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The UCSD Program in Technology and Entrepreneurship

UCSD CONNECT
BIOTECHNOLOGY/BIOMEDICAL CORPORATE PARTNERSHIP FORUM

Poster Session & Reception

Corporate 97 Partnership

TUESDAY, NOVEMBER 11, 1997
5:30 P.M. - 8:00 P.M.
SHERATON GRANDE TORREY PINES

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A UCSD CONNECT PROGRAM

1997

UCSD CONNECT Technology Financial Forum

Poster Session Presenter Index

This section includes one page descriptions of each poster session presenter at the 1997 UCSD CONNECT Biotechnology/Biomedical Corporate Partnership Forum. CONNECT welcomes all of the poster session presenters to this year's conference.

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Corporate Partnership 97

CyberChemics, Inc.

Address:	500 Boulevard South Huntsville, AL 35802	***Sector:***	Lead compound generation through advanced AI SAR de novo
Phone:	(205) 881-8805	***Attendees:***	Dr. Andrew Brittain, David A. Noever, Ph. D.
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Corporate Overview

CyberChemics, Inc. is a "next generation" drug design company that employs evolutionary computation techniques such as neural networks, artificial intelligence or expert systems, and genetic algorithms to deliver novel anti-infective therapeutics. These techniques allow for rapid identification, synthesis and testing of therapeutics for infectious diseases, while placing primary emphasis on the accelerated development of its *In Vitro*TM screening methods for multiple indications, i.e., antiviral, antimicrobial, ophthalmic, dermal, oral, systemic, topical antifungal, agricultural seed antifungals and crop protection, and small molecule antibiotic synergens.

CyberChemics, Inc. has facilities in Huntsville, Alabama and Stony Brook, New York

Products on the Market and under Development

De novo drug design utilizing:

- Small Molecule, Viral Combinatorial Chemistry (Building Block Libraries for Heterocyclic rings, Fused rings, Bycyclics, Carbonyls, Aromatics, L/D-Amino Acids, Nucleotides/Bases, Alpha/Beta D-sugars
- Proprietary Software for Evolving Peptide Anti-infective Drugs and predicting Protein Yield/Purity (Large-scale in-house library, 90% prediction from sequence data alone)
- Proprietary Software for Enhancing Transgenic output (Sequence-based, broad ranging across multiple expression systems from mouse, rat, bovine, sheep, bacterial, some plants>90% prediction of three-tier yields: high, low, medium for all organisms, identify and modify low yield segments for mutation and enhanced yield)
- Proprietary hardware for Industry Standard parallel Processing and *In Virtuo™* Discovery Libraries (64 parallel processor running supercomputer capable optimizations directly in chip hardware)

Partnering Objectives

CyberChemics, Inc's primary partnering objectives to provide evolutionary drug design tomajor pharmaceutical and agricultural companies.

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EnzyMed, Inc.

Address:	Oakdale Resarch Park 2501 Crosspark Road Iowa City, IA 52242	***Sector:***	Pharmaceutical & agrichemical discovery and development
Phone:	(319)626-5400	***Attendees:***	Kurt F. Heiar, President & CEO
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Corporate Contact: Ms. Marti Fleming, Director, Business Development

Corporate Overview

EnzyMed, Inc. is a global pharmaceutical and agrichemical discovery and development company founded in February, 1994. EnzyMed's proprietary BIOACTIVô technology integrates iterative enzymatic, microbial, and chemical processes to accelerate lead compound optimization. Our approach permits facile modification of diverse materials, from small molecules to complex natural products, creating novel derivatives inaccessible by traditional chemical methods alone. EnzyMed also specializes in lead generation with a focus on complementing both traditional and combinatorial chemistry drug discovery programs. Additionally, EnzyMed can apply its biocatalytic systems to generate and scale-up potential metabolites of molecules of interest.

EnzyMed's solution phase approach includes high-throughput, robotic synthesis and structural identification of derivatives. The Company continues to integrate artificial intelligence in its synthesis and screening efforts. EnzyMed has recently announced a number of additional corporate partnership agreements including Amylin Pharmaceuticals, Kosan Biosciences, and an extension of its initial agreement with Lilly Pharmaceuticals. EnzyMed is currently privately held and plans to fund its continued progress through stratetic alliances and, if appropriate, through private and/or public financing.

