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March 10, 2009

Welcome CONNECT Supporters and Friends:

On behalf of CONNECT, I am pleased to welcome you to the 2009 Life Science Venture Roundtable. The Venture Roundtable series aims to introduce you to early stage technologies being developed locally. Today we'll show you five technologies that represent San Diego's innovative and entrepreneurial early stage life science companies.

The companies selected to present today have survived a rigorous screening process conducted by two separate panels of industry experts, venture capitalists and business leaders. First, the Screening Committee volunteered their time to screen the applicants and provide coaching to the selected companies in preparation for today's presentations. Next, the Distinguished Judges reviewed presentations by the ten best applicants and narrowed down the competition to the five finalists. The time and expertise of these individuals is crucial to the integrity and success of this program, and CONNECT thanks the committee members for generously donating their time.

CONNECT would like to offer a special thanks to our lead sponsor and host, Morrison & Foerster and as our supporting sponsors, Ernst & Young and Tavistock Life Sciences for supporting our efforts to present today's technologies which are poised to become the businesses of tomorrow.

I hope that you enjoy today's program, and look forward to your participation in future CONNECT events.

Sincerely,

Whing plath

Duane Roth CEO, CONNECT

### Agenda

### Noon: VIP Luncheon

Dr. David Brenner, Chancellor for Health Sciences, Dean, UC San Diego School of Medicine

### 1:30pm: Introduction and Welcome Remarks

David Hale, Chairman, Hale BioPharma Ventures LLC

Terry Moore, Executive Director, Morrison & Foerster Venture Network; Chairman & Founder, The VC Roundtable

### 1:35pm: 2008 Venture Fund Activity

Jodi Hernandez, Partner, Ernst & Young

### 1:45pm: Company Presentations

(15 minute presentation followed by 15 minute Q&A session)

1:45 – 2:15pm	BeneChill		
2:15 – 2:45pm	Genalyte Inc.		
<i>2</i> :45 – 3:15pm	MediVas LLC		
3:15 – 3:30pm	Break		
3:30 – 4:00pm	Ridge Diagnostics, Ind		
4:00 – 4:30pm	EyeCyte, Inc.		

### 4:30 - 4:45: Concluding Remarks

### Terry Moore Executive Director, Morrison & Foerster Venture Network; Chairman & Founder, The VC Roundtable



### 2009 Life Science Venture Roundtable Screening Committee

Jennifer Brown	Executive Director, Life Sciences, Assurance and		
	Advisory Business Services, Ernst & Young		
Steve Flaim	CONNECT Entrepreneur-in-Residence		
Chris Fuglesang	Senior Executive, Tavistock Life Sciences		
William Gerhart	CONNECT Entrepreneur-in-Residence		
Rilus Graham	Venture Banking Officer, Square One Bank		
Mike Krupp	CONNECT Entrepreneur-in-Residence		
Terry Moore	Executive Director, Morrison & Foerster Venture		
	Network; Chairman & Founder, The VC Roundtable		
Ruprecht@on Buttlar	Director, Commercialization and Financing Programs		
	CONNECT		
Ilana Brand	Director, Innovation Programs, CONNECT		

### 2009 Life Science Venture Roundtable Distinguished Judges

Roy Cosan	Vice President, Johnson & Johnson
Hal DeLong	Business Advisor, William J. von Liebig Center at UC San
	Diego
Paul Laikind	GVM BioBusiness Consulting
Joel Martin	CoFounder, Avant BioVentures
James Mullen, III	Partner, Morrison & Foerster LLP
Terry Moore	Executive Director, Morrison & Foerster Venture
	Network; Chairman & Founder, The VC Roundtable
John Rodendrys	Senior Managing Director, Leading Ventures
Killu Sanborn	CONNECT Entrepreneur-in-Residence; Estuzk Partners
Ken Selzer	Venture Partner, Finistere Ventures
Jeff Southerton	Executive Director, Strategic Alliances, Pfizer
Ruprecht ớ n Buttlar	Director, Commercialization and Financing Programs
	CONNECT

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## CONNECT and the 2009 Venture Round Table

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### Presenting Companies

- Pg. 8 Benechill
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- Pg. 20 Ridge Diagnostics
- Pg. 23 EyeCyte, Inc.



Company or Organization Name: <b>BeneChill</b> Address: 10060 Carroll Canyon Rd, Suite 100 Venture Roundtable Presenter: <b>Allan Rozenberg, PhD</b>
Telephone: 858-342-0458 Email: arozenberg@BeneChill.com Website: www.BeneChill.com
Industry/Sector of Investment Opportunity: Medical Device Has a Company been Established? If so, when and what is the legal form: C-Corp Technology Readiness Level: Pivotal Trial
Patents Awarded: None Patents in progress: 8 Capital Raised: \$18M - VC and Private Current Investors: Medventure, NGN Capital, Solon Foundation Revenue & # Employees: 0, 10 employees
Amount of Funding sought: \$12-15M

### **Company Overview**

BeneChill's mission is to develop novel cooling technologies to improve patient outcomes after acute ischemic events such as cardiac arrest, stroke, and traumatic brain injury.

### **Technology or Product Description**

The RhinoChill System has been developed as a means of initiating and providing therapeutic cooling with limited delays. It is non-invasive, easy-to-use, portable, and requires no external power. RhinoChill is designed to overcome limitations of other temperature reduction technologies—limitations that prevent early and rapid initiation of patient cooling.

