in China, it is possible to eliminate further development of compounds that would be excessively toxic to humans or have poor bioavailability.

In the second tier of testing, a chemical is identified within the extract and the mechanism of action is described. In this phase of the product discovery program, the Company has incorporated a "fuzzy logic" identification process that has allowed the Company to discover novel pathways of action for the potential product. This process has already allowed the Company to identify a kinase known to have high activity in cancer cells and low activity in normal body cells. It is this second mode of discovery in the Company's product discovery program, that generates additional value. As new, previously undiscovered pathways are identified, they can be used in screening for other active compounds as well as analogs of the original natural compound identified.

Competition

There are a number of small biotechnology companies that focus on the discovery of novel compounds. The Company competes on the basis of the combination of its therapeutic focus on anti-proliferative action in cells, its novel screening technology and a large library of Chinese extracts with data on historical use. The Company is not aware of any competitors with a similar discovery program.

Business Strategy

The Company's strategy is to add value to the product development process by concentrating its efforts on the highly specialized area of early-stage compound development, generally discovery through preclinical toxicology mode of action, pharmacology and Phase I clinical trials. Industry factors such as downsizing and the trend toward outsourcing by major pharmaceutical companies support the strategy of identifying chemicals as potential therapeutic agents without the intent to develop these discoveries into clinically proven therapeutics. There are a number of biotechnology companies focusing their efforts on early-stage drug development. By partnering with large pharmaceutical companies at the phase II/III stages of development they can capitalize on the synergy of their discovery technology and the capital resources of large pharmaceutical corporations. Uncertainty about government health care reform and rising competition from the generic sector are forcing research oriented pharmaceutical companies to look for ways of reducing the high cost of research and development, but without harming their ability to develop innovative products. With rising competition from generics, the development of novel products has become more important to the success of the research oriented pharmaceutical industry. Thus, such pharmaceutical companies are increasingly focusing their capital and human resources on the development of fewer, but higher quality, compounds.

The Company has completed screening of extracts of approximately 1,000 traditional Chinese herbs and herbal extracts using its proprietary screening methodology. As a result of this screening

effort, the Company has identified approximately 370 herbal extracts that demonstrate inhibitory activity in signal transduction processes involved in cell proliferation. Of these, ten extracts appear to possess significant potential to yield good candidate products.

The Company has a unique set of development options for compounds with favorable safety and efficacy profiles. These extracts are eligible for development as dietary supplements since they are naturally occurring compounds with documented histories of traditional use. This development plan consists of Company prescribed safety and efficacy evaluations that may in some instances require pre-market notification but does not require pre-marketing approval by the FDA. Product selected for development under this option can generally reach markets faster than the route for pharmaceuticals that requires pre-marketing approval under a New Drug Application. Marketing plans for products developed under this option require precise characterization or how the compounds effect the human structure and function and cannot carry claims regarding the diagnosis, mitigation, treatment, cure or prevention of any disease. In addition to this option, the Company may also elect to develop these candidates as traditional therapeutics by following the FDA regulations for new drug approval. A full description of the regulatory requirements of each development option is set out in the "Governmental Regulation and Approval" section of this report. It is the Company's strategy to develop products for marketing, where appropriate, as dietary supplements and/or traditional therapeutics. The Company refers to this combination development plan as a dual development path.

Products

AndroVir(trademark)
AndroVir(trademark) is a formulation of a naturally occurring compound that functions biochemically in cellular signal transduction as a kinase inhibitor. The compound was isolated from an herb used routinely in traditional Chinese medicine ("TCM").

In laboratory animal tests performed by Chinese scientists, AndroVir(trademark) is reported to have exhibited extremely low acute and subchronic toxicity. Rats and rabbits were administered one gram of AndroVir(trademark)(trademark) per kg body weight daily for seven days and no changes were reported in body weights, complete blood counts or histopathologic evaluation of liver, kidneys or other major organs.

In laboratory research conducted on behalf of the Company at the Frederick Research Center, a contract research organization, AndroVir(trademark) demonstrated the capacity to inhibit the replication of HIV-1 in human lymphocytes. The median inhibitory effect of AndroVir(trademark) was observed at 640 micro gram/mL. Toxicity of AndroVir(trademark) to lymphocytes was not observed until concentrations of AndroVir(trademark) exceeded 10,000 micro gram/mL, providing a minimum therapeutic index in excess of fifteen-fold. Further laboratory testing of AndroVir(trademark) at Frederick Research Center indicated that it synergized with AZT in the inhibition of replication of the AIDS virus.

The mechanism of action of AndroVir(trademark) was determined during fiscal 1996 through a joint research project conducted by the Company and the National Cancer Institute. This research determined that AndroVir(trademark) controls AIDS cytotoxicity through a novel enzyme target. AndroVir(trademark) was shown to inhibit the signals of c-Mos, an enzyme not normally found in cells outside the reproductive system except in the case of HIV infected cells. The identification of this new enzyme's role in HIV killing of the immune system represents significant new information for HIV research. The inhibitory effect of AndroVir(trademark) on this target indicates that it may be useful in supporting a normal immune function and possibly useful as an adjunct to existing therapies for the treatment of AIDS.

The Company completed its first clinical study of AndroVir(trademark) in December 1996. The results of this nine-week study in 13 HIV+ subjects, demonstrated that the product was well tolerated at the doses tested. After an initial increase, the subjects experienced a median drop in viral load (a measure of the concentration of the virus in the subjects' blood stream) of 31% and an increase in CD4+ cell counts (a measure of the status of the immune system) of 38%. These subjects also experienced a median increase in serum cholesterol (a measure of the subjects' overall well-being) of 14%. These results support the hypotheses developed early in the laboratory experiments (including the results of the Company's proprietary Screening Technology) concerning the mechanism of action of AndroVir(trademark) in HIV+ individuals.

The Company plans to complete the development of AndroVir(trademark) as a dietary supplement to support normal immune function in HIV+ individuals and develop the necessary marketing plan to begin commercial sales and distribution as AndroVir(trademark)-DS as early in 1997 as practicable. Upon the successful launch of this product, the Company plans to pursue a therapeutic development plan by completing the necessary development steps to facilitate the license of marketing rights.

AndroCar(trademark)
In December 1994, after screening only 300 extracts from its library of 2,800 TCM extracts, the Company filed a patent describing the use of compounds for the treatment of proliferative and viral diseases. See "Patent Applications and Proprietary Technology."

In three initial laboratory screens against the Company's own test cell line, the crude extract of Andrographis paniculata demonstrated median effective doses averaging approximately 30 micro gram/mL. AndroCar(trademark) exhibited a median effective dose of 5 microgram/mL. This compared favorably to the median effective doses obtained for the positive control drugs Taxol(r) and etoposide of 3 and 7 micro gram/mL, respectively, in the same test system.

Testing in other laboratories for effectiveness against human prostate cancer cells indicated that AndroCar(trademark) inhibited LNCaP, PC-3 and DU-145 tumor cell lines, while the median effective doses of cisplatin in these studies was 4.6, 2.8 and 0.9 microM, respectively for the three cell lines tested. The estimated median effective dose for AndroCar(trademark) was 8, 1.7 and 1.4 microM, respectively, for the same three cell lines. At the Company's laboratory, inhibition of human breast cancer cells (MCF-7) over seven days was achieved at concentrations of AndroCar(trademark) that were similar to the pure reference drugs used in these studies. It is also

believed that AndroCar(trademark) inhibits proliferation of blood vessels and that this may attack solid tumors in a manner different from current cancer therapeutics. This effect may occur as a result of inhibiting the growth of the tumor cells and small blood vessels into the tumor mass. This latter effect may restrict the food supply of the tumor and leads to starvation of the tumor cells.

Based on these results in the laboratory, the Company elected to pursue the internal development of AndroCar(trademark) as a dietary supplement to support the general well-being of cancer patients. During fiscal 1996, the Company conducted a physician referred, clinical safety study of AndroCar(trademark) in nine patients over a 90-day period. Results of this study indicated that AndroCar(trademark) was well tolerated at the doses evaluated. Eighty percent of these subjects reported an increased sense of well-being while on the study. Five of these patients elected to continue receive AndroCar(trademark) during a post-study follow-up period. These patients continued to report an increased sense of well-being.

Based on the success of this study and the follow-up, the Company initiated two additional physician referred, safety studies that are currently underway. Both studies are 90-day studies at three increasing doses. Study endpoints are aimed at further establishing the safety of AndroCar(trademark) and its effects on the general well-being of the subjects. The first study is in approximately 30 subjects with end-stage prostate cancer and the second study is in approximately 12 subjects with a variety of end-stage cancers. The Company expects to have the results of these studies available in June 1997.

Based on the development results obtained to-date and the results expected from the clinical studies currently underway, the Company presently expects to launch commercial sales of AndroCar(trademark), as a dietary supplement, during fiscal 1997 as AndroCar(trademark)-DS. Upon the successful launch of this product, the Company plans to pursue a therapeutic development plan by completing the necessary development steps to facilitate the license of marketing rights.

Developmental Compounds

PN27,1 for Restenosis

Angioplasty is a life-saving surgical procedure resulting in an increased diameter of the treated blood vessel and improved blood flow. The procedure is associated with less risk than surgical bypass operations, while offering rapid improvement to the patient. However, approximately 40 to 50 percent of angioplasty patients experience an overall decrease in diameter of the treated blood vessel within several months of the operation. This adverse response to angioplasty is termed restenosis. Neovascularization begins with the attraction of circulating platelets to the traumatized vessel wall. The attached platelets degranulate and release growth factors that stimulate smooth muscle cell proliferation. As a result of the proliferation of the arterial smooth muscle, the blood vessel thickens and the diameter of the vessel decreases. To date there have been no drugs developed that adequately control restenosis. Therapeutics that affect either platelet aggregation, the first step in the process, or angiogenesis, smooth muscle cell proliferation, have met with little success.

The finding that p34cdc2 expression and activity relate to a wide variety of disease manifestations is rapidly becoming obvious as more research on the functions of this kinase is published. However, for therapeutic purposes, the more direct question involves whether the manipulation of p34cdc2 concentrations or activity in the affected cells alters cytopathology. During the last two years, research has been published indicating that it is possible to control cellular proliferation associated with cancer by inhibiting or down-regulating p34cdc2. In addition to effects on a wide variety of tumor cells, the down-regulation of p34cdc2 has proven in the laboratory to be a mechanism to avert smooth muscle cell proliferation.

That p34cdc2 (I) exists in biological systems as diverse as yeast and humans, (ii) serves a fundamental role in control and coordination of the cell cycle and (iii) is involved in a wide variety of pathologic consequences of abnormal expression, reflects the enormous importance of p34cdc2 in cell physiology. Therefore the capacity of a chemical to affect p34cdc2 concentrations in a multiplicity of cell types (e.g. epithelial, mesothelial) while avoiding direct cytotoxicity has possible therapeutic implications.

Chinese researchers have reported that extracts of the herb Andrographis paniculata inhibit platelet aggregation in humans and repress restenosis in the rabbit model of angioplasty. Through the use of the Company's proprietary p34cdc2-screening assay, it has identified the compound PN27,1 from this herb. This naturally occurring chemical inhibits both platelet aggregation and smooth muscle cell proliferation in vitro and along with several of its analogs, defines the biological activity seen with the administration of the herbal extracts to humans and laboratory animals. Overall, the novel bi-modal mechanism of action, the excellent oral bioavailability and the low toxicity of PN27,1 are the basis for the development of this compound for the prevention of restenosis in angioplasty patients although no definite assessment can be made at this time.

In studies conducted by the Company, the ability to inhibit the proliferation of human aortic smooth muscle cells was demonstrated by PN27,1 in vitro. Similar studies reported by Chinese researchers using an angioplasty model in the rabbit, indicate that the herbal extract from which PN27,1 is derived can also inhibit the arterial thickening resulting from the angioplasty procedure.

Products for the Transmission of HIV-1

The sexual transmission of the AIDS virus to women is becoming one of the most significant female health issues in the world. According to studies published in Science magazine, HIV-1 is currently among the top five causes of death for women in developing countries. Furthermore, reports indicate that the heterosexual spread of HIV-1 in Asia may be the result of a viral strain that differs from the HIV-1 viral strain involved in homosexual AIDS cases in Western countries.

The principal drugs being evaluated by others for the inhibition of HIV-1 transmission utilize physical processes to deactivate the virus. These physical processes include surface charge, detergent lysis and acidity. Associated with these physical agents are the problems of irritation and administration. The Company's product discovery program is focusing on the discovery of products that inhibit the transmission of AIDS and can be used orally or topically before or shortly after exposure.

In 1995, the Frederick Research Center completed the development of an assay, under a contract with the National Institutes of Health, to assess the capacity of a material to inhibit cell-to-cell transmission of the human HIV-1 virus. The Company sent 100 TCM extracts, which had been pre-selected from the library of extracts screened at the Company using its proprietary signal transduction assays, to Frederick Research Center for screening in their newly developed assay. Thirty-two percent of the Company's extracts tested at Frederick Research Center exhibited significant capacity to inhibit sexual transmission of the HIV-1 virus. Seven of the herbal extracts were more potent than the dextran sulfate positive control used in the study, while twenty herbal extracts demonstrated potency equal to dextran sulfate.

Figure 2: Inhibition of HIV-1 Transmission by Dextran Sulfate and the Company's TCM Extracts.

The Company believes these results are significant from a public health as well as a scientific standpoint, since herbal extracts can be manufactured inexpensively in developing countries, where the need is greatest. Furthermore, historical use of several of the HIV-1 inhibiting extracts indicates a good margin of safety with the possibility of oral as well as topical administration. Cost of manufacture and route of administration have been two of the greatest concerns in the development of an effective therapeutic for the inhibition of HIV-1 transmission.

Signal Transduction and the Biosensor Assay for Dioxin Compounds

Scientific Background

The Ah-IMMUNOASSAY(trademark) was developed by the Company to identify chemical carcinogens of the dioxin class that are commonly found in environmental pollutants from incineration of plastics and in paper production and recycling. TCDD (2,3,7,8-tetrachlorodibenzo-p-dioxin) or dioxin is the best studied and most toxic of a number of these environmentally important chemicals known as dioxin-like compounds.

Presently, scientists concur that all toxic effects of dioxin and structurally related compounds are mediated by a protein present in cells called the Aryl hydrocarbon (Ah) receptor. The initial step in dioxin toxicity requires the binding to, and transformation of, the Ah receptor to a DNA-binding form that then affects the expression of several gene products. In support of this concept, the susceptibility of different species to the toxic effects of dioxins can be correlated to the susceptibility of their Ah receptor molecule to transformation by dioxins. Furthermore, the toxicity of dioxin-like compounds is linked with their ability to transform the Ah receptor into a DNA-binding form. The Ah-IMMUNOASSAY(trademark) was designed to be selective for the toxic members of the dioxin family by utilizing the transformation of the Ah receptor as a biosensor. In the past year, the Environmental Protection Agency (the "EPA") circulated proposed regulations providing for the measurement of the dioxin family to be expressed as "Toxic Equivalent Quotients". The Company's assay provides this form of response and measurement.

Product

As designed and formatted, the Ah-IMMUNOASSAY(trademark) does not require the use of radioactivity, sophisticated equipment, live cells or live animals. Three convenient formats of the Ah-IMMUNOASSAY(trademark) have been designed by the Company to provide several methods of quantification of the amount of several important classes of compounds including dioxins, polychlorinated biphenyls, polybrominated biphenyls and polycyclic aromatic hydrocarbons. The interaction of dioxin with the Ah-biosensor complex in the Ah-IMMUNOASSAY(trademark) produces a transformation in the shape of the biosensor complex. The number of molecules of the biosensor complex that are transformed can be quantified with specific antibodies to the transformed, DNA-binding form of the complex.

The Ah-IMMUNOASSAY(trademark) indicates the toxicity of the test sample in terms of fractional equivalencies of the most toxic dioxin-like compound: TCDD. Because of the simplicity of the assay, hundreds of air, soil, food or water samples may be tested in a single day at field locations. Two formats of the assay are designed to be low-cost and high throughput versions that can be performed in several hours by non-technical personnel. Sensitivity of the Ah-IMMUNOASSAY(trademark) to the contaminants that it detects is comparable to instrumental methods currently used and is well below the recently proposed EPA concentrations for water, food and soil.

Unlike competing products, the Ah-IMMUNOASSAY(trademark) biosensor test does not detect the contaminant directly with antibodies, but detects the interaction of an intracellular receptor and ligands contained in the sample of interest. The Company believes that the advantages of this biosensor approach are (I) simple extraction procedures with few clean-up steps, (ii) high sensitivity, (iii) high specificity for the contaminant family of interest, (iv) reduced testing time, (v) lower testing costs and (vi) adaptable to robotic, high-throughput systems.

Competition

Many large companies with extensive research and development, marketing, financial and other capabilities, as well as government-funded institutions and smaller research firms are engaged in the development of diagnostic assays for environmental applications. The significant majority of diagnostic tests developed for these companies, however, are designed for use in laboratories that require sophisticated instrumentation and skilled technicians. The Company has designed its Ah-IMMUNOASSAY(trademark) system as an inexpensive, rapid, field test for use by minimally-skilled personnel and does not currently compete with laboratory-based systems. Moreover, while the Company is aware of a number of other firms that have developed an environmental field test, it is not aware of any such test that detects the substances identified by the Ah-IMMUNOASSAY(trademark) test. Early attempts to develop an antibody-based test for all dioxins have been unsuccessful. With the introduction of the Ah-IMMUNOASSAY(trademark) biosensor test, the Company provides the first receptor-based environmental testing system. Although there is no single product presently in the marketplace that competes directly with the Ah-IMMUNOASSAY(trademark), organizations in the field of environmental diagnostics are potential competitors.

Based upon scientific papers presented by the Company and others at International Symposiums on Dioxins and Related Compounds the Company anticipates performance of the Ah-IMMUNOASSAY(trademark) to be free of interference with common, nontoxic, naturally occurring,

organic compounds that are capable of interacting with the Ah-receptor. Furthermore, the Company's assay, unlike others presented, does not require the use of dangerous radioisotopes and can be performed in hours. The Company believes these qualities provide a significant competitive advantage to the Ah-IMMUNOASSAY(trademark) over all other known bioanalytical assays for dioxin-like compounds.

Business Strategy.

Environmental engineering firms must rely exclusively on sophisticated instrumentation, reagents, highly trained personnel and significant elapsed time for the information they need to begin any plan for remediation. By providing a real-time assay and freeing highly trained technicians for more sophisticated work, the Company believes that the Ah-IMMUNOASSAY(trademark) would be an invaluable tool to these target markets. For this application the Company has developed the Ah-IMMUNOASSAY(trademark) as a supplement to and not a replacement for existing instrumental methods by providing a system for use in connection with existing environmental remediation efforts at increased efficiency and decreased cost. Recently the EPA circulated proposed regulations providing for the measurement of the dioxin family to be expressed as "Toxic Equivalent Quotients". The Company's assay provides this form of response and measurement.

Additionally, developing economies in Asia and Eastern Europe are facing significant environmental problems with dioxin-like compounds and have neither the sophisticated instrumentation nor the trained personnel to address their analytical needs. In these potential markets there is the immediate need for an inexpensive testing system that will reliably identify problematic water, food and soil contamination.

In January 1995, the Company announced an agreement with Dow Environmental providing for a non-exclusive license and an option for an exclusive license to evaluate and commercialize the Company's Ah-IMMUNOASSAY(trademark) technology. Earlier this year Dow Environmental notified the Company that it does not intend to execute the exclusive worldwide license for the assay. Their intent is to use the assay for safety testing within the Dow organizations. The Company is in discussions with Dow to obtain a release of the nonexclusive agreement which will permit licensing the technology to other companies.

In October representatives from China conducted tests on samples from mainland China in the Company's lab utilizing the assay. The results of that test proved the usefulness to countries with enormous environmental problems utilizing low cost field test facilities.

Since August the Company has been in discussion with Japanese representatives of environmentally sensitive companies needing this type of assay for use in Japan. They are reviewing the technology and patents in preparation for conducting tests at the Company and then in Japan.

While the Company believes that a license arrangement can be achieved there is no assurance that this license can be completed.

Signal Transduction and Cancer Diagnostics

Scientific Background

All of the Company's products and their applications are based on a biochemical process known as signal transduction -- a form of information processing. Two proteins involved in separate cellular signal transduction pathways, p34 and the Ah-receptor, have been formatted by the Company into products that address the detection of cancerous tissues, identification of cancer causing chemicals and discovery of anti-cancer drugs.

The Company's CDK2 biomarker has been applied to the diagnosis of human prostate, as well as canine osteosarcomas, lung tumors and lymphosarcomas. Additionally, CDK2 serum and CDK1 tissue assays can be used to detect chemically induced cancer in laboratory rodents. The Company's CDK1 biomarker is one of the earliest indications that a normal cell is undergoing transformation to a cancer cell and, therefore, CDKs provides unique advantages in each of these applications.

In human medicine, CDK2 has demonstrated the capacity to identify individuals diagnosed with benign prostate hyperplasia who may be at high risk for development of metastatic prostate cancer. Males with metastatic prostate cancer have a 4-fold elevation of CDK2 in their serum in comparison to normal males. Early diagnosis of cancer in companion (dog and cat) animals suffers from the necessary expense of using a number of tissue-specific tumor biomarkers. Since CDK2 can be detected in the serum from any tumor tissue, the veterinarian can utilize a single serum CDK2 determination as a cost-effective part of routine dog and cat physicals. Similarly, the determination of a chemical's ability to induce cancer in rodents can benefit from a serum biomarker for tumor-bearing animals. By monitoring the serum CDK2 concentration of rodents receiving a test chemical, it is possible to assess the relative carcinogenicity of the chemical within 90 days as compared to the two years that it currently takes to determine chemical carcinogenicity in rodent bioassay systems.

Research Products

Currently the Company has seven products for research purposes only designed for laboratory animal carcinogen testing and cell culture markets. Utilizing an Enzyme Linked Immunosorbent Assay ("ELISA") format, the In VIVO research product line (two kits plus a combination kit) is for research of the quantification of CDK1 in human or animal tissues except blood. The In Vitro research product line (two kits plus a combination kit) permits quantification of CDK1 in cell cultures. Visualization of increased CDK1 in specific cells on microscopic slides is achieved by means of the Company's CDK1 Antibody Immunohistochemistry Kit.

Since several protein biomarkers had established a history of use in the human and animal solid tissue research markets before CDK1 was discovered, the Company offers ELISA kits for research on the quantification of the most widely-used competing biomarker in this market, PCNA (proliferating cell nuclear antigen). The Company's IN VIVO-CDKTM ELISA with confirmatory PCNA ELISA enables the researcher to make a direct comparison of both the CDK1 and PCNA biomarker.

In April 1996 the Company signed an exclusive worldwide licensing agreement for its CDK1 biomarker with CN Biosciences (formerly Calbiochem-Novabiochem) providing for royalties on a graduated scale commencing at 5%.

Competition - Laboratory Animal Cancer Diagnostics

The most significant barrier to entry for the cancer biomarker test in rodent studies is the general aversion by the marketplace to new technology in toxicology testing. Toxicology studies in the pharmaceutical and agrochemical industries are performed to assess chemical safety (carcinogenic potential). Ultimately, results of these studies are submitted to the FDA or EPA as part of drug or chemical applications. Although not mandated, the protocols for data submission established by these agencies are generally "recommended". Although the Company's published and marketing data demonstrates that toxicity studies could be conducted more quickly and with significant cost reduction using its CDK1 tests, the regulatory culture of these industries has prevented rapid penetration by the Company of this market. Products currently on the market that complete with the Company's ELISA assays include 3H-thymidine, a radioactive compound, and bromodeoxyuridine. These compounds are the reagents that are currently used in methodology to assess the ability of a chemical to generate a proliferative response in a cell. The testing protocols that are used with these chemicals are time consuming, taking up to several months to produce a result, and the generated data are difficult to interpret.

A strength of the CDK serum/tissue cancer diagnostic tests is that they are the first molecular, mechanistic assay offered to the toxicology industry. However, many principal investigators in the field of toxicology, among others, are not conversant with molecular biology techniques, cell cycle analysis, or current cancer research.

As health care reform increases the pressure on pharmaceutical companies to reduce the prices of new drugs, it is conceivable that pressure to adopt cost-cutting new technologies also will increase. The mechanistic nature of the Company's test may be useful in cutting research costs. In addition, the Company anticipates offering three separate products to the toxicology market. This portfolio of products is expected to meet the needs for monitoring, documenting endpoints and analyzing archival materials.

Competition - Human CDK2 Cancer Diagnostics

There are a number of companies and academic scientists endeavoring to discover serum-based tumor markers, many of which have significantly larger resources than that of the Company. The Company believes that its marker, however, is currently the only tumor biomarker that is mechanistically based. That is, since the role of CDK2 in cell division and the fact that this protein is elevated in transformed cell lines and tumors is known, the CDK2 marker is ideally suited as a diagnostic marker for a large number of cancers. The universality of CDK2 for all cancers is a positive attribute indicating that the biomarker could be useful for detection, prognosis and post-therapy to monitor for recurrence of the cancer. CDK2 is also one of the earliest indicators of cell transformation and, as such, provides the physician with a greater range of therapeutic options.

However, the ubiquity of the CDK2 biomarker for all cancers has a weakness for the diagnostician. Since CDK2 detects abnormally high cell division from any cancerous tissue nonspecifically, a physician could not use a CDK2 test alone to determine where the cancer is located. This deficiency may be overcome through the use of a panel of cancer biomarkers. For example, prostatic acid phosphate (PAP), prostate-specific antigen (PSA) and CDK2 could be requested for a patient if prostate cancer were suspected. The use of several tumor biomarkers as a diagnostic panel may increase the positive and negative predictive values of all biomarkers in the panel.

It is expected that the CDK2 tumor biomarker initially will be evaluated for prostate cancer, then for breast, colon, lung, ovarian and uterine cancers. Ultimately, CDK2 has the potential to be widely used as a screen during regular check-ups to determine if any early, undetected cancers of any site are present. As an in-vitro diagnostic, the CDK2 tumor biomarker requires pre-market notification or approval by the Food and Drug
Administration.

A variety of tumor biomarkers are currently being introduced by various competitors. The Company's strategy is to validate the CDK2 biomarker in a number of studies, obtain FDA clearance to market the biomarker, and then build physician awareness and understanding so that the test will be ordered. p53, p65, nuclear matrix proteins, and biomarkers are also vying for attention and clinical importance.

Future competitors could arise from as yet undiscovered biomarkers or technologies. The Company, however, knows of no competing technologies under development at this time. There is a trend toward home diagnosis as with blood sugar levels, cholesterol and pregnancy. If a home monitoring screen for cancer was desired, however, the CDK2 biomarker could be easily converted to the necessary test format. FDA clearance to market the CDK2 biomarker for home use would be required.

Competition - Veterinary CDK2 Cancer Diagnostics

There are currently no screening tests for cancer being used in veterinary medicine. Therefore, the Company expects single greatest barrier to the successful introduction of the CDK2 test to be acceptance by veterinarians and pet owners. Recent growth of oncology as an area of specialization in veterinary medicine is expected to facilitate the adoption of the test.

The Company's patented test is expected by the Company to impede immediate imitation. The fact that the biomarker is a mechanistic marker also should make it difficult for another test to enter the market after initial acceptance. The Company intends to rely upon the quality reputation and capabilities of its intended partner to maintain sales and market share.

For the companion animal market, general economic factors will play a role in the willingness of research customers to add a new test to their veterinary bills. Major competitors may attempt to maintain comparable product lines, so it is expected that other veterinary suppliers could produce a companion animal cancer screening test. The likelihood of success for another company is difficult to predict, although such success may require substantial investments in research and development.

Business Strategy - Laboratory Animal Diagnostics

The potential customers for the IN VIVO-CDKTM and IN VITRO-CPATM are toxicologists working to characterize the carcinogenicity of chemicals in the pharmaceutical, agrochemical, food and cosmetic industries. The CDK1 diagnostic market in toxicology can be estimated based upon the number of rodents used in cancer testing in the US. Sixteen percent of animals used in research are involved in studies to evaluate the toxicity of chemicals. Of that number, 63% represent studies that could use the CDK1 cancer diagnostic test. Currently, 20

to 40 million rodents are used each year for toxicology testing. Approximately 10% of these animals are used in studies in which the CDK1 diagnostic test could be applied which represents the Company's target market. The Company's ELISA CDK1 diagnostic test kit currently on the market for rodent tissues can assay 42 tissue samples per kit. Estimating usage at three or four assays per animal based on the number of tissues or serum assays per animal, the potential number of tests is estimated at eight to 16 million tests per year. Based on the Company's current kit price, the market potential in the US is estimated to be in the range of $75 to $150 million per year.

The regulatory environment facing customers of the rodent CDK1 diagnostic test has inhibited the rapid adoption of new technologies and testing protocols. Testing laboratories routinely use procedures, tests and protocols approved by the FDA. This barrier to sales can be alleviated by the introduction and regulatory approval of CDK2 serum diagnostics in human and veterinary medicine, of which there can be no assurance.

In April 1996 the Company signed an exclusive worldwide licensing agreement for its CDK1 diagnostic with CN Biosciences (formerly Calbiochem-Novabiochem) providing for royalties on a graduated scale commencing at 5%.

The Company's research finding, that CDK2 can serve as a serum biomarker for cancer and its progression, has led to the continued development of two additional products; these diagnostic tests provide for rapid and early detection of cancer in humans and companion animals such as dogs and cats.

Business Strategy - Human CDK2 Cancer Diagnostics

If FDA clearance or pre-market approval is obtained, the Company in partnership with testing labs, expects to market the CDK2 diagnostic testing kits to the clinical chemistry laboratories in hospitals and reference laboratories. Attending physicians would utilize the Company's CDK2 diagnostic testing kits for patients to assist in the diagnosis of prostatic, breast or colon cancer. Additionally, the serum CDK2 diagnostic test would be used to assess treatment efficacy and to define the period of remission.

The overall market for serum tumor biomarkers in 1992 was $85 million. An annual growth rate of 10% was forecast through 1997 in the Biomedical Business International Report, 1992. Market size is projected to grow when additional tumor markers obtain FDA approval. Market growth also could be significantly increased if viable serum marker screening tests are developed and adopted for any of the major cancer types.

The CDK2 biomarker is a mechanistic biomarker for the detection of cancer cells, which represent a novel characteristic of tumor biomarkers. See "Patent Applications and Proprietary Technology." Furthermore, the Company has filed a patent to protect its rights to the CDK2 serum marker. Present tumor markets for the CDK2 biomarker include prostate, breast and colorectal cancers, while markets that could be developed after the second year include lung, uterine/cervical, bladder and ovarian cancers.

The current format of the test is expected to be compatible with the Company's intended partner reference laboratory. In subsequent years, the Company expects to evaluate the test's format for high volume scale-up on automated instruments.

The Company intends to sell the marketing rights to such tests to a third party for an up-front licensing fee, milestone payments and royalties of which there can be no assurance. The Company expects that overseas distribution will be through licensing to one or more diagnostic companies.

Business Strategy - Veterinary CDK2 Cancer Diagnostics

The American Veterinary Medical Association ("AVMA") estimates that there were 110 million dogs and cats in the US in 1993. Assuming only 20% of these animals visit a veterinarian on an annual basis, these numbers yield 22 million companion animal visits to veterinarians each year. The target customers are the veterinarians who treat these 22 million animals and the target use is for integration into routine physical exams for dogs and cats. The market for CDK2 cancer diagnostic tests is veterinarians working in small clinics as well as large hospitals.

In October 1994, the Company licensed the marketing rights to the assay to IDEXX Laboratories, Inc., a company with revenues in excess of $130 million per year in the veterinary diagnostic market, in exchange for a licensing fee and royalty payments from IDEXX Laboratories, Inc.

Patent Applications and Proprietary Technology

The Company believes that patent protection of materials or processes it develops and any products that may result from the Company's research and development efforts are important to the commercialization of the Company's products. The Company has five US patent applications and three foreign applications that are currently pending.

In the 1995 fiscal year the Company filed a US patent describing the use of compounds identified from two of its TCM extracts. The patent describes uses of these compounds for the treatment of cancer, arterial restenosis following angioplasty and the prevention or treatment of cytopathology related to HIV-1, herpes or hepatitis infections.

Two patent applications for the biosensor detection methodology, which utilize properties of ligand-receptor interaction such as the Ah-IMMUNOASSYTM and potential derivative products using the Ah receptor technology, have been filed in the United States Patent and Trademark Office on behalf of Cornell Research Foundation, Inc. See "Exclusive License Agreement with Cornell Research Foundation, Inc.". The first, describing an indirect immunoassay for the detection of dioxin-like compounds issued on March 5, 1996 as U.S. Patent No. 5.496.703. The second application issued on June 25, 1996 as U.S. Patent No. 5.529.899 for foreign patent applications based upon the first patent were filed in Europe, Canada, and Japan and are still pending. Cornell Research Foundation has filed a Patent Cooperation Treaty (PCT) application for the second patent application that will allow applications to be filed in these countries and others after an international examination process.

The Company filed a third patent on October 27, 1995 describing improvements to the Ah-IMMUNOASSYTM technology. This new assay is targeted for markets in Asia and Eastern Europe. The simplicity and speed of the new formats, which will be owned entirely by the

Company, are ideal for countries with enormous environmental problems and little financial support for high-cost instrumentation.

The Company filed for patent protection in Europe and Canada in fiscal 1994 on finding the increased presence of CDK protein in cells that are exposed to carcinogenic chemicals and after becoming cancerous. This concept was accepted by the International Preliminary Examining Authority during the prosecution of the Patent Cooperation Treaty patent application and a notice of allowance has been received on one of the U.S. patent applications related to this technology. If patents are issued, the Company will have exclusive rights to assays that use certain CDKs as early diagnostic or prognostic markers for cancer.

It is anticipated that continuing United States and corresponding foreign patent applications will be filed in the future. There can be no assurance that any patents will be issued based upon such applications or that any patents that may be issued will provide the Company with significant protection from competitors. Further, there can be no assurance that any patents that may be issued based upon such applications will not be successfully challenged and declared invalid.

The patent positions of biopharmaceutical and biotechnology firms, as well as of academic and other research institutions, are uncertain and involve complex factual and legal questions. Accordingly, no predictions can be made regarding the allowance, breadth or enforceability of claims in these applications or others that may be filed by the Company. The Company and Cornell Research Foundation, Inc. believe that they have the sole and exclusive rights in the technologies underlying the Company's products. The Company would vigorously defend any attempt by any individuals to assert any rights in such technologies. Although Cornell Research Foundation, Inc. has substantial resources to legally enforce its patent rights, there can be no assurance that it will do so. If Cornell Research Foundation, Inc. elects not to enforce its patent rights in the technologies underlying the Company's products, the Company has the right under its license agreement with Cornell Research Foundation, Inc. to seek to enforce those rights. However, in such event, there can be no assurance that the Company will have the financial resources to do so. In addition, although all of the Company's employees are parties to confidentiality agreements which are intended to protect the Company's proprietary technology, there can be no assurance that any of such employees will not compromise any of the Company's proprietary rights.

The Company also relies upon unpatented proprietary technology, and no assurance can be given that others will not independently develop substantially equivalent proprietary information or techniques or otherwise gain access to the Company's proprietary technology or disclose such technology or that the Company can meaningfully protect its rights in such unpatented proprietary technology.

United States trademark applications were approved during the 1995 fiscal year for IN VIVO-CDK(and IN VITRO-CPA(ELISA assays.
Exclusive License Agreement with Cornell Research Foundation, Inc.

The Company and Cornell Research Foundation, Inc., a wholly-owned subsidiary corporation of Cornell University, are parties to a license agreement (the "License Agreement") pursuant to which the inventors have assigned to Cornell Research Foundation, Inc. their ownership interests in the Ah-IMMUNOASSAYTM technology in accordance with Cornell University's patent policy. Cornell University's patent policy states that all patentable inventions conceived or first reduced to practice by Cornell University's faculty and staff in the course of research conducted during an inventor's employment with Cornell University or with the use of Cornell University's resources shall belong to Cornell University, thereby giving Cornell University, through Cornell Research Foundation, Inc., the right to grant licenses under such patent applications and patents issuing thereon.

Pursuant to the License Agreement, Cornell Research Foundation, Inc. has granted an exclusive license for any patent applications based on the Ah-IMMUNOASSAYTM and any patents issuing thereon to the Company and the Company has issued to Cornell Research Foundation, Inc. 195,190 shares of Common Stock of the Company. In the License Agreement, Cornell Research Foundation, Inc. has expressed an intention to maintain a passive non-voting position with respect to its stock holdings in the Company. The Company also will pay Cornell Research Foundation, Inc. a royalty equal to 3% of the net sales price of licensed products based on Ah-IMMUNOASSAY(trademark) technology sold by the Company in the United States and throughout the world. Dr. John G. Babish, an officer of the Company and a co-inventor of the Ah-IMMUNOASSAY(trademark) technology, is entitled to a portion of such royalty payments since Cornell University's patent policy provides that the inventor of patented technology owned by Cornell Research Foundation, Inc. shall be entitled to a distribution of a portion of the net royalty income. Dr. Babish has assigned to the Company all of the royalty payments which he is entitled to receive pursuant to Cornell University's patent policy. Among other matters, the License Agreement also provides that the Company shall exercise diligence to introduce the licensed product into the commercial market.

The Company has the right to sub-license under the License Agreement with the approval of Cornell Research Foundation, Inc., which approval may not be unreasonably withheld or delayed. The Company's rights and obligations under the License Agreement are non-assignable, except to its successor in business if such assignment is approved by Cornell Research Foundation, Inc., which approval may not be unreasonably withheld or delayed. The License Agreement provides for the indemnification of the Company by Cornell Research Foundation, Inc. from any damages, costs or expenses incurred by reason of a breach of Cornell Research Foundation, Inc., warranties set forth in the License Agreement. The License Agreement further provides for the Company's indemnification of Cornell Research Foundation, Inc. with respect to any claim arising out of the Company's or its transferees' use of inventions licensed or information furnished under the agreement, or out of any use, sale or other disposition by the Company or its transferees of products made by use of such inventions or information.

Any exclusive license under a patent application lasts until the expiration date of the last to expire licensed patent, unless otherwise earlier terminated. Cornell Research Foundation, Inc. may terminate the License Agreement for noncompliance with a material provision by six month notice to the Company. Upon receipt of such notice, the Company has ninety days to cure its noncompliance.

Relationship with Cornell University and Cornell Research Foundation, Inc.

The initial Ah-IMMUNOASSAY(trademark)technology was developed at

Cornell University. The Company is a party to the License Agreement with Cornell Research Foundation, Inc. covering this system. See "Exclusive License Agreement with Cornell Research Foundation, Inc."

Cornell University received 78,660 shares of the Company's Common Stock in consideration for consulting services rendered to the Company by various members of the faculty of Cornell University. Cornell Research Foundation, Inc. received 195,190 shares of the Company's Common Stock in consideration for entering into the License Agreement. In the License Agreement, Cornell Research Foundation, Inc. has expressed an intention to maintain a passive non-voting position with respect to its stock holdings in the Company.

In July 1993, Dr. Babish began to devote his full time to the Company, taking an indefinite leave of absence from his tenured position at Cornell University until July 1996 when Dr. Babish resigned from this position.