Partnering Objectives

EnzyMed is interested in multi-year joint discovery and development opportunities with pharmaceutical, animal health, and agrichemical partners. These opportunities can include lead optimization, lead generation, and the analysis of metabolic products. Typically, EnzyMed's corporate agreements involve traditional terms and conditions.

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EPIcyte Pharmaceutical, Inc.

Address:	8445 Camino Santa Fe Suite 102 San Diego, CA 92121	***Sector:***	transport technology
Phone:	(619) 554 0281	***Attendees:***	Robert E. Leach, CEO
Fax:	(619) 554 0288		Mich B. Hein, Ph.D., President
E-mail:	epicyte.com		Andrew C. Hiatt, Ph.D., Vice President, Research

Corporate Overview

EPIcyte Pharmaceutical, Inc. is a biotechnology company developing proprietary technologies to transport therapeutic agents directly to disease sites. The Company's Epithelial Transport technology can enhance the therapeutic index for a broad spectrum of drugs already in use, increasing efficacy while decreasing toxicity.

Epithelial Transport combines (1) a Transport Molecule, (2) a chemical linker which releases a drug at disease sites, and (3) a payload drug that is active against the disease. The critical first component, the Transport Molecule, homes to a receptor found only on the inner surfaces of epithelial cells. This unique receptor transports *into* or *through* epithelial tissues, where a wide range of diseases originate, including fifty percent of cancers, ninety percent of infections, and ninety percent of chronic inflammatory conditions. EPIcyte has filed three patent applications to protect its inventions related to Epithelial Transport.

The Company is also the exclusive licensee of patents and patent applications from The Scripps Research Institute for the production of antibodies in plants, a technology (known as "Plantibodies") that was previously invented by EPIcyte's founders. Plantibodies is a major advance for the cost-effective bulk production of antibodies, and has a wide range of possible medical, consumer, and industrial applications, including the efficient production of EPIcyte's Transport Molecules.

Partnering Objectives

EPIcyte plans to attach existing generic drugs as well as the proprietary compounds of collaborative partners to its Transport Molecules and linkers. A broad spectrum of already proven drugs is available to treat many diseases if the side effects of systemic delivery can be eliminated.

Specific therapeutic areas for partnering are anti-infectives and cancer. EPIcyte's technology also has broad applications for inflammation, diagnostics, and vaccines.

EPIcyte is also interested in discussing the use of its Plantibodies technology to produce large quantities of antibodies in plants.

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FINLAND TECHNOLOGY CENTER, LOS ANGELES

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Attendees: Ms Ritva Saarelainen, Consul
URL: http://www.tekes.fi

COMPANY OVERVIEW

Contacts: Ms Ritva Saarelainen, Consul, Technology Counselor, biotechnology (ritva@netcom.com)
Mr Bror Salmelin, Vice Consul, Technology Attaché, information technology (bror.salmelin@tekes.fi)
No of Employees: 3 (total 211)
Held: Governmental organization

ORGANIZATION DESCRIPTION

The Finland Technology Center in Los Angeles is an affiliate of the **Finnish Technology Development Centre, Tekes**, which promotes the development of new products and production methods within the industry of Finland. It plans, coordinates and finances technology programs and provides funding for applied technical research carried out by institutes and universities. Tekes also coordinates and offers national support for participation in international technology initiatives, including the European Union's research programs.

Tekes has a worldwide network of Technology Centers, which explore immediate and future business opportunities in such forms as partnerships, technology transfer and joint ventures. This international network is supported by national technology experts and a regional network of technology specialists in Finland.

The Finland Technology Center in Los Angeles Offers:

* Extensive knowledge of the Finnish industry, universities and research institutes
* Contacts to Finnish companies through fifteen regional offices in Finland
* Information and contacts to European Union's research programs
* Information on unique opportunities to expand your business to Europe
* Excellent channels to locate the right technology and business partner for your specific needs

Finland Offers:

* An exceptional high technology infrastructure
* An advanced information society to develop and implement R&D activities
* National technology programs with access to European research programs
* Various sources for funding industrial R&D and production
* Innovative high technology partners in industry
* Superior research in many fields
* Educated and committed work force

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DEVELOPMENT CENTRE
FINLAND

Gene Logic, Inc.