Government Regulation and Approval

The formulating, processing, manufacturing, packaging, labeling and advertising of the Company's products are subject to regulation by one or more federal agencies, including the Food and Drug Administration (FDA), the Federal Trade Commission (FTC), and the Environmental Protection Agency. These activities are also regulated by various agencies of the states and foreign countries to which the Company's products may be distributed and in which the Company's products may be sold. The FDA, in particular, regulates the formulation, manufacture, and labeling of dietary supplements, drugs and diagnostics.

Dietary Supplements

Herbs and other botanicals, including the Company's Chinese herbs and herbal extracts, are regulated as dietary supplements under the Dietary Supplement Health and Education Act of 1994, so long as no claims are made that such dietary supplements are intended for the diagnosis, cure, mitigation, treatment, or prevention of disease in humans or other animals. The Company presently intends to introduce AndroVir(trademark)-DS and AndroCar(trademark)-DS to the market as dietary supplements during 1997.

The Dietary Supplement Health and Education Act of 1994 was adopted in recognition of the role dietary supplements, including herbs and other botanicals, can play in health promotion and the link between supplements and prevention of chronic diseases such as cancer, heart disease and osteoporosis. This new law revises the provisions of the Federal Food, Drug, and Cosmetic Act (FFDCA) concerning the definition, composition and labeling of dietary supplements. The legislation creates a new statutory class of "dietary supplements." This new class includes vitamins, minerals, herbs, other botanicals, amino acids and other dietary substances for human use to supplement the diet. The legislation grandfathers, with certain limitations, dietary ingredients on the market before October 15,1994. A dietary supplement which is to contain a new dietary ingredient, one not on the market before October 15, 1994, requires evidence of a history of use or other evidence of safety establishing that it will reasonably be expected to be safe, such evidence to be provided by the manufacturer or distributor to the FDA at least 75 days before the product is to be marketed.

The provisions in the law that are significant to the Company are: (i) If a product is first marketed as a dietary supplement and is later approved as a new drug, it may remain on the market as a dietary supplement unless the FDA determines by regulation that it is unsafe. If a product is first publicly investigated or approved as a new drug before being marketed as a dietary supplement, it may not later be marketed as a dietary supplement unless the FDA determines by regulation that it is safe to do so. (ii) A dietary supplement containing only old dietary ingredients can be removed from the market if the FDA shows that it presents "a significant or unreasonable risk of illness or injury," that it is or contains a "poisonous or deleterious substance which may render it injurious to health" or if the FDA determines that it "presents an imminent hazard to public health or safety." (iii) A dietary supplement containing a new dietary ingredient can be removed from the market if there is "inadequate information to provide reasonable assurance that the ingredient does not present a significant or unreasonable risk of illness or injury." (iv) Dietary supplements may make statements of nutritional support on their labels which describe the role of a dietary ingredient intended to affect any part of the structure or function of the human body, characterize the documented mechanism by which a dietary ingredient acts to maintain such structure or function, or describe general well being from consumption of the dietary ingredient, so long as the statement is substantiated to be truthful and not misleading, FDA is notified within 30 days of first making the statement, and the statement is accompanied in boldface by the following: "This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease."

The general labeling requirements for dietary supplements have not been clearly established. In December 1995, the FDA issued proposed regulations to govern the nutrition and ingredient labeling of dietary supplements. These regulations are expected to become final early in 1997 and would require the Company to conform any dietary supplement labels to the regulations.

The products intended to be marketed by the Company as dietary supplements (AndroVir(trademark)-DS and AndroCar(trademark)-DS) may be determined by the FDA to be new drugs. In such case, new drug approval would be required in order to market or to continue marketing the products.

Advertising and label claims for dietary supplements are also regulated by state and federal authorities under a number of disparate regulatory schemes. There can be no assurance that a state will not interpret claims presumptively valid for dietary supplements under federal law to be illegal or to be drug claims under the state's laws or regulations, or that future FDA or FTC regulations or decisions will not restrict the permissible scope of such claims.

Governmental regulations in foreign countries where the Company may determine to commence sales may prevent or delay entry into the market or prevent or delay the introduction, or require the reformulation of the Company's products.

See "Effect of Governmental Regulations on the Company."

Pharmaceuticals

Under the FFDCA, drugs are defined as articles intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease in man or other animals. In addition, a drug is an article (other than food) intended to affect the structure or any function of the body of man or other animals. To the extent that the Company markets its products as dietary supplements, a subset of food, the Company may make statements of nutritional support (structure or function claims), as set forth above in "Dietary Supplements," without causing the products to be deemed drugs.

If the Company's products were deemed by the FDA to be drugs or, if the Company chooses to develop the products as drugs, the products would be new drugs under the FFDCA. As new drugs, these products would require FDA approval prior to marketing based on clinical studies demonstrating safety and effectiveness. An Investigational New Drug exemption must be obtained from FDA prior to the initiation of human clinical trials. In order to obtain an Investigational New Drug exemption, the Company would be required to establish the chemistry of the compound (including assays for identity, strength, quality and purity) to be investigated and to demonstrate that it is manufactured and controlled in accordance with current good manufacturing practices for pharmaceuticals. In addition, the Company would be required to establish the safety of the compounds by toxicological studies in animals. It is possible, but by no means probable, that some of all of these requirements would be waived by FDA based on the history of use of the herb in traditional Chinese medicine or otherwise.

If the Company were to seek approval of a New Drug Application for a compound, at least two adequate and well-controlled clinical trials, in several hundred patients or more, usually performed in multiple centers, would be required. These are in addition to Phase I (initial evaluation of safety) and Phase 2 (initial evaluation of efficacy) human clinical trials to identify compounds safe enough for and worthy of large scale efficacy studies. In addition, the Company would be required to develop human pharmacokinetic and bioavailability data.

The new drug approval process, including performing clinical trials to establish efficacy, usually takes at least several years and requires a substantial investment of capital. In certain circumstances, expedited approval is possible for drugs intended to treat life-threatening or debilitating diseases where initial safety and efficacy is established in Phase I and Phase II clinical trials. Once approval is obtained, the Company may be entitled to a period of exclusivity depending an whether the compound is considered a New Chemical Entity or not and whether the Company owns or has exclusive rights in the clinical trial data, or contributed more than half its cost. Once a new drug is approved, annual and other reports are required to be submitted to FDA, including reports of adverse drug experiences.

Diagnostics

Neither the Ah-IMMUNOASSAY(trademark) nor the INVIVO-CDK(trademark) and the IN VIVO-CPA(trademark) assays used for environmental analyses or for research purposes only currently require pre-market approval by the FDA, the EPA or any other regulatory agency. However, there can be no assurance that these products will not become subject to pre-market approval or some other form of government regulation at a future date.

The IN VIVO-CDK(trademark) and the IN VITRO-CPA(trademark) assays can be used immediately by customers to screen drugs and compounds as nongenotoxic carcinogens. Sufficient data must be generated to substantiate the correlation to presently accepted in vivo tests prior to the test being accepted as a complete substitute for these in vivo tests. The Company expects that it will take up to eight years before complete acceptance is achieved. The Company has based this estimate of the time required for acceptance for prior assays that test genotoxic carcinogens. There is no guarantee that this acceptance will occur or that it will occur in the time frame estimated by the Company.

In addition, diagnostic tests developed from the IN VITRO-CPA(trademark) ELISA kit will be subject to FDA or other regulatory approval if they are used in clinical diagnostics. This test may be classified by the FDA as a Class III medical device, automatically requiring an FDA-approved pre-market approval application ("PMA") prior to commercial marketing and distribution in the clinical diagnostic market.

A PMA for a diagnostic test must contain the results of clinical investigations providing reasonable assurance that the test is safe and effective for its intended use. Thus, the data in such a study must demonstrate the sensitivity and specificity of the test to a sufficiently high degree to permit a judgment that the test will be clinically useful in diagnosing a specific disease or condition, and that the risk of a misdiagnosis is minimal. The FDA usually requires investigations at three separate sites to establish inter-laboratory reproducibility of results. While this investigational process is typically less complex and costly than the clinical testing process for pharmaceuticals, it nonetheless requires a sizable investment of capital. The Company cannot commercialize a medical diagnostic test classified by the FDA as a Class III medical device until the FDA approves a PMA for the product.

A Class III or other medical device not approved for marketing in the US may be exported for commercial sale in other countries pending PMA approval upon notification to the FDA. If the device is approved for marketing in certain foreign countries, the filing of a notification that such commercial sale is approved is sufficient to begin exportation.

Under the Patent Term Restoration Act of 1984, an entity which owns a patent claiming a Class III medical device requiring PMA approval, or a method of using or manufacturing such a product, may apply for an extension of the normal statutory patent term of 20 years to compensate for the time taken for clinical research and FDA review of the product's PMA. The Company may be eligible to apply for such additional patent protection if a patent issues on any of its medical diagnostic tests requiring PMA approval. There can be no guarantee, however, that any such patents will be issued or that such patent term extensions will be obtained.

Effect of Governmental Regulations on the Company

There is a risk that the FDA may take the position that the Company's clinical trials of AndroCar(trademark) and/or AndroVir(trademark) are new drug investigations which would

require an Investigational New Drug exemption to continue the trial. In addition, there is a risk that the FDA may take the position that the marketing of AndroCar(trademark)-DS and AndroVir(trademark)-DS to individuals compromised by cancer or HIV+ is a new drug use, and not a dietary supplement use, and that new drug approval is required prior to marketing. Either of these events, while contestable with FDA, would require the Company to re-evaluate how it intends to market the products.

There also is a risk that FDA may take the position that Andrographis paniculata, as it is proposed for use in AndroCar(trademark)-DS and AndroVir(trademark)-DS, is a new dietary ingredient requiring a 75 day advance notification to FDA and the submission of evidence of safety prior to marketing. If this were to occur, introduction of these products to the market could be delayed.

In late October 1996, FDA personnel performed an inspection at the Company's offices in Ithaca, New York in order to obtain information related to the clinical trials that the Company has performed and is performing on AndroCar(trademark), as well as to obtain samples of AndroCar(trademark). Study-related information and AndroCar(trademark) samples were provided by the Company.

With respect to product development generally, the Company is not aware of any other companies that are proceeding with development on dual tracks as dietary supplements making statements of nutritional support (structure or function claims) and pharmaceuticals. Accordingly, the Company anticipates that it may be subject to greater scrutiny by FDA than if it were pursuing either course alone.

Initially, the Company does not anticipate that the drug discovery pathway will be effected by FDA pharmaceutical regulation under the FFDCA, since the Company intends to license drug compounds to established pharmaceutical companies prior to extensive testing and development. In the future, it is conceivable that the Company could move further downstream in the new drug development process, possibly through Phase I clinical trials, in which case compliance with FDA regulations regarding Investigational New Drugs would become an important factor.

Due to the nature of the Company's products, they could become subject to governmental regulation in the future, and changes in regulations on other industries or products could indirectly affect the pricing and markets for the Company's products.

Proposed legislation for health care reform has increased pressure on pharmaceutical companies to reduce their pricing. The Company's Cell Proliferation Assays, if they are accepted by the scientific community, can provide its customers with the ability to reduce their direct costs and time required to either perform tests or to develop products for market. They also provide the customer with information regarding toxicity that is not currently available from any other source.

Funding of Research and Development

The Company expended $1,362,971 and $703,806 on research and development in fiscal years 1996 and 1995, respectively. None of these research and development costs were borne directly by customers.

Costs of Environmental Compliance

The Company believes it is in compliance with all environmental laws and the cost to the Company for this compliance has been minimal.

Employees

As of September 30, 1996, the Company had 20 employees. Nine employees are primarily engaged in research and development. Four employees are engaged in publishing the newsletter. Nine of the employees have a Ph.D. or MD degree. None of the Company's employees is covered by a collective bargaining agreement. The Company considers its relationship with its employees to be excellent. All employees of the Company are signatories to confidentiality agreements that restrict proprietary rights in, and commercial development of, all technology developed by the employees.

ITEM 2. Description of Properties.

The Company's executive offices and research facilities are located at Langmuir Laboratories in Ithaca, New York, and occupy approximately 6,000 square feet at that location. The Company occupies this space under a one year lease from Cornell University which expires in 1997 and provides for automatic annual renewals. At this time and for the foreseeable future, the Company believes that this space is sufficient for its administrative offices as well as currently contemplated manufacturing and research and development activities. The Company believes that the cost of such space is competitive.

ITEM 3. Legal Proceedings.

In June 1993, a suit was commenced in the New York State Supreme Court (Onondaga County) by certain persons, individually and doing business as In Vitro Bioanalytic Systems, against the Company, Dr. John G. Babish, an officer and director of the Company, and Edward Heslop, a founding shareholder of the Company.

The plaintiffs allege, among other things, that in 1990, prior to the Company's incorporation, a partnership had been formed with Messrs. Babish and Heslop to commercialize products which the Company is now developing. Damages, an accounting and an injunction are being sought against the Company. By decision dated September 14, 1994, the Court dismissed certain of the plaintiffs' claims against the Company while permitting a claim alleging unfair competition to proceed. The Company believes that the suit against it is without merit, intends to continue to vigorously oppose the allegations and is appealing the Court's ruling to the extent that it did not dismiss the entire complaint.

ITEM 4. Submission of Matters to a Vote of Security Holders.

None.

PART II

ITEM 5. Market for Common Equity and Related Stockholder Matters.

The Company's Common Stock, par value $0.01 per share (the "Common Stock"), commenced trading on February 11, 1992 on the over-the-counter market and is quoted on the National Association of Securities Dealers' Automated Quotation System ("NASDAQ") under the symbol PRLN. The Company's Redeemable Common Stock Purchase Warrants (the "Warrants") commenced trading on September 24, 1993 on the over-the-counter market and is quoted on NASDAQ under the symbol PRLNW.

The following table sets forth the high and low bid prices for the Common Stock and Warrants during the periods indicated as reported by NASDAQ. The prices reported reflect inter-dealer quotations, may not represent actual transactions and do not include retail mark-ups, mark-downs or commissions.

	Common Stock		Warrant	
	High Bid	Low Bid	High Bid	Low Bid
Fiscal 1995				
First Quarter	2 1/2	7/8	9/32	1/8
Second Quarter	3 5/8	1 1/2	1 3/16	1/8
Third Quarter	5 5/8	3 1/8	1 13/16	7/8
Fourth Quarter	8	3 3/8	4 7/8	7/8
Fiscal 1996				
First Quarter	7 1/8	2 1/8	4 1/8	7/8
Second Quarter	2 9/16	29/32	1 1/8	7/16
Third Quarter	4 1/4	2 5/32	1 5/8	3/4
Fourth Quarter	3 3/4	2 5/8	1 9/16	5/8

As of December 18, 1996, the Company had 11,669,604 shares of Common Stock outstanding held by approximately 1,200 record holders. As of such date, the Company had 2,042,870 Warrants outstanding and 60 record holders of Warrants.

The Company did not pay cash dividends on the Common Stock during the two fiscal years ended September 30, 1996. It is the present policy of the Company to retain earnings, if any, to finance the development and growth of its business. Accordingly, the Company does not anticipate that cash dividends will be paid until earnings of the Company warrant such dividends, and there can be no assurance that the Company can achieve such earnings or any earnings.

ITEM 6. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussions should be read in conjunction with the consolidated financial statements and related notes thereto of the Company included elsewhere herein.

General

Research and product engineering expenses include internal expenditures as well as expenses associated with third party consultants and collaborators. Newsletter expenses and costs include the cost of printing, supplies, and other administrative costs incurred with operating the Company's New Century Nutrition newsletter and the costs related to winding down the operation which ceased publication with its December 1996 issue. General and administrative expenses include salaries, overhead, and consulting costs incurred in connection with maintaining the Company's day to day operations. The Company's historical revenues have primarily been attributable to licensing fees generated from the use of its technology.

Results of Operations

Fiscal years ended September 30, 1996 and 1995

Revenues

Revenues decreased 81% to $59,000 in the fiscal 1996 from $306,000 in the fiscal 1995. This decrease in revenue is primarily attributable to a $245,000 decrease in licensing fees in the current year. In January 1995, the Company entered into an agreement with The Dow Chemical Company (Dow) for a non-exclusive license and an option for an exclusive license to evaluate and commercialize the Company's Ah-IMMUNOASSAY technology. In connection with the agreement, the Company received a one-time license fee of $250,000 for a worldwide, non-exclusive license. Dow has notified the Company that it does not intend to execute the exclusive worldwide license for the assay. This decrease in revenues was offset in part by the $32,000 in subscription revenue from the operations of the Company's newsletter.

Research and Product Engineering Expenses

Research and product engineering expenses increased by 94% to $1,363,000 in the fiscal 1996 as compared to $704,000 in the fiscal 1995. The significant increase in these types of expenditures are attributable to the costs of clinical studies associated the Company's AndroVir(trademark) and AndroCar(trademark), and associated personnel increases.

In the second quarter of fiscal 1995, the Company retained consultants to perform research into Indian sourced herbs and their medicinal benefits. The Company issued 200,000 shares of its common stock as full payment to such consultants in connection with this research and recognized a non-cash research expense of $375,000 in the fourth quarter of fiscal 1995.

General and Administrative Expenses

General and administrative expenses were $2,007,000 and $1,014,000 in fiscal 1996 and fiscal 1995, respectively, representing increases of 98% in fiscal 1996 from fiscal 1995. These expenses relate to the administration of the research, development and product engineering activities and support services including raising capital, arranging for facilities, hiring employees, market analysis and the development and administration of the Company's business and marketing plans.

The primary reasons for the increase in general and administrative expenses in fiscal 1996 are due to increases in hiring of additional employees, costs incurred with respect to raising additional capital and marketing initiatives put in place to develop the Company's

business. Also included in fiscal 1996 are $160,000 of non-cash expenses associated with an aggregate of 283,000 of options or shares issued in consideration of legal and professional services performed, or to be performed, for the Company.

Newsletter Expenses and Costs

During November 1995, the Company, through its wholly-owned subsidiary, purchased substantially all of the assets related to the New Century Nutrition (formerly Nutrition Advocate), a newsletter promoting disease prevention through nutrition, from Advocacy Communications, Inc. The purchase price for the acquired assets was $350,000 in cash. T. Colin Campbell, a Director of the Company and his son T. Nelson Campbell, then a Vice President of the Company, were majority shareholders and officers of Advocacy Communications, Inc.

The purchase price represented principally intangible assets which were to be amortized on a straight-line basis over 10 years. During fiscal 1996, the Company incurred expenses of approximately $531,000 developing the newsletter and soliciting subscriptions.

In December 1996, the Company decided to cease publication of the newsletter effective January 1, 1997. The Company will seek a buyer for either the newsletter business and/or the subscriber list. The Company wrote off the purchase price of the newsletter of $350,000 and accrued $75,000 for the anticipated costs to wind up the newsletter operations all of which are reflected in the September 30, 1996 financial statements.

Officer Stock Compensation

In fiscal 1995, the President and then CEO of the Company, purchased common stock at prices below market on the date of purchase. The Company incurred a one-time, non-cash compensation expense of $1,228,000 for the period ended September 30, 1995.

Liquidity & Capital Resources

As of September 30, 1996, the Company maintained working capital of $3,820,000, which included cash and cash equivalents of $4,171,000. On September 30, 1995, working capital was $821,000 and cash and cash equivalents were $1,416,000. During fiscal 1995 and 1996, the Company raised $9.9 million in equity through a series of transactions as described below.

In June and July 1996, the Company completed a private placement to certain investors for net proceeds of $2.2 million in which it issued 825,001 shares of common stock and 1.2 million warrants with various exercise prices ranging from $3.25 to $4.50 and other terms. In September 1996, the Company completed a private placement financing to many of the same investors for net proceeds of $2.0 million in which it issued 683,333 shares of common stock and 683,333 warrants with various exercise prices ranging from $3.25 to $4.00 and other terms.

During the period, August through October 1995, the Company sold 300,000 shares of common stock and 102,351 of convertible preferred stock in private transactions generating net proceeds of $5.7 million. During the period October 31, 1995 through February 1, 1996, all of the holders of the convertible preferred stock converted such shares into 5.4 million shares of common stock.

The Company intends to use the proceeds for continued research and development, product launch expenses associated with AndroVir(trademark)-DS and AndroCar(trademark)-DS and for working capital.

During November 1995, the Company purchased 265,478 shares of its common stock on the open market for an aggregate cost of $1,342,515. The Company has no further plans to make any additional purchases of its shares.

On April 9, 1996, the Company signed an option to acquire East West Herbs Ltd. of Kingham, England ("EWH"). EWH markets and distributes traditional Chinese medicines in the United Kingdom and throughout Europe. Under terms of the option, the Company has the right to acquire all of the outstanding shares of EWH on or before April 6, 1997 for $780,000 in cash and shares of the Company with a value of approximately $2,400,000 for a total proposed acquisition price of $3.2 million. Additionally, if the option is exercised, the Company has the obligation to extend an additional working capital loan to EWH of $300,000. Consideration for the option was made in the form of an option fee of $20,000 and a working capital loan of $340,000. The loan bears interest at the LIBOR rate and is payable in eight equal quarterly installments with the first installment to be paid six months after the first anniversary of the loan agreement. The loan is guaranteed by the majority shareholder of EWH.

The loan is to be used by EWH for inventory purchases, continuing research and development including the clinical trials of two herbal products for cancer patients and corporate working capital.

EWH is believed to be a leader in its industry and has launched 24 new products during the three month period ended September 30, 1996. Additionally, the Company anticipates that EWH's United States operations will expand as the awareness of complementary medicine increases. Should the Company not exercise its option to acquire EWH, the eventual collectibility of the loan will be subject to EWH's ability to obtain alternative financing, achieve profitable operations and/or positive cash flow in the future as well as the financial resources of the loan's guarantor. If the Company elects to exercise its option, it intends to fund the cash portions of the transactions from its existing funds.

In October 1994, the Company acquired Pacific Liaisons for approximately $1.6 million in common stock.

The Company expects to incur additional research and development and product engineering expenses, including personnel and costs related to pre-clinical testing and clinical trials. The Company intends to seek additional funding sources of capital and liquidity through collaborative agreements, through the exercise by the holders of outstanding warrants to purchase common stock or through public or private financing, however, there can be no assurance that additional financing will be available on acceptable terms or at all.

If additional financing is not available, the Company anticipates that its available cash and existing sources of funding will be adequate to satisfy its capital requirements through fiscal 1997. The

Company's future capital requirements will depend on many factors, including continued scientific progress in its research and development programs, the magnitude of such programs and its acquisition plan, including the exercise of the option to acquire EWH and related transactions.

Recently Issued Accounting Standards

In March, 1995, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 121, "Accounting for the Impairment of Long - Lived Assets and for Long-Lived Assets to be Disposed Of", which becomes effective for the Company in fiscal 1997. This statement establishes accounting standards for the impairment of long-lives assets, certain identifiable intangibles and goodwill related to those assets to be held and used, and for long-lived assets and certain identifiable intangibles to be disposed. Adoption of SFAS No. 121 is not expected to have a material impact on the Company's consolidated financial position and operating results, nor will it materially affect the Company's cash flows.

In October, 1995, the FASB issued SFAS No. 123, Accounting for Stock-Based Compensation. This statement establishes an alternative method of accounting for stock-based compensation awarded to employees, such as stock options granted by the Company to employees. SFAS No. 123 provides for the recognition of compensation expense based on the fair value of the stock-based award, but allows companies to continue to measure compensation cost in accordance with the Accounting Principles Board Opinion (APB) No. 25, "Accounting for Stock Issued to Employees". Companies electing to retain this method must make pro forma disclosure of net income and earnings per share as if the fair value based method had been applied. The Company plans to continue to use APB No. 25, which does not require the Company to record compensation expense for the stock options it awards to employees. In the Company's consolidated financial for fiscal 1997, the Company will disclose the pro forma effect of the fair value method on 1997 and 1996 net income and earnings per share.

ITEM 7. Financial Statements

Independent Auditors' Report.

Consolidated Balance Sheets as of September 30, 1996 and September 30, 1995.

Consolidated Statements of Operations for the years ended September 30, 1996, 1995 and 1994, and the period from inception (April 15, 1991) to September 30, 1996.

Consolidated Statements of Stockholders' Equity for the period from inception (April 15, 1991) to September 30, 1996.

Consolidated Statements of Cash Flows for the years ended September 30, 1996, 1995 and 1994 and the period from inception (April 15, 1991) to September 30, 1996.

Notes to Consolidated Financial Statements.

Financial Statement Schedules: No schedules were submitted because they are not applicable, not required or because the required information is included in the Financial Statements or notes thereto.

Independent Auditors' Report

The Board of Directors and Stockholders Paracelsian, Inc.

We have audited the accompanying consolidated balance sheet of Paracelsian, Inc. and subsidiary (a development stage enterprise) as of September 30, 1996, and the related consolidated statements of operations, stockholders' equity, and cash flows for the year ended to September 30, 1996 and for the period from April 15, 1991 (inception) to September 30, 1996. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit. The financial statements of the Company as of and for the year ended September 30, 1995 were audited by other auditors, whose report dated November 30, 1995, expressed an unqualified opinion on those financial statements. The cumulative statements of operations, stockholders' equity, and cash flows for the period April 15, 1991 (inception) to September 30, 1996 include amounts for the period from April 15, 1991 (inception) to September 30, 1991 and for each of the years in the four-year period ending September 30, 1995, which were audited by other auditors whose report has been furnished to us, and our opinion, insofar as it relates to the amounts included for the period April 15, 1991 (inception) through September 30, 1995 is based solely on the report of the other auditors.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, based on our audit and the report of the other auditors, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Paracelsian, Inc. and subsidiary (a development stage enterprise) as of September 30, 1996, and the results of their operations and their cash flows for the year ended September 30, 1996 and for the period April 15, 1991 (inception) to September 30, 1996, in conformity with generally accepted accounting principles.

KPMG PEAT MARWICK LLP

Jericho, New York
November 22, 1996

<TABLE>
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Paracelsian, Inc. and Subsidiary
(A Development Stage Company)
Consolidated Balance Sheets
September 30, 1996 and 1995

<S>	<C>	<C>
Assets	1996	1995
Current Assets:		
Cash and cash equivalents	$ 4,171,402	$ 1,416,022
Prepaid expenses and other current assets	278,367	146,155
Total current assets	4,449,769	1,562,177
Equipment, net	384,790	456,555
Traditional Chinese Medicine extracts, net	622,419	778,014
Licensing agreements, net	555,602	678,446
Patents and trademarks, net	258,206	209,169
Option to acquire East West Herbs, Ltd. and related acquisition costs	92,866	-
Loan to East West Herbs , Ltd.	340,000	-
	1,869,093	1,665,629
	$ 6,703,652	$ 3,684,361
Liabilities and Stockholders' Equity		
Current Liabilities:		
Accounts payable	$ 312,817	$ 539,084
Accrued expenses	192,790	65,328
Deferred revenue	46,858	-
Due to related party	77,597	137,261
Total current liabilities	630,062	741,673
Commitments and contingency		
Stockholders' Equity:		
Preferred stock, $.01 par value; 1,000,000 shares authorized;		
Series A - 10,700 shares outstanding in 1995	-	107
Series B - 10,000 shares outstanding in 1995	-	100
Series C - 5,000 shares outstanding in 1995	-	50
Common stock, $.01 par value; 20,000,000 shares authorized; 11,935,082 shares issued in 1996 and 4,901,584 shares issued in 1995	119,348	49,016
Additional paid-in capital	20,348,005	11,742,899
Deficit accumulated during the development stage	(13,051,248)	(8,849,484)
Treasury stock, at cost; 265,478 shares in 1996	(1,342,515)	-
Total stockholders' equity	6,073,590	2,942,688
	$ 6,703,652	$ 3,684,361

See accompanying notes to consolidated financial statements.

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Paracelsian, Inc. and Subsidiary
(A Development Stage Company)
Consolidated Statements of Operations
For the years ended September 30, 1996, 1995 and 1994
And the period from inception to September 30, 1996

<S>	1996 <C>	1995 <C>	1994 <C>	Cumulative Period from Inception to September 30, 1996 <C>
Revenues:				
Marketing rights	$ 5,000	$ 249,995	$ -	$ 254,995
Products	22,411	55,695	74,219	157,813
Subscription revenues	31,625	-	-	31,625
	59,036	305,690	74,219	444,433
Operating expenses:				
Research and product engineering	1,362,971	703,806	972,159	5,257,934
Research concerning Indian herbs	-	375,000	-	375,000
Newsletter expenses and costs	955,586	-	-	955,586
Cost of products sold	10,538	28,319	54,785	95,023
General and administrative	2,006,801	1,013,941	1,004,139	5,390,964
Officer stock compensation	-	1,228,275	-	1,228,275
	4,335,896	3,349,341	2,031,083	13,302,782
Loss from operations during the development stage	(4,276,860)	(3,043,651)	(1,956,864)	(12,858,349)
Interest income, net	75,096	12,455	16,602	307,101
Net loss during the development stage	$ (4,201,764)	$ (3,031,196)	$ (1,940,262)	$ (12,551,248)
Net loss per weighted average shares of common stock	$ (0.49)	$ (0.75)	$ (0.84)	
Weighted average number of common stock outstanding	8,597,479	4,055,598		2,312,388

See accompanying notes to consolidated financial statements.

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Paracelsian, Inc. and Subsidiary
(A Development Stage Company)
Consolidated Statements of Stockholders' Equity
For the period from Inception to September 30, 1996

	Preferred Stock		Common Stock		Additional Paid-In	Deficit Accumulated During the Development	Treasury	
	Shares	Amount	Shares	Amount	Capital	Stage	Stock	Total
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
Issuance of Common Stock April-July 1991	-	$-	806,250	$ 8,063	$ -	$ -	$ -	$ 8,063
Issuance of Common Stock for licensing, technology and consulting services-July 1991			333,850	3,338				3,338
Private placement of Common Stock- August-September 1991, net of costs			267,288	2,673	369,017			371,690
Net loss(April 15, 1991 to September 30, 1991)						(133,469)		(133,469
BALANCE, September 30, 1991	-	-	1,407,388	14,074	369,017	(133,469)	-	249,622
Redemption of Common Stock-November 1991			(245,000)	(2,450)				(2,450)
Initial Public Offering of Common Stock - February 1992, net of costs			1,150,000	11,500	5,103,451			5,114,951
Issuance of Warrants-February 1992					1,000			1,000
Net loss (year ended September 30, 1992)						(1,221,943)		(1,221,943)
BALANCE, September 30, 1992	-	-	2,312,388	23,124	5,473,468	(1,355,412)	-	4,141,180
Warrant dividend-September 1993					436,898	(500,000)		(63,102)
Net loss (year ended September 30, 1993)						(2,022,614)		(2,022,614)
BALANCE, September 30, 1993	-	-	2,312,388	23,124	5,910,366	(3,878,026)	-	2,055,464
Net loss (year ended September 30, 1994)						(1,940,262)		(1,940,262)
BALANCE, September 30, 1994	-	-	2,312,388	23,124	5,910,366	(5,818,288)	-	115,202
Issuance of Common Stock for acquisition of Pacific Liaisons - October 1994			1,116,666	11,167	1,632,833			1,644,000
Exercise of Warrants			221,200	2,212	716,644			718,856
Common Stock purchase by Officer -January 1995			705,000	7,050	1,311,075			1,318,125
Issuance of Common Stock for services rendered-January 1995			33,330	333	21,167			21,500
-April 1995			200,000	2,000	373,000			375,000
Issuance of Common Stock for conversion of short-term liabilities-June 1995			13,000	130	48,849			48,979
Issuance of Common Stock -August 1995, net of costs			300,000	3,000	749,625			752,625
Issuance of Preferred Stock-September 1995								
Series A, net of costs	10,700	107			361,018			361,125
Series B, net of costs	10,000	100			399,900			400,000
Series C, net of costs	5,000	50			218,422			218,472
Net loss(year ended September 30, 1995)						(3,031,196)		(3,031,196)
BALANCE, September 30, 1995	25,700	257	4,901,584	49,016	11,742,899	(8,849,484)	-	2,942,688
Issuance of Series B Preferred Stock, net of costs	76,651	767			3,999,233			4,000,000
Exercise of Warrants			73,318	733	154,676			155,409
Issuance of Common Stock for services rendered-October 1995			33,336	331	42,669			43,000
Purchase of Treasury Stock-November 1995							(1,342,515)	(1,342,515)
Conversion of Preferred Stock	(102,351)	(1,024)	5,371,010	53,710	(52,686)			-
Issuance of Common Stock for conversion of short-term liabilities -January 1996			2,500	25	9,975			10,000
Issuance of Common Stock for services rendered-February 1996			25,000	250	27,875			28,125
Issuance of Warrants and Options for services rendered-February 1996					132,500			132,500
Issuance of Common Stock -June 1996,net of costs			733,334	7,333	1,965,663			1,972,996
Sale of Warrants-June 1996					35,000			35,000
Issuance of Common Stock -July 1996,net of costs			91,667	917	250,075			250,992
Issuance of Common Stock for services rendered-July 1996			5,000	50	4,950			5,000
Excersise of Options-September 1996			15,000	150	37,350			37,500
Issuance of Common Stock -September 1996, net of costs			683,333	6,833	1,997,826			2,004,659
Net loss(year ended September 30, 1996)						(4,201,764)		(4,201,764)
BALANCE, September 30, 1996	-	$-	11,935,082	$ 119,348	$20,348,005	$(13,051,248)	$(1,342,515)	$6,073,590

See accompanying notes to consolidated financial statements.

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Paracelsian, Inc. and Subsidiary
(A Development Stage Company)
Consolidated Statements of Cash Flows
For the Years Ended September 30, 1996, 1995 and 1994
And the Period From Inception to September 30, 1996

	1996	1995	1994	Cumulative Period from Inception to September 30, 1996
<S>	<C>	<C>	<C>	<C>

Cash flows from operating activities:				
Net loss	$(4,201,764)	$(3,031,196)	$(1,940,262)	$(12,551,248)
Adjustments to reconcile net loss to net cash used in by operating activities:				
Non-cash compensation expense	-	1,228,275	-	1,228,275
Other non-cash expenses	725,658	415,000	-	1,140,658
Depreciation and amortization	274,818	302,320	110,202	777,604
Changes in assets and liabilities				
(Increase) decrease in prepaid expenses and other current assets	(132,212)	(4,209)	35,535	(248,947)
(Decrease) increase in accounts payable	(183,142)	302,221	234,560	644,432
(Decrease) increase in due to related party	(59,664)	(4,998)	80,838	77,597
Increase in deferred revenues	46,858	-	-	46,858
(Decrease) increase in accrued expenses	127,462	30,696	(34,781)	192,790
Net cash used in operating activities	(3,401,986)	(761,891)	(1,513,908)	(8,691,981)
Cash flows from investing activities:				
Purchase of investments	-	-	-	(6,719,089)
Redemption of investments	-	-	1,256,755	6,719,089
Purchase of equipment	(54,352)	(14,243)	(16,737)	(715,299)
Proceeds from sale of equipment	-	20,000	-	20,000
Acquisition of licensed technology	(50,000)	-	-	(50,000)
Acquisition of patents and trademarks	(69,457)	(120,581)	-	(304,803)
Acquisition of New Century Nutrition newsletter	(350,000)	-	-	(350,000)
Acquisition of option for EWH and related acquition costs	(92,866)	-	-	(92,866)
Loan to EWH	(340,000)	-	-	(340,000)
Net cash provided by (used in) investing activities	(956,675)	(114,824)	1,240,018	(1,832,968)
Cash flows from financing activities:				
Sale of common stock, initial public offering, net of costs	-	-	-	5,124,014
Sale of common and preferred stock, net of costs	8,228,647	1,732,222	-	10,330,109
Proceeds from the exercise of warrants	155,409	510,886	-	666,295
Proceeds from the exercise of options	37,500	-	-	37,500
Proceeds from the sale of warrants	35,000	-	-	35,000
Purchase of treasury stock	(1,342,515)	-	-	(1,342,515)
Cost of warrant dividend	-	-	-	(63,102)
Proceeds from short term borrowing, net	-	-	(100,000)	-
Payments on equipment contract	-	-	-	(90,950)
Net cash provided by (used in) financing activities	7,114,041	2,243,108	(100,000)	14,696,351
Net increase (decrease) in cash and cash equivalents	2,755,380	1,366,393	(373,890)	4,171,402
Cash and cash equivalents, beginning of perid	1,416,022	49,629	423,519	-
Cash and cash equivalents, end of period	$ 4,171,402	$ 1,416,022	$ 49,629	$ 4,171,402
Supplemental disclosure:				
Cash paid during the period for interest	$ 6,875	$ 973	$ 2,826	$ 14,800
Supplemental disclosure of non-cash investing and financing activities:				
Fair value of assets acquired, net of cash acquired	$ -	$ 1,702,000	$ -	$ 1,702,000
Less - liabilities assumed	-	52,000	-	52,000
Less - issuance of common stock	-	1,644,000	-	1,644,000
Net cash paid	$ -	$ 6,000	$ -	$ 6,000
Warrant dividend	$ -	$ -	$ -	$ 500,000
Issuance of common stock/warrants for services and to reduce short-term liabilities	$ 218,625	$ 278,449	$ -	$ 497,074
Purchase of equipment	$ -	$ -	$ -	$ 90,950
Issuance of common stock for licensing and technology rights	$ -	$ -	$ -	$ 3,338

See accompanying notes to consolidated financial statements.

</TABLE>

Paracelsian, Inc. and Subsidiary
(A Development Stage Company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

SEPTEMBER 30, 1996 AND 1995

1. ORGANIZATION, BUSINESS, AND RISK FACTORS:

Organization and Business

Paracelsian, Inc. (The "Company") is a biotechnology company that markets and develops products from technology related to the detection of signals from the exterior of a cell to its nucleus (signal transduction). These signals result in the activation or suppression of specific genes and culminate in cell division.

Cell division is the one of the basic steps in biology necessary for normal growth of tissues to support life. The Company's technology enables researchers to observe signal transduction and measure the effects of chemicals contained in synthetic and natural compounds, such as herbal extracts, on cell division. In the course of these observations, the Company can distinguish the effects of such chemicals on targeted cells, thereby screening compounds to identify those with promising therapeutic effects. (This proprietary technology, including the components, methods, procedures and know-how employed in this screening process, is referred to herein as the "Screening Technology".)

In October 1994, Pacific Liaisons (Pacific), a partnership engaged in identifying and acquiring biologically active drugs, natural products and foods from Eastern Asia, merged with a wholly-owned subsidiary of the Company and the Company now maintains a large library of natural medicinal extracts. These extracts are being processed with the Company's p34 screening assay. The Company also has access to the informational database related to the medicinal extracts, which contains, among other things, a history of the usage of each extract (see Note 3).

In November 1995, the Company purchased substantially all the assets

related to New Century Nutrition, a newsletter promoting disease prevention through nutrition. In December 1996, the Company decided to cease publication of the newsletter and seek potential buyers for the newsletter and/or its subscriber list (see Note 3).

Development Stage Company and Risk Factors

The Company is considered to be a development stage company as defined in Statement of Financial Accounting Standards No. 7, "Accounting and Reporting by Development Stage Enterprises." Since inception, the Company has been primarily engaged in research, product engineering and raising capital.

The Company, as a development stage enterprise, has yet to generate significant revenues and has no assurance of substantial future revenues. Even if marketing efforts are successful, it may take several years before significant revenues are realized. The Company is subject to a number of risks that may affect its ability to become an operating enterprise or impact its ability to remain in existence, including risks related to successful development and marketing of its products, patent protection of proprietary technology, government regulation competition from substitute products (including technologies that may not yet have been developed), dependence on key employees and the need to obtain additional funds that may not be available to it.

As shown in the accompanying financial statements, the Company incurred a net loss of approximately $4,200,000 for the year ended September 30, 1996 and has working capital of approximately $3,820,000 at year-end. The Company continues to expend funds on product research and development and general and administrative expenses and has not generated significant revenues subsequent to year-end.

2. SIGNIFICANT ACCOUNTING POLICIES:

Consolidation

The consolidated financial statements of the Company include the accounts of Paracelsian, Inc. and its wholly owned subsidiary ParaComm, Inc. formerly known as Para Acquisition Corp. All intercompany balances and transactions have been eliminated.

Cash and Cash Equivalents

Cash and cash equivalents consist of highly liquid investments with an original maturity of three months or less. Cash equivalents as of September 30, 1996 and 1995 approximated $2,145,000 and $0, respectively.

Research and Product Engineering

Company-sponsored research and product engineering expenditures have been charged to expense as incurred. These costs consist primarily of employee salaries and direct laboratory costs. The cost of extracts used in research and development activities is expensed as consumed.

Net Loss Per Share

Net loss per share was computed by dividing net loss for the period by the weighted average number of shares of common stock outstanding during the period. Common stock equivalents are not included in the computation of average shares outstanding because the effect of such inclusion would be to decrease the loss per share.

Patents and Trademarks

The Company has acquired or applied for certain patent and trademark rights. Costs associated with the acquisition and application for these rights have been capitalized and are being amortized on the straight-line method over the estimated legal life of the assets which range from 15 to 17 years. Accumulated amortization of the patents and trademarks totaled $58,747 and $26,177, respectively, at September 30, 1996 and 1995.

Equipment and Depreciation

Equipment is stated at cost and is depreciated over the estimated useful lives of the assets using the straight-line method. Equipment consists of the following as of September 30:

	Useful Lives	1996	1995
Laboratory Equipment	10 years	$ 500,623	$ 563,577
Office furniture,equipment	10 years	88,095	73,273
Computer equipment,software	5 years	133,033	104,820
		721,751	741,670
Less Acccumulated Depreciation		336,961	285,115
		$ 384,790	$ 456,555

Depreciation expense of $81,554, $93,332 and $101,519 were charged to operations for the years ended September 30, 1996, 1995 and 1994, respectively.

Use of Estimates

The preparation of the consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements. Estimates also affect the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

3. ACQUISITIONS:

(a) East West Herbs Ltd.

On April 9, 1996, the Company signed an option to acquire East West Herbs Ltd. of Kingham, England. East West Herbs Ltd. markets and distributes traditional Chinese medicines in the United Kingdom and throughout Europe. Under terms of the option, the Company has the right to acquire all of the outstanding shares of East West Herbs on or

before April 6, 1997 for $780,000 in cash and shares of the Company with a value of approximately $2,400,000 for a total proposed acquisition price of $3.2 million. Consideration for the option was made in the form of an option fee of $20,000 and a working capital loan of $340,000. The loan bears interest at the LIBOR rate (6% at September 30, 1996) and is payable in eight equal quarterly installments with the first installment to be paid six months after the first anniversary of the loan agreement. The loan is guaranteed by a majority shareholder of East West Herbs.

The loan is to be used by East West Herbs for inventory purchases, continuing research and development including the clinical trials of two herbal products for cancer patients and corporate working capital. In connection with the option and loan agreements, the Company also incurred other direct costs of $72,866. Such costs will either be capitalized as part of the acquisition costs of East West Herbs should the merger be consummated or written off if the Company elects not to exercise its option.

Summary unaudited financial information of East West Herbs as of September 30, 1996 is as follows (in US dollars translated from Pounds Sterling at $1.50):

	As of Sept. 30, 1996
Total assets	$ 772,000
Total liabilities	995,000
Total stockholders' deficit	(223,000)
	For six months ended Sept. 30, 1996
Total sales	$ 900,000
Total expenses	1,019,000
Net loss	(119,000)

Management believes East West Herbs has launched numerous new products during the last three month period ended September 30, 1996. The Company anticipates that East West Herbs will further expand its product line and its operations in the United States over the next twelve months.

Should the Company not exercise its option to acquire East West Herbs, the eventual collectibility of the loan will be subject to East West Herbs' ability to achieve profitable operations and positive cash flow in the future and the financial resources of the loan's guarantor.

(b) New Century Nutrition Newsletter

During November 1995, the Company, through its wholly-owned subsidiary, purchased substantially all of the assets related to the New Century Nutrition (formerly Nutrition Advocate), a newsletter promoting disease prevention through nutrition, from Advocacy Communications, Inc. The purchase price for the acquired assets was $350,000 in cash. The purchase agreement provided for contingent payments to be made to the China-Cornell Project, a non-profit organization, based upon revenues to be generated by this subsidiary. T. Colin Campbell, a Director of the Company and his son T. Nelson Campbell, a Vice President of the Company, were majority shareholders and officers of Advocacy Communications, Inc.

The purchase price represented principally intangible assets which were to be amortized on a straight-line basis over 10 years. During fiscal 1996, the Company incurred expenses of approximately $531,000 developing the newsletter and soliciting subscriptions. The Company recorded subscription revenues of $31,625 for the year ended September 30, 1996 and, as of September 30, 1996, the Company had recorded deferred revenue of $46,858 representing subscriptions paid in advance.

In December 1996, the Company decided to cease publication of the newsletter effective January 1, 1997. The Company will seek a buyer for either the newsletter business and/or the subscription list. The Company wrote off the purchase price of the newsletter and accrued $75,000 for the anticipated costs to close down the newsletter operations which amounts are included in newsletter expenses and costs in the accompanying consolidated statement of operations for the year ended September 30, 1996.

(c) Pacific Liaisons

During October 1994, a wholly-owned subsidiary of the Company acquired Pacific Liaisons for approximately $1.6 million in common stock. The acquisition has been accounted for using the purchase method and the accompanying statement of operations includes the results of operations of Pacific Liaisons from October 25, 1994. The allocation of the purchase price was based on an independent appraisal of certain assets acquired which include traditional Chinese medicine ("TCM") extracts and a licensing agreement. The approximately 2,800 TCM extracts can be sold outright or utilized in various research and development applications using the Company's screening technology. It is the Company's intention to sell/license the extracts to established pharmaceutical and biotechnology companies. Effective October 1, 1995, the Company elected to begin amortizing the cost of the TCM extracts on a straight line basis over a five-year period, which represents the estimated period over which the extracts will be used in the Company's research and development efforts. Amortization of the extracts totaling $155,602 is included in research and product engineering expense in the accompanying consolidated statement of operations for the year ended September 30, 1996.

Through the licensing agreement with the Institute of Nutrition and Food Hygiene, an institute within the Chinese Academy of Preventive Medicine, the Company has the exclusive right to acquire up to 5,000 to 10,000 extracts. The licensing agreement is being amortized over a period of five years commencing in October 1994. The annual amortization of the license agreement is $173,290 which is included in research and product engineering expense in the accompanying consolidated statements of operations for the years ended September 30, 1996 and 1995.

The Company continually evaluates the recoverability of its TCM extracts and the license agreement by assessing whether the unamortized value can be recovered through expected future results.

At the time of the acquisition, T. Colin Campbell became a director of the Company and his son, T. Nelson Campbell was hired as a Vice President of the Company. Both individuals were majority stockholders of Pacific Liaisons.

4. STOCKHOLDERS' EQUITY:

(a) Common Stock Offerings

In September 1996, the Company completed a private placement financing for approximately $2.05 million in which it issued:

1) 683,333 shares of common stock;

2) Warrants to purchase 372,727 shares of common stock at an exercise price of $4.00 per share, of which the right to purchase 300,000 shares of common stock is not immediately exercisable and is void after the fifth anniversary of the date on which they first become exercisable and of which the right to purchase 72,727 shares of common stock is immediately exercisable and void after September 30, 2001; and

3) Warrants to purchase 310,606 shares of common stock at an exercise price of $4.50 per share, of which the right to purchase 250,000 shares is not immediately exercisable and is void after the fifth anniversary of the date on which they first become exercisable and of which the right to purchase 60,606 shares is immediately exercisable and void after September 30, 2001.

In June and July 1996, the Company completed a private placement to certain investors for approximately $2.25 million in which it issued:

1) 825,001 shares of common stock;

2) Warrants to purchase 825,001 shares of common stock at an exercise price of $3.25 per share, of which the right to purchase 550,000 shares of common stock is not immediately exercisable and is void after the fifth anniversary of the date on which they first become exercisable and of which the right to purchase 275,000 shares is immediately exercisable and void after June 26, 2001; and

3) Warrants to purchase 375,001 shares of common stock at an exercise price of $4.50 per share, of which the right to purchase 250,000 shares is not immediately exercisable and is void after the fifth anniversary of the date on which they first become exercisable and of which the right to purchase 125,001 shares is immediately exercisable and void after June 26, 2001.

In August 1995, the Company completed a private placement of 300,000 shares of common stock to certain investors at $2.76 per share resulting in net proceeds, after expenses, to the Company of $752,625.

The Company intends to use the proceeds of the private placements for product launch expenses, working capital and research and development.

(b) Convertible Preferred Stock Offerings

In the period August through November 1995, the Company sold convertible preferred stock through various private placements. The Company issued 10,700 shares of its Series A preferred stock at $37.50 per share, 86,651 shares of its Series B preferred stock at an average price of $63.47 per share and 5,000 shares of its Series C preferred stock at $50.00 per share. The net proceeds from these issuance's were used primarily to provide working capital and fund research and development.

The preferred stock had a stated dividend rate of 8% payable in cash or common stock at the option of the Company. The preferred stock was convertible into common stock based on the following conversion prices:

Series	Shares Authorized	Conversion Price
A	50,000	Lower of $3.75 or 85% of five-day average Closing Price
B	100,000	80% of three-day average Closing Price
C	50,000	72.5% of three-day average Closing Price

The Closing Price is defined in the agreements as the bid price of the common stock beginning on the trading day prior to conversion.

During the period October 31, 1995 through February 1, 1996, all of the holders of the preferred shares converted such shares into common stock summarized as follows:

Series	Preferred Stock Issued	Gross Proceeds	Net Proceeds	Common Shares Converted
A	10,700	$ 402,250	$ 361,125	372,253
B	86,651	5,500,000	4,400,000	4,918,409
C	5,000	250,000	218,472	80,348
Total	102,351	$ 6,152,250	$ 4,979,597	5,371,010

Included in the common shares converted are 58,031 shares issued in exchange for the cumulative dividends payable on the preferred stock.

(c) Other Transactions

In June 1996, the Company sold an investor 350,000 warrants at $.10 per warrant to purchase 350,000 shares of common stock at $5.25 per share. The warrants can be exercised at any time over a three-year period. The cash paid for the warrants of $35,000 is reflected as an addition to additional paid-in capital in the accompanying consolidated statement of stockholders' equity for the year ended September 30, 1996.

During November 1995, the Company purchased 265,478 shares of its common stock on the open market for an aggregate cost of $1,342,515.

In April 1995, the Company issued 200,000 shares of common stock to an individual in connection with the Company's research of Indian herbs. The fair value of the common stock of $375,000 is reflected as an expense in the consolidated statement of operations for the year ended September 30, 1995.

During fiscal 1996 and 1995, the Company issued 63,336 and 33,330 shares of common stock in exchange for services rendered and issued 2,500 and 13,000 shares, respectively, for the conversion of short-term

liabilities. The transactions have been valued based on the estimated fair value of the common stock on the date issued.

On September 8, 1993, the Company granted a warrant dividend. The Company distributed to each stockholder, excluding one of the Company's founders, one redeemable common stock purchase warrant for each share of the Company's common stock owned, entitling the holder to purchase an additional share of common stock for $3.25 per share. On October 12, 1994, the Company granted 375,000 warrants to one of the Company's founders, under similar terms. The warrants were originally valued at $500,000. The warrants expire on September 7, 1997 and may be called at a redemption price of $.05 per warrant, if the Company's common stock trades at $4.75 or higher for 15 consecutive days. As of September 30, 1996, a total of 2,312,388 warrants have been issued and 269,518 warrants have been exercised.

In February 1992, the Company completed its initial public offering covering 1,150,000 shares of common stock at $5.50 per share. Issuance costs totaled approximately $1,210,000 which were treated as a reduction of proceeds. In connection with the offering, the Company sold warrants to the underwriter for $1,000 exercisable for a four year period beginning in February 1993 for 100,000 shares of common stock at a price of $6.60 per share. The number of shares and the exercise price per share of the warrants are to be adjusted for certain events, as defined in the agreement.

5. COMMON STOCK OPTIONS:

In 1991, the Company adopted a Stock Option Plan (the Plan). Under the Plan, directors, key employees and consultants of the Company are eligible to receive grants of options which are intended to qualify as incentive stock options within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended (the Code) or which are nonqualified stock options. In addition, nonemployee directors of the Company may receive grants of options according to a formula which upon the adoption of the Plan provided for an initial grant of an option to purchase 5,000 shares of common stock and annual grants of options to purchase 2,500 shares of common stock for each person who is subsequently elected or re-elected and for each year of service thereafter as a director. An aggregate of 394,000 shares of common stock has been reserved for issuance under the Plan. The Plan is administered by a committee (the Committee) designated by the Board of Directors of the Company. The exercise price per share for the options granted under the plan may not be less than the fair value of the Company's common stock on the date of grant. The exercise price and the term are fixed by the Committee, subject to the terms of the Plan.

Changes in the status of options under the Plan for the years ended September 30, 1996, 1995 and 1994 are summarized as follows:

	1996	1995	1994
Outstanding at beginning of period	150,150	116,150	187,150
Granted	22,500	34,000	2,500
Exercised	(15,000)	-	-
Forfeited	(57,000)	-	(73,500)
Outstanding at end of period	100,650	150,150	116,150
Number of options at end of period-			
Exercisable	130,650	150,150	98,775
Available for grant	293,350	243,850	277,850
Average exercise price of options outstanding	$ 2.68	$ 4.02	$ 4.23

15,000 options granted pursuant to the Plan and an additional 200,000 (for a total of 215,000) were granted consultants providing communications services to the Company. The fair value of these options of $107,500 is being amortized over the three year terms of the consulting contracts. In addition, 50,000 options were issued to the Company's legal counsel in exchange for services rendered. The fair value of this option of $25,000 and the amortization of the options issued to the consultants of $35,000 are included in general and administrative expenses in the accompanying consolidated statements of operations for the year ended September 30, 1996.

On January 23, 1995, the Company approved a stock purchase by the Company's President and then Chief Executive Officer to purchase an aggregate of 705,000 shares of the Company's common stock at a price of $.05 and $.56 per common share for 245,000 and 460,000 shares of common stock, respectively. In connection with this transaction, the Company recognized a one-time, non-cash compensation expense of approximately $1,228,000 in the year ended September 30, 1995.

6. LICENSING AGREEMENTS:

The Company entered into an exclusive licensing agreement with Cornell Research Foundation, Inc. in July 1991 in exchange for common stock of the Company, for proprietary rights allowing the Company to use certain technology and patents for the purpose of developing, manufacturing and selling any products derived therefrom. The agreement provides that the Company will pay royalties to Cornell Research Foundation, Inc. for certain licensed products sold by the Company in the United States and throughout the world.

In January 1995, the Company entered into an agreement with The Dow Chemical Company (Dow) for a non-exclusive license and an option for an exclusive license to evaluate and commercialize the Company's Ah-IMMUNOASSAY technology. In connection with the agreement, the Company received a license fee of $250,000 for the worldwide, non-exclusive license. Dow has notified the Company that it does not intend to execute the exclusive worldwide license for the assay.

In December 1995, the Company entered into a license agreement with Northwestern University with respect to use of certain biological materials for dioxin assays. The Company paid Northwestern $50,000 for an exclusive worldwide license to the materials for the specified use of dioxin assays. The Company will amortize the license fee on a straight line basis over a five-year period.

7. INCOME TAXES:

Effective October 1, 1993, the Company prospectively adopted Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes", which requires an asset and liability approach to financial accounting and reporting for income taxes. The cumulative effect of this change in accounting principle did not have a material effect on the Company's financial position or results of operations.

The income tax effects of temporary differences that give rise to the deferred tax asset/(liability) as of September 30 are approximately as follows (in thousands):

	1996	1995
Net operating loss	$ 3,600	$ 2,500
Start-up costs	150	230
Patents and trademarks	(30)	(30)
Newsletter	130	-
Accelerated depreciation	(70)	(70)
	3,780	2,630
Less valuation allowance	(3,780)	(2,630)
Net deferred tax asset/liability	$ -	$ -

Valuation allowances of $3,780,000 and $2,630,000 were recorded at September 30, 1996 and 1995, respectively, to offset the related net deferred tax asset due to the uncertainty of realizing the related tax benefit (see Note 1).

8. RELATED PARTIES:

During fiscal 1996 and 1995, the Company made loans to its Vice President and Chief Science Officer. Such loans are due on demand and bear interest at 8% per annum. As of September 30, 1996 and 1995, these loans aggregated $56,000 and $26,000, respectively.

During fiscal 1994 and 1993, the Company had research and sponsorship agreements with Cornell. Approximately $165,000 and $376,000 were expensed under these agreements in 1994 and 1993, respectively. In the opinion of the Board of Directors, the terms of these agreements were at least as favorable as could have been obtained if the agreements were undertaken with an unrelated party. Amounts payable to Cornell total approximately $77,000 and $137,000 at September 30, 1996 and 1995, respectively.

9. COMMITMENTS AND CONTINGENCY :

Lease and Rental Commitments

The Company has entered into noncancelable operating leases for executive offices and laboratory facilities from an entity owned by Cornell covering approximately 6,000 square feet and expiring in February 1997. Such leases provide for automatic renewals for one year terms. Amounts charged to expense in 1996, 1995 and 1994 totaled approximately $90,000, $76,000 and $67,000, respectively.

Employment Agreements

The Company entered into an employment agreement with the Vice President of Science (Vice President) which expired in 1994. The Vice President's contract provided that he would assign to the Company all royalty payments due to him pursuant to the Cornell patent policy. The Company and the Vice President are continuing their relationship under the terms of the previous agreement until such time as negotiations for a new agreement are completed.

Contingency:

During 1993, an action was commenced against the Company, a Company Vice President and a shareholder and former employee of the Company. The complaint seeks money damages and alleges that in 1990, prior to the Company's incorporation, certain individuals became partners with the individual defendants in a venture formed to commercialize products which the Company had originally intended to develop. Management believes that the action is without merit and is vigorously opposing the allegations and that the ultimate resolution of this litigation will not have a material adverse effect on the Company's financial position or results of operations.

10. RECENTLY ISSUED ACCOUNTING STANDARDS

In March, 1995, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 121. "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of", which becomes effective for the Company as of October 1, 1996. This statement establishes accounting standards of the impairment of long-lived assets, certain identifiable intangibles and goodwill related to those assets to be held and used and for long-lived assets and certain identifiable intangibles to be disposed. Adoption of SFAS No. 121 is not expected to have a material impact on the Company's consolidated financial position and operating results, nor will it materially effect the Company's cash flows.

In October, 1995, the FASB issued SFAS No. 123, Accounting for Stock-Based Compensation. This statement establishes an alternative method of accounting for stock based compensation awarded to employees, such as stock options granted by the Company to employees. SFAS No. 123 provides for the recognition of compensation expense based on the fair value of the stock -based award, but allows companies to continue to measure compensation cost in accordance with the Accounting Principles Board Opinion (APB) No. 25, Accounting for Stock Issued to Employees. Companies electing to retain this method must make pro forma disclosure of net income and earnings per share as if the fair value based method had been applied. The Company plans to continue to use APB No. 25, which does not require the Company to record compensation expense for the stock options it awards to employees. In the Company's consolidated financial statements for the year ending September 30, 1997 the Company will disclose the pro forma effect of the fair value method on 1996 and 1997 net income and earnings per

share.

ITEM 8. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

On November 8, 1996 the Company engaged KPMG Peat Marwick, LLP as its independent auditors for the year ending September 30, 1996 as approved by its Board of Directors and simultaneously dismissed Arthur Andersen LLP.

The reports of Arthur Andersen LLP on the Company's financial statements for the past two fiscal years did not contain an adverse opinion or a disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope, or accounting principles.

In connection with the audits of the Company's financial statements for each of the two years ended September 30, 1995 and 1994, and in the subsequent interim period there were no disagreements with Arthur Andersen LLP on any matters of accounting principles or practices, financial statement disclosure, or auditing scope and procedures which, if not resolved to the satisfaction of Arthur Andersen LLP would have caused Arthur Andersen LLP to make reference to the matter in their report.

PART III

ITEM 9. Directors, Executive Officers, Promoters and Control Persons in compliance with Section 16(a) of the Exchange Act and

ITEM 10. Executive Compensation and

ITEM 11. Security Ownership of Certain Beneficial Owners and Management and

ITEM 12. Certain Relationships and Related Transactions

Omitted, per general instruction E. The information required by Part III shall be incorporated by reference from the registrant's definitive proxy statement pursuant to Regulation 14A for the fiscal year ended September 30, 1996 which is to be filed with the Commission.

ITEM 13. EXHIBITS, LIST AND REPORTS ON FORM 10-K

a. Exhibits: The following exhibits are filed as part of this report.

Exhibit No.	Description
3.1	Certificate of Incorporation of the Registrant. (Incorporated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form S-1, File No. 33-44809 (the "1992 Registration Statement").
3.2	By-Laws of the Registrant. (Incorporated by reference to Exhibit 3.2 to the 1992 Registration Statement.)
4.1	Form of Stock Certificate. (Incorporated by reference to Exhibit 1.1 to the Registrant's Registration Statement on Form 8-A, File No. 0-19844.)
4.2	Warrant Agreement dated July 1993 between the Registrant and American Stock Transfer & Trust Company (Incorporated by reference to Exhibit (4)(b) to the Registrant's Registration Statement on Form S-3, File No. 33-65782).
4.3*	Form of Warrants issued to institutional investors in June and September 1996.
10.1	Exclusive License Agreement, dated as of July 1, 1991, between the Registrant and Cornell Research Foundation, Inc. (Incorporated by reference to Exhibit 10.1 to the 1992 Registration Statement).
10.2	Assignment Agreement, dated as of December 1, 1991, between the Registrant and John G. Babish (Incorporated by reference to Exhibit 10.3 to the 1992 Registration Statement).
10.3	Amended 1991 Stock Option Plan and form of Stock Option Contracts (Incorporated by reference to Exhibit 10.4 to the 1992 Registration Statement).
10.4*	Lease Agreement, dated as of February 31, 1996 (sic.) Between ParaComm, Inc. And Cornell University c/o Sibley Real Estate Services, Inc.
10.5	Agreement and Plan of Merger, dated as of October 25, 1994, among the Registrant, Para Acquisition Corporation, Pacific Ventures, Inc., China Consultants Inc., Pacific Liaisons, T. Nelson Campbell, T. Colin Campbell, Dr. Chen Junshi, Dr. Wu Boping and Mr. Ming Li. (Incorporated by reference to Exhibit 2.1 to the Registrant's Report on Form 8-K dated October 25, 1994, File No. 0-19844.)
10.6	Agreement, dated September 23, 1994, between the Registrant and IDEXX Laboratories Corp. (Incorporated by reference to Exhibit 2.1 to the Registrant's Report on Form 8-K dated October 25, 1994. File No. 0-19844.)
10.7	License Agreement, dated January 19, 1995, between the Registrant and Dow Environmental. (Incorporated by reference to Exhibit 10.8 to the Registrant's Report on Form 10-KSB for the Fiscal year ended September 30, 1995).
10.8*	Cooperative Research and Development Agreement dated December 18, 1995 by and between the Registrant and the National Cancer Institute.
10.9*	Agreement, dated April 9, 1996, between the Registrant, East West Herbs Limited, Robert E. Miller and A. E. Lyon.
10.10*	Option Agreement, dated April 9, 1996, relating to the

purchase of East West Herbs Limited, Re: Robert E. Miller and Others (defined therein) and the Registrant and East West Herbs Limited.

10.11* Exclusive Licensing Agreement, dated April 1, 1996, between Calbiochem-Novabiochem International and the Registrant.

21* Subsidiaries of the Registrant.

23.1* Consents of Arthur Andersen LLP

23.2* Consent of KPMG Peat Marwick LLP.

*Included herewith.

b. Reports on Form 8-K
None

SIGNATURES

In accordance with Section 13 or 15(d) of the Exchange Act, the Registrant caused this Amendment to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: December 20, 1996

PARACELSIAN, INC.

By:/s/KEITH A. RHODES Keith A. Rhodes Chairman of the Board, President, Member of the Office of the Chief Executive	By:/s/JOHN G. BABISH John G.Babish Vice President and Member of the Office of the Chief Executive	By: /s/ARTHUR A. KOCH, JR. Arthur A. Koch, Jr. Vice President and Member of the Office of the Chief Executive

In accordance with the Exchange Act, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/KEITH A. RHODES Keith A. Rhodes	Chairman of the Board and President	December 20, 1996
/s/JOHN G. BABISH John G. Babish	Vice President of Science Secretary and Director	December 20, 1996
/s/ARTHUR A. KOCH, JR Arthur A. Koch,Jr.	Vice President, Chief Financial Officer	December 20, 1996
/s/ T. COLIN CAMPBELL T. Colin Campbell	Director	December 30, 1996
/s/JAMES NICHOLS James Nichols	Director	December 30, 1996
/s/THEODORE P. NIKOLIS Theodore P.Nikolis	Director	December , 1996
/s/JACK O'REILLY Jack O'Reilly	Director	December , 1996
/s/WILLIAM J. WARWICK William J. Warwick	Director	December 30, 1996

COMMISSION FILE NO. 0-19844
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

EXHIBITS

to

FORM 10-KSB

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)

OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 1996

PARACELSIAN, INC.

EXHIBIT INDEX

Exhibit No.	Description
3.1	Certificate of Incorporation of the Registrant. (Incorporated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form S-1, File No. 33-44809 (the "1992 Registration Statement").
3.2	By-Laws of the Registrant. (Incorporated by reference to Exhibit 3.2 to the 1992 Registration Statement.)
4.1	Form of Stock Certificate. (Incorporated by reference to Exhibit 1.1 to the Registrant's Registration Statement on Form 8-A, File No. 0-19844.)
4.2	Warrant Agreement dated July 1993 between the Registrant and American Stock Transfer & Trust Company (Incorporated by reference to Exhibit (4)(b) to the Registrant's Registration Statement on Form S-3, File No. 33-65782).
4.3*	Form of Warrants issued to institutional investors in June and September 1996.
10.1	Exclusive License Agreement, dated as of July 1, 1991, between the Registrant and Cornell Research Foundation, Inc. (Incorporated by reference to Exhibit 10.1 to the 1992 Registration Statement).
10.2	Assignment Agreement, dated as of December 1, 1991, between the Registrant and John G. Babish (Incorporated by reference to Exhibit 10.3 to the 1992 Registration Statement).
10.3	Amended 1991 Stock Option Plan and form of Stock Option Contracts (Incorporated by reference to Exhibit 10.4 to the 1992 Registration Statement).
10.4*	Lease Agreement, dated as of February 31, 1996 (sic.) Between ParaComm, Inc. And Cornell University c/o Sibley Real Estate Services, Inc.
10.5	Agreement and Plan of Merger, dated as of October 25, 1994, among the Registrant, Para Acquisition Corporation, Pacific Ventures, Inc., China Consultants Inc., Pacific Liaisons, T. Nelson Campbell, T. Colin Campbell, Dr. Chen Junshi, Dr. Wu Boping and Mr. Ming Li. (Incorporated by reference to Exhibit 2.1 to the Registrant's Report on Form 8-K dated October 25, 1994, File No. 0-19844.)
10.6	Agreement, dated September 23, 1994, between the Registrant and IDEXX Laboratories Corp. (Incorporated by reference to Exhibit 2.1 to the Registrant's Report on Form 8-K dated October 25, 1994. File No. 0-19844.)
10.7	License Agreement, dated January 19, 1995, between the Registrant and Dow Environmental. (Incorporated by reference to Exhibit 10.8 to the Registrant's Report on Form 10-KSB for the Fiscal year ended September 30, 1995).
10.8*	Cooperative Research and Development Agreement dated December 18, 1995 by and between the Registrant and the National Cancer Institute.
10.9*	Agreement, dated April 9, 1996, between the Registrant, East West Herbs Limited, Robert E. Miller and A. E. Lyon.
10.10*	Option Agreement, dated April 9, 1996, relating to the purchase of East West Herbs Limited, Re: Robert E. Miller and Others (defined therein) and the Registrant and East West Herbs Limited.
10.11*	Exclusive Licensing Agreement, dated April 1, 1996, between Calbiochem-Novabiochem International and the Registrant.
21*	Subsidiaries of the Registrant.
23.1*	Consents of Arthur Andersen LLP
23.2*	Consent of KPMG Peat Marwick LLP.

*Included herewith.

EXHIBIT 4.3

Form of Warrants issued to institutional investors in June and September, 1996

NEITHER THIS WARRANT NOR THE SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE OF THIS WARRANT HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AND NEITHER THIS WARRANT NOR SUCH SHARES MAY BE SOLD, ENCUMBERED OR OTHERWISE TRANSFERRED EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER SUCH ACT OR AN EXEMPTION FROM SUCH REGISTRATION REQUIREMENT, AND, IF AN EXEMPTION SHALL BE APPLICABLE, THE HOLDER SHALL HAVE DELIVERED AN OPINION OF COUNSEL ACCEPTABLE TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED.

Void after 5:00 P.M. Eastern Standard time, on the Expiration Date.

WARRANT TO PURCHASE COMMON STOCK

OF

PARACELSIAN, INC.

FOR VALUE RECEIVED, Paracelsian, Inc., a Delaware corporation (the "Company") hereby certifies that Xxxx or its permitted assigns ("Xxxx"), is entitled to purchase from the Company, at any time or from time to time commencing 5:00 P.M., Eastern Standard Time, on the Commencement Date (as defined below) and prior to 5:00 P.M., Eastern Standard Time, on the fifth anniversary of the Commencement Date (the "Expiration Date"), a total of fully paid and nonassessable shares of the common stock, par value $.01 per share, of the Company for an aggregate purchase price of $ per share. (Hereinafter, (i) said common stock, together with any other equity securities which may be issued by the Company with respect thereto or in substitution therefor, is referred to as the "Common Stock", (ii) the shares of the Common Stock purchasable hereunder are referred to as the "Warrant Shares", (iii) the aggregate purchase price payable hereunder for the Warrant Shares is referred to as the "Aggregate Warrant Price", (iv) the price payable hereunder for each of the Warrant Shares is referred to as the "Exercise Price", (v) this Warrant, and all warrants hereafter issued in exchange or substitution for this Warrant are referred to as the "Warrant" and (vi) the holder of this Warrant is referred to as the "Holder".) The Exercise Price is subject to adjustment as hereinafter provided. The "Commencement Date" shall be the 61st day after the day on which (1) the number of Warrant Shares plus (2) the number of any shares of Common Stock owned by Xxxx (including, for purposes of this paragraph, any affiliate of Xxxx whose beneficial ownership would be aggregated with Xxxx for purposes of the

rules promulgated under Section 16 of the Exchange Act (as defined below)) plus (3) the number of any shares of Common Stock that may then be received by Xxxx upon exercise of warrants to purchase and shares of Common Stock, respectively, issued to Xxxx on plus (4) the number of any shares of Common Stock that may then be received by Xxxx upon exercise of a warrant to purchase shares of Common Stock issued to Xxxx on , shall equal less than 10% of the then outstanding shares of Common Stock as is determined in accordance with the rules promulgated under Section 16 of the Exchange Act.

1. Exercise of Warrant. This Warrant may be exercised, in whole at any time or in part from time to time, commencing 5:00 P.M., Eastern Standard Time, on the Commencement Date and prior to 5:00 P.M., Eastern Standard Time, on the Expiration Date, by the Holder of this Warrant by the surrender of this Warrant (with the subscription form at the end hereof duly executed) at the address set forth in Subsection 9(a) hereof, together with proper payment of the Aggregate Warrant Price, or the proportionate part thereof if this Warrant is exercised in part. Payment for Warrant Shares shall be made by certified or official bank check payable to the order of the Company. If this Warrant is exercised in part, this Warrant must be exercised for a minimum of shares of the Common Stock (or such lesser number of shares of Common Stock as shall remain available for purchase under the terms of the Warrant), and the Holder is entitled to receive a new Warrant covering the number of Warrant Shares in respect of which this Warrant has not been exercised and setting forth the proportionate part of the Aggregate Warrant Price applicable to such Warrant Shares. Upon such surrender of this Warrant, the Company will (a) issue a certificate or certificates in the name of the Holder of the largest number of whole shares of the Common Stock to which the Holder shall be entitled if this Warrant is exercised in whole and (b) deliver the proportionate part thereof if this Warrant is exercised in part, pursuant to the provisions of the Warrant. In lieu of any fractional share of the Common Stock which would otherwise be issuable in respect to the exercise of the Warrant, the Company at its option (a) may pay in cash an amount equal to the product of (i) the daily mean average of the Closing Price of a share of Common Stock on the ten consecutive trading days before the Conversion Date and (ii) such fraction of a share or (b) may issue an additional share of Common Stock.

Upon exercise of the Warrant, the Company shall issue and deliver to the Holder certificates for the Common Stock issuable upon such exercise within ten business days after such exercise and the person exercising shall be deemed to be the holder of record of the Common Stock issuable upon such exercise.

No warrant granted herein shall be exercisable after 5:00 P.M., Eastern Standard Time, on the Expiration Date.

2. Consolidations and Mergers. In case of any consolidation or merger of the Company with any other corporation (other than a wholly-owned subsidiary of the Company), or in case of any sale or transfer of all or substantially all of the assets of the Company, or in the case of any share exchange pursuant to which all of the outstanding shares of Common Stock are converted into other securities or property, the Company shall make appropriate

provision or cause appropriate provision to be made so that each Holder shall have the right thereafter to obtain upon exercise of the Warrant the kind and amount of shares of stock and other securities and property receivable upon such consolidation, merger, sale, transfer, or share exchange by a holder of the number of shares of Common Stock for which the Warrant may be exercised prior to the effective date of such consolidation, merger, sale, transfer, or share exchange. If, in connection with any such consolidation, merger, sale, transfer, or share exchange, each holder of shares of Common Stock is entitled to elect to receive either securities, cash, or other assets upon completion of such transaction, the Company shall provide or cause to be provided to each Holder the right to elect the securities, cash, or other assets for which the Warrant may be exercised by such Holder subject to the same conditions applicable to holders of the Common Stock (including, without limitation, notice of the right to elect, limitations on the period in which such election shall be made, and the effect of failing to exercise such election). The Company shall not effect any such transaction unless the provisions of this paragraph have been complied with. The above provisions shall similarly apply to successive consolidations, mergers, sales, transfers, or share exchanges.

3. Adjustments to the Exercise Price. Notwithstanding anything in this Section 3 to the contrary, no change in the Exercise Price shall actually be made until the cumulative effect of the adjustments called for by this Section 3 since the date of the last change in the Exercise Price would change the Exercise Price by more than 1%. However, once the cumulative effect would result in such a change, then the Exercise Price shall actually be changed to reflect all adjustments called for by this Section 3 and not previously made. Notwithstanding anything in this Section 3 to the contrary, no change in the Exercise Price shall be made that would result in an Exercise Price of less than the par value of the Common Stock to be issued upon the exercise of this Warrant.

The "Closing Price" for each day shall be the closing price regular way on such day as reported on the New York Stock Exchange Composite Tape, or, if the Common Stock is not listed or admitted to trading on such Exchange, on the principal national securities exchange on which Common Stock is listed or admitted to trading, or, if not listed or admitted to trading on any national securities exchange, the closing bid price as reported on the Nasdaq Stock Market (or, if not so reported, the closing price), or, if not admitted for quotation on the Nasdaq Stock Market, the average of the high bid and low asked prices on such day as recorded by the National Association of Securities Dealers, Inc. through the National Association of Securities Dealers Automated Quotations System ("NASDAQ"), or if the National Association of Securities Dealers, Inc. through NASDAQ shall not have reported any bid and asked prices for the Common Stock on such day, the average of the bid and asked prices for such day as furnished by any New York Stock Exchange member firm selected from time to time by the Company for such purposes, or, if no such bid and asked prices can be obtained from any such firm, the fair market value of one share of Common Stock on such day as determined in good faith by the Board of Directors.

Such determination by the Board of Directors shall be conclusive.

Subject to the provisions of the first paragraph of this Section 3, the Exercise Price shall be appropriately adjusted from time to time to account for stock splits, stock dividends, combinations, recapitalizations, reclassifications and similar events and under certain circumstances as follows:

(i) In case the Company shall issue rights or warrants to all holders of Common Stock entitling such holders to subscribe for or purchase Common Stock on the record date referred to below at a price per share less than the average daily Closing Prices of the Common Stock for the 30 consecutive business days commencing 45 business days before the record date (the "Current Market Price"), then, in each such case, the Exercise Price in effect on such record date shall be adjusted in accordance with the following formula:

$$EP1 = EP \times \frac{O + N \times P}{M} \Big/ (O + N)$$

where

EP1 = the adjusted Exercise Price.

EP = the current Exercise Price.

O = the number of shares of Common Stock outstanding on the record date.

N = the number of additional shares of Common Stock issuable pursuant to the exercise of such rights or warrants.

P = the offering price per share of the additional shares (which amount shall include amounts received by the Corporation in respect of the issuance and exercise of such rights or warrants).

M = the Current Market Price per share of Common Stock on the record date mentioned below.

Such adjustment shall become effective immediately after the record date for the determination of stockholders entitled to receive such rights or warrants. If any or all such rights or warrants are not so issued or expire or terminate before being exercised, the Exercise Price then in effect shall be readjusted appropriately.

(ii) In case the Company shall, by dividend or otherwise, distribute to all holders of its Common Stock evidences of its indebtedness or assets (including securities, but excluding any warrants or subscription rights referred to in subparagraph (i) above and any dividend or distribution paid in cash out of the retained earnings of the Company), then in each such case the Exercise Price then in effect shall be adjusted in accordance with the following formula:

$$EP1 = EP \times \frac{M-F}{M}$$

where

EP1 = the adjusted Exercise Price.
EP = the current Exercise Price.
M = the Current Market Price per share of Common Stock on the record date mentioned below.
F = the aggregate amount of such cash dividend (other than a cash dividend paid out of retained earnings) and/or the fair market value on the record date of the assets or securities to be distributed divided by the number of shares of Common Stock outstanding on the record date. The Board of Directors shall determine such fair market value, which determination shall be conclusive.

Such adjustment shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution.

(iii) All calculations hereunder shall be made to the nearest cent or to the nearest 1/100 of a share, as the case may be.

(iv) If at any time as a result of an adjustment made pursuant to Section 2, the Holder of any Warrant thereafter exercised shall become entitled to receive securities, cash, or assets other than Common Stock, the number or amount of such securities or property so receivable upon exercise 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 Common Stock contained in subparagraphs (i) to (iii) above.

Except as otherwise provided above in this Section 3, no adjustment in the Exercise Price shall be made in respect of any conversion for share distributions or dividends theretofore declared and paid or payable on the Common Stock.