Address: 10150 Old Columbia Road
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Sector: Genomics

Attendees: Daniel R. Passeri, J.D.; Eric M. Eastman, Ph.D.

Corporate Overview

Gene Logic inc. uses a proprietary system, based on analysis of gene expression and gene regulation, to discover drug targets and drug leads. The Company's objective is to provide its pharmaceutical company partners with novel drug targets, drug leads and a suite of genomic database products to reduce the time, cost and risk associated with drug discovery. Gene Logic believes that by building its portfolio of partnerships it will generate current revenues and establish a long-term economic interest in the product pipelines of multiple partners through milestone and royalty payments. The company believes that this portfolio approach will maximize the likelihood of drugs being discovered and developed using its system.

Partnering Opportunities

The company has developed a proprietary, automated technology, known as READS (restriction Enzyme Analysis of Differentially-expressed Sequences), for capturing and analyzing the overall gene expression profile of a given cell or tissue type to identify drug targets. Using READS, Gene Logic rapidly generates a gene expression profile, or Molecular Topography, representing a quantitative snapshot of the levels of expression of essentially all the genes in a tissue sample. The company compares normal and diseased tissues through a series of Molecular Topography snapshots, a "molecular movie," to identify the changes in gene expression patterns that occur as the disease develops and progresses and to determine which genes are associated with the disease. The READS technology is accurate and highly sensitive, capable of detecting one mRNA copy per cell. By employing its READS technology in conjunction with its proprietary bioinformatics system Gene Logic can then prioritize the proteins encoded by these disease-associated genes as potential drug targets.

The Company is also developing its proprietary MuST (Multiplex Selection of Transcription factors) and Flow-thru Chip technologies. MuST enables the company to identify the nucleotide sequences of the transcription binding sites through which the expression of genes is regulated. The Flow-thru Chip for high-throughput analysis of changes in the expression of known genes. The company believes that the Flow-thru Chip will enable the development of high-throughput screening assays to evaluate the effects of compounds on the expression of disease-associated genes identified by READS. This technology represents a new approach to drug discovery and has the potential to accelerate substantially the identification of drug leads.

Gene Logic has designed and is continuing to develop a bioinformatics system to manage and analyze the information it generates and to interface with its databases, its partners' databases and databases in the public domain. This system enables the functional integration of Gene Logic's genomic data content with other proprietary databases, protein databases and strategic partner's chemical, screening and assay databases. Gene Logic's bioinformatics system provides the analytical tools necessary to enable the company to discover and prioritize targets for drug discovery.

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LIGAND PHARMACEUTICALS

Address:	9393 Towne Centre Drive San Diego, CA 92121	***Sector:***	Signal transduction drug delivery
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E-mail:	aday@ligand.com		

CORPORATE OVERVIEW

As a leader in signal transduction drug discovery, Ligand is developing new small molecule drugs through a combination of internal and collaborative programs. Ligand's goal is to discover, develop and market small molecule drugs for use in oncology and select areas of men's and women's health. To achieve this goal Ligand has combined focused internal drug discovery programs with a strategy involving in-licensing or acquisition of later-stage products in these medical specialties. In addition, Ligand as a result of seven collaborations with major pharmaceutical companies, has built a royalty-based business through the application of its technologies to primary care markets such as, metabolic, cardiovascular, inflammatory, and skin diseases.

PARTNERING OPPORTUNITIES

Ligand's proprietary position in the field of cytokine signal transduction affords us the opportunity to identify small molecule drugs that act by blocking or stimulating the intracellular signaling pathways utilized by medically important cytokines. As a result of an internal drug discovery program, focused on the JAK/STAT signal transduction pathway, we have developed a detailed understanding of JAK/STAT biology and complementary expertise in identifying the appropriate targets, cell lines and reagents that are critical for the construction and efficient operation of our high-throughput screens. Importantly, using our screening paradigm, we have been successful in identifying small molecule leads in all of the cytokine screens run to date.

This technology offers the ability to investigate a number of cytokines that are exciting immunomodulatory targets. A variety of immune disorders that are characterized by imbalanced T-helper cell responses serve as an example. The two cytokines that play a key role in regulating the proper balance of T helper cell responses are IL-4 and IL-12. The cell-mediated immune response, when hyperstimulated, is clearly associated with autoimmune diseases such as rheumatoid arthritis, multiple sclerosis, and diabetes. Thus, drugs capable of regulating IL-4 and IL-12 action would have a dramatic impact on the course of a variety of diseases for which current therapies are inadequate. It has been clearly demonstrated that the biological effects of IL-4 and IL-12 are mediated by the JAK/STAT signaling pathway. The effects of IL-4 are specifically mediated by Stat6, and those of IL-12 are specifically mediated by Stat4. *In vivo* evidence suggest that pharmacological intervention in the JAK/STAT signaling pathways activated by IL-4 and IL-12 offers the promise of drugs with novel mechanisms of action that would not only complement but also greatly improve on current therapies.

Ligand has extensive and proven expertise in the identification of pharmacological modulators of cytokine action through focused, JAK/STAT-based drug discovery programs. With a strong partner, we feel that we could leverage these strengths and develop novel therapeutics that act on cytokine signaling pathways such as IL-4, IL-12, IL-10, IL-2, or IFN-g.

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MEDIPOLIS LTD.

Address:	Kiviharjuntie 11 FIN-90220 Oulu, Finland	***Sector:***	Health care products
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COMPANY OVERVIEW

Medipolis Ltd. is a unique Finnish business and research community developing and producing health care products for the international market. Medipolis consists of a globally active group of companies that combine advanced research and state-of-the-art technology to manufacture technologically competitive, quality products as cost-effectively as possible. Medipolis works closely together with researchers and scientists in order to create new businesses and networks for (interactive) cooperation between industry, enterprises and research institutes. Our goal is to increase technology transfer and the commercialization of innovations. Medipolis is physically linked to the University of Oulu and the adjacent University Hospital and this gives us an excellent opportunity to integrate innovations and research. Research findings produced by our scientists are developed into commercial products by Medipolis companies, and the University Hospital acts as a test market as well as offers a valuable network for clinical trials.

TECHNOLOGY OVERVIEW

Medipolis excels in a number of technology fields. We are internationally recognized in the applied biotechnology and process technology. Other strong areas in the medical industry include health care business operations and innovative applications of telecommunications and electronics in health care products. We also have increasing business potential in developing and producing preventive, diagnostic and treatment methods for cardiovascular, metabolic, autoimmune and connective tissue diseases as well as cancer. Our companies have successfully advanced the fermentation technology with genetically modified organisms in the production of therapeutic and diagnostic proteins.

PARTNERSHIP OPPORTUNITIES

Medipolis is looking for highly innovative companies to commercialize some of our newest technologies and discoveries..

We offer our partners:

* Commercialization of innovations and access to the European market
* Partnership in R&D and GMP pilot production
* Assistance in starting up new businesses
* Assistance in hiring skilled employees
* An organized business infrastructure with easy access to universities, hospitals and related companies and industries as well as R&D funding sources in Europe
* OEM products and licensing
* Cost-effective facilities (GLP laboratory, production facility and office space) with synergetic benefits in our business environment

Key Facts

Year Established:	1990 in Oulu, Finland
Number of Employees:	40 companies with over 500 employees (over 5000 with the University of Oulu, Oulu University Hospital and Kastelli Research Center)
Legal Form:	Private corporation
Existing Partnerships:	Our existing partnerships include several projects with the Oulu University Hospital as well as biomedical companies and research centers in Finland and abroad

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MEGABIOS CORP.

Address:	863A Mitten Road Burlingame, CA 94010	***Sector:***	Gene Delivery
Phone:	(650) 697-1900	***Attendee:***	Simba Gill, Ph.D.
Fax:	(650) 652-1990		Vice President, Business Development

CORPORATE OVERVIEW

Megabios Corp. provides proprietary gene delivery systems and preclinical development expertise to help create gene-based therapeutics designed for the treatment or prevention of genetic and acquired diseases. The Company has developed several *in vivo*, non-viral gene delivery systems to address a number of potential therapeutic applications using a variety of therapeutic genes.