Whenever the Exercise Price is adjusted, the Company will give notice by mail to the Holders, which notice shall be made within 45 days after the effective date of such adjustment and shall state the adjustment and the Exercise Price. Notwithstanding the foregoing notice provisions, failure by the Company to give such notice or a defect in such notice shall not affect the binding nature of such corporate action of the Company.

Whenever the Company shall propose to take any of the actions specified in Section 2 or in subparagraphs (i) or (ii) of the third paragraph of this Section 3 which would result in any adjustment in the Exercise Price under this Section 3, the Company shall cause a notice to be mailed at least 15 business days prior to the date on which the books of the Company will close or on which a record will be taken for such action, to the Holders. Such notice shall specify the action proposed to be taken by the Company and the date as of which holders of record of the Common Stock shall participate in any such actions or be entitled to exchange their Common Stock for securities or other property, as the case may be. Failure by the Corporation to mail the notice or any defect in such notice shall not affect the validity of the transaction.

Notwithstanding any other provision of this Section 3, no adjustment in the Exercise Price need by made (a) for sales of Common Stock pursuant to a plan for reinvestment of dividends and interest, provided that the purchase price in any such sale is at least equal to the fair market value of the Common Stock at the time of such purchase; (b) for sales of up to 750,000 shares of Common Stock pursuant to any plan adopted by the Corporation for the benefit of its employees, directors, or consultants; or (c) after the Common Stock becomes convertible into cash (no interest shall accrue on the cash).

4. Reservation of Warrant Shares. The Company agrees that, prior to the expiration of this Warrant, the Company will at all times have authorized and reserved, and will keep available, solely for issuance or delivery upon the exercise of this Warrant, the number of shares of the Common Stock as from time to time shall be receivable upon the exercise of this Warrant.

5. Fully Paid Stock; Taxes.The Company agrees that the shares of the Common Stock represented by each and every certificate for Warrant Shares delivered on the exercise of this Warrant shall, at the time of such delivery, be validly issued and outstanding, fully paid and nonassessable, and not subject to preemptive rights, and the Company will take all such actions as may be necessary to assure that the par value or stated value, if any, per share of the Common Stock is at all times equal to or less than the then Exercise Price. The Company further covenants and agrees that it will pay, when due and payable, any and all Federal and state stamp, original issue or similar taxes that may be payable in respect of the issue of any Warrant Shares or certificate therefor.

6. Transfer.

a) Securities Laws. Neither this Warrant nor the Warrant Shares issuable upon the exercise hereof have been registered under the Securities Act of 1933, as amended (the "Securities Act"), or under any state securities laws and unless so registered may not be transferred, sold, pledged, hypothecated or otherwise disposed of unless an exemption from such registration is available. In the event Holder desires to transfer this Warrant or any of the Warrant Shares issued, the Holder must give the Company prior written notice of such proposed transfer including the name and address of the proposed transferee. Such transfer may be made only either (i) upon publication by the Securities and Exchange Commission (the "Commission") of a ruling, interpretation, opinion or "no action letter" based upon facts presented to said Commission, or (ii) upon receipt by the Company of an opinion of counsel to the Company in either case to the effect that the proposed transfer will not violate the provisions of the Securities Act, the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or the rules and regulations promulgated under either such act, or in the case of clause (ii) above, to the effect that the Warrant or Warrant Shares to be sold or transferred has been registered under the Securities Act and that there is in effect a registration statement in which is included a prospectus meeting the requirements of Section 10(a) of the Securities Act, which is being or will be delivered to the purchaser or transferee at or prior to the time of delivery of the

certificates evidencing the Warrant or Warrant Shares to be sold or transferred.

(b) Conditions to Transfer. Prior to any such proposed transfer, and as a condition thereto, if such transfer is not made pursuant to an effective registration statement under the Securities Act, the Holder will, if requested by the Company, deliver to the Company (i) an investment covenant signed by the proposed transferee, (ii) an agreement by such transferee to the impression of the restrictive investment legend set forth herein on the certificate or certificates representing the securities acquired by such transferee, (iii) an agreement by such transferee that the Company may place a "stop transfer order" with its transfer agent or registrar, and (iv) an agreement by the transferee to indemnify the Company to the same extent as set forth in the next succeeding paragraph.

(c) Indemnity. The Holder acknowledges that the Holder understands the meaning and legal consequences of this Section 6, and the Holder hereby agrees to indemnify and hold harmless the Company, its representatives and each officer and director thereof from and against any and all loss, damage or liability (including all attorneys' fees and costs incurred in enforcing this indemnity provision) due to or arising out of (a) the inaccuracy of any representation or the breach of any warranty of the Holder contained in, or any other breach of, this Warrant, (b) any transfer of the Warrant or any of the Warrant Shares in violation of the Securities Act, the Exchange Act or the rules and regulations promulgated under either of such acts, (c) any transfer of the Warrants or any of the Warrant Shares not in accordance with this Warrant, or (d) any untrue statement or omission to state any material fact in connection with the investment representations or with respect to the facts and representations supplied by the Holder to counsel to the Company upon which its opinion as to a proposed transfer shall have been based.

(d) Transfer. Except as restricted hereby, this Warrant and the Warrant Shares may be transferred by the Holder in whole or in part at any time or from time to time. Upon surrender of this Warrant to the Company or at the office of its stock transfer agent, if any, with assignment documentation duly executed and funds sufficient to pay any transfer tax, and upon compliance with the foregoing provisions, the Company shall, without charge, execute and deliver a new Warrant in the name of the assignee named in such instrument of assignment, and this Warrant shall promptly be canceled. Any assignment, transfer, pledge, hypothecation or other disposition of this Warrant attempted contrary to the provisions of this Warrant, or any levy of execution, attachment or other process attempted upon this Warrant, shall be null and void and without effect.

(e) Legend and Stop Transfer Orders. Unless the Warrant Shares have been registered under the Securities Act, upon exercise of any part of the Warrant and the issuance of any of the Warrant Shares, the Company shall instruct its transfer agent to enter stop transfer orders with respect to such shares, and all certificates representing Warrant Shares shall bear on the face thereof substantially the following legend:

"The shares of common stock represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be sold, offered for sale, assigned, transferred or otherwise disposed of unless registered pursuant to the provisions of that Act or an opinion of counsel to the Company is obtained stating that such disposition is in compliance with an available exemption from such registration."

7. Loss, etc. of Warrant. Upon receipt of evidence satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant, and of an unsecured indemnity from the Holder reasonably satisfactory to the Company, if lost, stolen or destroyed, and upon surrender and cancellation of the Warrant, if mutilated, the Company shall execute and deliver to the Holder a new Warrant of like date, tenor and denomination.

8. Warrant Holder Not Shareholder. Except as otherwise provided herein, this Warrant does not confer upon the Holder any right to vote or to consent to or receive notice as a shareholder of the Company, as such, in respect of any matters whatsoever, or any other rights or liabilities as a shareholder, prior to the exercise hereof.

9. Communication. No notice or other communication under this Warrant shall be effective unless the same is in writing and is mailed by first-class mail, postage prepaid, addressed to:

(a) the Company at 222 Langmuir Laboratories, Cornell Technology Park, Ithaca, New York 14850 or such other address as the Company has designated in writing to the Holder, with a copy to .

(b) the Holder at or such other address as the Holder has designated in writing to the Company, with a copy to Xxxx,
.

10. Headings. The headings of this Warrant have been inserted as a matter of convenience and shall not affect the construction hereof.

11. Applicable Law. This Warrant shall be governed by and construed in accordance with the laws of the State of Delaware without giving effect to the principles of conflicts of law thereof.

Dated as of
PARACELSIAN, INC.

By: _____

Agreed and Accepted as of

XXXX

By: _____

NEITHER THIS WARRANT NOR THE SHARES OF COMMON STOCK ISSUABLE UPON

EXERCISE OF THIS WARRANT HAVE BEEN REGISTERED UNDER THE SECURITIES ACT
OF 1933, AND NEITHER THIS WARRANT NOR SUCH SHARES MAY BE SOLD, ENCUMBERED OR OTHERWISE TRANSFERRED EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER SUCH ACT OR AN EXEMPTION FROM SUCH REGISTRATION REQUIREMENT, AND, IF AN EXEMPTION SHALL BE APPLICABLE, THE HOLDER SHALL HAVE DELIVERED AN OPINION OF COUNSEL ACCEPTABLE TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED.

Void after 5:00 P.M. Eastern Standard time, on .

WARRANT TO PURCHASE COMMON STOCK

OF

PARACELSIAN, INC.

FOR VALUE RECEIVED, Paracelsian, Inc., a Delaware corporation (the "Company") hereby certifies that xxxxx or its permitted assigns, is entitled to purchase from the Company, at any time or from time to time commencing 5:00 P.M., Eastern Standard Time, on and prior to 5:00 P.M., Eastern Standard Time, on , a total of fully paid and nonassessable shares of the common stock, par value $.01 per share, of the Company for an aggregate purchase price of $ per share. (Hereinafter, (i) said common stock, together with any other equity securities which may be issued by the Company with respect thereto or in substitution therefor, is referred to as the "Common Stock", (ii) the shares of the Common Stock purchasable hereunder are referred to as the "Warrant Shares", (iii) the aggregate purchase price payable hereunder for the Warrant Shares is referred to as the "Aggregate Warrant Price", (iv) the price payable hereunder for each of the Warrant Shares is referred to as the "Exercise Price", (v) this Warrant, and all warrants hereafter issued in exchange or substitution for this Warrant are referred to as the "Warrant" and (vi) the holder of this Warrant is referred to as the "Holder".) The Exercise Price is subject to adjustment as hereinafter provided.

1. Exercise of Warrant. This Warrant may be exercised, in whole at any time or in part from time to time, commencing 5:00 P.M., Eastern Standard Time, on and prior to 5:00 P.M., Eastern Standard Time, on , by the Holder of this Warrant by the surrender of this Warrant (with the subscription form at the end hereof duly executed) at the address set forth in Subsection 9(a) hereof, together with proper payment of the Aggregate Warrant Price, or the proportionate part thereof if this Warrant is exercised in part. Payment for Warrant Shares shall be made by certified or official bank check payable to the order of the Company. If this Warrant is exercised in part, this Warrant must be exercised for a minimum of shares of the Common Stock (or such lesser number of shares of Common Stock as shall remain available for purchase under the terms of the Warrant), and the Holder is entitled to receive a new Warrant covering

the number of Warrant Shares in respect of which this Warrant has not been exercised and setting forth the proportionate part of the Aggregate Warrant Price applicable to such Warrant Shares. Upon such surrender of this Warrant, the Company will (a) issue a certificate or certificates in the name of the Holder of the largest number of whole shares of the Common Stock to which the Holder shall be entitled if this Warrant is exercised in whole and (b) deliver the proportionate part thereof if this Warrant is exercised in part, pursuant to the provisions of the Warrant. In lieu of any fractional share of the Common Stock which would otherwise be issuable in respect to the exercise of the Warrant, the Company at its option (a) may pay in cash an amount equal to the product of (i) the daily mean average of the Closing Price of a share of Common Stock on the ten consecutive trading days before the Conversion Date and (ii) such fraction of a share or (b) may issue an additional share of Common Stock.

Upon exercise of the Warrant, the Company shall issue and deliver to the Holder certificates for the Common Stock issuable upon such exercise within ten business days after such exercise and the person exercising shall be deemed to be the holder of record of the Common Stock issuable upon such exercise.

No warrant granted herein shall be exercisable after 5:00 P.M., Eastern Standard Time, .

2. Consolidations and Mergers. In case of any consolidation or merger of the Company with any other corporation (other than a wholly-owned subsidiary of the Company), or in case of any sale or transfer of all or substantially all of the assets of the Company, or in the case of any share exchange pursuant to which all of the outstanding shares of Common Stock are converted into other securities or property, the Company shall make appropriate provision or cause appropriate provision to be made so that each Holder shall have the right thereafter to obtain upon exercise of the Warrant the kind and amount of shares of stock and other securities and property receivable upon such consolidation, merger, sale, transfer, or share exchange by a holder of the number of shares of Common Stock for which the Warrant may be exercised prior to the effective date of such consolidation, merger, sale, transfer, or share exchange. If, in connection with any such consolidation, merger, sale, transfer, or share exchange, each holder of shares of Common Stock is entitled to elect to receive either securities, cash, or other assets upon completion of such transaction, the Company shall provide or cause to be provided to each Holder the right to elect the securities, cash, or other assets for which the Warrant may be exercised by such Holder subject to the same conditions applicable to holders of the Common Stock (including, without limitation, notice of the right to elect, limitations on the period in which such election shall be made, and the effect of failing to exercise such election). The Company shall not effect any such transaction unless the provisions of this paragraph have been complied with. The above provisions shall similarly apply to successive consolidations, mergers, sales, transfers, or share exchanges.

3. Adjustments to the Exercise Price. Notwithstanding anything in this Section 3 to the contrary, no change in the Exercise Price

shall actually be made until the cumulative effect of the adjustments called for by this Section 3 since the date of the last change in the Exercise Price would change the Exercise Price by more than 1%. However, once the cumulative effect would result in such a change, then the Exercise Price shall actually be changed to reflect all adjustments called for by this Section 3 and not previously made. Notwithstanding anything in this Section 3 to the contrary, no change in the Exercise Price shall be made that would result in an Exercise Price of less than the par value of the Common Stock to be issued upon the exercise of this Warrant.

The "Closing Price" for each day shall be the closing price regular way on such day as reported on the New York Stock Exchange Composite Tape, or, if the Common Stock is not listed or admitted to trading on such Exchange, on the principal national securities exchange on which Common Stock is listed or admitted to trading, or, if not listed or admitted to trading on any national securities exchange, the closing bid price as reported on the Nasdaq Stock Market (or, if not so reported, the closing price), or, if not admitted for quotation on the Nasdaq Stock Market, the average of the high bid and low asked prices on such day as recorded by the National Association of Securities Dealers, Inc. through the National Association of Securities Dealers Automated Quotations System ("NASDAQ"), or if the National Association of Securities Dealers, Inc. through NASDAQ shall not have reported any bid and asked prices for the Common Stock on such day, the average of the bid and asked prices for such day as furnished by any New York Stock Exchange member firm selected from time to time by the Company for such purposes, or, if no such bid and asked prices can be obtained from any such firm, the fair market value of one share of Common Stock on such day as determined in good faith by the Board of Directors. Such determination by the Board of Directors shall be conclusive.

Subject to the provisions of the first paragraph of this Section 3, the Exercise Price shall be appropriately adjusted from time to time to account for stock splits, stock dividends, combinations, recapitalizations, reclassifications and similar events and under certain circumstances as follows:

(i) In case the Company shall issue rights or warrants to all holders of Common Stock entitling such holders to subscribe for or purchase Common Stock on the record date referred to below at a price per share less than the average daily Closing Prices of the Common Stock for the 30 consecutive business days commencing 45 business days before the record date (the "Current Market Price"), then, in each such case, the Exercise Price in effect on such record date shall be adjusted in accordance with the following formula:

$$EP1 = EP \times \frac{O + N \times \frac{P}{M}}{O + N}$$

where

EP1 = the adjusted Exercise Price.

EP = the current Exercise Price.

O = the number of shares of Common Stock outstanding on the record date.

N = the number of additional shares of Common Stock issuable pursuant to the exercise of such rights or warrants.

P = the offering price per share of the additional shares (which amount shall include amounts received by the Corporation in respect of the issuance and exercise of such rights or warrants).

M = the Current Market Price per share of Common Stock on the record date mentioned below.

Such adjustment shall become effective immediately after the record date for the determination of stockholders entitled to receive such rights or warrants. If any or all such rights or warrants are not so issued or expire or terminate before being exercised, the Exercise Price then in effect shall be readjusted appropriately.

(ii) In case the Company shall, by dividend or otherwise, distribute to all holders of its Common Stock evidences of its indebtedness or assets (including securities, but excluding any warrants or subscription rights referred to in subparagraph (i) above and any dividend or distribution paid in cash out of the retained earnings of the Company), then in each such case the Exercise Price then in effect shall be adjusted in accordance with the following formula:

$$EP1 = EP \times \frac{M-F}{M}$$

where

EP1 = the adjusted Exercise Price.

EP = the current Exercise Price.

M = the Current Market Price per share of Common Stock on the record date mentioned below.

F = the aggregate amount of such cash dividend (other than a cash dividend paid out of retained earnings) and/or the fair market value on the record date of the assets or securities to be distributed divided by the number of shares of Common Stock outstanding on the record date. The Board of Directors shall determine such fair market value, which determination shall be conclusive.

Such adjustment shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution.

(iii) All calculations hereunder shall be made to the nearest cent or to the nearest 1/100 of a share, as the case may be.

(iv) If at any time as a result of an adjustment made pursuant to Section 2, the Holder of any Warrant thereafter exercised shall become entitled to receive securities, cash, or assets other than

Common Stock, the number or amount of such securities or property so receivable upon exercise 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 Common Stock contained in subparagraphs (i) to (iii) above.

Except as otherwise provided above in this Section 3, no adjustment in the Exercise Price shall be made in respect of any conversion for share distributions or dividends theretofore declared and paid or payable on the Common Stock.

Whenever the Exercise Price is adjusted, the Company will give notice by mail to the Holders, which notice shall be made within 45 days after the effective date of such adjustment and shall state the adjustment and the Exercise Price. Notwithstanding the foregoing notice provisions, failure by the Company to give such notice or a defect in such notice shall not affect the binding nature of such corporate action of the Company.

Whenever the Company shall propose to take any of the actions specified in Section 2 or in subparagraphs (i) or (ii) of the third paragraph of this Section 3 which would result in any adjustment in the Exercise Price under this Section 3, the Company shall cause a notice to be mailed at least 15 business days prior to the date on which the books of the Company will close or on which a record will be taken for such action, to the Holders. Such notice shall specify the action proposed to be taken by the Company and the date as of which holders of record of the Common Stock shall participate in any such actions or be entitled to exchange their Common Stock for securities or other property, as the case may be. Failure by the Corporation to mail the notice or any defect in such notice shall not affect the validity of the transaction.

Notwithstanding any other provision of this Section 3, no adjustment in the Exercise Price need by made (a) for sales of Common Stock pursuant to a plan for reinvestment of dividends and interest, provided that the purchase price in any such sale is at least equal to the fair market value of the Common Stock at the time of such purchase; (b) for sales of up to 750,000 shares of Common Stock pursuant to any plan adopted by the Corporation for the benefit of its employees, directors, or consultants; or (c) after the Common Stock becomes convertible into cash (no interest shall accrue on the cash).

4. Reservation of Warrant Shares. The Company agrees that, prior to the expiration of this Warrant, the Company will at all times have authorized and reserved, and will keep available, solely for issuance or delivery upon the exercise of this Warrant, the number of shares of the Common Stock as from time to time shall be receivable upon the exercise of this Warrant.

5. Fully Paid Stock; Taxes. The Company agrees that the shares of the Common Stock represented by each and every certificate for Warrant Shares delivered on the exercise of this Warrant shall, at the time of such delivery, be validly issued and outstanding, fully paid and nonassessable, and not subject to preemptive rights, and the Company will take all such actions as may be necessary to assure that the par value or stated value, if any, per share of the Common Stock

is at all times equal to or less than the then Exercise Price. The Company further covenants and agrees that it will pay, when due and payable, any and all Federal and state stamp, original issue or similar taxes that may be payable in respect of the issue of any Warrant Shares or certificate therefor.

6. Transfer.

a) Securities Laws. Neither this Warrant nor the Warrant Shares issuable upon the exercise hereof have been registered under the Securities Act of 1933, as amended (the "Securities Act"), or under any state securities laws and unless so registered may not be transferred, sold, pledged, hypothecated or otherwise disposed of unless an exemption from such registration is available. In the event Holder desires to transfer this Warrant or any of the Warrant Shares issued, the Holder must give the Company prior written notice of such proposed transfer including the name and address of the proposed transferee. Such transfer may be made only either (i) upon publication by the Securities and Exchange Commission (the "Commission") of a ruling, interpretation, opinion or "no action letter" based upon facts presented to said Commission, or (ii) upon receipt by the Company of an opinion of counsel to the Company in either case to the effect that the proposed transfer will not violate the provisions of the Securities Act, the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or the rules and regulations promulgated under either such act, or in the case of clause (ii) above, to the effect that the Warrant or Warrant Shares to be sold or transferred has been registered under the Securities Act and that there is in effect a registration statement in which is included a prospectus meeting the requirements of Section 10(a) of the Securities Act, which is being or will be delivered to the purchaser or transferee at or prior to the time of delivery of the certificates evidencing the Warrant or Warrant Shares to be sold or transferred.

(b) Conditions to Transfer. Prior to any such proposed transfer, and as a condition thereto, if such transfer is not made pursuant to an effective registration statement under the Securities Act, the Holder will, if requested by the Company, deliver to the Company (i) an investment covenant signed by the proposed transferee, (ii) an agreement by such transferee to the impression of the restrictive investment legend set forth herein on the certificate or certificates representing the securities acquired by such transferee, (iii) an agreement by such transferee that the Company may place a "stop transfer order" with its transfer agent or registrar, and (iv) an agreement by the transferee to indemnify the Company to the same extent as set forth in the next succeeding paragraph.

(c) Indemnity. The Holder acknowledges that the Holder understands the meaning and legal consequences of this Section 6, and the Holder hereby agrees to indemnify and hold harmless the Company, its representatives and each officer and director thereof from and against any and all loss, damage or liability (including all attorneys' fees and costs incurred in enforcing this indemnity provision) due to or arising out of (a) the inaccuracy of any representation or the breach of any warranty of the Holder contained in, or any other breach

of, this Warrant, (b) any transfer of the Warrant or any of the Warrant Shares in violation of the Securities Act, the Exchange Act or the rules and regulations promulgated under either of such acts, (c) any transfer of the Warrants or any of the Warrant Shares not in accordance with this Warrant, or (d) any untrue statement or omission to state any material fact in connection with the investment representations or with respect to the facts and representations supplied by the Holder to counsel to the Company upon which its opinion as to a proposed transfer shall have been based.

(d) Transfer. Except as restricted hereby, this Warrant and the Warrant Shares may be transferred by the Holder in whole or in part at any time or from time to time. Upon surrender of this Warrant to the Company or at the office of its stock transfer agent, if any, with assignment documentation duly executed and funds sufficient to pay any transfer tax, and upon compliance with the foregoing provisions, the Company shall, without charge, execute and deliver a new Warrant in the name of the assignee named in such instrument of assignment, and this Warrant shall promptly be canceled. Any assignment, transfer, pledge, hypothecation or other disposition of this Warrant attempted contrary to the provisions of this Warrant, or any levy of execution, attachment or other process attempted upon this Warrant, shall be null and void and without effect.

(e) Legend and Stop Transfer Orders. Unless the Warrant Shares have been registered under the Securities Act, upon exercise of any part of the Warrant and the issuance of any of the Warrant Shares, the Company shall instruct its transfer agent to enter stop transfer orders with respect to such shares, and all certificates representing Warrant Shares shall bear on the face thereof substantially the following legend:

"The shares of common stock represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be sold, offered for sale, assigned, transferred or otherwise disposed of unless registered pursuant to the provisions of that Act or an opinion of counsel to the Company is obtained stating that such disposition is in compliance with an available exemption from such registration."

7. Loss, etc. of Warrant. Upon receipt of evidence satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant, and of an unsecured indemnity from the Holder reasonably satisfactory to the Company, if lost, stolen or destroyed, and upon surrender and cancellation of the Warrant, if mutilated, the Company shall execute and deliver to the Holder a new Warrant of like date, tenor and denomination.

8. Warrant Holder Not Shareholder. Except as otherwise provided herein, this Warrant does not confer upon the Holder any right to vote or to consent to or receive notice as a shareholder of the Company, as such, in respect of any matters whatsoever, or any other rights or liabilities as a shareholder, prior to the exercise hereof.

9. Communication. No notice or other communication under this Warrant shall be effective unless the same is in writing and is mailed by first-class mail, postage prepaid, addressed to:

(a) the Company at 222 Langmuir Laboratories, Cornell Technology Park, Ithaca, New York 14850 or such other address as the Company has designated in writing to the Holder, with a copy to .

(b) the Holder at or such other address as the Holder has designated in writing to the Company.

10. Headings. The headings of this Warrant have been inserted as a matter of convenience and shall not affect the construction hereof.

11. Applicable Law. This Warrant shall be governed by and construed in accordance with the laws of the State of Delaware without giving effect to the principles of conflicts of law thereof.

Dated as of
PARACELSIAN, INC.

By: _____

Agreed and Accepted as of

xxxxx

By: _____

EXHIBIT 10.4

Lease agreement, dated as of February 31, 1996 (sic), between ParaComm, Inc. and Cornell University c/o Sibley Real Estate Services, Inc.

LEASE AGREEMENT

THIS LEASE AGREEMENT, hereinafter called the Lease, is made and entered into on the date, between the parties, and upon the terms and conditions hereinafter set forth.

1. Short Description of Terms. This Lease is an integrated agreement. The format used in this paragraph is for the convenience of the parties. The terms in this paragraph are controlled by the Lease in its entirety.

A.	Date of Lease:	February 31, 1996
B.	Landlord:	Cornell University c/o Sibley Real Estate Services, Inc. 146 Langmuir Lab 95 Brown Road Ithaca, New York 14850
C.	Tenant:	ParaComm, Inc. 145 Langmuir Lab 95 Brown Road Ithaca, New York 14850
D.	Term of Lease:	(1) Beginning: May 1, 1996 (2) Ending: April 30, 1997
E.	Purpose:	Office
F.	Description of Premises:	Room(s) 145 Building: Langmuir Lab Cornell Business and Technology Park Ithaca, New York 14850
G.	Rentable Square Feet:	725
H:	Rent:	Annually: $8,700.00 Monthly: $ 725.00

I. Security Deposit: Total Deposit: $ 725.00
Date Received: 12/01/95

2. Premises. Landlord, for and in considerations of the rents, covenants and agreements, and upon the terms and conditions set forth herein, hereby leases to the Tenant, and Tenant hereby hires from the Landlord, the Premises set forth above, together with the right in common with other tenants entitled thereto, to use the halls, elevators (if any), and stairways in the building of which the Premises are a part (hereinafter call the Building) for purposes of ingress and egress, and of any land and parking areas which Landlord may designate (hereinafter called the Grounds) for any use by Tenant, its employees, and invitees.

3. Square Footage. Tenant hereby acknowledges that the total square footage represented in section one is comprised of the total Rentable Square Footage for the space plus a fifteen percent common area factor.

4. Rent. Tenant shall pay the rental set forth above in consecutive monthly installments, in advance, on the first day of each month. If rent is not paid by the tenth of the month, it shall be subject to a late charge equal to two percent (2%) per month of such unpaid amount to cover Landlord's additional administrative costs and other losses and expenses resulting from said late payment.

5. Security Deposit. Tenant hereby deposits with Landlord the amount set forth above as security for the faithful performance by Tenant of the terms hereof, to be returned to Tenant (without interest) on the full and faithful performance by Tenant of the provisions hereof, less any deductions necessary for damage, breakage, cleaning, unpaid and due rent, etc., and only after an agent of the Landlord has inspected the Premises. Under no circumstances shall the security deposit be used as any month's rent or the last month's rent.

6. Manner of Payment. Tenant agrees to pay (a) rent and (b) all other sums, impositions, costs, expenses, and other payments which Tenant assumes or agrees to pay in any of the provisions of this Lease (hereinafter called "Additional Rent") at the Landlord's address above or at such other address as the Landlord may designate in writing, and to make such payments in lawful money of the United States of America, without demand by the Landlord, and without counterclaim, deduction, or set off. The rent for the calendar month of the Term, if either is not a full month, shall be apportioned.

7. Use. The Tenant shall use and occupy the Premises for the purposes set forth above and for no other purpose. The Tenant shall comply with all laws, orders, and regulations of the Federal, State, and Municipal Governments, or any of their departments, and the regulations of the Board of Fire Underwriters governing such use. Tenant shall procure and maintain in force during the Term all permits, authorizations, and licenses necessary for Tenant's business use and

operation in the premises. Tenant covenants that neither it nor any assignee nor subtenant will (a) use or permit to be used any part of the Premises for any dangerous or noxious trade or business, (b) transport to or from, dispose of, use, store, handle, or generate any flammable substances or explosives or hazardous or toxic substances in quantities or concentration which are unsafe or otherwise not suitable for the Premises, (the foregoing shall not be construed to prohibit Tenant from using the Premises for reasonable and suitable laboratory purposes, provided accepted laboratory safety procedures and precautions appropriate to the Premises are employed), or (c) cause or maintain any nuisance, waste, or injury to the Premises. Tenant shall conform to the Rules and Regulations now or hereinafter established by Landlord, and changed from time to time, for the general safety, care, and cleanliness of the entire Premises; the preservation of good order therein; and the comfort, quiet, and convenience of the other tenants. The Tenant shall not without Landlord's written consent: (a) abandon the Premises or suffer the Premises to become vacant or deserted; (b) assign, mortgage, pledge or encumber this Lease, in whole or in part; (c) underlet or sublet the Premises or any part thereof.

8. Services and Utilities. A. At its own expense, Landlord agrees to provide the following services and utilities:

(1) Electricity for normal business use;
(2) Heat to a reasonable temperature during normal business hours;
(3) Cold water for drinking, lavatory, and toilet purposes, and hot water for lavatory purposes;
(4) Regular cleaning and janitorial services as follows:
    (a) Clean lavatories daily;
    (b) Empty wastebaskets daily;
    (c) Vacuum or dust mop floors weekly;
    (d) Wash exterior of windows semi-annually;
(5) Necessary lawn care and snow removal;
(6) Replace burnt out light bulbs and ballasts.

B. At its own expense, Tenant agrees to provide the following services and utilities:

(1) Telephone service;
(2) Place large boxes and trash, other than normal wastebasket trash, in dumpster;
(3) Dust and clean desk tops, ashtrays, telephones, furniture, machines, lab equipment and sinks, interior of windows, and window sills as necessary;

C. If utility costs in the Building are materially increasing, Landlord reserves the right to pass Tenant's pro-rata share of the cost of such increases on to Tenant, as determined in Landlord's sole and absolute discretion;

D. Landlord shall not be liable for any consequential damages arising

out of its provision of services and utilities or any failure to provide services and utility.

9. Construction. A. Landlord and Tenant agree to complete the items of work and materials required, if any, under the terms of a Work Letter executed by Landlord and Tenant in connection with this lease.

B. Tenant shall not without Landlord's written consent make or allow to be made any structural alterations, additions or improvements to the Premises, including electrical and plumbing connections, without first submitting plans thereof and obtaining the written approval of the Landlord permitting the carrying out of said structural alterations, additions, or improvements. All improvements made by Tenant to the Premises, which are attached to the Premises, including, but not limited to, carpets, drapes, and anything bolted, nailed, plumbed, or otherwise secured in a manner customarily deemed to be permanent, shall become the property of Landlord upon termination of the Lease. The Tenant shall, within ten (10) days after filing, discharge any mechanic's lien for materials or labor claimed to have been furnished to the Premises on Tenant's behalf.

10. Maintenance. A. Landlord will, at its own expense;

(1) Repair as necessary the exterior of the Building;
(2) Repair as necessary the common areas of the Building;
(3) Repair as necessary the Grounds, including parking areas;
(4) Make all necessary structural repairs and repairs to the Building Utility systems.

B. Tenant will, at its own expense:

(1) Repair as necessary the interior of the Premises, excluding structural repairs and repairs to the Building Utility systems;
(2) Make all repairs and replacement to the Premises, Building, Building Utility systems, and Grounds, necessitated by the negligence of Tenant, its employees, customers, invitees, and assignees.

11. "As Is" Condition. Landlord leases, and Tenant agrees to accept, Premises in an "as is" condition. Landlord makes no warranties, representations, or promises as to the condition of the Premises, Building, or Grounds, except as herein expressly set forth. Tenant agrees that it has examined said Premises and takes the same in their present conditions and state of repair. The taking of possession of the Premises and said Building and Grounds were in satisfactory conditions at the time such possession was so taken. Landlord makes no representation or warranty that the Premises are suitable for Tenant's purposes, and Tenant agrees that any measures necessary to make the Premises suitable and safe or to otherwise adapt the Premises for its purpose (e.g. fume hoods, drains, or other work to ventilation,

electrical, plumbing, or other systems) shall be undertaken at Tenant's expense in accordance with the provisions of Paragraph 8.

12. Indemnity. Tenant agrees to hold and save Landlord harmless from, and indemnify Landlord against, any and all claims of any party for damage, loss, or injury (including death) of whatever nature, including costs of legal defense, arising out of use or occupancy of the Premises, or out of any act, omission, or negligence of Tenant or anyone claiming under Tenant.

13. Insurance. A. The Tenant agrees to obtain comprehensive general liability insurance to include both bodily injury and property damage liability insurance. Such insurance shall name Landlord as an additional named insured. The limits of liability shall be not less than one million dollars ($1,000,000.00) combined single limit for bodily injury and property damage liability. Each such policy shall contain a provision that it cannot be canceled or amended insofar as it relates to the Leased Premises without at least thirty (30) days prior written notice to the Landlord. Tenant also agrees to provide Landlord with a Certificate of Insurance showing evidence of Workers' Compensation Insurance. In addition, Tenant agrees to obtain Builder's Risk Insurance covering Landlord during construction or renovation by the Tenant, and to carry Workers' Compensation Insurance affording applicable statutory coverage and containing statutory limits on employees at all times. A Certificate of Insurance at inception and each renewal period shall be provided to Landlord by Tenant.

B. Notwithstanding any other provisions contained herein, in the event of any loss or damage to the Premises and/or any contents, Tenant shall look solely to Insurance in its favor. Tenant shall obtain for each policy of such insurance, provisions waiving the right of subrogation against the Landlord for loss or damage within the scope of the insurance; and Tenant hereby does for itself and its insurers waive all such insured claims against the Landlord.

14. Property Loss or Damage. All merchandise, furniture, and property of any kind, nature, and description, belonging to Tenant or any person claiming by, through, or under Tenant, which may be in, on, or about the Premises during the continuance of this Lease, or any extension or renewal thereof, is to be at the sole risk and hazard of Tenant; and if the whole or any part thereof shall be destroyed or damaged by fire, water, steam, smoke, cold, by the leakage or bursting of water privies, or in any other way or manner, no part of said loss or damage is to be charged to or to be borne by Landlord in any case whatsoever.

15. Interference. A. In the case the Premises, during the term hereby created, shall be destroyed or damaged by fire or other unavoidable casualty so that the same shall be thereby rendered unfit for Tenant for its business purposes, or in case Tenant shall be prevented from using said Premises by reason of any action on the part of municipal or state officers through no fault, neglect, or willful

act of his own, his agents, servants, or employees, then the rent hereinbefore reserved, or a just proportionate part thereof, according to the nature and extent of the injury sustained, shall be suspended or abated until the said Premises shall have been put in proper condition for use of Tenant in its business purpose, or until Tenant is permitted to resume the use thereof by said municipal or state officers. In case of fire, Tenant shall give immediate notice thereof to Landlord. If the Premises be so damaged that Landlord shall decide not to rebuild, the term hereby created shall cease, and the accrued rent be paid up to the time of the fire, or refunded to Tenant for such period beyond the time of the fire, as Tenant may have paid the same. If the damage results from the fault of the Tenant, or Tenant's agents, servants, visitors, or licensees, Tenant shall not be entitled to any abatement or reduction of rent, except to the extent, if any, that Landlord receives the proceeds of rent insurance in lieu of such rent.

B. The Tenant shall not be entitled to claim a constructive eviction from the Premises unless Tenant shall have first notified Landlord in writing of the condition or conditions giving rise thereto, and, if the complaints be justified, unless Landlord shall have failed within a reasonable time after receipt of said notice to remedy such conditions.

16. Condemnation. If the Premises or any part thereof or any estate therein, be taken by virtue of eminent domain, this Lease shall terminate on the date when title vests pursuant to such taking, the rent and Additional Rent shall be apportioned as of said date, and any rent paid for any period beyond said date shall be repaid to Tenant. Tenant shall not be entitled to any part of the award or any payment in lieu thereof; but Tenant may file a claim against the taking authority for any taking of fixtures and improvements owned by Tenant, and for moving expenses.

17. Entry. The Landlord may enter the Premises at any time, on reasonable notice to Tenant (except that no notice need be given in case of emergency), for any legal purpose. Landlord may show the Premises to prospective purchasers, mortgagees, and Tenants upon reasonable notice to Tenant.

18. Subordination. This Lease shall be subject and subordinate to all underlying leases and to mortgages which may now or hereinafter affect such leases or the real property of which the Premises is a part, and also to all renewals, modifications, consolidations, and replacements of said underlying leases and said mortgages. Although no instrument or act on the part of Tenant shall be necessary to effectuate such subordination, Tenant will, nevertheless, execute and deliver such further instruments confirming such subordination of this Lease as may be desired by the holders of said mortgages or by any of the lessors under such underlying leases. Tenant hereby appoints Landlord attorney-in-fact, irrevocably, to execute and deliver any such instrument for Tenant. If any underlying lease to which this Lease is subject terminates, Tenant shall, on timely request, attorn to the

owner of the reversion.

19. Liens. The Tenant shall have no power to do any act or make any contract which may create or be the foundation for any lien, mortgage, or other encumbrance upon any interest in property of the Landlord, including the Premises, Building, and Grounds, it being agreed that this Lease may not be subordinated to the interest of any other party without the express written consent of the Landlord, which consent the Landlord may withhold for any reason or no reason.

20. Estoppel Certificates. Tenant shall, from time to time, upon not less than ten (10) days prior written request by Landlord, execute, acknowledge, and deliver to Landlord a written statement certifying that this Lease is unmodified and in full force and effect (or that the same is in full force and effect as modified, listing the instruments of modification), the dates to which the rent and other charges have been paid, and whether or not to the best of Tenant's knowledge Landlord is in default hereunder (and, if so, specifying the nature of the default).

21. Default. If the Tenant defaults in the payment of rent or Additional Rent or defaults in the performance of any of the covenants or conditions hereof, Landlord may give to Tenant notice of such default, and if Tenant does not pay the rent or Additional Rent default within five (5) days, or cure such other default within ten (10) days, after the giving of such notice (or, if such other default is of such nature that it cannot be completely cured within such ten (10) days, if Tenant does not commence such curing within such (10) days thereafter and proceed with reasonable diligence and in good faith to cure such default), or if the default is irreversible and not capable of cure; or if the Tenant has engaged in any act or activity unreasonably dangerous or hazardous to the Premises, the Building, or to the other occupants or tenants of the Building, then Landlord may terminate this Lease with not less than three (3) days notice to Tenant, and on the date specified in said notice the term of this Lease shall terminate, and Tenant shall then quit and surrender the Premises to Landlord, but Tenant shall remain liable as hereinafter provided. If this Lease shall have been so terminated by Landlord, Landlord may at any time thereafter resume possession of the Premises by any lawful means and remove Tenant or other occupants and their effects, and use any legal remedy.

22. Landlord's Right to Cure. If Tenant breaches any covenant or condition of this Lease, Landlord may, on reasonable notice to Tenant (except that no notice need be given in case of emergency), cure such breach at the expense of Tenant and the reasonable amount of all expenses, including attorneys' fees, incurred by Landlord in do so shall be deemed Additional Rent payable on demand.

23. Other Tenants. Landlord shall not be liable to Tenant for failure to enforce or for violation of any Rules and Regulations or the breach

of any covenant or condition in any Lease by any other tenant.