Megabios has developed a series of gene delivery systems each of which have multiple applications for various genetic and acquired diseases. These delivery systems employ cationic and neutral lipids as carriers for the DNA and effect its delivery to the desired cell or tissue type. Each of Megabios' gene delivery systems are classified by series based on the mode of administration and the cell site where the therapeutic is delivered. Megabios' *in vivo*, non viral gene delivery systems are designed to avoid the significant limitations of *ex vivo* (whether viral or non-viral) and *in vivo*, viral gene delivery. Furthermore, Megabios believes it has made progress in overcoming the limitations often associated with *in vivo*, non-viral gene delivery approaches. To date, Megabios has developed seven series of gene delivery systems, each with multiple potential therapeutic applications, and the Company expects to design additional series of gene delivery systems with different performance attributes and potential applications, further expanding the scope of its commercial opportunities. Megabios' delivery systems offer the following advantages:

- High-level and Long-term Gene Expression.
- Tissue-specific Gene Delivery and Expression.
- Ease of Handling and Administration, Stability and Scalable Manufacturing Methods.
- Improved Safety Profile.

PRODUCTS UNDER DEVELOPMENT

Megabios has developed a series of gene delivery systems each of which have multiple applications for various genetic and acquired diseases. Each of Megabios' gene delivery systems are classified by series based on the mode of administration and the cell site where the therapeutic is delivered. Megabios expects to enter into several corporate partnerships for each of its gene delivery systems in therapeutic areas including: pulmonary applications, immunotherapeutics for cancer, genetic vaccines and cardiovascular applications.

PARTNERING OBJECTIVES

Megabios expects to enter into corporate partnerships with a number of pharmaceutical and biotechnology companies to commercialize gene-based therapeutics using its proprietary gene delivery technology. This strategy is intended to enable Megabios to extend and leverage its technology platform, maintain its competitive advantage in gene delivery and preclinical development of gene therapies and create a portfolio of product development programs. In each relationship, Megabios will conduct preclinical development including DNA manufacturing and process development, the creation of novel DNA plasmids and formulations, formulation optimization, screening product candidates in animal models, and other pre-IND studies.

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MetaXen LLC

Address:	3910 Trust Way Hayward, CA 94545	***Sector:***	Drug optimization
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Contact person: Deebie Symmes, Director, Business Development
(510) 259-6825
Deebie_Symmes@metaxen.com

Corporate Overview

MetaXen is a biopharmaceutical company developing a drug pipeline for clinical partnering and engaging in partnerships in lead. MetaXen uses an interdisciplinary approach to drug optimization known as ***parallel lead optimization*** which advances candidates to the clinic faster and at lower cost than is currently achievable through traditional optimization strategies. MetaXen's team provides a state-of-the-art skill set in:

- Proprietary computational approaches for optimizing compound potency, specificity, and pharmacological profile
- Medicinal and combinatorial chemistry
- Protein engineering, cloning, expression, and production
- X-ray crystallography
- MetaXen employs proprietary computational methods in machine learning that predictively model and integrate data across these areas. MetaXen's goal is to be able to predict, prior to synthesis, key aspects of a target molecule's ADME/PK profile.

Programs

In addition to its core technology, MetaXen is currently conducting six drug development projects focused on five therapeutic areas:

- Chronic and prophylactic antithrombotic treatments based on inhibitors of PAI-1 (plasminogen activator inhibitor) that enhance clot break-up without the bleeding side-effects associated with other clot dissolving drugs.
- Treatments for metastatic cancer based on inhibitors of PAI-1 (plasminogen activator inhibitor type I).
- Treatments for multiple drug resistant tumors based on inhibitors of P-gp (P-glycoprotein) inhibitors and/or MRP (multidrug resistance-related protein).
- Anticancer treatments based on dual topoisomerase inhibitors (1 and 2).
- Drug adsorption enhancers for oral and percutaneous absorption based on local inhibition of P- glycoprotein

Partnership Objectives

MetaXen engages in partnerships with pharmaceutical and biotechnology companies to develop hits from its partners' screening efforts into development candidates based on MetaXen's core parallel lead optimization technology. In addition, the company is seeking development and marketing partners for the programs.

Web Site

Please visit our Web Site at www.metaxen.com for more detail and for contact information.

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NovaDx

Address:	11526 Sorrento Valley Road Suite B San Diego, CA 92121	***Sector:***	Proteomics & functional genomics technologies
Phone:	(619) 793-5975	***Attendee:***	Fereydoun Sajjadi, Vice President, Research and Development
Fax:	(619) 793-5978		

Corporate Overview

NovaDx is a biotechnology company focused on proteomics and functional genomics technologies. Specifically, NovaDx has developed a unique high capacity two-dimentional gel electrophoresis system which separates complex protein mixtures such as human serum, cerebral spinal fluid, and urine. The company has also identified several candidates relevant to bone metabolism from an osteoclast subtraction cDNA library.

As these technologies have both diagnostic and therapeutic applications, NovaDx has divisions focused on each area. The division in San Diego (15 employees) is primarily focused on generating therapeutic targets with an initial emphasis in osteoporosis. The Denver division (formerly Reaads Medical, 35 employees), focuses on diagnostic development and currently sells diagnostic blood tests for liver disease, vascular disease, and autoimmune diseases with sales of $2.5 million.

Products On The Market And Under Development

The company currently manufactures and markets worldwide 17 FDA cleared tests which use proprietary immunological technology. In addition, one new diagnostic test which measures hyaluronic acid has been developed in collaboration with Chugai Pharmaceutical Co., Ltd., of Japan who is also an equity shareholder of the company.

Diagnostic tests in development include Chondrex, an arthritis blood test. Abbott Laboratories and Metra Biosystems have been granted semi-exclusive licenses to manufacture and market the Chondrex arthritis test. NovaDx receives up-front and milestone payments as well as royalties. The company is also developing novel osteoporosis blood tests.

Partnering Objectives

NovaDx's proteomics and functional genomics technologies are amendable to a variety of partnering strategies including non-exclusive licensing opportunities, research-oriented alliances, and target- or project-specific collaborations. NovaDx is also seeking collaborators for its osteoporosis diagnostic program.

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Pacific Pharmaceuticals

Address:	6730 Mesa Ridge Road, Suite A San Diego, CA 92121	***Sector:***	Targets unique technologies and compounds in the healthcare sector for in-licensing
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Corporate Overview

Pacific Pharmaceuticals, Inc. is a biopharmaceutical company which targets unique technologies and compounds in the healthcare sector for in-licensing. The Company manages these products through pre-clinical, clinical development, and regulatory approval to position them for successful commercialization. The Company will pursue a broad scope of indications with large market opportunities, with an initial emphasis on cancer therapy. Alliances with corporate partners for sales and marketing will provide the Company with revenue streams to fund further development.

Pacific Pharmaceuticals holds rights to two proprietary technologies, the first is a drug for photodynamic therapy (PDT) which has a variety of applications, and the second is an exclusive license to a cancer immunotherapy for the treatment of metastatic cancer.

The Company has successfully developed the Periodontal Tissue Monitor Kit (PTM), which is approved for use world-wide and marketed through distributors.

Pacific Pharmaceuticals Core Technologies

Boronated Porphyrin Compounds (BOPP)

Pacific Pharmaceuticals has a photodynamic therapy agent that is scheduled to enter a Phase II clinical trial for oncology under an FDA IND in 1997. PDT is an emerging mode of treatment for cancer which uses the combination of light- activated drugs and nonthermal light to achieve selective, photochemical destruction of cancer cells with minimal effect on surrounding normal tissues. This technology may offer advantages over other existing PDT technologies in terms of selectivity (the ability to specifically target tumors) and faster activation of the drug resulting in shorter procedure times.

Since BOPP is selectively taken up in rapidly growing tissues, there may be other applications in treating many hyperproliferative disorders, such as vascular and coronary restenosis following angioplasty or bypass surgery, psoriasis and rheumatoid arthritis. PDT therapy is being studied in academic centers for conditions as diverse as acute macular degeneration of the retina, removing microbial contaminants from blood and cleansing bone marrow of leukemic cells.

Cancer Immunotherapy

Treatment for Metastatic Cancer

The Company's proprietary Cancer Immunotherapy which is scheduled for clinical trials in 1998, involves the co-injection of an infrared absorbing dye (photosensitizing drug) and an immune system stimulant (immunoadjuvant) directly into a tumor followed by illumination with an infrared laser. This therapy is intended to produce tumor tissue destruction in the primary area of treatment. An important distinction of this therapy, however is that in the presence of the immunoadjuvant, the treatment triggers an immune reaction in the patient which may also destroy metastases. The Company believes that the potential for this therapy to destroy metastatic tumors offers an improved methodology for treatment of cancers such as breast, lung and prostate, particularly in more advanced stages.