24. Agreement to Lease. The Tenant agrees to pay the rent and other charges as required in the Lease. The Tenant agrees to do everything required in the Lease. Landlord agrees that if Tenant pays the rent and is not in default under this Lease, Tenant may peaceably and quietly have, hold, and enjoy the Premises for the Term of this Lease.

25. End of Term. No later than the last day of the Term, Tenant shall, at Tenant's expense, remove all of Tenant's personal property and those improvements made by Tenant which have not become the property of Landlord, including trade fixtures, cabinet work, moveable paneling, partitions and the like, repair all injury done by or in connection with the installation or removal of said property and improvements, and surrender the leased Premises broom clean and in as good condition as they were at the beginning of the Term, reasonable wear, and damage by fire, the elements, casualty, or other causes not due to the misuse or neglect by Tenant or Tenant's agents, servants, visitors, or licensees, excepted. All property of Tenant remaining on the Premises after the last day of the Term of this Lease shall be conclusively deemed abandoned and may be removed by Landlord, and Tenant shall reimburse Landlord for the cost of such removal. Landlord may, but is not obligated to, have any such property stored. Such storage shall be at Tenant's risk and expense.

26. Option to Renew (if applicable). Tenant, if such option is granted above and if not in default under any of the terms hereof, shall have the option to renew the term of the Lease for the period set forth above, by giving notice in writing to Landlord no later than ninety (90) days prior to the end of the original term. The terms and conditions hereof shall also apply to the renewal term shall be as set forth above. If the option to renew is not set forth above, then Tenant shall have no option to renew.

27. Holding Over. In the event Tenant remains in possession of the leased Premises after expiration of this Lease and without the execution of a new Lease, it shall be deemed to be occupying the Premises as a holdover tenant from month to month (and not from year to year), and subject to all the obligations, conditions and provisions of this Lease except that Tenant shall pay for each day the Tenant holds over rent at twice the rate of the rental herein before provided to be paid. Such holdover, month to month tenancy shall be cancelable by either party upon thirty (30) days written notice to the other.

28. Notice. Any notice by either party to the other shall be in writing and shall be deemed to be duly given only if delivered personally or mailed by registered or certified mail in a postpaid envelope addressed to the addresses first given above, or at such other addresses as Tenant or Landlord, respectively, may designate in writing. Notice shall be deemed to have been duly given if delivered personally, upon delivery thereof, and if mailed, upon the third (3rd)

day after the mailing thereof.

29. No Broker. The parties agree that no real estate broker or salesperson was involved in this transaction.

30. Relocation. Notwithstanding anything to the contrary contained in this Lease, the parties acknowledge that it may become necessary for Landlord to reallocate the space Lease in the Building from time to time as conditions warrant. If it becomes necessary for Landlord to reallocate space in order to accommodate the needs of other tenants, Tenant agrees to relocate subject to the following conditions:

(1) Ninety (90) days prior written notice by Landlord;
(2) Allocation of comparable space to Tenant by Landlord;
(3) Written consent by Tenant which shall not be unreasonably withheld;
(4) Compensation for the reasonable value of and expense, loss, damage or interruption of business caused by the relocation either by Landlord or by tenant for whose benefit the relocation is made.

31. Miscellaneous. This lease contains the entire agreement between the parties respecting the matters herein set forth and supersedes all prior agreements between the parties hereto respecting such matters. Paragraph headings herein contained are for convenience only and shall not be considered in construing this Lease. Time is of the essence with respect to all matters provided in this Lease. If any party obtains a judgement or decree against any other party by reason of this Lease, reasonable attorneys' fees, as fixed by the court, shall be included in such judgement or decree. The Lease shall be construed and enforced in accordance with the laws of the State of new York. No waiver by Landlord of any default of Tenant shall be implied or inferred, and no written waiver thereof shall constitute, a waiver of any other default of Tenant, whether of the same or of any other nature or type and whether preceding, concurrent or succeeding; and no failure or delay on the part of Landlord to exercise any right it may have by the terms hereof or by law upon the default of Tenant, shall prevent the exercise thereof by Landlord at any time when Tenant shall continue to be so in default and no such failure or delay and no waiver of default shall operate as a waiver of any other default, or as a modification in any respect of the provisions of this Lease. As used herein "Landlord" means the entity(ies) who is or are the owner or owners of the Premises at the time in question, whether singular or plural in number and whether named in this Lease as Landlord or having become the successor or successors in interest of the same. In the event Landlord conveys its interest in the Premises, then it shall thereupon be automatically freed relieved from all obligations under this Lease which arise or accrue after the date of such conveyance. "Tenant" as used herein means the party, whether singular or plural in number; provided, however, that Tenant does not include any entity claiming under any assignment or other transfer prohibited by this

Lease and this definition does not alter the provisions of the Lease relating to assignment or subletting. If there shall be more than one entity constituting Tenant, their obligations shall be joint and several, and any notice required or permitted by the terms of this Lease may be given by or to any one thereof, and shall have the same force and effect as if given by or to all thereof. The consent by Landlord to any act by Tenant requiring the Landlord's approval shall not be deemed to waive or render unnecessary Landlord's consent to any subsequent similar acts. To the extent such waiver is permitted by law, the parties waive trial by jury in any action or proceeding brought in connection with this Lease or Premises. Unless otherwise stated, this Lease is binding on all parties who lawfully succeed to the right or take the place of the Landlord or the Tenant. Any provision(s) of this Lease which shall be to any extent in violation of the law or ordinance which shall prove to be to any extent unenforceable, invalid, void, or illegal, shall in no way affect, impair, or invalidate any other provisions hereof, and the remaining provisions, except those provisions that are made subject to or conditions upon such unenforceable, invalid, void, or illegal provision(s), shall nevertheless remain in full force and effect. No payment by Tenant or receipt by Landlord of a lesser amount than the monthly rent shall be deemed to be other than on account of the earliest stipulated rent, nor shall any endorsement or statement on any check or any letter accompanying any check or payment as rent be deemed to be an accord and satisfaction, and Landlord may accept such payment without prejudice to Landlord's right to recover the balance of such rent or pursue any other remedy. Landlord shall have the right to credit Tenant's payments towards any due or past due item(s) it so desires, notwithstanding any specification of Tenant. This Lease can be changed only by an agreement in writing signed by Landlord and Tenant.

IN WITNESS WHEREOF, the parties have executed this Leases as of the date first above written.

LANDLORD, Cornell University
Real Estate Department

TENANT, ParaComm, Inc.

/s/ John E. Majeroni
John E. Majeroni, Director
of Real Estate

/s/Arthur A. Koch, Jr.

</TEXT/

EXHIBIT 10.8

Cooperative Research and Development Agreement dated December 18, 1995, by and between the Registrant and the National Cancer Institute

PUBLIC HEALTH SERVICE

COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

This Cooperative Research and Development Agreement, hereinafter referred to as the "CRADA," consists of this Cover Page, an attached Agreement, and various Appendices referenced in the Agreement. This Cover Page serves to identify the Parties to this CRADA:

(1) the following Bureau(s), Institute(s), Center(s) or Division(s) of the National Institutes of Health ("NIH"), the Food and Drug Administration ("FDA"), and the Centers for Disease Control and Prevention ("CDC"):

The Laboratory of Tumor Cell Biology
Division of Basic Science
National Cancer Institute

hereinafter singly or collectively referred to as the Public Health Service ("PHS"); and

(2) Paracelsian, Inc.

which has offices at

222 Languir Laboratories
95 Brown Road
Cornell Tecvhnology Park
Ithaca, NY USA 14850

hereinafter referred to as the "Collaborator."

COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

Article 1. Introduction

This Cooperative Research and Development Agreement (CRADA) between PHS and the Collaborator will be effective when signed by all Parties. The research and development activities which will be undertaken by each of the Parties in the course of this CRADA are detailed in the Research Plan (RP) which is attached as Appendix A. The funding and staffing commitments of the Parties are set forth in Appendix B. Any exceptions or changes to the CRADA are set forth in Appendix C.

Article 2. Definitions

As used in this CRADA, the following terms shall have the indicated meanings:

2.1 "Affiliate" means any corporation or other business entity controlled by, controlling, or under common control with Collaborator. For this purpose, "control" means direct or indirect beneficial ownership of at least fifty (50) percent of the voting stock or at least fifty (50) percent interest in the income of such corporation or other business.

2.2 "Cooperative Research and Development Agreement" or "CRADA" means this Agreement, entered into by PHS pursuant to the Federal Technology Transfer Act of 1986, as amended, 15 U.S.C. 3710a et seq. and Executive Order 12591 of October 10, 1987.

2.3 "Government" means the Government of the United States as represented through the PHS agency that is a Party to this agreement.

2.4 "IP" means intellectual property.

2.5 "Invention" means any invention or discovery which is or may be patentable or otherwise protected under title 35, United States Code, or any novel variety or plant which is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).

2.6 "Principal Investigator(s)" or "PIs" means the persons designated respectively by the Parties to this CRADA who will be responsible for the scientific and technical conduct of the RP.

2.7 "Proprietary/Confidential Information" means confidential scientific, business, or financial information provided that such information does not include:

2.7.1 information that is publicly known or available from other sources who are not under a confidentiality obligation to the source of the information;

2.7.2 information which has been made available by its owners to others without a confidentiality obligation;

2.7.3 information which is already known by or available to the receiving Party without a confidentiality obligation; or

2.7.4 information which relates to potential hazards or cautionary warnings associated with the production, handling or use of the subject matter of the Research Plan of this CRADA.

2.8 "Research Materials" means all tangible materials other than Subject Data first produced in the performance of this CRADA.

2.9 "Research Plan" or "RP" means the statement in Appendix A of the respective research and development commitments of the Parties to this CRADA.

2.10 "Subject Invention" means any Invention of the Parties, conceived or first actually reduced to practice in the performance of the Research Plan of this CRADA.

2.11 "Subject Data" means all recorded information first produced in the performance of this CRADA by the Parties.

Article 3. Cooperative Research

3.1 Principal Investigators. PHS research work under this CRADA will be performed by the PHS laboratory identified in the RP, and the PHS Principal Investigator (PI) designated in the RP will be responsible for the scientific and technical conduct of this project on behalf of PHS. Also designated in the RP is the Collaborator PI who will be responsible for the scientific and technical conduct of this project on behalf of the Collaborator.

3.2 Research Plan Change. The RP may be modified by mutual written consent of the Principal Investigators. Substantial changes in the scope of the RP will be treated as amendments under Article 13.6.

Article 4. Reports

4.1 Interim Reports. The Parties shall exchange formal written interim progress reports on a schedule agreed to by the PIs, but at least within twelve (12) months after this CRADA becomes effective and at least within every twelve (12) months thereafter.

Such reports shall set forth the technical progress made, identifying such problems as may have been encountered and establishing goals and objectives requiring further effort, any modifications to the Research Plan pursuant to Article 3.2, and all CRADA-related patent applications filed.

4.2 Final Reports. The Parties shall exchange final reports of their results within four (4) months after completing the projects described in the RP or after the expiration or termination of this CRADA.

Article 5. Financial and Staffing Obligations

5.1 PHS and Collaborator Contributions. The contributions of the Parties, including payment schedules, if applicable, are set forth in Appendix B. PHS shall not be obligated to perform any of the research specified herein or to take any other action required by this CRADA if the funding is not provided as set forth in Appendix B. PHS shall return excess funds to the Collaborator when it sends its final fiscal report pursuant to Article 5.2, except for staffing support pursuant to Article 10.3. Collaborator acknowledges that the U.S. Government will have the authority to retain and expend any excess funds for up to one (1) year subsequent to the expiration or termination of the CRADA to cover any costs incurred during the term of the CRADA in undertaking the work set forth in the RP.

5.2 Accounting Records. PHS shall maintain separate and distinct current accounts, records, and other evidence supporting all its obligations under this CRADA, and shall provide the Collaborator a final fiscal report pursuant to Article 4.2.

5.3 Capital Equipment. Equipment purchased by PHS with funds provided by the Collaborator shall be the property of PHS. All capital equipment provided under this CRADA by one party for the use of another Party remains the property of the providing Party unless other disposition is mutually agreed upon by in writing by the Parties. If title to this equipment remains with the providing Party, that Party is responsible for maintenance of the equipment and the costs of its transportation to and from the site where it will be used.

Article 6. Intellectual Property Rights and Patent Applications

6.1 Reporting. The Parties shall promptly report to each other in writing each Subject Invention resulting from the research conducted under this CRADA that is reported to them by their respective employees. Each Party shall report all Subject Inventions to the other Party in sufficient detail to determine inventorship. Such reports shall be treated as Proprietary/Confidential Information in accordance with Article

8.4.

6.2 Collaborator Employee Inventions. If the Collaborator does not elect to retain its IP rights, the Collaborator shall offer to assign these IP rights to the Subject Invention to PHS pursuant to Article 6.5. If PHS declines such assignment, the Collaborator may release its IP rights as it may determine.

6.3 PHS Employee Inventions. PHS on behalf of the U.S. Government may elect to retain IP rights to each Subject Invention made solely by PHS employees. If PHS does not elect to retain IP rights, PHS shall offer to assign these IP rights to such Subject Invention to the Collaborator pursuant to Article 6.5. If the Collaborator declines such assignment, PHS may release IP rights in such Subject Invention to its employee inventors pursuant to Article 6.6.

6.4 Joint Inventions. Each Subject Invention made jointly by PHS and Collaborator employees shall be jointly owned by PHS and the Collaborator. The Collaborator may elect to file the joint patent or other IP application(s) thereon and shall notify PHS promptly upon making this election. If the Collaborator decides to file such applications, it shall do so in a timely manner and at its own expense. If the Collaborator does not elect to file such application(s), PHS on behalf of the U.S. Government shall have the right to file the joint application(s) in a timely manner and at its own expense. If either Party decides not to retain its IP rights to a jointly owned Subject Invention, it shall offer to assign such rights to the other Party pursuant to Article 6.5. If the other Party declines such assignment, the offering Party may release its IP rights as provided in Articles 6.2, 6.3, and 6.6.

6.5 Filing of Patent Applications. With respect to Subject Inventions made by the Collaborator as described in Article 6.2, or by PHS as described in Article 6.3, a Party exercising its right to elect to retain IP rights to a Subject Invention agrees to file patent or other IP applications in a timely manner and at its own expense and after consultation with the other Party. The Party shall notify the other Party of its decision regarding filing in countries other than the United States in a timely manner. The Party may elect not to file a patent or other IP application thereon in any particular country or countries provided it so advises the other Party ninety (90) days prior to the expiration of any applicable filing deadline, priority period or statutory bar date, and hereby agrees to assign its IP right, title and interest in such country or countries to the Subject Invention to the other Party and to cooperate in the preparation and filing of a patent or other IP applications. In any countries in which title to patent or other IP rights is transferred to the Collaborator, the Collaborator agrees that PHS inventors will share in any royalty distribution that the Collaborator pays to

its own inventors.

6.6 Release to Inventors. In the event neither of the Parties to this CRADA elects to file a patent or other IP application on a Subject Invention, either or both (if a joint invention) may retain or release their IP rights in accordance with their respective policies and procedures. However, the Government shall retain a nonexclusive, non-transferrable, irrevocable, royalty-free license to practice any such Subject Invention or have it practiced throughout the world.

6.7 Patent Expenses. The expenses attendant to the filing of patent or other IP applications generally shall be paid by the Party filing such application. If an exclusive license to any Subject Invention is granted to the Collaborator, the Collaborator shall be responsible for all past and future out-of-pocket expenses in connection with the preparation, filing, prosecution and maintenance of any applications claiming such exclusively-licensed inventions and any patents or other IP grants that may issue on such applications. The Collaborator may waive its exclusive license rights on any application, patent or other IP grant at any time, and incur no subsequent compensation obligation for that application, patent or IP grant.

6.8 Prosecution of Intellectual Property Applications. Within one month of receipt or filing, each Party shall provide the other Party with copies of the applications and all documents received from or filed with the relevant patent or other IP office in connection with the prosecution of such applications. Each Party shall also provide the other Party with the power to inspect and make copies of all documents retained in the patent or other IP application files by the applicable patent or other IP office. Where licensing is contemplated by Collaborator, the Parties agree to consult with each other with respect to the prosecution of applications for PHS Subject Inventions described in Article 6.3 and joint Subject Inventions described in Article 6.4. If the Collaborator elects to file and prosecute IP applications on joint Subject Inventions pursuant to Article 6.4, PHS will be granted an associate power of attorney (or its equivalent) on such IP applications.

Article 7. Licensing

7.1 Option for Commercialization License. With respect to Government IP rights to any Subject Invention not made solely by the Collaborator's employees for which a patent or other IP application is filed, PHS hereby grants to the Collaborator an option to elect an exclusive or nonexclusive commercialization license, which is substantially in the form of the appropriate model PHS license agreement. This option does not apply to Subject Inventions conceived prior to the effective date of this

CRADA that are reduced to practice under this CRADA, if prior to that reduction to practice, PHS has filed a patent application on the invention and has licensed it or offered to license it to a third party. The terms of the license will fairly reflect the nature of the invention, the relative contributions of the Parties to the invention and the CRADA, the risks incurred by the Collaborator and the costs of subsequent research and development needed to bring the invention to the marketplace. The field of use of the license will be commensurate with the scope of the RP.

7.2 Exercise of License Option. The option of Article 7.1 must be exercised by written notice mailed within three (3) months after either (i) Collaborator receives written notice from PHS that the patent or other IP application has been filed; or (ii) the date Collaborator files such IP application; whichever comes first. Exercise of this option by the Collaborator initiates a negotiation period that expires nine (9) months after the exercise of the option. If the last proposal by the Collaborator has not been responded to in writing by PHS within this nine (9) month period, the negotiation period shall be extended to expire one (1) month after PHS so responds, during which month the Collaborator may accept in writing the final license proposal of PHS. In the absence of such acceptance, PHS will be free to license such IP rights to others. In the event that the Collaborator elects the option for an exclusive license, but no such license is executed during the negotiation period, PHS agrees not to make an offer for an exclusive license on more favorable terms to a third party for a period of six (6) months without first offering Collaborator those more favorable terms.

7.3 License for PHS Employee Inventions and Joint Inventions. Pursuant to 15 U.S.C. 3710a(b)(1)(A), for inventions made by PHS employees or jointly with a Collaborator under this CRADA, pursuant to Articles 6.3 and 6.4, the Collaborator grants to PHS a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government. In the exercise of such license, the Government shall not publicly disclose trade secrets or commercial or financial information that is privileged or confidential within the meaning of 5 U.S.C. 552(b)(4) or which would be considered as such if it had been obtained from a non-Federal party.

7.4 License in Collaborator Inventions. Pursuant to 15 U.S.C. 3710a(b)(2), for inventions made solely by Collaborator employees under this CRADA, pursuant to Article 6.2, the Collaborator grants to PHS a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government for research or other Government purposes.

7.5 Third Party License. Pursuant to 15 U.S.C. 3710a(1)(B), if PHS

grants an exclusive license to a Subject Invention made wholly by PHS employees or jointly with a Collaborator under this CRADA, pursuant to Articles 6.3 and 6.4, the Government shall retain the right to require the Collaborator to grant to a responsible applicant a nonexclusive, partially exclusive, or exclusive sublicense to use the invention in Collaborator's licensed field of use on terms that are reasonable under the circumstances; or if the Collaborator fails to grant such a license, to grant the license itself. The exercise of such rights by the Government shall only be in exceptional circumstances and only if the Government determines (i) the action is necessary to meet health or safety needs that are not reasonably satisfied by Collaborator, (ii) the action is necessary to meet requirements for public use specified by Federal regulations, and such requirements are not reasonably satisfied by the Collaborator; or (iii) the Collaborator has failed to comply with an agreement containing provisions described in 15 U.S.C. 3710a(c)(4)(B). The determination made by the Government under this Article is subject to administrative appeal and judicial review under 35 U.S.C. 203(2).

7.6 Joint Inventions Not Exclusively Licensed. In the event that the Collaborator does not acquire an exclusive commercialization license to IP rights in all fields in joint Subject Inventions described in Article 6.4, then each Party shall have the right to use the joint Subject Invention and to license its use to others in all fields not exclusively licensed to Collaborator. The Parties may agree to a joint licensing approach for such IP rights.

Article 8. Proprietary Rights and Publication

8.1 Right of Access. PHS and the Collaborator agree to exchange all Subject Data produced in the course of research under this CRADA, whether developed solely by PHS or jointly with the Collaborator. Research Materials will be shared equally by the Parties to the CRADA unless other disposition is agreed to by the Parties. All Parties to this CRADA will be free to utilize Subject Data and Research Materials for their own purposes, consistent with their obligations under this CRADA.

8.2 Ownership of Subject Data and Research Materials. Subject to the sharing requirements of Paragraph 8.1 and the regulatory filing requirements of Paragraph 8.3, the producing Party will retain ownership of and title to all Subject Inventions, all Subject Data and all Research Materials produced solely by their investigators. Jointly developed Subject Inventions, Subject Data and Research Materials will be jointly owned.

8.3 Dissemination of Subject Data and Research Materials. To the extent allowed under law, the Collaborator and PHS agree to use

reasonable efforts to keep Subject Data and Research Materials confidential until published or until corresponding patent applications are filed. Any information that would identify human subjects of research or patients will always be maintained confidentially. Collaborator shall have the exclusive right to use any and all CRADA Subject Data in and for any regulatory filing by or on behalf of Collaborator, except that PHS shall have the exclusive right to use Subject Data for that purpose, and authorize others to do so, if the CRADA is terminated or if Collaborator abandons its commercialization efforts.

8.4 Proprietary/Confidential Information. Each Party agrees to limit its disclosure of Proprietary/Confidential Information to the amount necessary to carry out the Research Plan of this CRADA, and shall place a confidentiality notice on all such information. Confidential oral communications shall be reduced to writing within 30 days by the disclosing Party. Each Party receiving Proprietary/Confidential Information agrees that any information so designated shall be used by it only for the purposes described in the attached Research Plan. Any Party may object to the designation of information as Proprietary/Confidential Information by another Party. Subject Data and Research Materials developed solely by the Collaborator may be designated as Proprietary/Confidential Information when they are wholly separable from the Subject Data and Research Materials developed jointly with PHS investigators, and advance designation of such data and material categories is set forth in the RP. The exchange of other confidential information, e.g., patient-identifying data, should be similarly limited and treated. Jointly developed Subject Data and Research Material derived from the Research Plan may be disclosed by Collaborator to a third party under a confidentiality agreement for the purpose of possible sublicensing pursuant to the Licensing Agreement and subject to Article 8.7.

8.5 Protection of Proprietary/Confidential Information. Proprietary/Confidential Information shall not be disclosed, copied, reproduced or otherwise made available to any other person or entity without the consent of the owning Party except as required under court order or the Freedom of Information Act (5 U.S.C. Sect. 552). Each Party agrees to use its best efforts to maintain the confidentiality of Proprietary/Confidential Information. Each Party agrees that the other Party is not liable for the disclosure of Proprietary/Confidential Information which, after notice to and consultation with the concerned Party, the other Party in possession of the Proprietary/Confidential Information determines may not be lawfully withheld, provided the concerned Party has been given an opportunity to obtain a court order to enjoin disclosure.

8.6 Duration of Confidentiality Obligation. The obligation to maintain the confidentiality of Proprietary/Confidential

Information shall expire at the earlier of the date when the information is no longer Proprietary Information as defined in Article 2.5 or three (3) years after the expiration or termination date of this CRADA. The Collaborator may request an extension to this term when necessary to protect Proprietary/Confidential Information relating to products not yet commercialized.

8.7 Publication. The Parties are encouraged to make publicly available the results of their research. Before either Party submits a paper or abstract for publication or otherwise intends to publicly disclose information about a Subject Invention, Subject Data or Research Materials, the other Party shall be provided thirty (30) days to review the proposed publication or disclosure to assure that Proprietary/Confidential Information is protected. The publication or other disclosure shall be delayed for up to thirty (30) additional days upon written request by any Party as necessary to preserve U.S. or foreign patent or other IP rights.

Article 9. Representations and Warranties

9.1 Representations and Warranties of PHS. PHS hereby represents and warrants to the Collaborator that the official signing this CRADA has authority to do so.

9.2 Representations and Warranties of the Collaborator.

(a) The Collaborator hereby represents and warrants to PHS that the Collaborator has the requisite power and authority to enter into this CRADA and to perform according to its terms, and that the Collaborator's official signing this CRADA has authority to do so. The Collaborator further represents that it is financially able to satisfy any funding commitments made in Appendix B.

(b) The Collaborator certifies that the statements herein are true, complete, and accurate to the best of its knowledge. The Collaborator is aware that any false, fictitious, or fraudulent statements or claims may subject it to criminal, civil, or administrative penalties.

Article 10. Termination

10.1 Termination By Mutual Consent. PHS and the Collaborator may terminate this CRADA, or portions thereof, at any time by mutual written consent. In such event the Parties shall specify the disposition of all property, inventions, patent or other IP applications and other results of work accomplished or in progress, arising from or performed under this CRADA, all in accordance with the rights granted to the Parties under the terms of this Agreement.

10.2 Unilateral Termination. Either PHS or the Collaborator may unilaterally terminate this entire CRADA at any time by giving written notice at least thirty (30) days prior to the desired termination date, and any rights accrued in property, patents or other IP rights shall be disposed of as provided in paragraph 10.1.

10.3 Staffing. If this CRADA is mutually or unilaterally terminated prior to its expiration, funds will nevertheless remain available to PHS for continuing any staffing commitment made by the Collaborator pursuant to Article 5.1 above and Appendix B, if applicable, for a period of six (6) months after such termination. If there are insufficient funds to cover this expense, the Collaborator agrees to pay the difference.

10.4 New Commitments. No Party shall make new commitments related to this CRADA after a mutual termination or notice of a unilateral termination and shall, to the extent feasible, cancel all outstanding commitments and contracts by the termination date.

10.5 Termination Costs. Concurrently with the exchange of final reports pursuant to Articles 4.2 and 5.2, PHS shall submit to the Collaborator for payment a statement of all costs incurred prior to the date of termination and for all reasonable termination costs including the cost of returning Collaborator property or removal of abandoned property, for which Collaborator shall be responsible.

Article 11. Disputes

11.1 Settlement. Any dispute arising under this CRADA which is not disposed of by agreement of the Principal Investigators shall be submitted jointly to the signatories of this CRADA. If the signatories are unable to jointly resolve the dispute within thirty (30) days after notification thereof, the Assistant Secretary for Health (or his/her designee or successor) shall propose a resolution. Nothing in this Article shall prevent any Party from pursuing any additional administrative remedies that may be available and, after exhaustion of such administrative remedies, pursuing all available judicial remedies.

11.2 Continuation of Work. Pending the resolution of any dispute or claim pursuant to this Article, the Parties agree that performance of all obligations shall be pursued diligently in accordance with the direction of the PHS signatory.

Article 12. Liability

12.1 Property. The U.S. Government shall not be responsible for damages to any Collaborator property provided to PHS, where Collaborator retains title to the property, or any property

acquired by Collaborator for its own use pursuant to this CRADA.

12.2 NO WARRANTIES. EXCEPT AS SPECIFICALLY STATED IN ARTICLE 9, THE PARTIES MAKE NO EXPRESS OR IMPLIED WARRANTY AS TO ANY MATTER WHATSOEVER, INCLUDING THE CONDITIONS OF THE RESEARCH OR ANY INVENTION OR PRODUCT, WHETHER TANGIBLE OR INTANGIBLE, MADE, OR DEVELOPED UNDER THIS CRADA, OR THE OWNERSHIP, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF THE RESEARCH OR ANY INVENTION OR PRODUCT.

12.3 Indemnification. The Collaborator agrees to hold the U.S. Government harmless and to indemnify the Government for all liabilities, demands, damages, expenses and losses arising out of the use by the Collaborator for any purpose of the Subject Data, Research Materials and/or Subject Inventions produced in whole or part by PHS employees under this CRADA, unless due to the negligence or willful misconduct of PHS, its employees, or agents. The Collaborator shall be liable for any claims or damages it incurs in connection with this CRADA. PHS has no authority to indemnify the Collaborator.

12.4 Force Majeure. Neither Party shall be liable for any unforeseeable event beyond its reasonable control not caused by the fault or negligence of such Party, which causes such Party to be unable to perform its obligations under this CRADA, and which it has been unable to overcome by the exercise of due diligence. In the event of the occurrence of such a force majeure event, the Party unable to perform shall promptly notify the other Party. It shall further use its best efforts to resume performance as quickly as possible and shall suspend performance only for such period of time as is necessary as a result of the force majeure event.

Article 13. Miscellaneous

13.1 Governing Law. The construction, validity, performance and effect of this CRADA shall be governed by Federal law, as applied by the Federal Courts in the District of Columbia. Federal law and regulations will preempt any conflicting or inconsistent provisions in this CRADA.

13.2 Entire Agreement. This CRADA constitutes the entire agreement between the Parties concerning the subject matter of this CRADA and supersedes any prior understanding or written or oral agreement.

13.3 Headings. Titles and headings of the articles and subarticles of this CRADA are for convenient reference only, do not form a part of this CRADA, and shall in no way affect its interpretation.

13.4 Waivers. None of the provisions of this CRADA shall be considered

waived by any Party unless such waiver is given in writing to the other Party. The failure of a Party to insist upon strict performance of any of the terms and conditions hereof, or failure or delay to exercise any rights provided herein or by law, shall not be deemed a waiver of any rights of any Party.

13.5 Severability. The illegality or invalidity of any provisions of this CRADA shall not impair, affect, or invalidate the other provisions of this CRADA.

13.6 Amendments. If either Party desires a modification to this CRADA, the Parties shall, upon reasonable notice of the proposed modification or extension by the Party desiring the change, confer in good faith to determine the desirability of such modification or extension. Such modification shall not be effective until a written amendment is signed by the signatories to this CRADA or by their representatives duly authorized to execute such amendment.

13.7 Assignment. Neither this CRADA nor any rights or obligations of any Party hereunder shall be assigned or otherwise transferred by either Party without the prior written consent of the other Party.

13.8 Notices. All notices pertaining to or required by this CRADA shall be in writing and shall be signed by an authorized representative and shall be delivered by hand or sent by certified mail, return receipt requested, with postage prepaid, to the addresses indicated on the signature page for each Party. Notices regarding the exercise of license options shall be made pursuant to Article 7.2. Any Party may change such address by notice given to the other Party in the manner set forth above.

13.9 Independent Contractors. The relationship of the Parties to this CRADA is that of independent contractors and not agents of each other or joint venturers or partners. Each Party shall maintain sole and exclusive control over its personnel and operations. Collaborator employees who will be working at PHS facilities may be asked to sign a Guest Researcher or Special Volunteer Agreement appropriately modified in view of the terms of this CRADA.

13.10 Use of Name or Endorsements. By entering into this CRADA, PHS does not directly or indirectly endorse any product or service provided, or to be provided, whether directly or indirectly related to either this CRADA or to any patent or other IP license or agreement which implements this CRADA by its successors, assignees, or licensees. The Collaborator shall not in any way state or imply that this CRADA is an endorsement of any such product or service by the U.S. Government or any of its organizational units or employees. Collaborator issued press releases that reference or rely upon the work of PHS under this CRADA shall be made available to PHS at least 7 days prior to publication for review and

comment.

13.11 Exceptions to this CRADA. Any exceptions or modifications to this CRADA that are agreed to by the Parties prior to their execution of this CRADA are set forth in Appendix C.

13.12 Reasonable Consent. Whenever a Party's consent or permission is required under this CRADA, such consent or permission shall not be unreasonably withheld.

Article 14. Duration of Agreement

14.1 Duration. It is mutually recognized that the duration of this project cannot be rigidly defined in advance, and that the contemplated time periods for various phases of the RP are only good faith guidelines subject to adjustment by mutual agreement to fit circumstances as the RP proceeds. In no case will the term of this CRADA extend beyond the term indicated in the RP unless it is revised in accordance with Article 13.6.

14.2 Survivability. The provisions of Articles 4.2, 5-8, 10.3-10.5, 11.1, 12.2-12.4, 13.1, 13.10 and 14.2 shall survive the termination of this CRADA.

APPENDIX A: RESEARCH PLAN
Title of CRADA

Role of certain signal transduction pathways in malignant cell growth and in cell death

NCI PRINCIPAL INVESTIGATOR
Dr. Genoveffa Franchini
Laboratory of Tumor Cell Biology/Division of Basic Sciences

NCI CO-INVESTIGATOR
Dr. David I. Cohen
Laboratory of Tumor Cell Biology/Division of Basic Sciences

COLLABORATOR PRINCIPAL INVESTIGATOR
Dr. John Babish
Paracelsian, Inc.

Term of CRADA
Two (2) years from the date of execution of the CRADA.

Work on this project has commenced pursuant to letter of intent executed between Paracelsian, Inc. and NCI on December 20, 1995

Conflict of Interest Information
See attached Conflict of Interest and Fair Access Survey form.

GOALS OF THIS CRADA

The principal goals of this CRADA are:

1. To screen for unique pharmacological agents from a library of traditional Chinese medicines (TCMs) for their capability of modulating a cell signaling pathway induced by the cell lines HIVenv(2-2) and HIVenv(2-8) expressing HIV-1 envelope proteins gp160, gp120 and/or gp41. This pathway is triggered coincident with a GP120/41-dependent cell interaction with CD4+ T lymphocytes ("fusion"), eventually leading to depletion of the CD4+ T cells.

2. To screen for unique pharmacological agents from a library of traditional Chinese medicines (TCMs) for their capability of modulating a cell signaling pathway within various cancer cell lines to promote cell death during the course of tumorigenesis. This signaling pathway will have components which are in common with the pathway discussed in #1 and limited to the following cell lines: human pancreatic tumor cell lines ASPC-1, PANC1-60, and M776T; human Kaposi's sarcoma cell line KSY-1 and related cells; human breast cancer cell lines HTB 20, HTB 22, HTB 121, HTB 122, and HTB 126.

3. To develop an understanding of the molecular interactions of the various screen-positive TCMs with the cell signaling pathways in the cell. A detailed knowledge of these interactions will be useful for potential future molecular modeling and design of improved therapeutics.

Scientific Background

Dramatic changes in cellular growth and viability are controlled by protein phosphorylation/dephosphorylation, and protein kinases have frequently been transduced as oncogenes into the genome of acutely transforming retroviruses. Protein phosphorylation physiologically occurs in response to specific extracellular, and intracellular, stimuli, but viral infections can also aberrantly trigger protein phosphorylation. In both cases, these phosphorylation events are mediated by cellular protein kinases. Several protein kinases have been shown to interact like links in a chain to pass signals from one compartment of the cell to another. Upsetting these normal signaling pathways within a cell, such as occurs during tumorigenesis or viral infection, can lead to dramatic effects on cell growth and on cell viability.

CD4+ T cell death associated with HIV-1 infections has been mapped to the envelope glycoprotein, gp120/41 of the virus. HIV-1 isolates

infect cells by a process of membrane fusion through the utilization of specific cellular receptors. In the case of HIV-1, the primary receptor is CD4, while the main co-receptors involved in membrane fusion are the chemokine receptors CC-CKR5, for macrophage infection, and CXC-4 (LESTR, FUSIN), for T cell infection. Co-receptor utilization is also a property of the HIV envelope glycoproteins. During HIV-1 infection, CD4+ T cells are rapidly lost . This depletion of CD4+ T cells is the major contributing factor that cripples the immune system and leads to the eventual death of AIDS patients.

A helper T-cell line, stably expressing the HIV-1 envelope surface glycoproteins gp160, gp120, and gp41 (HIVenv), tat and rev proteins, but not surface CD4, has been established [(HIVenv(2-8)] as a model for the HIV cell death process. Studies with either HIV-1 infected peripheral blood mononuclear cells (PBMCs), or with HIVenv(2-8), show that the HIVenv glycoproteins are expressed on the surface of the cell after infection with HIV-1. HIVenv then interacts with a CD4 molecule and chemokine co-receptor(s) on the surface of another CD4+ T cell to induce membrane fusion and cell death. During this process, protein kinases are activated, and inhibition of kinase triggering strongly reduces cell death. Some of the protein kinases identified within this pathway are c-mos , and the p34cdc2/cyclin B complex . It is hoped that further delineation of the kinases and the overall mechanisms involved in this pathway will help in explaining how depletion of CD4+ T cells occurs. Using this HIV-1/T-cell model system, pharmaceuticals can be identified which modulate this cellular kinase death pathway, possibly leading to improved therapeutics for AIDS.

The cell signaling pathway, inducing cell death in HIV infected cells, shares in common kinases known to aberrantly trigger cell growth during tumorigenesis (oncogenes). As examples, Fyn and Lck are two protein tyrosine kinases (PTKs) activated during HIV-cell death, that are also oncogenes. Therefore, the HIVenv model system can lead to better understanding of the different outcomes (cell death versus unregulated cell division) that can follow activation of the same kinase(s). This knowledge may be used to tip the balance of a kinase pathway in favor of the desired outcome, such as cell death in the case of cancer. Using the model system, pharmaceuticals may be identified which enhance or accelerate HIV-induced cell death, which might be predicted to induce cell death in the context of unregulated proliferation (malignancy). Alternatively, synthetic modifications to cell death inhibitory compounds might produce the opposite outcome, and trigger cell death.

Androvir (andrographolide)(PN355) is a proprietary compound of Paracelsian, Inc. Paracelsian has purified Androvir from a panel of traditional Chinese medicines (TCMs), and has demonstrated that it inhibits several kinases, including the c-src PTK and the mitotic cyclin-dependent kinase, cdc2. Androvir is also proposed to inhibit in

vitro HIV-1 replication. Androvir is a compound with unique cell cycle effects, in so far as it first reduces the percentage of cells in S phase at lowest doses (<1 mg/ml), arrests cells in G1 phase at somewhat higher doses (1-5 mg/ml), and at the highest doses begins to trigger cell death and apoptosis. No other compound with a similar effect has been described. The mode of action of Androvir in cell cycle, and its specific target of activity, are at this time unknown and are one of the goals of this CRADA.

In short term trials of one to three months conducted by Paracelsian, Inc., under compassionate-use protocols, humans with endstage cancer have been administered oral doses of Androvir corresponding to a peak serum concentration of 10-:g/ml, without serious side effect. These studies were performed in Aberdeen, TX, between January and March, 1996. Rats administered similar doses for 60 days become infertile, but suffered no other deleterious effects, suggesting that a part of the meiotic cell cycle is most sensitive to andrographolide.

Introduction

Dr. Genoveffa Franchini and Dr. David Cohen, who will undertake this project collaboratively within the NCI, have extensive experience in the areas of gene expression systems and protein interactions designed to mimic given aspects of HIV-1 and HTLV-1 infection in cell culture, the development of recombinant vectors, the identification, characterization and cloning of HIV-1 genes, the design of assays to measure kinase levels and their activation state within cells, and testing these observations in animal models. In addition, NCI has designed and synthesized bacterial expression vectors to produce large quantities of the human kinase c-mos. The NCI collaborators have worked extensively on the characterization of other serine-threonine kinases, including the cyclin-dependent kinases and the MAP kinases, and PTKs, including Fyn and Lck kinases, which are candidate targets of action for Androvir.

Paracelsian, Inc. has extensive experience in the design, development, and marketing of products that detect cancerous tissues and identify toxic chemicals. The company has developed kits based on the ELISA system as well as diagnostics for the detection of cancer in animals. These products rely heavily on their knowledge and experience in the field of intracellular signaling processes. A recent merger between Paracelsian and Pacific Liaisons has afforded the company access to a collection of over 2,000 traditional Chinese medicines (TCMs) and the ability to collect an additional 5,000 to 10,000 extracts. This places Paracelsian in a position of holding the world's largest databases of TCM. Paracelsian has the capabilities of producing recombinant protein in large quantities for future crystallographic work.