The Periodontal Tissue Monitor Kit (PTM)

The Company's proprietary PTM Kit is an eye readable, chairside disposable test for use in the dental office to assist practitioners in the early detection, diagnosis and monitoring of periodontitis, a severe form of periodontal disease. According to the American Dental Association, periodontitis affects 33% of the world-wide population and 24% of 18 to 64 year olds in the U.S. each year. It is the most common cause of tooth loss in adults.

PTM Kit is approved for sale in U.S., Europe, Canada and China and awaits regulatory approval in Japan. Pacific Pharmaceuticals has entered into marketing agreements with leading dental product companies to effectively market PTM Kit throughout the world. The Company has a distribution agreement with Steri-Oss, a leading dental implant company, to distribute PTM Kit in North America and other countries, excluding Europe and Japan. The PTM kit was launched for sale in Europe in April 1997 by Hawe Neos Dental and in October 1997 in the United States by Steri-Oss. Shofu Inc. is presently conducting clinical trials in Japan and will market the product when approval is obtained.

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Pangene Corporation

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E-mail:	david_zarling@qm.sri.com		

Corporate Overview

Pangene is commercializing recombination and gene targeting products & technologies to produce superior recombinant cells, proteins, and animals. Pangene is reprogramming genes by homologous recombination. Enhanced homologous recombination (EHR) methods were discovered and developed at SRI International, formerly Stanford Research Institute, a non-profit research institute in Menlo Park, California. Pangene Corporation, founded in 1993, is a privately held for-profit spin-off from SRI.

Pangene's proprietary homologous gene targeting and recombination methods efficiently target genes to permanently modify them at their natural locations in chromosomes. In contrast, other current commercial recombination methods use uncontrolled recombination processes which result in random integrations of added genes, commonly referred to as random transgene additions. Pangene uses compositions of DNA vectors and recombination proteins that mediate homologous targeting and reprogramming methods which can modify virtually any selected gene(s) or polygenic disease network. These genetic reprogramming methods present significant advances over current random transgene addition technologies and enable commercialization of a range of new homologous recombination based products.

Pangene is operating in dedicated and fully equipped facilities leased from SRI International. The Company is co-developing and licensing EHR technologies.

Products under development

Recombinant Cells, Recombinant Proteins, and Recombinant Animals.

Recombination based genetic reprogramming tools, cell products and therapies provide effective means to treat a variety of genetic and acquired disorders. The current limitations of random transgene addition strategies are significant. Pangene's EHR genetic reprogramming is able to fulfill the significant and currently unmet market needs for efficiently producing genetic modifications in cells. Pangene's products in development address debilitating and life threatening diseases by recombination based methods.

Pangene's therapeutic products include recombinant protein producing cells and animals. Recombination methods are being employed for production of recombinant genes in transgenic organisms, for producing superior transgenic livestock, and animal models of polygenic human diseases. Strategic alliances with corporate partners in transgenics and genomics are being formed. This includes new recombinant mouse phenotypes enabling discovery of gene functions and screening the effects of drugs.

Areas of Partnering Interest

Functional genomics, transgenics, and therapeutics.

Current Corporate Partner(s)

Plant Transgenics.

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PHERIN PHARMACEUTICALS

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E-mail:	kevin@pherin.com		

CORPORATE OVERVIEW

Pherin Pharmaceuticals, Inc. is focused on the discovery and development of innovative chemical compounds called vomeropherins. Vomeropherins are applied within the nasal passage where they bind to specific chemoreceptors and generate noninvasive bioelectric impulses that are transmitted through pathways directly to the brain. These compounds act rapidly, show efficacy in extremely low dosages and do not need to enter the brain or the general circulation to generate a therapeutic response. Based upon its proprietary technology and research findings to-date, the Company believes it is strongly positioned to develop a portfolio of vomeropherin-based therapies with better therapeutic and side-effect profiles than drugs currently marketed for various disorders of the CNS and endocrine systems. To the Company's knowledge, no other companies possess proprietary rights to practice the technology.

Pherin has gathered highly significant human data on some of the therapeutic properties of vomeropherins and is moving forward with development work on two compounds. Other promising vomeropherins have been identified and are being evaluated for their CNS and/or endocrine system effects. Once lead compounds are identified they will be moved forward in development to the point where they can be profitably licensed to major pharmaceutical companies for later stage clinical development and marketing.

PARTNERING OBJECTIVES

Pherin is seeking a development and licensing partnership to develop its lead compounds for acute anxiety, social phobia and simple phobias.

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The UCSD Program in Technology and Entrepreneurship

Corporate 97 Partnership

PROMOTION 13 - MARSEILLE-PROVENCE

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Phone: 011-33-4-91-39-56-39 (France)
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(415-693-9501 (San Francisco)

URL: www//investinprovence.com

Attendees: Christine A. DeLalio, Philadelphia Office;
Bruce Gammill, San Francisco

CORPORATE OVERVIEW

Marseille - Provence, is the heart of Southern Europe, a market of 173 million people. It is also the economic center of the fast growing Mediterranean Basin, a market of an additional 186 million. Economic experts all agree on one thing: the growth of Southern Europe and of the Mediterranean Basin will be far greater than that in Northern Europe. These two markets in the south will experience a veritable explosion with a doubling of the population within twenty years!

If your company is looking to expand its international activities into the most dynamic European markets, CCIMP is in contact with the companies and institutions which can be instrumental to your expansion plans.

ON THE ROAD TO BIOTECHNOLOGY

As a European educational and research center, the Greater Marseille Area has decidedly chosen to bet on the future of advanced technology. In the field of health care, biotechnology applications have largely benefited from the major advances that have been made in the fields of molecular and cellular biology, cancerology, virology, AIDS research, developmental genetics, as well as neuroscience, endocrinology, crystallography and artificial intelligence applied to medical research.

The Marseille/Aix-en-Provence scientific community has largely benefited from French decentralization measures and is becoming the undeniable heart of advanced technology in Southern Europe.

The confirmed expertise of the Marseille area in the fields of advanced mechanical engineering, computer science and electronics have laid the foundations for a dense biotech and medical engineering network.

MICRO-ELECTRONICS RESEARCH: A CONCENTRATION OF EXCELLENCE

Marseille is France's largest research center after Paris, with a number of leading specialist in materials engineering, thin film technologies, surface processing and interface design. No fewer than thirty laboratories are working on microelectronics research, form semiconductor and dielectric heterostructures to laser materials processing, plasma technologies, signal processing or micro-instrumentation, not to mention the work being done in conventional electronics.

A team of 25 specialists is available to be your sole source contact point for information, assistance and advice for advancing the prospects of your venture through Marseille -Provence.

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SHAMAN PHARMACEUTICALS

Address:	213 East Grand Avenue South San Francisco, CA 94080-4812	***Sector:***	Novel drugs
Phone:	(650) 952-7070	***Attendees:***	Lisa Conte; Gina Morhun; J.D. Haldeman
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CORPORATE OVERVIEW

Shaman Pharmaceuticals discovers and develops novel pharmaceutical products for major human diseases by isolating active compounds from tropical plants with a long history of medicinal use. The company currently has approximately 100 employees, 75 of whom are employed in research and development. Shaman is a publicly traded company on Nasdaq (SHMN).

PRODUCTS UNDER DEVELOPMENT

- Provir, an oral product for the treatment of AIDS-related, traveler's, in-hospital and other watery diarrhea
- Virend, a topical antiviral for the treatment of herpes
- Nikkomycin Z, an oral antifungal for the treatment of systemic fungal infections
- SP-134101, an oral product for the treatment of Type II diabetes

Shaman also maintains an active Type II diabetes research program which serves as the basis for its collaborations with Lipha s.a., a wholly-owned subsidiary of Merck KGaA, Darmstadt, Germany and Ono Pharmaceutical Co., Ltd. of Japan.

PARTNERING OBJECTIVES

Shaman is currently focused on the out-licensing opportunity for Provir for the treatment of AIDS-related diarrhea. The Company recently released positive Phase II data in a double-blind, placebo controlled trial for this indication. Shaman is interested in out-licensing this indication worldwide, while retaining some marketing/co-promotion rights in the U.S. Because of this focus, Shaman is interested in entering into discussions with other companies with AIDS therapeutics or products utilized for AIDS-related opportunistic infections.

Shaman will seek to out-license for subsequent indications for Provir as additional clinical data become available.

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