The subject of this CRADA, including any in vitro and in vivo testing conducted by Drs. David Cohen and Genoveffa Franchini in conjunction

with this CRADA Research Plan, is strictly limited to investigation of the mechanism(s), definition of novel compounds derived from Paracelsian's library of TCMs, and development and use of assays related to components of the cell signaling pathways involved in HIVenv-dependent cytotoxicity or increased cell growth during tumorigenesis. The pathways are defined in terms of all of their components, that may be modulated from the cell surface through the nucleus. Additionally, these studies may involve other TCMs that may be collected by the company. The addition of vectors, genes, cell types, antigens, cytokines or other medicinal compounds to this Research Plan shall be added by amendment in accordance with paragraph 13.6 of the CRADA.

Although HIV-associated Kaposi's sarcoma and pancreatic malignancy are viewed as possible future targets of this research, no clinical trials will be conducted under this Research Plan. Any future clinical studies will be added either by amendment in accordance with paragraph 13.6 of this CRADA or under a new CRADA as appropriate.

To date experimental protocols have been performed under the Letter of Intent between the National Cancer Institute and Paracelsian, Inc. signed on 12/20/95. However, the original collaborative research effort dates to a meeting between Drs. David Cohen and Genoveffa Franchini (representing the NCI) and Keith Rhodes, President and CEO of Paracelsian, and Dr. John Babish (Vice President of Science of Paracelsian) on September 7, 1995 conducted in Bldg. 37, National Cancer Institute, National Institutes of Health, Bethesda, MD. A confidentiality agreement was signed and exchanged between the Parties on August 25, 1995, in preparation for this meeting. Thus far, these studies have involved the use of Androvir with cell lines HIVenv(2-8), SupT1, PANC1-60, M776T, and ASPC-1; and kinases c-src, cdc2, cdk2, and c-mos.

WORK SCOPE OF PROPOSED CRADA BETWEEN NCI AND PARACELSIAN, INC.

It is proposed that the objectives of this CRADA will be divided into five parts:

Part I:
NIH will supply Paracelsian, Inc. with stabile transfected Jurkat T cell lines expressing the HIVenv protein combinations of gp160 or gp160, gp120, and gp41 having been assigned the names HIVenv(2-2) and HIVenv(2-8) respectively. (See summary of Material Transfer Agreement and Biological Materials License under "Description of Other Agreements" below.) These cell lines will be used to test compounds that have an inhibitory role in the HIV-1env induced cytotoxicity. Compounds to be tested shall be limited to those found in the TCM database supplied by Paracelsian, Inc. The compounds for future work will be limited to

those having an effect on the HIVenv-dependent cytotoxicity. NCI may also supply other selected cell lines as agreed upon in writing by both Parties. It is anticipated that the assay for novel compounds will continue throughout the two years of this agreement, and the completion of these studies is not dependent upon other aspects of this research plan. Inhibitory compounds will be tested at NCI for the ability to limit HIV-1 and SIV infection of PBMCs in vitro. Compounds demonstrating anti-SIV activity in vitro will be tested in monkeys infected with SIVmac251 or with SIVpbj simian immunodeficiency viruses.

Part II:
NCI will develop vectors for the production of bacterially expressed c-mos protein and any mutants of c-mos as agreed upon by both Parties. Paracelsian will use these vectors to express and purify mg quantities of the c-mos protein for use in x-ray crystallography to determine the three dimensional structure of the protein. In addition, the purified enzyme will be used to examine the potential molecular interactions of said enzyme with compounds identified in Part I. These studies may assist in the rational design of future drugs with activity in the signaling pathway, which will be performed at Paracelsian. Additional protein expression vectors and scale-up production thereof may be needed to investigate other kinases identified within the signaling pathway . The c-mos expression vectors, and 1 ml of affinity-purified rabbit anti-human c-mos antibody, will be provided by NCI to Paracelsian immediately upon the execution of this agreement. The antibody will be employed in Part V of these objectives. It is anticipated that these studies will be ongoing throughout the two years of the initial agreement, and may aide, but are not required for the completion of Part V of these objectives.

Part III:

NCI and Paracelsian, Inc. will carry out experiments to test compounds for their affect on the uncontrolled cell growth of several tumor cell lines. Paracelsian will select for anti-signaling compounds according to their cdc2 inhibition assay or according to the joint HIVenv cytotoxicity assay. These selected compounds will be further tested on the human pancreatic tumor cell lines ASPC-1, PANC1-60, and M776T; human Kaposi's sarcoma cell line KSY-1 and related cells; human breast cancer cell lines HTB 20, HTB 22, HTB 121, HTB 122, and HTB 126; human infected HTLV-1 cell lines, CR45-8166, C91-PL, ESS, 1186, and I-94. The cell lines will be used to test compounds that have an inhibitory role in the uncontrolled growth of said cell lines. Compounds to be tested shall be limited to those found in the TCM database supplied by Paracelsian, Inc. The compounds for future work will be limited to those having an effect on reducing or inhibiting cell growth from the above tests. NCI may also supply other selected cell lines as agreed upon in writing by both Parties. NCI anticipates testing compounds displaying anti-tumor activity in small animal models relevant to the tumor under study, by amendment to the research plan in accordance with paragraph 13.6 of the CRADA. These tests will depend upon the rate of

discovery of novel compounds at Paracelsian. Several such novel compounds will be identified by Paracelsian and provided to NIH at the time of execution of this CRADA. This part of the work will extend throughout the two years of this agreement.

Part IV.

Those compounds showing a reduction in cell growth from Part III will be examined for their ability to interact with given kinases. The study shall be limited to kinases which have been previously identified to be altered in some manner as a result of their particular types of cancer, and/or are kinases that are part of the signal pathway altered during HIVenv-dependent cytotoxicity. Kinases involved may be commercially available or obtained through a

collaboration between NCI and Paracelsian as outlined in Part II above. Studies to determine the rational design of future drugs based on this information will be conducted at Paracelsian in accordance with Part II, and will be ongoing throughout this CRADA. Kinase studies employing defined compounds should be completed within the first year of this CRADA.

Part V:

The activities and mechanisms of action of Androvir in terms of inhibition of and/or activation of protein kinases that function in cell cycle regulation, or that function by directly triggering programmed cell death in sensitive cells will be jointly investigated. To do this, the activity and phosphorylation state of the cyclin-dependent kinases cdk1, cdk2, and cdk4 will be examined. Additionally, c-mos, MAPK, JNK, and p38 kinases, recently implicated in multiple forms of programmed cell death, will be assessed. These studies will employ several types of human cell lines such as: pancreatic, breast, HTLV-1 transformed, Kaposi's sarcoma, and HIVenv(2-1) and HIVenv(2-8). A therapeutic window in which cancer cells lines may be killed more readily by Androvir than normal cells will be determined. These studies can be completed within the first year of this CRADA, and are not linked to other studies.

DESCRIPTION OF CONTRIBUTIONS AND RESPONSIBILITIES OF THE PARTIES

Laboratory of Tumor Cell Biology, NCI

- Provide cell lines HIVenv(2-2) and HIVenv(2-8) and protocols for cell lysis of CD4+ lymphocytes. (See summary of Material Transfer Agreement and Biological Materials License under

"Description of Other Agreements" below.)

- Test Androvir and other kinase inhibitory compounds identified by Paracelsian for the ability to inhibit SIV-1 infection in vitro. Test compounds with clearly defined in vitro activity (greater than one logarithmic reduction of viral growth in the absence of significant cellular toxicity), for therapeutic benefit in SIV-1 infected monkeys.

- Obtain and/or clone genes encoding specific kinases involved in the cell signaling pathway leading to HIVenv-dependent cell death, and modify genes as necessary for expression in DNA plasmid constructs.

- Collaborate in the analysis and design of protein expression from vectors containing these genes for their use in X-ray crystallography, molecular interactions with TCMs.

- Provide plasmids to be used for subsequent scale-up into research grade reagents.

- Provide polyclonal antibodies with specificity and affinity to proteins used as immunogen. Produce rabbit polyclonal antibodies to human c-mos kinase.

- Design and synthesize DNA vectors producing c-mos peptides and recombinant protein substrates.

- Test anti-signaling compounds identified by Paracelsian according to their cdc2 inhibition assay, or according to the joint HIVenv cytotoxicity assay, for activity against human pancreatic tumor cell lines ASPC-1, PANC1-60, and M776T; human Kaposi's sarcoma cell line KSY-1 and related cells; human breast cancer cell lines; HTB 20, HTB 22, HTB 121, HTB 122, and HTB 126; human infected HTLV-1 cell lines, CR45-8166, C91-PL, ESS, 1186, and I-94.

Paracelsian, Inc.

- Paracelsian will test Androvir and the remaining TCMs for their effects on cdc2 inhibition or on the HIVenv-dependent cytotoxicity of CD4+ T cells.

- Using expression vectors designed in LTCB, Paracelsian will express and purify c-mos protein in sufficient quantities for X-ray crystallography (mg quantities) from bacteria.

- Test Androvir and the remaining TCMs for their affects on reducing or inhibiting cell growth of selected tumor cell lines.

- Paracelsian will provide input as to the design of future expression

vectors.

- Purify c-mos protein and peptide substrates produced from DNA vectors synthesized by LTCB.

- Paracelsian will perform X-ray crystallographic studies to determine the three dimensional structure of human c-mos, and other compounds discovered in the course of these studies. These investigations will form the basis for rational drug design performed at Paracelsian.

Paracelsian, Inc. and Laboratory of Tumor Cell Biology, NCI

- Design of in vitro assays to assess the molecular interactions taking place between Androvir and other screen-positive TCMs with cell cycle regulators and kinases found to play a role in either HIVenv-dependent cell death or tumorigenesis.

- Test antibodies to kinases, such as c-mos, for ability to prevent interaction of the kinases with screen positive TCMs in the above mentioned in vitro assays.

- Develop other reagents necessary to determine the molecular interaction of additional TCMs, favorably screened by Paracelsian, Inc,. for activity on the cell signaling pathway.

DESCRIPTION OF OTHER AGREEMENTS AND INTELLECTUAL PROPERTY OF THE PARTIES

OTHER CRADAs BETWEEN PARACELSIAN AND NIH: none

RELATED PATENTS/PATENT APPLICATIONS of PARACELSIAN:

"Use of Androgapholide Compounds to Treat or Prevent Pathogenicity of Diseases"
Inventor: John G. Babish
US applications: 08/349,989 filed December 6, 1994 08/551,418 filed Nov 1, 1995
WO 96/17605 published June 13, 1996 and filed December 6, 1995.

"Products for Measuring Cell Growth and Propensity and Methods for Their Use"
Inventors: John G. Babish, Xinfang Ma, Joseph A. Rininger and Brian E. Johnson
US applications 08/007,636 filed January 21, 1993; 08/075,744 filed June 11, 1993
WO 9417413 (published August 4, 1994; filed January 21, 1994

RELATED PATENTS/PATENT APPLICATIONS OF NIH

None identified

MATERIAL TRANSFER AGREEMENT:

1-06222-96
Provider: NCI; Recipient: Paracelsian
Material: Transfected Human T cell lines stably expressing the HIV-1 envelope, tat, and rev proteins."
Project: Pharmacologic methods, including agents derived from Traditional Chinese Medicines for reducing HIV-1 cytopathicity as specified in CRADA LOI # 344
MTA Executed: April 10, 1996

CONFIDENTIAL DISCLOSURE AGREEMENTS:

Subject: Andrographolide and a proprietary screening technology
Effective Date: August 25, 1995

Subject: Kinases and therapeutic inhibitors of cellular kinases involved in Human Immunodeficiency Virus growth.
Effective Date: September 4, 1995

Subject: Role of certain signal transduction pathways in malignant cell growth and in cell death"
Effective Date: July 2, 1996

LICENSES:

Paracelsian is currently negotiating the terms of a Biological Material License with the Office of Technology Transfer, NIH, for the use of cell lines HIVenv(2-8) and (2-2) developed by Dr. Cohen while working for NIAID. These cell lines were created prior to the effective date of the CRADA, and as such are not a Subject Invention under the CRADA.

Abstract FOR PUBLIC RELEASE of the Research Plan of the CRADA

The principal goals of this proposed CRADA involve the screening of a library of traditional Chinese medicines (TCMs) for their affects on reducing HIV induced cytotoxicity and /or their ability to inhibit cell growth in various tumor cell lines. It is hoped that this CRADA will lead to new drug designs for future anti-HIV and anti-cancer therapy.

Thus, the specific objectives of this CRADA will be:

1. To screen for unique pharmacological agents from a library of TCMs for their capability of modulating a cell signaling pathway induced in

the cell lines HIVenv(2-2) and HIVenv(2-8) expressing HIV-1 envelope proteins gp160, gp120 and/or gp41. This pathway is triggered coincident with a GP120/41-dependent cell interaction with CD4+ T lymphocytes, leading to depletion of the CD4+ T cells.

2. To screen for unique pharmacological agents from a library of TCMs for their ability to modulate a cell signaling pathway within various cancer cell lines, to promote cell death of the tumors. This signaling pathway will have components which are in common with the pathway discussed in #1 and limited to the following cell lines: human pancreatic tumor cell lines ASPC-1, PANC1-60, and M776T; human Kaposi's sarcoma cell line KSY-1 and related cells; human breast cancer cell lines HTB 20, HTB 22, HTB 121, HTB 122, and HTB 126.

3. To develop an understanding of the molecular interactions of the various screen-positive TCMs with the cell signaling pathways in the cell. A detailed knowledge of these interactions will be useful for potential future molecular modeling and design of improved therapeutics.

References

1. Mordret, G. Biol. Cell (1993) 79, 193-207.

2. Gougeon, M-L and Montagnier, L. Science (1993) 260, 1269-1270.

3. Tani, Y., Tian, H., Lane, H. C. and Cohen, D.I., J. of Immunol. (1993) 151, 7337-7348.

4. Cohen, D.I., Wahl, L., Sharpe, S and Blatner, G. XI International Conference on AIDS, Vancouver Cananda, July 7-11, 1996.

5. Kolesnitchenko, V. Wahl, L. M., Tian, H., et al., Proc.Natl Acad. Sci. (USA), (1995) 92, 11889-11893.

APPENDIX B: CACR-0344

FINANCIAL AND STAFFING CONTRIBUTIONS OF THE PARTIES

The Laboratory of Tumor Cell Biology (LTCB),NCI

The LTCB will provide scientific staff and other support as necessary to conduct the research outlined in Appendix A, Research Plan. Present estimates are that Dr. Franchini will devote approximately 10% of her time, and Dr. Cohen approximately 10% of his time.

Paracelsian, Inc.

Paracelsian will provide scientific staff and other support as necessary to its research responsibilities outlined in Appendix A, Research Plan. Present estimates are that Dr. Babish will devote approximately 10% of his time. Other scientific and technical staff will contribute the balance of the approximately two Paracelsian person years to be committed to this CRADA research.

In addition, Paracelsian will provide financial support for personnel, reagents and supplies, animal studies, equipment and travel to be deposited to an NCI CAN account established for the administration of this CRADA. No full-time tenured NCI employees will be supported under this CRADA by Paracelsian.

A check in the amount of $73,400 will be provided to NCI by Paracelsian upon execution of the CRADA. Three additional payments of $50,000 will be made quarterly during the first year. A payment of $100,000 is due on the one year anniversary of the execution of the CRADA, with three additional payments of $50,000 made quarterly, during the second year. (Total funds for Year 1 are $223,400; and for Year 2 are $250,000.)

Following the execution of the Letter of Intent, Paracelsian has been paying the salaries of staff working at the Laboratory of Tumor Cell Biology under Special Volunteer Agreements. It is the intention of LTCB,NCI to assume responsibility for the salaries of these staff upon execution of the CRADA using funds provided to the CRADA CAN. Should it be mutually agreed that Paracelsian continue to fund these positions beyond December 1, 1996, the above payment schedule will be adjusted by amendment in accordance with Paragraph 13.6 of the CRADA to offset these salary payments. The total financial support provided by Paracelsian in funds provided to NCI as set forth above, and for funds paid to staff working at LTCB,NCI shall not exceed $500,000.

APPENDIX C

EXCEPTIONS OR MODIFICATIONS TO THIS CRADA

There are no exceptions or modifications to this CRADA.

EXHIBIT 10.9

Agreement, dated April 9, 1996, between the Registrant, East West Herbs Limited, Robert E. Miller and A.E. Lyon

DATED April 9, 1996

PARACELSIAN INC

-and-

EAST WEST HERBS LIMITED

-and-

R E MILLER and A E LYON

SECURED LOAN AGREEMENT

Linnells
Greyfriars Court
Paradise Square
Oxford OX1 1BB
(Ref:COM.loan)

THIS AGREEMENT is made the 9th day of April, 1996

BETWEEN

(1) "The Lender" PARACELSIAN INCORPORATED (a company incorporated under the laws ofDelaware)whose principal office is at 222 Langmuir Laboratories Cornell Technology Park Ithaca NewYork 14850 USA

(2) "The Company" EAST WEST HERBS LIMITED(registered number 2241037) whoseregistered office of Langston Priory Mews Kingham Oxford OX76UP

(3) "The Guarantor" ROBERT ERIC MILLER and ALICE ELIZABETH LYON both of OldClock Cottage Swerford Oxfordshire OX74BQ

WHEREAS the Lender has been requested by the Guarantor to provide financial facilities to theCompany which the Lender has agreed to upon the terms and conditions hereinafter contained

NOW THIS DEED WITNESSES as follows:-

1. LOAN

The Lender shall lend to the Company and the Company at the request of the Guarantor shall borrow from the Lender the sum of Three Hundred and Forty Thousand US DOLLARS(US$340,000) which sumor part thereof as is for the time being owing by the Company to the Lender is hereinafter referred to as"the Loan" upon the terms hereinafter mentioned

2. SECURITY

The Company shall contemporaneously with the advance of the Loan execute and issue to the lender a fixedand floating debenture in the form agreed between the parties on or before the date hereof

3. PURPOSE OF LOAN

The Loan shall be applied by the Company solely for the purpose of providing working capital for the business of the Company

4. DRAW DOWN OF LOAN

The monies to be advanced to the Company shall be paid by one instalment on the date of this Agreement

5. REPAYMENT OF LOAN

5.1 The Loan shall be repaid by eight equal instalments the first instalment to be paid six onthsafter the first anniversary of this Agreement and subsequent instalments at intervals of three calendarmonths

5.2 Subject to Clause 7.2 the Company may at any time repay the Loan in full or part thereof inmultiples of US$10,000 by giving to the Lender at least three days written notice

6. EARLY REPAYMENT ON DEFAULT

6.1 The Loan and interest thereon under Clause 7.2 and other sums payable by the Companyhereunder thereof shall be forthwith repaid to the lender following written demand therefor if:-

6.1.1 The Company commits any material breach of the provisions of this Agreementand in the case of a breach capable of remedy fails to remedy the same within 30 days after receipt of a written notice giving full particulars of the breach and requiring it to be remedied

6.1.2 an encumbrancer takes possession or a Receiver is appointed over any of the property or assets of the Company

6.1.3 The Company makes any voluntary arrangement withits creditors

6.2 For the purpose of Clause 6.1.1 a breach shall be considered capable of remedy if theCompany can comply with the provision in question in all respects other than as time of performance(provided that time of performance is not of the essence)

6.3 Any waiver by the Lender of a breach of any provisions of this Agreement shall not beconsidered as a waiver of any subsequent breach of the same or any other provision thereof

6.4 The rights to terminate this Agreement given by this Clause 6 shall be without prejudice to anyother right or remedy of the Lender in respect of the breach concerned (if any) or any other breach

7. INTEREST ON LOAN

7.1 The period during which the Loan is outstanding will be divided into successive periods ofthree months (each an "Interest Period"). The first Interest period shall commence on the date hereof andthe subsequent Interest Periods shall each commence on the expiry of the preceding Interest Period

7.2 The rate of interest applicable to the Loan during each Interest period shall be the LIBOR rate applicable to that Interest Period

7.3 The LIBOR rate means the rate per annum at which domestic sterling deposits are offered in the London inter-bank market for a three month period at approximately 11.00 am on the first day of such Interest Period

7.4 Interest on the Loan shall be payable in arrears on the last day of each Interest Period or on the date of repayment of the Loan, if earlier, in which case the interest shall be calculated down to the date ofrepayment

7.5 The Company will make all payments under or in respect of this facility for value on the duedate in US dollars to the Lender at:-

Paracelsian Inc
ABA Routing #
Account# #
Tompkins Ithaca
New York NY
Attention: Trust Department

or such other account as the Lender may from time to time instruct the Company in writing. If any payment becomes due on a day which is not a day on which banks are generally open for business in London, the due date of such payment will be extended to the next business day

8. APPOINTMENT OF DIRECTORS

For so long as the Loan or any part thereof and any interest thereon and any other sum payable by the Company to the Lender hereunder remains outstanding the Company shall procure that a person nominatedby the Lender ("the Nominated Director") shall be appointed to and shall not be removed from the Board of Directors of the Company provided always that:-

8.1 the Lender shall at any time be entitled by notice in writing to the Company to remove its nominated director and by like notice to appoint any other person as a director and

8.2 upon the Loan and all other sums payable by the Company to the lender hereunder having been repaid or paid, as the case may be, the Lender will procure the resignation forthwith of the Nominated Director on terms acceptable to the Guarantor

9. GUARANTEE

9.1 In consideration of the Lender having agreed at the request of the Guarantor to advance the Loan to the Company the Guarantor hereby unconditionally and irrevocably guarantees to the Lender dueand punctual payment and discharge by the Company of all sums due and payable by the Company to the Lender under this Agreement including the Loan, interest at the rate set out in Clause 7 together withreasonable charges, expenses and costs properly incurred by the Lender in connection with the enforcementor preservation of this Agreement (hereinafter called "Indebtedness")

9.2 If the Company defaults in the payment of any Indebtedness when due for more than 14 daysthe Guarantor's liability to the Lender shall be discharged by the delivery to the Lender forthwith on demandwithout set-off counterclaim or other deductions a duly executed transfer together with relative share certificates off or the number of fully paid ordinary shares of pounds sterling 1.00 each in the capital of the Company determined by the following formula:-

$$x = y \times \frac{45,000}{340,000} \times 33,200$$

where x = the number of shares to be transferred

y = the amount of the Loan in respect of the re-payment of which the company is in default

9.3 The total liability of the Guarantor under this Agreement shall not exceed the amount represented by the value from time to time of 3022.1% of the issued fully paid ordinary shares in the capital of the Company and as security for the obligations of the Guarantor hereunder the Guarantor shall on the date of this Agreement deposit with the Lender share certificates representing [33,200] fully paid ordinary shares of pound sterling 1.00 each in the capital of the Company (hereinafter

called "the Security Shares")together with six duly executed blank stock transfers

9.4 The Guarantor shall not be discharged by time indulgence forbearance or any other concessions given to the Company or to any third party by the lender or by anything the Lender may do or omit to do or by any other dealing or thing which but for this provision would or might discharge the Guarantor

9.5 The Guarantee herein contained shall:-

9.5.1 be in addition to and not in substitution for any other guarantee or security held by theLender at any time for the Indebtedness and the Lender may deal with any such other security as it may think fit without affecting or releasing the obligations of the Guarantor or either of them hereunder in anyway

9.5.2 be a continuing guarantee and shall not be discharged by any intermediate settlementof the Indebtedness

9.5.3 remain in full force and effect until:-

(a) such time as the Indebtedness has been satisfied in full and no further Indebtedness is capable of arising;

or (b) the Lender shall complete the purchase of the whole of the issued share capital of the Company pursuant to an Option Agreement of today's date and made between the Guarantor and others (1) the lender (2) and the Company (3)whichever is the sooner

9.6 Until the Indebtedness shall have been satisfied in full:-

9.6.1 the Guarantor shall not claim or prove against the Company in competition with theLender in respect of the discharge by the Guarantor to the Lender of any liability hereunder; and

9.6.2 the Guarantor shall not claim or have the benefit of any set-off counterclaim or proofagainst the Company or of any dividend composition or payment by the Company or of any other securityto which the Lender may be entitled in respect of the Indebtedness or any share therein

9.7 The Guarantor hereby undertakes with the Lender as a separate and independent stipulation that if any liability of the Guarantor to the Lender pursuant to Clause 9.1 above is not recoverable by the Lender pursuant to that Clause on the footing of a guarantee by reason of any legal limitation disability orincapacity or the unenforceability for any reason of his Guarantee and/or the discharge of any indebtednessor any other fact matter or circumstance whether known to the Lender or not such liability shall nevertheless be recoverable from the Guarantor as sole or principal debtor in respect thereof and shall be discharged by the Guarantor to the Lender upon demand made pursuant to Clause 9.2 by way of indemnity against the Company's failure to perform and satisfy the Indebtedness

9.8 The Guarantee herein contained shall bind the personal representatives or the successors in titleof the Guarantor and shall not in any way be affected or released by the death or insolvency of theGuarantor

9.9 In the event of any alteration in the capital structure of the Company (whether by way of a bonus issue arising on a capitalisation of profits or reserves a share issue for cash or for a consideration other than cash a reduction of capital or otherwise

whatsoever) taking place or in the event of the Company subdividing or consolidating its ordinary share capital or in the event of the grant by the Company of any option or other right in relation to shares in its capital the number of Security Shares shall be adjusted insuch manner (if any) as the parties hereto may agree in writing or in default of agreement as the auditors ofthe Company acting as expert and not as arbitrator shall certify in writing to be fair and reasonable and whose certificate shall be final and binding upon the parties hereto

10. NOTICES

10.1 Any notice or other document to be given hereunder shall bedelivered or sent by first class post (or if outside the United Kingdom Air Mail) or telex or facsimile transmission to the party to be served at the party's registered office or last known address or such other address as the party shall notify in accordance herewith

10.2 Any notice or other communication given by or to any party in accordance with this Agreement may be given by or to that party's solicitors in accordance with the provisions of the preceding sub-clause of this Agreement

10.3 Any such notice or document shall be deemed to have been served if delivered at the time of delivery or if posted at the expiration of 48 hours (108 hours if sent to or from an address outside theUnited Kingdom) after the envelope containing the same shall have been put into the post or if sent by telex or facsimile transmission at the expiration of 12 hours after receipt of the same has been automatically acknowledged to the sender thereof and in proving such service it shall be sufficient to prove that delivery was made or that the envelope containing such notice or document was properly addressed and posted as a prepaid first class or air mail letter or that the telex or facsimile transmission was properly addressed and posted as a prepaid first class or airmail letter or that the telex or facsimile transmission was properly addressed and acknowledged as the case may be provided that a copy of such telex or facsimile transmission is delivered or sent by post in manner aforesaid within twenty four hours of such telex or facsimile being automatically acknowledged

11. GOVERNING LAW AND JURISDICTION

This Agreement shall be governed by and construed under English Law and each of the parties heretohereby submits to the non-exclusive jurisdiction of the English courts for the purposes of any claim or matter arising under or in connection with this Agreement

12. COSTS

The costs and expenses incurred by the Lender in connection with the negotiation and preparation of this Agreement in the sum of US$10,000 shall be paid by the Company tothe Lender on the date hereof

13. INTERPRETATION

13.1 Any reference in this Agreement to "writing" or cognate expressions includes a reference totelex cable facsimile transmission or comparable means of communication

13.2 Any reference in this Agreement to any provision of a statute shall be construed as a referenceto that provision as amended re-enacted or extended at the relevant time

13.3 In this Agreement words importing the masculine gender shall be deemed and taken to includethe feminine or neuter gender and the singular to include the plural and agreements or undertakings madeby two or more persons shall be deemed to be made by such persons jointly and severally

13.4 The headings in this Agreement are for convenience only and shall not affect its interpretation

IN WITNESS whereof the parties to this Deed have executed it as a deed on or before the date first before written and have given authority to their respective solicitors to date anddeliver the same and (if appropriate) a duplicate or counterpart thereof such dating being conclusive proofof delivery on the date first before written

EXECUTED as a Deed by PARACELSIAN)
)
INCORPORATED)
)
acting by its President and Vice-President)

EXECUTED as a deed by EAST WEST)
)
HERBS LIMITED acting by:-)

Director
Director/Secretary

SIGNED as a Deed and DELIVERED)
)
by the said ROBERT ERIC MILLER)
)
in the presence of:-)

SIGNED as a Deed and DELIVERED)
)
by the said ALICE ELIZABETH LYON)
)
in the presence of:-)

EXHIBIT 10.10

Option Agreement, dated April 9, 1996, relating to the purchase of East West Herbs Limited, Re: Robert E. Miller and Others (defined therein) and Registrant and East West Herbs Limited

DATED April 9, 1996

R E MILLER and others

-and-

PARACELSIAN INC

-and-

EAST WEST HERBS LIMITED

O P T I O N A G R E E M E N T

relating to purchase of East West Herbs Limited

Linnells
Greyfriars Court
Paradise Square
Oxford OX1 1BB
(Ref:COMP.sharesal)

THIS AGREEMENT is made the 9th day of April, 1996

BETWEEN:-

(1)	"The Vendors"	THE SEVERAL PERSONS whose names and addresses are set out in Schedule 1
(2)	"The Purchaser"	PARACELSIAN INCORPORATED (a company incorporated under the laws of Delaware) whose principal office is at 222 Langmuir Laboratories Cornell Technology Park Ithaca New York 14850 USA
(3)	"The Company"	EAST WEST HERBS LIMITED (company registration number 2241037) whose registered office is at Langston Priory Mews Kingham Oxfordshire OX7 6UP

WHEREAS

A. The Company is a private company with limited liability of which short particulars are contained in Part I of Schedule 2

B. The Vendors wish to grant to the Purchaser an option to purchase all the Shares of the Company on the terms and conditions hereinafter mentioned

NOW IT IS HEREBY AGREED as follows:-

1. INTERPRETATION

In this Agreement and in the Schedules unless the context otherwise requires the following words and expressions shall bear the following meanings:-

1.1	"the Accounts"	the audited balance sheet as at the Accounts Date and the audited profit and loss account for the period ended on the Accounts Date of each Group Company including in the case of the Company the audited consolidated balance sheet as at that date and the notes and Auditors' and Directors' Reports in relation thereto
1.2	"the Accounts Date"	the 31st day of March 1995
1.3	"the Business Plan"	means a memorandum prepared by or on behalf of the Company a copy of which is annexed to the Disclosure Letter at Section 2 of the Agreed Bundle (as such expression is defined in the Disclosure Letter
1.4	"the Management Accounts"	means the balance sheet of the Company made up as at 29th February 1996 and the trading and profit and loss account of the Company for the period of 11 months ended on that date
1.5	"the Auditors"	Messrs Leigh Carr of 27 Blandford Street London W1H 4EN
1.6	"CA 1985"	the Companies Act 1985
1.7	"Completion"	the completion of the sale and purchase of the Shares
1.8	"Condition"	the condition precedent to Completion set out in Clause 5
1.9	"Consideration Shares"	the shares to be issued to the Vendors on Completion pursuant to Clause 4.2.2
1.10	"the Directors"	the persons listed as such in Part I of Schedule 2
1.11	"Disclosure Letter"	the letter of even date herewith from the Vendors to the Purchaser (or their respective Solicitors) in the agreed terms
1.12	"the Gains Tax Act"	the Taxation of Chargeable Gains Tax Act 1992
1.13	"Group Company" or "Group Companies"	means in relation to the Company,

		the Company and its Subsidiary or Subsidiaries for the time being (if any) and, in relation to the Purchaser, the Purchaser and its subsidiaries or holding company (as such terms are defined in section 736 of CA 1985) or another subsidiary of such holding company
1.14	"Indemnities"	the indemnities given by the Vendors to the urchaser pursuant to Clause 7.1.1 in respect of the liabilities costs claims and expenses referred to in Schedule 3
1.15	"Issue Price"	means the value ascribed to each of the Consideration Shares pursuant to Clause 4.2.2
1.16	"Mr Miller"	Robert Eric Miller of Old Clock Cottage, Swerford, Oxon, OX7 4BQ
1.17	"Notice"	means notice exercising the Option served pursuant to Clause 2.3 hereof
1.18	"Option"	means the right granted pursuant to Clause
1.19	"Option Period"	means the period of twelve months commencing on the date hereof and ending at 17.00 on the day which is the first anniversary of the date hereof
1.20	"Price"	the consideration for the Shares to be sold pursuant to this Agreement
1.21	"the Properties"	the properties described in Schedule 5
1.22	"the Purchaser's Solicitors"	Messrs Linnells of Greyfriars Court Paradise Square Oxford OX1 1BB
1.23	"the Vendors' Solicitors"	Messrs Cole and Cole of Buxton Court 3 West Way Oxford OX2 OSZ
1.24	"Service Agreement"	the Service Agreement between Mr Miller and the Company in the agreed terms
1.25	"the Shares"	all of the issued Ordinary Shares of pounds sterling 1 each in the capital of the Company comprising at the date of this Agreement 150,000 Ordinary Shares of pounds sterling 1 each in the capital of the Company of which 74,100 are fully paid and 75,900 are nil paid and all of which are beneficially owned by and registered in the names of the Vendors together with any further shares stock or other securities in the Company or in any other company which are derived from such Shares or which are distributed by the Company in respect of such Shares and any shares stock and other securities for the time being representing the same by reason of any alteration in the share capital of the Company or any amalgamation reorganisation or reconstruction of the Company
1.26	"Subsidiary" or Subsidiaries"	a subsidiary or subsidiaries of the Company as defined in Section 736 of CA 1985 and East West Herbs Pty Limited brief particulars of which are given in Part II of Schedule 2"
1.27	"Taxation"	all taxes howsoever called and includes (without limitation) corporation tax, income tax, surtax, supertax, special charge, special contribution, profit tax, excess profits tax, excess profits duty, capital gains tax, betterment levy,

		development gains tax, land tax, development land tax, value added tax, purchase tax, customs and other import duties, capital duty, stamp duty, stamp duty reserve tax, estate duty, capital transfer tax, inheritance tax, petroleum revenue tax, licence royalties, national insurance contributions, social security contributions, selective employment tax, general uniform business and water rates and any payment whatsoever which the Company may be or become bound to make to any person (whether in respect of the liability of the Company or of any other person) as a result of the operation of any enactment in relating to taxation and all penalties, charges and interest relating to any claim or assessment for taxation levied, assessed or imposed by governmental (whether central or local) authorities and other agencies or bodies having lawful authority in whatever country so to do
1.28 "Taxes Act 1988"		Income and Corporation Taxes Act 1988
1.29 "the Warranties"		the warranties undertakings and representations contained in Schedule 4
1.30 "the Warrantors"		Mr Miller Albert S Humphrey Alice Elizabeth Lyon and William Ahern

1.31 References to statutory provisions shall be construed as references to any statutory modification or re-enactment thereof (whether before on or after the date hereof) for the time being in force and to any former statutory provision replaced (with or without modification) by the provision referred to and shall include all statutory instruments or orders from time to time made pursuant thereto

1.32 References to persons shall include references to unincorporated associations to the singular shall include references to the plural and to the masculine shall include references to the feminine and vice versa

1.33 Agreements undertakings or covenants given by two or more persons together shall be deemed to be given by such persons jointly and severally, save as otherwise stated

1.34 References to a document being "in the agreed terms" means in the form of a draft agreed between the parties hereto and signed for the purposes of identification by their respective Solicitors and a list of documents "in the agreed terms" is set out in Schedule 8

1.35 References to Clauses and Schedules are to Clauses of and Schedules to this Agreement

1.36 The headings in this Agreement and the use of underlining are included for convenience only and shall not affect the interpretation or construction of this Agreement

1.37 Words and expressions defined in CA 1985 bear the same meaning in this Agreement

1.38 The expressions "the Vendors" and "the Warrantors" includes the personal representatives of any of the Vendors or any of the Warrantors respectively

1.39 Where the context admits "the Company" includes each Group Company so that this Agreement shall apply to each Group Company as if it were the Company and without prejudice to the generality of the foregoing the Warranties shall apply to and shall be given in respect of each of the Subsidiaries

2. OPTION

2.1 In consideration of the sum of Twenty Thousand US dollars ($20,000) paid by the Purchaser to the Vendors (the receipt of which the Vendors hereby acknowledge) the Vendors hereby grant to the Purchaser the right exercisable at any time during the Option Period to purchase the Shares in consideration of the Price upon the terms and subject to the conditions of this Agreement

2.2 The Option shall be exercisable only in respect of all the Shares

2.3 The Option shall be exercisable at any time during the Option Period by a Notice in writing served upon the Vendors and if un-exercised at the end of the Option Period the Option shall lapse

2.4 If the Option is exercised as herein provided the sum referred to in Clause 2.1 hereof shall be deemed to have been paid on account of the Price

2.5 The sum referred to in Clause 2.1 shall be paid to the Vendors absolutely and shall be refundable to the Purchaser only in accordance with the provisions of Clause 7.7

2.6 If any offer is made by the Company or by any third party to all or any of the Vendors prior to the exercise or expiry of the Option to purchase any or all of the Shares the Purchaser shall be entitled to exercise the Option at any time up to the last business day before the expiration of the offer and the Vendors shall immediately upon the offer being made give written notice to the Purchaser of the offer

2.7 Time shall be of the essence for the purposes of this Clause

3. SALES OF SHARES

3.1 If the Option is duly exercised each of the Vendors shall with full title guarantee sell and the Purchaser shall purchase free from all liens charges rights of pre-emption encumbrances and equities and together with all dividends interest bonuses distributions or other rights attaching thereto the number of Shares in the capital of the Company set opposite his name in Schedule 1

3.2 The Purchaser shall not be obliged to complete the purchase of any of the Shares unless the purchase of all the Shares is completed simultaneously

3.3 Before Completion the Vendors shall exercise their powers as directors and/or shareholders of the Company so far as they are able to procure that East West Herbs Pty Limited (registered in Australia) shall become a wholly owned subsidiary of the Company

4. CONSIDERATION

4.1 The Price for the sale of the Shares shall be the sum of Three Million One Hundred and Eighty Thousand US dollars ($3,180,000) payable to the Vendors in the amounts set out opposite their respective names in Schedule 1 hereto

4.2 The Price shall be satisfied by:-

4.2.1 the payment by the Purchaser to the Vendors on Completion of the sum of Seven Hundred and Eighty Thousand US dollars ($780,000) in cash and

4.2.2 the issue to the Vendors by the Purchaser on Completion of the Consideration Shares, being that number of fully paid shares of $0.01 each in the Common Stock of the Purchaser rounded to the nearest whole number as shall have the value on Completion of Two Million Four Hundred Thousand US dollars ($2,400,000) on the basis that the the Issue Price shall be $2.75 or if greater the average of the bid and asked closing price of such Common Stock as reported on the NASDAQ small cap market arithmetically averaged over each of the 15 trading days prior to Completion

4.3 Each of the Vendors acknowledges and represents to the Purchaser that he or she:-

4.3.1 is acquiring the Consideration Shares for such Vendor's own account with the intention of holding the Consideration Shares for investment with no present intention of allowing others to participate in such investment or of reselling such Consideration Shares;

4.3.2 shall not make any sale transfer or other disposition of the Consideration Shares without registration under the United States of America Securities Act of 1933 as amended ("the 1933 Act") and applicable state securities laws unless an exemption from registration is available under those laws;

4.3.3 understands that none of the Consideration Shares has been registered under the 1933 Act or any state securities laws in reliance on exemptions therefrom and that the Consideration Shares cannot be resold or otherwise disposed of unless they are subsequently registered under

the 1933 Act and applicable state securities laws or an exemption from registration is available

4.3.4 The certificate(s) representing the Consideration Shares will bear the following legend until either (i) such securities have been registered under the 1933 Act and effectively disposed of in accordance with such registration statement or (ii) in the opinion of counsel reasonably satisfactory to the Purchaser such Consideration Shares may be sold without registration under the 1933 Act:-

"The Securities represented by this Certificate have not been registered under the Securities Act of 1933 as amended ("the Act") or applicable state securities laws and may not be offered sold transferred pledged hypotheticated or otherwise disposed of except pursuant to an effective registration statement under the Act or in a transaction which, in the opinion of Counsel to the holder hereof in form and substance satisfactory to Counsel to the Corporation, is exempt from registration under the Act and any applicable state security laws"

4.4 The Purchaser warrants that the Consideration Shares when issued will be duly authorised validly issued fully paid and non-assessable and that all corporate action necessary for the issuance of the Consideration Shares will have been duly and properly taken and that no consents or waivers (including the consent of the shareholders of the Purchaser) are required in connection with the issuance of the Consideration Shares

5. CONDITION

The sale and purchase of the Shares is conditional upon:-

5.1 the Purchaser exercising the Option

5.2 the Purchaser delivering to the Vendors on or before Completion a Registration Rights Agreement in the agreed terms duly executed by the Purchaser

6. RESTRICTIONS

The Vendors shall procure that until the exercise or expiry of the Option the Company shall not without the Purchaser's consent:-

6.1 issue cancel sub-divide reclassify purchase redeem grant any option over or register the transfer of any share made other than in accordance with Clause 7.4.1 in or increase or reduce the capital or capitalise any amount standing to the credit of the Company

6.2 declare any dividend bonus or distributions

6.3 cause or permit any alteration to the Articles of Association of the Company or any regulations or resolutions inconsistent with them to be adopted

6.4 make any substantial change in the nature of its business

6.5 pass any resolution for the voluntary winding up of the Company

6.6 enter into any transaction that is not in the normal and ordinary course of conducting its business or enter into any transaction which is not at arms length or on arms length terms

6.7 cease to trade or change the nature or character of the business or transfer its business or undertaking or any part thereof to any other person

6.8 change its auditor

6.9 charge its undertaking and assets or any part thereof

6.10 borrow any money or undertake any obligation except in the usual and ordinary course of the business of the Company and except for further bank borrowing of up to pounds sterling 300,000

6.11 appoint any person to hold the office of director of the Company other than a person retiring by rotation or other than to fill a vacancy

6.12 pay any remuneration or bonus to the Directors or the Vendors except in the usual and ordinary course of the business of the Company

7. WARRANTIES

7.1 Subject to the exceptions limitations provisions and restrictions

in this Clause the Warrantors:-

7.1.1 covenant with the Purchaser to indemnify and keep indemnified the Purchaser and its successors and assigns free from all liability in respect of the liabilities claims costs and expenses referred to but subject as mentioned in Schedule 3 and

7.1.2 save as fairly and accurately disclosed in the Disclosure Letter undertake with and warrant and represent to and for the benefit of the Purchaser that the Warranties in Schedule 4 are true and accurate in all respects at the date of this Agreement

7.2 The benefit of the Warranties may not be assigned by the Purchaser except after Completion to a Group Company provided that on any such assignee ceasing to be a Group Company the Purchaser shall procure that the benefit of the Warranties is assigned to the Purchaser or another Group Company

7.3 The Purchaser is entering this Agreement and will exercise the Option in reliance upon each of the Warranties which the Warrantors acknowledge (but on no other representations or warranties made by the Warrantors or on their behalf to the Purchaser)

7.4 Each of the Vendors hereby undertakes represents and warrants to the Purchaser that:-

7.4.1 he shall not prior to the exercise or expiry (whichever is the sooner) of the Option transfer dispose of charge pledge or encumber in any way his interest in any of the Shares except by a transfer of the entire legal and beneficial interest therein in which case the Vendor in question will procure that before any person (other than an existing shareholder) is registered as a holder of any share in the company such person shall enter into a Deed of Adherence in the agreed terms and the Shares shall upon Completion be sold free of any liens charges or encumbrances

7.4.2 he will procure that he shall not, and shall exercise his votes as a member and/or director of the Company to procure so far as he is able that the Company shall not before Completion knowingly do any act or make any omission which would constitute a breach of any of the Warranties if the same were repeated at Completion

7.4.3 he will forthwith notify the Purchaser in writing of any matter or thing which may arise after the date hereof and prior to Completion which is to his knowledge (or would after the lapse of time become) a breach of the Warranties

7.5 Each of the Warrantors hereby undertakes represents and warrants to the Purchaser that in relation to any of the Warranties which are qualified by the expression "so far as the Warrantors are aware" or which refer to the knowledge information or belief of the Warrantors that he has made all reasonable enquiries into the subject matter of that Warranty

7.6 If there shall be any material breach of the Warranties before Completion other than a breach fairly and accurately disclosed in the Disclosure Letter or if there is any material breach or non-fulfilment before Completion of any of the provisions on the part of the Vendors contained in this Agreement which (being capable of remedy) is not remedied prior to Completion then (in addition and without prejudice whatever to any other rights or remedies available to the Purchaser in respect thereof) the Purchaser shall be at liberty without any liability whatever to the Vendors to terminate this Agreement and (after the exercise of the Option) not to complete the purchase of the Shares by giving notice to that effect to the Vendors' or their Solicitors

7.6 If this Agreement is terminated pursuant to Clause 7.6 hereof by reason of any matter or thing arising or known to the Warrantors or any of them on or prior to the date of this Agreement the Vendors shall forthwith repay to the Purchaser the sum referred to in Clause 2.1 hereof

7.7 From Completion the Disclosure Letter shall be read and construed as if any further disclosure made in writing by the Vendors or the Warrantors to the Purchaser on or prior to Completion in respect of any matter or thing arising or known to the Warrantors or any of them after the date of this Agreement had been made on the date of this Agreement and for the avoidance of doubt the Purchaser

shall be bound by such disclosure if it shall choose not to exercise any right to terminate this Agreement (and not to complete the purchase of the Shares) under Clause 7.6

7.9 The Purchaser undertakes with the Warrantors that if it receives any information in writing (save from its professional advisers) whereby the Warranties are not true and accurate in all material respects it will as soon as reasonably practicable provide the Warrantors with a copy of such information and subject thereto no information of which the Purchaser may have notice actual constructive or implied) other than that fairly and accurately disclosed in the Disclosure Letter shall prejudice any claim by the Purchaser under the Warranties or operate to reduce any amount recoverable by the Purchaser

7.10 The Warranties shall remain in full force and effect after Completion

7.11 Each of the Warranties shall be construed as a separate and independent warranty and shall not be limited by reference to any other

7.12 The Warrantors undertake that in the event of the Purchaser making any claim against the Warrantors in respect of the Warranties the Warrantors will not make any claim against the Company or any of its officers or employees in connection therewith (other than any such officer or employee who is named herein as a Vendor)

7.13 If the sale and purchase of the Shares is completed then in respect of any breach of any of the Warranties the Warrantors hereby agree with the Purchaser to pay to the Purchaser:

7.13.1 the amount necessary to put the Company and each of the Subsidiaries into the position which would have existed if the Warranties had been true when given; and

7.13.2 all reasonable costs and expenses incurred in connection therewith by the Company or each of the Subsidiaries

7.14 The liability of the Warrantors under this Agreement shall not be affected by the transfer of any of the Shares held by them at the date hereof

8. LIMITATION ON WARRANTY LIABILITIES

8.1 Notwithstanding anything in this Agreement to the contrary the Warrantors shall not be liable for any claim or claims under the Indemnities or in respect of a breach of the Warranties by the Warrantors unless:

8.1.1 written particulars thereof giving full details of the specific matters in respect of which such claim is made shall have been given to the Warrantors within a period of six years after Completion in respect of claims relating to the Indemnities and twelve months after Completion in respect of claims relating to the Warranties; and

8.1.2 the amount of all claims brought in accordance with the foregoing shall exceed US$70,000 in aggregate in which event all of such amount shall be subject to such claims

8.1.3 the amount of each individual claim exceeds $3,000

8.2 The maximum aggregate liability of the Warrantors in respect of all claims in relation to the Warranties and under the Indemnities (including any such claim made by the Company) shall not exceed a sum equal to the total consideration received under Clause 4 by the Warrantors and/or by any person to whom the Warrantors may have transferred any of the Shares pursuant to Clause 7.4.1

8.3 The total liability of each Warrantors shall not in any event exceed the amount of the consideration received under Clause 4 by that Warrantor and/or by any person to whom that Warrantor may have transferred any of the Shares pursuant to Clause 7.4.1

8.4 In the event that the liability of a Warrantor exceeds the amount of cash consideration received by that Warrantor under Clause 4.2.1 and/or by any person to whom that Warrantor may have transferred any of the Shares pursuant to Clause 7.4.1 the balance shall be satisfied, at the election of the Warrantor, either in cash or by the transfer by the Warrantor to the Purchaser of that number of Consideration Shares as shall have a value equivalent to the value of the balance of the liability outstanding against that Warrantor on the basis that the value of each Consideration Share shall be deemed to be the Issue Price

8.5 Any sums expended by the Warrantors in satisfaction of any claim for breach of Warranty or a claim made under the Indemnities shall be deemed to be paid as a reduction in the Price

8.6 The Warranties are given subject to matters fairly and accurately disclosed in the Disclosure Letter

8.7 The Warrantors shall not be liable for any claim under the Indemnities or in respect of a breach of the Warranties

8.7.1 where a claim is in respect of any liability for Taxation which arises out of the ordinary course of trading of the Company since the Accounts Date;

8.7.2 which arises or to the extent that any such claim is increased as a result only of any increase in rates of Taxation or any other change in the law made after the date hereof with retrospective effect;

8.7.3 where the claim would not have arisen but for a voluntary act or omission which could have been avoided made by the Purchaser or any of its subsidiaries or the Company after Completion otherwise than in the ordinary course of business and which the Purchaser ought reasonably to have been aware could give rise to a claim;

8.7.4 where an amount payable in respect of a claim is increased by reason of the Purchaser or the Company failing after due warning to act in accordance with the written instructions or request of the Warrantors in respect of that claim to the extent of such increase;

8.7.5 where the claim is in respect of stamp duty or stamp duty reserve tax on the transfer of the Shares to the Purchaser pursuant to this Agreement;

8.7.6 where a claim would not have arisen but for any change in the accounting policy or practice of the Purchaser or the Company introduced or having effect after the Accounts Date;

8.7.7 to the extent that the amount by which any provisions for Taxation (including deferred tax), bad or doubtful debts or contingent or other liabilities contained in the Accounts or the Management Accounts has proved at the date of the relevant claims to be in excess of the matter for which such provision was made; or

8.7.8 to the extent that the amount by which any Taxation for which the Company is or may be liable to be assessed or accountable is reduced or extinguished as a result of the matter giving rise to such claim

8.7.9 to the extent that a specific provision or reserve therefor has been made in the Accounts or the Management Accounts

8.8 If the Purchaser shall make a claim under this Agreement and under the Indemnities in respect of the same liability the Purchaser may not recover more than the full amount of such liability

8.9 Notification of claims by the Purchaser shall be made to the Warrantors as soon as reasonably practicable after the facts giving rise to any such claim come within the knowledge of the Purchaser and in any event in respect of a claim under the Indemnities no later than seven days from the date of receipt of any notice or other communication from the Inland Revenue by the Purchaser or the Company

8.10 The Purchaser shall procure that the Company shall observe the terms of this Clause as if it were a party hereto

8.11 Where the Purchaser or the Company has any claim against any third party in relation to any matter in respect of which there shall have been a breach or alleged breach of the Warranties or the Indemnities or where the Purchaser or the Company receives any claim from a third party which may result in the Purchaser having a claim against the Warrantors in respect of the Warranties or the Indemnities:-

8.11.1 the Warrantors shall be entitled (subject to providing the Purchaser or the Company such security for costs as they shall reasonably require) to take any action and require the Purchaser and the Company to take any action they may reasonably request to prosecute or resist such claim as the case may be in the name of the Purchaser or the Company (as appropriate) but at the expense of the Warrantors and the Warrantors shall further be entitled at their own expense to have the conduct of any appeal dispute application for deferment and other forms of objection compromise or defence thereof and of any incidental negotiations and the Purchaser shall and shall procure that the Company shall give the Warrantors all

co-operation access and assistance for the purpose of considering prosecuting or resisting as the case may be such claims as they may reasonably require

8.11.2 The amount of any liability of the Warrantors shall be reduced by the amount recovered from the said third party in respect of the claim against it

8.12 In the event of the Warrantors or any of them having paid to the Purchaser an amount in respect of a claim under the Warranties or Indemnities and subsequent to the date of making such payment the Purchaser or the Company receives from a third party a sum which is directly referable to that payment then the Purchaser shall forthwith repay or procure the repayment by the Company to the relevant Warrantors of so much of the amount paid by the third party (less the reasonable costs of recovery of such sum, including any related liability to Taxation) as does not exceed the sum paid in cash by the Warrantors or any of them to the Purchaser

8.13 Where a breach of any of the Warranties or Indemnities shall be in respect of a matter where the Company shall be insured against any loss or damage arising therefrom, neither the Company nor the Purchaser shall make any claim against the Warrantors or any of them under the Warranties or Indemnities without first procuring that the Company shall make a claim against its insurers for compensation for such loss or damage suffered and thereafter any claim against the Warrantors shall be limited (in addition to all other limitations on the Warrantors' liability elsewhere referred to herein) to the amount by which the amount of the loss or damage suffered by the Purchaser or the Company as a result of such breach shall exceed the compensation paid by the said insurers to the Company or the Purchaser together with such amount as may be necessary to compensate the Purchaser for any increase in the costs of obtaining and/or maintaining insurance for the Company in consequence of such claim having been made. For the avoidance of doubt the provisions of this Clause 8.13 shall not preclude the Purchaser giving notice of any matters to which this Clause relates under Clause 8.1 hereof prior to such insurance claim being made or resolved

8.14 The Purchaser undertakes to retain or to procure the retention by the Company of all such books records accounts correspondence and other papers of the Company as are likely to be material in the context of the liability of the Warrantors under the Warranties or the Indemnities during the subsistence of the liability of the Warrantors under the Warranties or (as the case may be) the Indemnities

8.15 Any payments made to the Company in respect of the Indemnities shall be inclusive of Value Added Tax

8.16 If the Inland Revenue brings into charge to tax any sum paid to the Purchaser and/or the Company in respect of a breach of the Warranties or pursuant to a claim made under the Indemnities then the sum so paid shall be grossed up by such amount as is necessary to ensure that the amount of the sum so paid shall after deduction of any tax so chargeable equal the sum otherwise payable

8.17 If the Purchaser is entitled to make a claim in respect of any act event or default both under the Warranties and under the Indemnities the claim shall first be made under the Warranties and any amount payable to the Purchaser under the Indemnities shall be reduced to the extent of the claim

9. REMEDIES

9.1 Save as expressly provided in this Agreement any breach by the Warrantors and/or the Vendors of any terms of this Agreement shall give rise only to an action for damages and shall not entitle the Purchasers to rescind this Agreement

9.2 The Purchaser may release or compromise the liability of any of the Vendors hereunder or grant to any of the Vendors time or other indulgence and it shall not thereby be under any obligation to make any such release compromise or grant in relation to the remaining Vendors

9.3 No failure to exercise and no delay in exercising on the part of any party to this Agreement any right or remedy in respect of any part of this Agreement or the Indemnities shall operate as a waiver of such rights or remedy nor shall a single or partial exercise of such rights or remedy prejudice the exercise of any

other right or remedy

10 . VENDORS' UNDERTAKINGS PENDING COMPLETION

From the exchange of this Agreement until Completion the Vendors shall exercise their powers as directors and/or shareholders of the Company so far as they are able to procure that the Company shall carry on its business in the normal and ordinary course and as a going concern and (without prejudice to the generality of the foregoing) in particular shall procure that the Company will:-

10.1 maintain its trade and trade connections;

10.2 maintain its policies of insurance;

10.3 not purchase or acquire nor sell or dispose of any asset otherwise than in the ordinary course of business;
not enter into any agreement or other commitment otherwise than in the ordinary course of business; and

10.4 not declare or pay any dividend or other distribution nor pay or agree to pay any management fees (whether or not in the ordinary course of business) without the consent in writing of the Purchaser

11. COMPLETION

11.1 In the event that the Condition is fulfilled Completion shall take place at the offices of the Purchaser's Solicitors 28 days after the date of service of the Notice (or on the next succeeding business day if Completion would not otherwise fall on a business day)

11.2 At Completion the Vendors shall procure the delivery to the Purchaser of:

11.2.1 duly executed transfers in favour of the Purchaser or its nominee of all the Shares;

11.2.2 the share certificates representing the Shares (or an express indemnity in a form satisfactory to the Purchaser in the case of any found to be missing);

11.2.3 the Registration Rights Agreement in the agreed terms duly executed by the Vendors

11.2.4 the Certificates of Incorporation Common Seals Minute Books Statutory Registers and Share Certificate Books of the Company each duly made up to date;

11.2.5 the resignation of the Auditors containing the statement referred to in Section 394 CA 1985 confirming that there are no circumstances connected with their resignation which they consider should be brought to the notice of the members or creditors of the Company;

11.2.6 duly executed transfers in favour of the Purchaser or its nominee of all the issued shares of each of the Subsidiaries not registered in the name of the Company;

11.2.7 the share certificates representing the shares referred to in Clause 11.2.5 (or an indemnity in a form satisfactory to the Purchaser in the case of any found to be missing);

11.2.8 the title deeds to the Properties which the Purchaser shall hold as agent for the Company

11.3 The Vendors shall procure that a Board meeting of the Company shall be held at which it shall be resolved that:-

11.3.1 if so required by the Purchaser prior to Completion Alice Elizabeth Lyon shall resign her office as Secretary of the Company and William Ahern and Albert S Humphrey shall each resign their offices as Directors and each shall deliver to the Purchaser an acknowledgement executed as a deed in the agreed terms that he has no claim against the Company for loss of office

11.3.2 such persons as the Purchaser shall nominate prior to Completion shall be appointed officers of the Company;

11.3.3 the registered office of the Company shall be changed to such place as the Purchaser may nominate prior to Completion

11.3.4 the transfers referred to in Clause 11.2.1 shall (subject only to the same being duly stamped) be approved for registration and that the Purchaser and its nominees (if any) be entered in the Company's Register of Members as the holders of the Shares;

11.3.5 all authorities to the bankers of the Company shall be

revoked or amended (as the Purchaser directs) and authority shall be given to such persons as the Purchaser may nominate to operate the Company's bank accounts; and

11.3.6 the resignation of the Auditors shall be accepted

11.4 The Vendors shall procure that a board meeting of each of the Subsidiaries is held dealing with the matters specified in Clause 11.3 as if references therein to "the "Company" were to the Subsidiary but on the basis that the reference in Clause 11.3.4 to Clause 11.2.1 were to Clause 11.2.5 (transfer of shares in the Subsidiaries)

11.5 Mr Miller shall enter into the Service Agreement

11.6 Upon completion of all the matters referred to in Clauses 11.2 to 11.5 inclusive (failing which the Purchaser shall not be obliged to complete this Agreement) the Purchaser shall

11.6.1 deliver to the Vendors' Solicitors (as agents for the Vendors) a banker's draft for US$780,000

11.6.2 satisfy the balance of the Price by complying with the provisions of Clause 4.2.2 and by delivering share certificates duly issued and authorised fully paid and non-assessable

and the receipt of the Vendors' Solicitors shall be a sufficient discharge to the Purchaser therefor

12. LOANS AND UNPAID SHARES

12.1 At or before Completion the Vendors will discharge all indebtedness and pay all uncalled share capital due from the Vendors (or any firm company or business in which any of the Vendors is interested) to the Company (with the exception of any trade debts incurred in the ordinary course of business which shall be satisfied in accordance with the terms stated in the Disclosure Letter or if none are so stated within 30 days of invoice)

12.2 The Purchaser shall procure that at or before Completion all indebtedness due from the Company to the Vendors (full particulars whereof have been provided to the Purchaser in writing prior to the date hereof) shall be discharged (with the exception of any trade debts which will be dealt with in accordance with Clause 12.1)

12.3 The Purchaser shall procure that within 30 days after Completion it shall lend to the Company on such terms as may be agreed between the Company and the Purchaser the sum of pounds sterling 300,000 by way of additional working capital

13. RELEASES

13.1 The Vendors shall procure that prior to or at Completion the Company shall be released from all guarantees and indemnities given by it of which full details are set out in the Disclosure Letter in respect of obligations of the Vendors and pending such release the Vendors shall indemnify the Company against all liabilities in respect thereof

13.2 The Purchaser will use all reasonable endeavours to procure that with effect from Completion the Vendors shall be released from all guarantees and indemnities given by the Vendors in respect of obligations of the Company and of which full details have been notified to the Purchaser or the Purchaser's solicitors in writing prior to the date hereof and pending such release shall indemnify the Vendors against all liabilities in respect thereof

13.2 The Purchaser shall use all reasonable endeavours to procure that with effect from Completion Mr Miller is released from all liability to the Landlord of Units 21 and 22 Langston Priory Mews Kingham Oxfordshire under a lease dated 26 February 1991 made between Turngallant Limited (1) and the Company and Mr Miller (2) and pending such release shall indemnify Mr Miller against all liabilities in respect thereof

14. RESTRICTIONS ON VENDORS

14.1.1 Mr Miller hereby undertakes and covenants with the Purchaser (for the benefit of the Purchaser and as trustee for the benefit of the Company and its successor in title to the business) that he shall not:-

14.1.1 for a period of three years from Completion be directly or

indirectly interested or concerned in or assist in carrying on any business undertaking company or firm carrying on business in (the United Kingdom) or any part thereof for the import and export and sale of herbs or any business which is otherwise competitive with any of the respective businesses carried on by the Company at the date hereof provided that nothing herein contained shall prevent him from:-

(a) being the holder of or from being beneficially interested in any class of securities in any company if such class of securities is listed and dealt in on the Stock Exchange or any other recognised investment exchange where Mr Miller (together with his spouse and children) neither holds nor is beneficially interested in more than a total of five per centum of any single class of the securities in that company

(b) continuing to carry on or be interested or concerned in any other business which is at the date hereof carried on by him or in which he is concerned or interested

14.1.2 for a period of three years from Completion (other than on behalf of the Company) either on his own account or on behalf of any other person firm or company solicit orders or contracts for goods of similar type to those being manufactured or dealt in or for services similar to those being provided by the Company at the date hereof from any person firm or company who or which is at Completion or has been at any time within the twelve months prior to Completion a customer of or supplier to the Company; or

14.1.3 for a period of three years from Completion either on his own account or on behalf of any other person firm or company solicit the employment for the purposes of a similar business to that carried on by the Company at Completion of any person who is at Completion or who has within the six months prior to Completion been an officer or employee of the Company (provided that the placement by Mr Miller of any advertisement for staff in any newspaper or magazine shall not of itself be treated as a breach of this Clause 14.1.3); or

14.1.4 at any time hereafter in relation to a trade or business competitive or likely to be competitive with that carried on by the Company at Completion use or (insofar as he can reasonably do so) allow to be used (other than by the Company) any trade name used by the Company at Completion or any other name intended or likely to be confused therewith

14.2 William Ahern (in this Clause referred to as "Mr Ahern") hereby undertakes and covenants with the Purchaser (for the benefit of the Purchaser and as trustee for the benefit of the Company and its successor in title to the business) that he shall not for a period of one year from Completion (other than on behalf of the Company) either on his own account or on behalf of any other person firm or company solicit orders or contracts for goods of similar type to those being manufactured or dealt in or for services similar to those being provided by the Company at the date hereof from any person firm or company who or which is at Completion or has been at any time within the twelve months prior to Completion a customer of or supplier to the Company other than a customer in Italy, Spain or Portugal or a supplier who is listed in Schedule 9 and save in the case of suppliers, with the previous written consent of the Purchaser, such consent not to be unreasonably withheld or delayed

14.3 The Vendors hereby undertake and covenant with the Purchaser (for the benefit of the Purchaser and as trustee for the benefit of the Company and its successor in title to the business) that they shall not at any time hereafter make use of or disclose or divulge to any third party (other than as required by law or to his professional advisers) any information of a secret or confidential nature relating to any business of the Company save insofar as they may prove the same has become a matter of public knowledge (otherwise than by reason of a breach by any of them of this Clause)

14.4 The restrictions contained in Clause 14.1 Clause 14.2 and 14.3 have been carefully considered by the covenantors who accept that

they are reasonable and necessary for the proper protection of the goodwill of the businesses of the Company and of the Purchaser but in the event that any such restriction shall be found to be unenforceable for whatever reason but would be valid if some part thereof were deleted or the period or area of application reduced such restriction shall apply with such modification as may be necessary to make it valid and effective and the remaining restrictions shall continue to bind the relevant covenantor

15. FURTHER ASSURANCE

15.1 The Vendors shall do all necessary acts within their power for effectively vesting the Shares in the Purchaser or its nominees from Completion and shall each exercise their powers as directors and/or shareholders to procure the convening of all such meetings and the giving or passing of all such waivers and shall do or procure all such other acts and things as shall be necessary under CA 1985 or the Articles of Association of the Company or otherwise to give effect to the provisions of this Agreement

15.2 The Purchaser shall do all necessary acts within their power for effectively vesting the Consideration Shares in the Vendors or their nominees from Completion

15.3 In consideration of each of the other Vendors entering into this Agreement each of the Vendors hereby waives all rights of pre-emption which he may have (whether under the Company's Articles of Association or otherwise) in respect of the transfer to the Purchaser or its nominees of the Shares or any of them

16. CONTINUING OBLIGATIONS AND ASSIGNMENTS

16.1 The Warranties and each of the obligations undertaken or given by the Warrantors and the Vendors respectively pursuant to this Agreement excluding any obligation fully performed at Completion shall continue in full force and effect notwithstanding Completion taking place and be binding on the estates and personal representatives of the Warrantors and the Vendors

16.2 If the Shares shall at any time be sold or transferred by the Purchaser to a Group Company of the Purchaser the benefit of each of the said obligations shall be assignable to the purchaser or transferee of the Shares and such purchaser or transferee shall be entitled to enforce each of the Warranties against the Warrantors and each of the obligations against the Vendors as if it were named herein as the Purchaser provided that on any such assignee ceasing to be a Group Company of the Purchaser the Purchaser shall procure that the benefit of the Warranties and the said obligations is assigned to the Purchaser or another Group Company of the Purchaser

16.3 Save as aforesaid none of the rights or obligations hereunder may be assigned or transferred to any other person without the consent of all the parties to this Agreement

17. ANNOUNCEMENTS

No announcement concerning this sale and purchase or any ancillary matter shall be made before or after Completion by any party hereto other than as required by law without the prior written approval of the other parties (such approval not to be unreasonably withheld)

18. COSTS

Each party hereto shall pay the costs and expenses incurred by him in connection with the entering into and completion of this Agreement

19. NOTICES

19.1 Any notice or other document to be given hereunder shall be delivered or sent by first class post (or if outside the United Kingdom Air Mail) or telex or facsimile transmission to the party to be served at the party's registered office or last known address or such other address as the party shall notify in accordance herewith

19.2 Any notice or other communication given by or to any party in accordance with this Agreement may be given by or to that party's solicitors in accordance with the provisions of the preceding sub-clause of this Agreement

19.3 Any such notice or document shall be deemed to have been served if delivered at the time of delivery or if posted at the expiration of 48 hours (108 hours if sent to or from an address outside the United Kingdom) after the envelope containing the same shall have been put into the post or if sent by telex or facsimile transmission at the expiration of 12 hours after receipt of the same has been automatically acknowledged to the sender thereof and in proving such service it shall be sufficient to prove that delivery was made or that the envelope containing such notice or document was properly addressed and posted as a prepaid first class or air mail letter or that the telex or facsimile transmission was properly addressed and posted as a prepaid first class or air mail letter or that the telex or facsimile transmission was properly addressed and acknowledged as the case may be provided that a copy of such telex or facsimile transmission is delivered or sent by post in manner aforesaid within twenty four hours of such telex or facsimile being automatically acknowledged

20. PROPER LAW

This Agreement shall be governed by and construed in accordance with English Law and the parties hereby submit to the non-exclusive jurisdiction of the English courts

21. REGISTRATION

No provisions of this Agreement or any agreement or arrangement of which it forms part which is subject to registration (if such be the case) under the Restrictive Trade Practices Acts 1976 and 1977 shall take effect until the day after particulars of such agreement have been furnished to the Director General of Fair Trading pursuant to Section 24 of the Restrictive Trade Practices Act 1976 which (if necessary) the parties shall furnish within 3 months of the date hereof

22. WHOLE AGREEMENT

This Agreement (together with the documents referred to in this Agreement) constitutes the whole agreement between the parties hereto, each of whom acknowledges that there are no representations, agreements, terms or conditions relating to the sale of the Sale Shares save as are contained in this Agreement or in any documents referred to in this Agreement and no variations to this Agreement shall be effective unless made in writing and signed by all the parties.

23. COUNTERPARTS

This Agreement may be executed in any number of counterparts.

IN WITNESS whereof the parties to this Agreement have executed it under hand on or before the date first before written and have given authority to their respective Solicitors to date and deliver the same and (if appropriate) a duplicate or counterpart thereof such dating being conclusive proof of delivery on the date first before written

SCHEDULE 1
(The Vendors)

Name	Address	Number of Shares	Consider-ation US $
Robert Eric Miller	Old Clock Cottage, Swerford, Oxon, OX7 4BQ	92,728	1,965,833.60
William Ahern	31 Rua Poco Novo Cascais 2765 Portugal	12,800	271,360.00

Guendolin Crawford Urquhart	The Old House, Church Street, Kingham Oxon OX76YA	7,000	148,400.00
Richard John Bruce	1 Fowler Road Kingham Oxon OX76YU	1,000	21,200.00
Barbara Pamela Clark	Barn Cottage, 35 South Street Middle Barton Chipping Norton Oxon OX7 7BU	500	10,600.00
Alexander Peter Galitzine	109 Abingdon Road London W8	15,000	318,000.00
Anabella Holliday	124 North Street, Middle Barton Oxon OX7 7DA	1,500	31,800.00
Albert S Humphrey	4030 Charlotte St Kansas City,MO 64110, USA	5,100	108,120.00
Alice Elizabeth Lyon	Old Clock Cottage, Swerford, Oxon, OX7 4BQ	12,872	272,886.40
Susan Tyack	47 Hailey Avenue, Chipping Norton, Oxon OX7 5HG	500	10,600.00
Anne Wilkinson	Cedarhurst, Wyck Beacon, Bourton on the Water Glos GL54 2NE	1,000	21,200.00
		150,000	3,180,000.00

SCHEDULE 2
PART 1
(Details of the Company)

Registered Number	2241037
Date of Incorporation	6th April 1988
Registered Office	Langston Priory Mews, Kingham Oxfordshire OX7 6UP
Directors	William Ahern Albert S Humphrey Robert Eric Miller
Secretary	Alice Elizabeth Lyon

Accounting Reference Date	31st March
Auditors	Leigh Carr of 27 Blandford Street London W1H 4EN
Bankers	Coutts & Co of 440 Strand London WC2R 0QS
VAT registration number	GB 448 6730 19
Tax District and Reference	Oxford 2, Reference 185 11850 26524

PART II
(Details of the Subsidiaries)

Name	:East West Herbs Pty Limited
Australian Company Number	:066444148
Date of Incorporation	:16 March 1995
Registered Office	:Phipson Nominees Pty Limited, 10th Floor, National Mutual Centre, 15 London Circuit, Canberra, Australian Capital Territory 2601, Australia
Directors	:Alice A Elizabeth Lyon Robert Eric Miller
Auditors	:None
Bankers	:None
Authorised Share Capital	:$10,000,000
Issued Share Capital	:$2
Shareholders	:Alice Elizabeth Lyon Robert Eric Miller
VAT Number	:Not applicable
Tax District and Reference	:Not applicable

Name	:East West Herbs (USA) Limited
Employer Identification Number	:13 - 3846274
Date of Incorporation	:13th February 1995
Registered Office	:400 Madison Avenue, Suite 1005 New York 10017
Directors	:Robert Miller and William Ahern
Secretary	:Anastacia White
Accounting Reference Date	:
Auditors	:
Bankers	:Wells Fargo
Authorised Share Capital	:$30
Issued Share Capital	:$0.01
Shareholder	:East West herbs Limited
VAT Number	:N/A
Tax District and Reference	:N/A

SCHEDULE 3
(The Indemnities - Clause 7.1.1)

1. Tax

Any claim for Taxation or settlement of or any depletion in the value of the assets of the Company in connection with any claim for Taxation in respect of any act omission or event before Completion

2. Penalties and Costs

All penalties imposed and costs and expenses incurred by the Company and the Purchaser or any of them in connection with any claim relating

to the matters in paragraph 1 of this Schedule or any of them and in the event of the Purchaser becoming aware of any claim relevant for the purpose of this Schedule of which the Vendors may not be aware the Purchaser shall procure that notice thereof is given to the Vendors and as regards any relevant claim the Purchaser shall or shall procure that the Company at the request of the Vendors takes such action as the Vendors may reasonably require to avoid dispute resist appeal compromise or defend the claim and any adjudication in respect thereof but subject to the Purchaser being fully and effectually indemnified and secured by the Vendors against all losses (including any interest and additional taxation) costs damages and expenses which may be thereby incurred.

SCHEDULE 4
(Warranties and Undertakings - Clause 7.1.2)

GENERALLY

1. The Accounts

1.1 The Accounts:-
- 1.1.1 show a true and fair view of the state of affairs profit and loss and assets and liabilities of the Company as at the Accounts Date and
- 1.1.2 have been prepared in accordance with current accounting standards and practices; make proper provision for all actual and contingent liabilities including without limitation tax and bad or doubtful debts as at the Accounts Date
- 1.1.3 are not affected by any extraordinary exceptional or non-recurring item

1.2 Since the Accounts Date there has been no material reduction in the net assets position of the Company as represented by the Accounts or in the share capital

1.3 The Company has at all times kept and maintained and will prior to the completion of this Agreement keep and maintain in accordance with the requirements of the Companies Act and good business practice and proper accounting principles and current standard accounting practices proper books of account and accounting records

1.4 All accounting information records documents books and papers relating to the business and affairs of the Company are and will remain until completion of this Agreement in the possession of the Company

2. Management Accounts

True copies of the Management Accounts prepared by the Company in respect of the business carried on by the Company since the Accounts Date and annexed hereto have been prepared in accordance with generally accepted accounting principles and to the best of the Warrantors' knowledge and belief reflect the state of affairs of the business of the Company in all material respects and adequately disclose all assets and liabilities of the Company at the relevant balance sheet date to which they relate and apply bases and policies of accounting which have been consistently applied in the Accounts save that such Management Accounts have not been audited by the Auditors

3. Business Plan

So far as the Warrantors are aware all facts stated in the Business Plan were as at its date and remain true and accurate in all material respects. All estimates, opinions and projections contained therein were as at such date and remain honestly made or held and fairly based upon facts which were and are within the knowledge of the Warrantors or which they reasonably believe to be true and were and are bona fide and reasonably arrived at on the basis of proper and reasonable assumptions and so far as the Warrantors are aware there were and are no other material facts the omission of which would or might make misleading any statement therein whether of fact or opinion or the disclosure of which could reasonably be expected to affect the decision of the Purchaser to enter into the Option Agreement.

4. Assets

4.1 The method of valuing stock and work in progress and the basis of depreciation adopted by the Company in respect of each of the fixed assets of the Company shown in the Accounts and the Management Accounts was the same as that adopted in the balance sheets for the two financial years preceding the Accounts Date and the rate of depreciation shown in the Accounts and the Management Accounts for each such asset is sufficient to write down the value of such asset to nil not later than the end of its useful working life

4.2 The stock of raw materials packaging materials and finished goods now held are not excessive and are adequate in relation to the current trading requirements of the businesses of the Company and none of such stock is obsolete unusable or unmarketable in relation to the current business of the Company and no contracts are outstanding which are likely to result in the foregoing not being true

4.3 The stock-in-trade of the Company is in reasonably good condition and is capable of being sold by the Company in the ordinary course of its business in accordance with its current price list without rebate or allowance to a purchaser

4.4 The plant machinery equipment vehicles and other equipment used in connection with the business of the Company:

4.4.1 are in a reasonably good and safe state of repair and condition and satisfactory working order and have been properly maintained

4.4.2 are not expected to require replacements or additions at a cost in excess of pounds sterling 5,000 within twelve months from the date of this Agreement

4.5 All the stock-in-trade of the Company and those of its other assets and undertakings which are of an insurable nature are and have at all material times been insured in amounts representing their full replacement or reinstatement value against fire and other risks normally insured against by persons carrying on the same business as that carried on by the Company

4.6 The Company is now and has at all material times been adequately covered against accident damage injury third party loss (including product liability) loss of profits and other risks normally insured against by persons carrying on the same business as that carried on by the Company

4.7 All insurances are currently in full force and effect and nothing has been done or omitted to be done which could make any policy of insurance void or voidable or so far as the Warrantors are aware which is likely to result in an increase in premium

4.8 No claim is outstanding or may be made under any of the insurance policies and so far as the Warrantors are aware no circumstances exist which are likely to give rise to a claim

5. Shares

5.1 No person has the right to call for the issue of any shares in the capital of the Company

5.2 None of the Shares is subject to any charge lien encumbrance option claim or title adverse to that of the Vendors and the Vendors have the complete interest right power and authority to sell and transfer the Shares

5.3 The Company has not repaid or agreed to repay or redeemed or agreed to redeem or capitalised or agreed to capitalise any shares and has not been engaged in any demerger within or as referred to in section 213 of the Taxes Act

6. Title and Value of Assets

6.1 Neither the Company nor the Vendors have done or omitted to do or are aware of anything save as disclosed in the Disclosure Letter which would materially reduce the value of the assets of the Company or any of them as contained or referred to in the Accounts and the Management Accounts and

6.2 The Company has absolute title free from any adverse claim to such assets and does not have any assets subject to any lien charge claim encumbrance letting rental lease purchase hire purchase or other agreement other than those mentioned in Schedule 7 to this Agreement

6.3 All the assets of the Company are free from any defect except only fair wear and tear

7. Contracts

7.1 An Agreement dated the 2nd November 1994 made between the Company (1) and Giovanni Maciocia C.Ac (Nanjing) (2) for the production and distribution of 36 herbal products is in full force and effect and the Company is not in default of any of the provisions thereof and the Warrantors know of no circumstance likely to give rise to such a default

7.2 The Company has not entered into any long term or abnormal contract or undertaken any obligations whatsoever except such as are usual and necessary in the ordinary and proper course of its business or except as hereinafter referred to or as are referred to in the Accounts or the Management Accounts

8. Trading matters

8.1 The Company is not or has not agreed to become a member of any joint venture consortium partnership or other unincorporated association

8.2 There are no claims pending or threatened or so far as the Warrantors are aware capable of arising against the Company by an employee or workman or third party in respect of any accident or injury which are not fully covered by insurance

8.3 No power of attorney given by the Company is in force

8.4 Save for the Directors there are no outstanding authorities (express or implied) by which any person may enter into any contract or commitment to do anything on behalf of the Company

8.5 The Disclosure Letter contains accurate particulars of all subsisting contracts to which the Company is a party at the date of this Agreement

8.6 The Company is not or will not by reason simply of the lapse of time become in default in respect of any obligation or restriction binding upon it

8.7 So far as the Warrantors are aware the Company has not manufactured sold or supplied products which are or were or will become in any material respect faulty or defective or which do not comply in any material respect with any warranties or representations expressly or impliedly made by it or with all applicable regulations and standards in respect thereof

8.8 The Company is not subject to any liability or obligation (save as may be implied by law) to service repair maintain take back or otherwise do or not do anything in respect of any goods or products that have been or are hereafter delivered by it

8.9 The Company is not a party to nor has its profits or financial position during the three years prior to the date hereof been affected by any contract or arrangement which is not of an entirely arm's length nature

8.10 The Company is not a party to or subject to any agreement transaction obligation commitment understanding arrangement or liability which:-

8.10.1 will require the Company to pay any commission finder's fees royalty or similar payment or

8.10.2 in any way restricts the Company's freedom to carry on the whole or any part of its business in any part of the United Kingdom or elsewhere in such manner as it thinks fit

8.11 There are no arrangements and understandings (whether legally enforceable or not) between the Company and any person who is a director or shareholder or the beneficial owner of any interest in the Company

9. Employees

9.1 There are no employees of the Company at the date hereof other than:-

9.1.1 those whose main terms and conditions of employment are mentioned in Schedule 6, and

9.1.2 casual workers at 3 Neal's Yard none of whom (so far as the Warrantors are aware) have been continuously employed by the Company for more than six months

9.2 Full particulars of all subsisting contracts of employment and service agreements and other terms and conditions and statements

of employment have been disclosed to the Purchaser

9.3 There is not outstanding any claim in respect of dismissal or redundancy of any employee of the Company

9.4 There has not been any increase in any fees commission emoluments or payments paid or payable to any officer or servant or agent of the Company since the Accounts Date

9.5 The Company does not employ any person except only as disclosed as aforesaid and there are no consultancy agreements or arrangements with anyone

10. Pension Scheme

The Company is not under any legal or moral liability or obligation or a party to any ex-gratia arrangement or promise to pay pensions gratuities superannuation allowances or the like or otherwise to provide 'relevant benefits' within the meaning of Taxes Act 1988 s 612 to or for any of its past or present officers or employees or their dependants; and there are no retirement benefit or pension or death benefit or similar schemes or arrangements in relation to or binding on the Company or to which the Company contributes

11. Debts

11.1 The Company has no outstanding debts or liabilities (contingent or otherwise other than trade debts incurred in the ordinary course of business) contracts or engagements otherwise than as provided in the Accounts and/or the Management Accounts or disclosed to the Purchaser

11.2 There are no liabilities of the Company (including contingent liabilities) incurred since the date of the Management Accounts which are outstanding on the part of the Company in excess of $10,000

12. Financial position

12.1 Save for such changes as have arisen in the ordinary course of business or by reason of fluctuations in market values of investments or changes in market conditions or disclosed in the Management Accounts the Vendors have no reason to believe that the aggregate trading results of the Company as disclosed in the Accounts have deteriorated since the Accounts Date

12.2 The Company does not have any estate or interest in land other than the Properties

12.3 So far as the Warrantors are aware and subject to the Company using reasonable endeavours therefor the debtors of the Company will meet their obligations in ordinary and due course within the terms of trade of the Company free from any counterclaim deduction or set-off

12.4 No expenditure has been incurred by the Company which will not be wholly deductible against corporation tax

12.5 The Company has at all times been a trading company

12.6 The Company has conducted its trade only in the United Kingdom

12.7 Save for the Subsidiaries the Company has not had at any time any subsidiary within the meaning of Section 736 of the Companies Act and has never been a member of any group of companies

12.8 The Company has not been entitled whether as legal or beneficial owner at any time to any shares in any other company

12.9 The purchase of the Company by the Purchaser will not so far as the Warrantors are aware cause any person who normally does business with the Vendor not to continue to do so on substantially the same basis as previously

13. Capital transactions

The Company has not entered into any capital transactions involving more than $15,000 in aggregate except as provided in the Management Accounts or as expressly referred to in this Schedule or as disclosed to the Purchaser either as vendor or purchaser since the Accounts Date

14. Returns, documents and legislation

All returns particulars resolutions and other documents statutorily required to be delivered by the Company to the Registrar compliance of Companies have been duly delivered to such Registrar and the Directors

have kept all statutory registers minutes and records fully and effectually in accordance with the Companies Act and there are no omissions therefrom and there has not been any default in connection with any such documents or records so far as the Warrantors are aware and the Company has complied with all Acts of Parliament and legislation thereunder affecting the Company its employees assets and the business and is not in breach of any provision thereof

15. Notices

There are no outstanding notices served on the Company materially and adversely affecting its assets or any of them

16. Litigation

16.1 The Company is not engaged in any litigation industrial dispute or arbitration proceedings except as already disclosed and no proceedings or prosecutions are pending or threatened and so far as the Warrantors are aware there are no facts or matter (including but without limitation Completion) likely to give rise thereto and the Company is not in default in respect of any material obligation whether contractual statutory or municipal

16.2 The Company is not the subject of any investigation or enquiry pending or threatened nor has it given any agreement or undertaking in connection with any such matter as aforesaid and so far as the Warrantors are aware the Company is free to carry on the business without any restriction or adverse claim except only as applicable generally by statute and has so far as the Warrantors are aware obtained all licences consents permissions and agreements relevant to carrying on the business

17. Tax returns

The Company will not submit a draft of any tax return or agree any tax computation or computation intended to be made or agreed with the Inland Revenue to the Purchaser before making or submitting the same as aforesaid and will not make any tax return after the date hereof without the consent in writing of the Purchaser

18. Disclosures

The Vendors will forthwith disclose in writing to the Purchaser any matter which may arise and become known to them between the date hereof and Completion which is inconsistent with any of the warranties or indemnities contained or referred to in this Agreement and which is material to be known by a transferee for value of any share in the Company

TAXATION

19. Provisions

19.1 Full provision or reserve has been made in the Accounts for all tax liable to be assessed on the Company or for which it is accountable in respect of income profits or gains earned accrued or received on or before the Accounts Date or any event giving rise to taxation on or before the Accounts Date including distributions made down to such date or provided for in the Accounts

19.2 Proper provision has been made in the Accounts for deferred taxation in accordance with current standard accounting practices and generally accepted accountancy principles

19.3 The Company has not at any time been engaged in any transaction the main or only purpose of which was the avoidance or reduction of any liability to tax or could lead to the cancellation of any tax advantage or could be claimed to be an artificial transaction for tax purposes

20. Returns

The Company has properly and punctually made all returns (subject to paragraph 17 of this Schedule) and provided all information required for tax purposes since incorporation until the Accounts Date as to which there are no outstanding requirements from the Inland Revenue or other taxation authority and none of such returns is the subject of any

back dating claim appeal or dispute by the Inland Revenue or any other authority concerned and the Vendors are not aware that any dispute is likely

21. Payment of tax

The Company has duly and punctually paid all tax which it has become liable to pay and is not under any liability to make any reimbursement or indemnity in respect of any taxation or to pay any penalty or interest in connection with any claim for tax

22. PAYE

The Company has properly operated the Pay As You Earn system deducting tax as required by law from all payments to or treated as made to employees and ex-employees of the Company prior to the date hereof and accounted to the Inland Revenue for all tax so deducted and all tax chargeable on benefits provided for persons employed at any time by the Company

23. Payments under deduction

All payments by the Company to any person which as far the Warrantors are aware ought to have been made under deduction to tax have been so made and the Company has (if required by law so to do) accounted to the Inland Revenue for the tax so deducted

24. Migration

The Company has not without the prior consent of the Treasury entered into any of the transactions specified in Section 765 of the Taxes Act or changed its residence whereby it is liable for any charge to tax or unrealised gains.

25. Group income

25.1 Particulars of any elections made in respect of the Company under Section 47 of the Taxes Act have been disclosed to the Purchaser and any such elections are now in force

25.2 The Company has not paid any dividend without advance corporation tax or made any payment without deduction of income tax in the circumstances specified in sub-section (4) of that Section

26. Group relief

Particulars of any arrangement and agreements relating to group relief (as defined by the Taxes Act Section 402) to which the Company is or has been a party have been disclosed to the Purchaser and the Company has received all payments due to it under any such arrangement or agreement for surrender of group relief made by it and any claim for relief whether for any losses or otherwise or for any allowances as deductions or repayment has not been and will not be made by any company which was at any time or is the holding company of or connected with the Company pursuant to Sections 240 and 402 to 412 of the Taxes Act or otherwise without limitation so as to affect the Company

27. Surrender of Advance Corporation Tax

There has been disclosed to the Purchaser particulars of all arrangements and agreements to which the Company is or has been a party relating to the surrender of advance corporation tax made or received by the Company under Section 240 of the Taxes Act and:-

27.1 the Company has not paid nor is liable to pay for the benefit of any advance corporation tax which is or may become incapable of set-off against the Company's liability to corporation tax and

27.2 the Company has received all payments due to it under such arrangements or agreements for all surrenders of advance corporation tax made by it

28. Shortfall

28.1 The Company is not a close investment holding company as defined by Section 13A of the Taxes Act

28.2 The Company has never received any intimation pursuant to

paragraphs 13 to 17 in Schedule 19 to the Taxes Act that the Inland Revenue intends to make any apportionments for any accounting reference period ending on or before the date of the Accounts and any information and particulars supplied to the Inland Revenue under the said paragraphs were such as to make full and accurate disclosure of all facts and considerations material to be known by the Inland Revenue

29. Base values

If each of the capital assets of the Company were disposed of for a consideration equal to the book value of that asset in or adopted for the purpose of the Accounts or the Management Accounts no liability to corporation tax on chargeable gains or balancing charge in connection with the Capital Allowances Act 1990 or Section 810(4)(b) of the Taxes Act would arise (and for this purpose there shall be disregarded any relief and allowances available to the Company other than amounts falling to be deducted from the considerations receivable under Section 38 of the Gains Tax Act and all capital allowances available to the Company have or will be made prior to the date hereof and there is no reason for any such allowances to be reduced postponed or disallowed

30. Roll-over

The Company has not made any claim under Sections 152 to 161 of the Gains Tax Act and no such claim has been made by any other Company which affects or could affect the amount or value of the consideration for the acquisition of any asset by the Company taken into account in calculating liability to corporation tax on chargeable gains on a subsequent disposal

31. Depreciatory transactions

No loss which might accrue on the disposal by the Company of any share in or security of any company is liable to be reduced by virtue of any depreciatory transaction within the meaning of Sections 280 and 281 of the Income and Corporation Taxes Act 1970 nor is any expenditure on any shares or security liable to be reduced under Section 125 of the Gains Tax Act

32. Straightline growth and chargeable debts

No asset owned by the Company is subject to paragraphs 16 19 20 or 21 in Schedule 2 of the Gains Tax Act and no gain chargeable to corporation tax will accrue to the Company on the disposal of any debt owing to the Company not being a debt on a security

33. Chargeable policies

The Company has not acquired benefits under any policy of assurance otherwise than as original beneficial owner

34. Claims by the company

The Company has not made any claim under any of the following:-

34.1 Section 279 of the Gains Tax Act (assets situated outside the United Kingdom)

34.2 Section 280 of the Gains Tax Act (tax on chargeable gains payable by instalments)

34.3 Section 242 of the Taxes Act (surplus franked investment income)

34.4 Section 584 of the Taxes Act (unremittable income arising outside the United Kingdom)

34.5 Section 24 of the Gains Tax Act (assets of negligible value)

34.6 Section 48 of the Gains Tax Act (contingent consideration becoming irrecoverable)

and the Company has not made any claim for or received the benefit of any deduction reduction set-off exemption repayment allowance relief benefit or payment in respect of any tax under any statutory provision or other concession without limitation as to the statutory provisions or any of them mentioned in this Agreement which could or might be effectively withdrawn postponed restricted or otherwise lost as a result of any cost omission event or circumstances arising at any time after Completion and details of all claims for relief as to trading stock prior to the coming into operation of Section 48 of the Finance Act 1984 have been disclosed to the Purchaser

35. Stamp duty

The Company has not obtained relief from Stamp Duty relief under Section 55 of the Finance Act 1927 (reconstruction and amalgamations) or under Section 42 of the Finance Act 1930 (relief between associated companies) or under paragraph 10 of the 19th Schedule to the Finance Act 1973 or Sections 75 76 and 77 of the Finance Act 1986

36. First business loans etc.

The Company has not expended or applied any sum liable to be regarded as income available for distribution pursuant to paragraphs 8 or 9 in Schedule 19 to the Taxes Act and is not bound (contingently or otherwise) to expend or apply any such sum

37. Tax losses carry forward

There has not been any major change in the business of and the Company within the meaning of Section 245 or 768 of the Taxes Act

38. Gifts

38.1 The Company has not been engaged in any transaction not being at arm's length within Section 770 of the Taxes Act or Sections 125 or 282 of the Gains Tax Act and the Company is not liable to be assessed to corporation tax on chargeable gains or to capital transfer tax as donor or donee of any gift or transferor or transferee of value

38.2 The Company has not been a party to associated operations in relation to a transfer of value within the meaning of Section 268 of the Inheritance Tax Act 1984.

38.3 No asset owned by the Company is liable to be subject to any sale mortgage or charge by virtue of Section 212(l) of the Inheritance Tax Act 1984.

38.4 There are no circumstances which could give rise to any claim for estate duty payable by the Company

39. Intra group transfer

The Company has not acquired any asset (past or present) from any other company then belonging to the same group of companies as the Company within the meaning of Section 272 of the Income and Corporation Taxes Act 1970 as applied in Section 347(5) of the Taxes Act

40. Loans to participators

The Company has not and will not be deemed to have made any loan or advance to a participator or an associate of a participator so as to become liable to make any payment under Sections 419 or 422 of the Taxes Act

41. Distributions

Subject as hereinafter provided no distribution within the meaning of Sections 209 to 211 or 254 of the Taxes Act has or is deemed to have been made by the Company except dividends shown in its audited accounts nor is the Company bound to make any such distribution provided always that in respect of any qualifying distribution made to the Company since the Accounts Date and prior to Completion the Company will be entitled to a full set-off of its corresponding payment of ACT under either Section 239(l) of the Taxes Act or Section 239(3) thereof insofar as there is no set-off under the said Section 239(l) or any such set-off is restricted

42. Payment to employees

The Company has not made any payment to or provided any benefit for any officer or employee or ex-officer or ex-employee of the Company which is not allowable as a deduction in calculating the profits of the Company for taxation purposes and interest has not been paid to any director or other officer so as to result in any liability under Section 187 of the Taxes Act

43. National insurance etc.

The Company has paid all national insurance and graduated pension contributions for which it is liable and has kept proper books and records relating to the same

44. Value added tax

The Company:-

44.1 has complied with all statutory provisions and regulations relating to Value Added Tax Act 1994 for which the Company is liable and has not been required to give any security therefor

44.2 is not and has not been for value added tax purposes a member of a group of companies

45. Companies stamp duty

The Company has complied with the provisions of the Finance Act 1973 relating to stamp duty and has duly paid all stamp duty which it was liable to pay

AS TO THE PROPERTIES

46. Title

46.1 The Company has a good and marketable title to each of the Properties free from all charges encumbrances wayleaves profits a prendre easements exceptions reservations options and adverse interests whatsoever and has not agreed to grant or create any such things as aforesaid save as disclosed in the Disclosure Letter

46.2 The information relating to the Properties contained in Schedule 5 is true and complete in all respects

47. Leases

47.1 The Company has taken all necessary action to secure the rights available to it in respect of the Properties under Part II of the Landlord & Tenant Act 1954

47.2 The Company has paid the rent and observed and performed the covenants on the part of the tenant and the conditions contained in any leases (which expressions in this Clause 48 includes underleases) under which the Properties are held, and the last demand (or receipts for rent if issued) were unqualified, and all the leases are valid and in full force

47.3 All licences, consents and approvals required from the landlords and any superior landlords under any leases of the Properties have been obtained and the covenants on the part of the tenant contained in the licences, consents and approvals have been duly performed and observed

47.4 There are no rent reviews under the leases of the Properties held by the Company in progress

47.5 No obligation necessary to comply with any notice or other requirement given by the landlord under any leases of the Properties is outstanding and unobserved or unperformed

47.6 There is no obligation to reinstate any of the Properties by removing or dismantling any alteration made to it by the Company or any predecessor in title to the Company

48. Compliance

Save as disclosed in the Disclosure Letter the Company and every person in possession or occupation with of the Properties has complied with all restrictions covenants restrictions agreements stipulations declarations and conditions affecting the Properties and every part thereof and the Company is not aware of any breach thereof

49. Possession

The Company has not at any time agreed to part with any estate or interest or the possession of the Properties or any part thereof and there are no subsisting claims thereto or any notices affecting the same with which the Company has not complied and on Completion the

Company will have vacant possession of the whole of the Properties save as disclosed in the Disclosure Letter

50. Registration of title

The title to the Properties are not registered at HM Land Registry

51. Outgoings

The Properties are not subject to any outgoings monetary claims charges or liabilities other than non-domestic business and water rates except as disclosed to the Purchaser

52. User

52.1 The use of each of the Properties is the permitted use under the Town and Country Planning Act 1990 as amended

52.2 Planning Permission has been obtained or is deemed to have been granted for the purpose of the Town and Country Planning Act 1990 as amended with respect to the development of the Properties and no permission has been suspended or called in and no application for planning permission is awaiting decision

52.3 The Company has complied and is complying with

52.3.1 all permissions orders and regulations applicable to the Properties

52.3.2 all agreements under Section 106 of the Town and Country Planning Act 1990

52.4 Consent has been obtained under the Building Regulations for all works alterations and improvements to the Properties

52.5 All fire regulations local and other bye laws and Section 38 of the Highways Act 1980 and the Public Health Acts the Factory Acts and the Offices Shops and Railway Premises Act 1963 have been fully complied with

52.6 So far as the Warrantors are aware, the Company has complied with, and the Warrantors are aware of no previous breach of, any legislation and common law relating to environmental matters, including (but without limitation):

52.6.1 waste;

52.6.2 contaminated land;

52.6.3 discharges to (i) land (ii) ground and surface water and (iii) sewers;

52.6.4 emissions to air;

52.6.5 noise;

52.6.6 dangerous, hazardous or toxic substances and materials;

52.6.7 nuisance;

52.6.8 health and safety;

and the Warrantors are not aware of any actions, claims or proceedings nor have they any other reason to believe that the Company has any liability in relation to such matters.

53. Listing

There are no buildings on the Properties or any part thereof which are listed as being of special historic or architectural importance and none of the Properties are located in a Conservation Area or subject to any rights of common or affected by any past or present mining operations

54. Utilities

The buildings and other structures on the Properties are supplied with gas water electricity and drainage directly to or into mains as the case may be without crossing any land other than the Properties and so far as the Warrantors are aware the buildings and all other structures on the Properties do not include any high alumina cement blue asbestos calcium chloride accelerator wood wool slabs used as permanent shuttering or other poisonous or noxious or harmful or deleterious material

55. Other property

The Company has never been a tenant or licensee of any property whatsoever or held any interest under any lease or assignment thereof

of an estate or interest in land

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SCHEDULE 5
(The Properties)

<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
Premises	Date of Lease	Term	Current Rent (pounds sterling)	Next Rent Reviews	Current Service Charge	Insurance	Repairs
(1) Units 21 & 22 Langston Priory Mews Kingham Oxfordshire	26.2.1991	11 years from 1.12.1989		1.12.1993 and every third anniversary thereof	As defined in Lease (none demanded)	Landlord insures Tenant reimburses	Tenant repairs interior and service charge in respect of external parts
(2) Unit 25 and Units 7 - 10 Langston Priory Mews Kingham Oxfordshire	27.4.1995	from 27.4.1995 to 30.11.2000	3,000 pa (Unit 25) 6,000 pa (Units 7-10)	1.12.1996 and 1.12.1999	as defined in lease (none demanded)	Landlord insures Tenant reimburses	
(3) 3 Neal's Yard London WC2	31.5.1994	3 years from 13 September 1992		none	1,000 per annum		

</TABLE>

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<CAPTION>

SCHEDULE 6
(Employees)

<S>	<C>	<C>	<C>	<C>
Name/Location	Date of Birth/Age	Date Employ-ment Commenced	Annual Salary (British pounds)	Benefits
Langston Priory Mews				
Robert Eric Miller	29.09.50	06.04.88	72,000	
William Ahern	21.05.57	18.07.94	3,600	
Albert Humphrey	02.02.26	18.07.94	Nil	
Susan Tyack	16.06.65	05.05.87	11,115	
Philip Howells	20.03.64	02.01.88	11,115	

Anabella Holliday	09.10.47	01.08.90	8,951.28	
Paul Sparling	18.03.54	10.09.90	9,590.88	
Bruce Rowland	20.05.39	08.04.91	11,115	
Richard Bruce	06.11.90	16.09.91	8,268	
Reg Thomas	10.08.55	21.09.92	8,268	
Sheila Salmon	06.01.50	02.01.90	11,368.50	
Margaret Millard	19.04.43	23.06.88	4,694.52	
Shouming Zhong	18.10.43	05.12.91	19,848	27 per week travel allowance
Yu Hongwen	23.05.53	24.08.92	15,714	27 per week travel allowance
Alice Elizabeth Lyon	19.07.63	05.01.94	15,900	
3 Neal's Yard				
Yu Qin Shen	53	21.02.92	12,987	36 per week travel allowance
Andrew Gordon	26	05.01.94	12,250	
Lucy Leon		04.01.94	4.24 per hour	
Peter Fulcher	30	06.07.94	4.24per hour	
Annalise Garrett	23	21.08.94	4.24per hour*	
Yu Zhong	25	19.08.94	6.25 per hour	
6400 Hollis Street, Suite 14				
Anastacia White	43	09.95	$42,984	
Jonah Chaffee	25	09.95	$21,000	
Andrew Miller	24	01.96	$21,000	

* or 6.25 per hour if working on the second floor of the shop

</TABLE>

SCHEDULE 7
(Leasing/Hiring and other Agreements)

Date of Agreement	Owner/Lessor	Vehicle/ Equipment	Rental (exclusive of VAT)
28.06.94	Neopost Limited	Scare and Equipment	353.60 per quarter
17.01.95	Anglo Leasing plc	Sharp Copier SF2022 plus equipment	513.43 per quarter
05.01.96	Pallas Services Limited	Sharp Copier SF2022 plus equipment and bin sorter	1,776.81 per quarter

27.01.95	Pallas Services Limited	Sharp Fax F04800	357 per quarter
24.04.95	Anglo Leasing plc	Bin Sorter	77.82 per quarter
09.02.94	GE Capital Motor Finance Limited	Subaru Inipreza Reg. No. L669 TKV	266.63 /month including VAT
01.12.94	United Dominions Trust Limited	Subaru Legacy Reg. No. M496 6HP	381.28 /month including VAT

SCHEDULE 8
(Documents in The Agreed Terms)

1. Disclosure Letter
2. Service Agreement
3. Resignations
4. Deed of Adherence
5. Registration Rights Agreement

SCHEDULE 9
(List of Suppliers with whom William Ahern deals direct)

Supplier	Goods Supplied
Helio Medical Supplies	Acupuncture Needles
Gourmet Mushrooms	Medicinal Mushrooms
Mycoherb	Medicinal Mushrooms
Evergreen Inc	Red Algae

SIGNED as a deed and DELIVERED)
)
by the said ROBERT ERIC MILLER)
)
in the presence of)

SIGNED as a deed and DELIVERED)
)
by the said WILLIAM AHERN)
)
in the presence of)

SIGNED as a deed and DELIVERED)
)
by the said GUENDOLIN CRAWFORD)
)
URQUHART in the presence of)

SIGNED as a deed and DELIVERED)
)
by the said RICHARD JOHN BUNCE)
)
in the presence of)

SIGNED as a deed and DELIVERED)
)
by the said BARBARA PAMELA CLARK)
)
in the presence of)

SIGNED as a deed and DELIVERED)
)
by the said ALEXANDER PETER)
)
GALITZINE in the presence of)

SIGNED as a deed and DELIVERED)
)
by the said ANABELLA HOLLIDAY)
)
in the presence of)

SIGNED as a deed and DELIVERED)
)
by the said ALBERT S)
)
HUMPHREY in the presence of)

SIGNED as a deed and DELIVERED)
)
by the said ALICE ELIZABETH LYON)
)
in the presence of)

SIGNED as a deed and DELIVERED)
)
by the said SUSAN TYACK)
)
in the presence of)

SIGNED as a deed and DELIVERED)
)
by the said ANNE WILKINSON)
)
in the presence of)

THE COMMON SEAL of EAST WEST)
)
HERBS LIMITED)
)
was hereunto affixed in the)
)
presence of:-)

Director

Secretary

EXECUTED as a Deed by PARACELSIAN)
)
INCORPORATED)
)
acting by its President and Vice-President)

EXHIBIT 10.11

Exclusive Licensing Agreement, dated April 1, 1996, between Calbiochem-Novabiochem International and the Registrant

Exclusive Licensing Agreement
between
Calbiochem-Novabiochem International (CNI)
and
Paracelsian

1. PREAMBLE

Subject matter of this agreement is the Assay for cdkl, components, improvements and equivalents, the patent(s) covering this assay and the know how and information on the manufacture, significance and performance of the assay, hereinafter referred to as "Documentation".

2. RECITALS

a) Paracelsian having its principal office at 222 Langmuir Laboratories, Cornell Technology Park, Ithaca, NY 14850, represents and warrants that it has the right to license the rights in the patent applications and know how and information covering this technology and that it is not aware of any right that would inhibit any licensee of these rights to commercialize the ASSAY.

b) Calbiochem-Novabiochem International (hereinafter referred to as "CNI") a Delaware corporation having its principal place of business at 10394 Pacific Center Court, San Diego, California 92121 is desirous of obtaining an exclusive license for the commercial and scientific use of the ASSAY, and the sale and distribution of the ASSAY.

In consideration of the mutual benefits to be derived hereunder, Calbiochem Novabiochem International and Paracelsian agree as follows:

3. DEFINITIONS

"LICENSED PRODUCTS" shall mean the cdkl ASSAY and components to be used as a research test kit for determining cdk1 levels in cell o serum. Paracelsian reserves the right to market any assay not included as part of the LICENSEE PRODUCTS.

"RESEARCH PRODUCT" shall mean any product not approved by the Federal Drug Administration.

"AFFILIATE" shall mean any corporation or other business entity controlled by or in common control of the one of the parties. "Control" as used herein means the ownership directly or indirectly of fifty percent (50%) or the maximum interest permitted by local law of the voting stock of a corporation or a fifty percent (50%) or greater interest in the income of such corporation or other business entity or the ability otherwise of CNI or Paracelsian to secure that the affairs of such corporation or other business entity are managed in accordance with its wishes. CNI and Paracelsian shall include any and all of the AFFILIATES, unless otherwise provided.

"NET SALES" shall mean actual billings of CNI on sales to third parties for LICENSED PRODUCTS less the following deductions, where applicable:

(i) Discounts, allowed and taken, in amounts customary in the trade;
(ii) Sales, excise value added and/or use taxes or duties imposed upon and with specific reference to particular sales-,
(iii) Amounts allowed or credited on returns, rebates or retroactive price reductions; and
(iv) Outbound transportation prepaid or allowed.

"Exclusive License" shall mean that Paracelsian shall not issue a license to a third party for the LICENSED PRODUCTS for the same use as provided above.

4. GRANT OF LICENSE

Paracelsian hereby grants to CNI on the terms and conditions hereinafter stated an exclusive world-wide license to make, have made, use, sell and have solid LICENSED PRODUCTS as RESEARCH PRODUCTS under any patents that may issue thereof reissues or extensions thereof, to use the ASSAY as well as the Documentations throughout the world for a cdk1 ASSAY and any know-how or components supplied by Paracelsian to be used as RESEARCH PRODUCTS. This license shall continue until five (5) years from the date of this agreement unless sooner terminated as herein provided and shall be prolonged automatically for another five years unless terminated in writing (Section 12). Paracelsian reserves the right to make and use the LICENSED PRODUCT for research and to market or license the rights to market any assay not included as part of the LICENSED PRODUCTS.

Each LICENSED PRODUCT sold shall include a statement that the product may only be used for purposes that do not require Federal Drug Administration approval.

CNI Agrees to use its best efforts to bring LICENSED PRODUCTS to market

and to promote sales thereof. Such efforts shall be at least equal to commercially reasonable efforts for promotion, sales and quality control and CNI's efforts for its other products.

5. ROYALTIES

In consideration for the license granted in Section 4, CNI agrees to pay Paracelsian:

a) An initial license fee of five thousand dollars ($5,000) shall be paid upon execution of this Agreement.

b) A royalty of five percent (5%) on the first one million dollars ($1,000,000) of NET SALES of CNI or its Affiliates of a LICENSED PRODUCT and a royalty of ten percent (10%) on NET SALES over one million dollars ($1,000,000).

c) If CNI is required to take a license under an issued patent or other proprietary right in any country in order to market a LICENSED PRODUCT, CNI will pay a royalty rate that is reduced by 1/2 of the royalty rate of the other license, but in no event less than three percent (3%) on the NET SALES in that country.

d) It is understood that a LICENSED PRODUCT may be sold in a combination package, composite or kit containing other non-licensed products or items. In such event, NET SALES, for purposes of determining royalty payments on the combination package, shall be calculated by the following applicable method:

(i) By multiplying the NET SALES of that combination package by the fraction A/B, where A is the price per unit, during the royalty paying period in question, of the LICENSED PRODUCTS when sold separately, and B is the price per unit, during the royalty paying period in question, of the combination package.

(ii) In the event that no such separate sales are made of the LICENSED PRODUCTS during the royalty paying period in question, the price per unit from the most recent royalty paying period shall be used.

(iii) NET SALES for the purposes of determining royalty payments shall be never be less than the formula (2 x C), where C is the standard fully absorbed cost to CNI of the LICENSED PRODUCTS, such costs being determined by using CNI's standard accounting procedures which shall be in accordance with the generally accepted practice.

e) Nothing contained herein shall obligate CNI to pay royalties more than once in respect of NET SALES of any LICENSED PRODUCTS or to pay a higher or multiple royalties for any reason, including whether the sales of any LICENSED PRODUCTS are covered by the CLAIMS of more than one patent owned or controlled by Licensor.

f) If Paracelsian shall, at any time during the term of this Agreement, grant to any other licensee a royalty that is lower than that contained herein, Paracelsian shall so notify CNI and CNI shall be entitled to have such more favorable royalty was granted.

6. TERMS OF PAYMENT

Payment of the royalties shall be due no later than sixty (60) days after the close of each quarter fiscal year of CNI.

7. RECORDS

CNI shall keep accurate records on books of account showing the quantities and NET SALES prices of the LICENSED PRODUCTS. Any certified or chartered public accountant authorized in writing by Paracelsian shall be given access to such records and books at all reasonable times. Within sixty (60) days after March 31, June 30, September 30 and December 31, CNI shall deliver to Licensor a true and accurate report stating for the preceding three (3) calendar months (a) NET SALES, (b) the royalties payable thereon and (c) the amount of any credit taken against royalties payable, if any, not otherwise taken in computing NET SALES. Except as otherwise provided, simultaneously with the delivery of each such report, CNI shall pay to Licensor the provided, simultaneously with the delivery of each such report, CNI shall pay to Licensor the amount, if any, due for the period of such report. If no payments are due, it shall be so reported.

All amounts payable hereunder by CNI shall be payable in United States funds; provided, however, that if any payment on account of NET SALES is received by CNI in a foreign currency, such amount shall be converted monthly to United States funds at the rate set internally by CNI's international finance department providing exchange rates for translation of end of the month balance sheets and following month income statements.

8. SUBLICENSES

CNI shall retain control over the ASSAY in its possession and shall not give it or sublicense it to any third party or entity without prior specific written permission from Paracelsian.

9. LIABILITY

Paracelsian's liability, in contract, tort or otherwise under or in relations to the agreement, shall be limited to the amount of monies actually received from CNI under this agreement. In no event shall Paracelsian be liable for any indirect or consequential losses (including, without limitation, loss of profits or use) CNI shall keep Paracelsian fully indemnified at all times against all liabilities,

claims proceedings (whether civil or criminal), penalties, fines or other sanctions, judgments, suits, actions, losses, damages obligations, disbursements, costs and expenses which may at any time be incurred by or imposed against Paracelsian arising in connection with the manufacture, control possession, ownership, use, sale or other disposition by CNI of ASSAY.

CNI hereby agrees to indemnify, hold harmless and defend Paracelsian, its directors, officers, employees, agents and affiliates against any damages and legal expenses arising out of lawsuits or any other damage claim resulting from CNI's activities.

10. REPRESENTATIONS AND WARRANTIES

Paracelsian represents and warrants that it has the right to license the rights in the patent applications and know how and information covering this technology and that it is not aware of any right that would inhibit any licensee of these rights to commercialize ASSAY. Paracelsian and CNI each represent and warrant to the other that they have the full power an authority to enter into this Agreement, and that entering into this Agreement will not contravene, conflict with or violate the terms of any law, rule, regulation, order or agreement by which the party may be bound.

11. USE OF NAME

CNI shall use the name of Paracelsian in any advertising, packaging including customary technical literature and other promotional material in connection with the sale of Licensed Product pursuant to this Agreement.

12. INFORMATION

Paracelsian agrees to provide CNI with technical information and scientific references as needed to market product and to answer customer's questions related to the product.

CNI agrees to provide Paracelsian with copies of any information that it receives regarding the efficacy, quality or reliability of the LICENSED PRODUCTS.

Both parties agree to keep any confidential information disclosed by either party confidential for at least two years past the termination of this agreement unless directed to release the information by a court of law or a lawful subpoena. Confidential Information shall include, but not be limited to, information relating to: financial information, manufacturing, research or testing methods, marketing and customer information, and Documentation and other information related to a cdk1 Assay. Confidential Information shall not include information that: 1) must be disclosed for the marketing or sale of a LICENSED PRODUCT: 2) was in the Recipient's possession before disclosure by the Disclosing

party; 3) which is or becomes public through no wrongful action of the Receiving party; 4) is rightfully received by the Receiving party from another source without an obligation to the Disclosing party. Paracelsian specifically reserves the right to disclose information relating to: 1) the formation of a business relationship between the parties; 2) the total amount received in royalties under this Agreement; and 3) the efficacy, quality or reliability of any LICENSED PRODUCT.

13. TERMINATION

If CNI fails to pay the royalties payable under the terms hereof, or violates or fails to keep or perform any other obligation, term or condition hereof, Paracelsian may at its option terminate this agreement by giving sixty (60) days written notice, sent by registered mail, return receipt requested, specifying the default complained of, provided, however, that if CNI shall within such sixty (60) days cure the default complained of, then the notice shall cease to be operative and this agreement shall continue in fall force and effect as though such default has not occurred. CNI may terminate this Agreement at any time upon sixty (60) days written notice to Licensor. Upon termination, CNI will destroy or return the MATERIALS back to Paracelsian. In such case, CNI shall, remain obligated for royalties on the NET SALES sold before the effective date of termination under this paragraph.

14. MISCELLANEOUS

Parties to this Agreement recognize and agree that each is operating as an independent contractor and not as an agent of the, other. This Agreement shall not constitute a partnership or joint venture, and neither party may be bound by the other to any contract, arrangement or understanding except as specifically stated herein.

All notices, payments, reports and the like required or permitted hereunder shall be deemed given when mailed by registered or certified mail, if to Paracelsian to:

Paracelsian
222 Langmuir Laboratories
Cornell Technology Park
Ithaca, New York 14850
ATTN: Keith A. Rhodes
President and CEO

and if to CNI to:

Calbiochem-Novabiochem International
10394 Pacific Center Court
San Diego, California 92121
ATTN: Dr. John T. Snow

Vice President, New Business Development

or to such other person or by such other means as to which the parties may from time to time agree in writing.

The captions herein are for the convenience of the parties only.

This Agreement shall not be assignable by either party without prior written consent of the other party, except that each party may assign to an AFFILIATE or to a successor in ownership of all or substantially all of the business assets to which the Agreement pertains which successor shall expressly assume in writing performance of all the terms and conditions of this Agreement to be performed by the assigning party.

This Agreement contains the entire understandings of the parties and no amendment may be made hereto without the express written consent of each of the parties.

15. ARBITRATION AND APPLICABLE LAW

This Agreement shall be construed under the substantive laws of the State of California, United States, without giving effect to choice of law or conflict of law principles. In the event of any dispute or controversy arising under this Agreement or the transactions contemplated herein, the parties mutually consent to the jurisdiction of the courts sitting in the State of California, United States.

16. COUNTERPARTS

For convenience of the parties hereto, this Agreement may be executed in one or more counterparts, each of which shall be deemed an original for all purposes.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized officers as of the date first written below.

Calbiochem-Novabiochem International		Paracelsian	
/s/Stelios B. Papadoupoulos	3/25/96	/s/Keith A. Rhodes	4/1/96
Signature	Date	Signature	Date
Stelios B. Papadopoulos		Keith A. Rhodes	
Chairman and CEO		President and CEO	

EXHIBIT 21

SUBSIDIARIES
OF
PARACELSIAN, INC.

Name	State of Incorporation	% Owned
PARA Acquisition Corp.	Delaware	100 %

EXHIBIT 23.1

Consent of Arthur Andersen LLP

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation of our report dated November 30, 1995 on the consolidated balance sheet of Paracelsian, Inc. (a Delaware corporation in the development stage) and subsidiary as of September 30, 1995, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the two years in the period ended September 30, 1995 and for the period from inception (April 15, 1991) to September 30, 1995 included in this Form 10-KSB, into the Company's previously filed Registration Statement File No. 333-8333.

/s/Arthur Andersen LLP

Rochester, New York
December 30, 1996

Consent of Independent Public Accountants

As independent public accountants, we hereby consent to the incorporation of our report dated November 30, 1995 on the consolidated balance sheet of Paracelsian, Inc. (a Delaware corporation in the development stage) and subsidiary as of September 30, 1995, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the two years in the period ended September 30, 1995 and for the period from inception (April 15, 1991) to September 30, 1995 included in this Form 10-KSB, into the Company's previously filed Registration Statement File No. 333-14215.

/s/Arthur Andersen LLP

Rochester, New York
December 30, 1996

EXHIBIT 23.2

Consent of KPMG Peat Marwick LLP

Independent Auditor's Consent

The Board of Directors
Paracelsian, Inc.

We consent to incorporation by reference in the Registration Statement No. 333-8333 on Form S-3, and Registration Statement No. 333-14215 on Form S-3, of Paracelsian, Inc. of our report dated November 22, 1996, relating to the consolidated balance sheet of Paracelsian, Inc. and subsidiary as of September 30, 1996, and the related consolidated statements of operations, stockholders' equity, and cash flows for the year ended September 30, 1996, which report appears in the September 30, 1996 annual report on Form 10-KSB of Paracelsian, Inc.

/s/ KPMG Peat Marwick LLP
KPMG PEAT MARWICK LLP

New York, New York
December 27, 1996

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