The RhinoChill System uses the nasal cavity for cooling. This is advantageous due to the nasal cavity being:

- A natural orifice into the body
- In close proximity to the brain
- A natural heat exchanger

Use of the nasal cavity enables treatment by non-specialized medical personnel using non-sterile technique in any environment.

### Competition

There is no direct competition for the RhinoChill device.

### Sustainable Advantage

BeneChill has developed a unique technology with the potential to profoundly improve the survival and outcome of cardiac arrest patients.

### **Marketing Plan**

Plan to go to market in Europe in January 2010

### **Market Size**

Industrialized worldwide market is 550,000 per year.

#### **Revenue Projections**

2010: \$8M, 2011: \$26M, 2012: \$52M, 2013: \$73M, 2014: \$89M

#### **Management Team**

#### Denise Barbut MD MRCP CEO

#### Part time

Denise Barbut received her medical training in the United Kingdom, at the Hammersmith Hospital, the Brompton Hospital and the National Hospital for Nervous Diseases, Queen Square in London. Dr. Barbut is board certified in Internal Medicine and Neurology in the UK, and is a member of the Royal College of Physicians of Great Britain. Her former position was Associate Professor of Neurology and Director of the Stroke Research Program at Cornell University Medical College and Attending Physician at New York Hospital. She has published extensively in the fields of stroke and the neurologic complications of cardiac and vascular surgery. She is the founder of several companies including Coaxia, and is an expert in neuroprotective mechanisms and stroke. She has published over 100 papers and holds over 150 patents.

30 Years in Sector Start ups: Embol-X, Coaxia, BeneChill, Sage, Sarentis

#### Allan Rozenberg, PhD COO Full time

Allan Rozenberg has over 20 years of experience in the research and development of biomedical instrumentation used in the monitoring, testing and delivering of therapy to critically ill patients. Most recently he was the Director of Biomedical Engineering at Metracor Technologies. Prior to that he was a Principal Scientist at Alliance Pharmaceutical Corp. where he worked on devices for liquid ventilation and pulmonary delivery of perfluorocarbons. Dr. Rozenberg holds a Bachelor of Arts degree in Biomedical Statistics, a Master of Science in Health Informatics and a Doctorate in Biomedical Engineering from the University of Minnesota.

#### 20 Years in Sector

Start ups: Via Medical, Metracor, Provatek, BeneChill

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### **Company Overview**

Genalyte Inc. has developed a breakthrough label-free, real-time diagnostic platform with a disposable sensor chip capable of high levels of multiplexing. This diagnostic engine merges core technology disciplines encompassing silicon photonics, optics, biochemistry and micro-fluidics. The market target is primarily clinical diagnostics with research & drug discovery representing early revenue opportunities.

### **Technology or Product Description**

At the core of the Genalyte diagnostic engine is a consumable biochip that enhances the effect of a single molecule interaction hundreds of thousands of times while providing a real-time kinetic readout on a highly multiplexed assay. The Genalyte platform makes possible the parallel multiplexed screening of tens of interactions in real-time, encompassing protein-antibody, protein-protein, protein-ligand or protein-drug, enzyme-substrate screening with multi-analyte diagnostic assays. Significantly, the incremental cost for the addition of an immunoassay on a Genalyte panel is negligible. The miniature biosensor enables large arrays and real-time measurement that remains linear 8 logs of dynamic range.

### Competition

MARKET SIZE: \$400M, Immediate Opportunity

Research Use Only (RUO) label-free protein characterization platform

Corning: Low sensitivity (10ug/ml), end-point readout, expensive platform (\$1M), High throughput (96 plate format) Biorad: Low sensitivity (100ng/ml in serum), expensive consumable (>100\$)

Forte Biosystems: Low sensitivity (500pg/ml), one assay/well only, cheap consumable (8\$)

Biacore/GE: Low sensitivity (100pg/ml), expensive consumable (120\$), large sample size (350ul), established player, broad range of instrumentation platforms

Genalyte: High sensitivity (10pg/ml), 6 logs of dynamic range, small sample size (<25ul), very cheap consumable (<5\$), truly multiplexed (32-1000's), kinetic readout (determination of ka & kd), broad applications including chemical synthesis, whole cell assays, RT-PCR, protein-protein interactions, sequencing/genotyping & small molecule screening.

MARKET SIZE: >\$13B, Requires FDA Approval

Clinical Diagnostics

Abbott- AxSym: Chemiluminescent, max 25 parallel tests alequoted.

Beckman Coulter - Access: Chemiluminescent, 65 parallel tests alequoted.

BioMerieux – mini/VIDAS: Fluorescence, 30 parallel tests alequoted.

Orthoclinical Dx - Vitros: Chemiluminescent, 20 parallel tests alequoted.

Roche - Cobas: Electroluminescent, 18 parallel tests alequoted.

Siemens - Immulite, Advia: Chemiluminescent, 18 parallel tests alequoted.

Roche Lightcycler: Moderate to high complexity assay only for molecular Dx.

Genalyte: Homogeneous Assay, truly multiplexed (32-1000's), very cheap consumable, <25ul sample size, label-free (easy to develop panels, eliminate cross-reactivity issues of typical label based assays), Rapid time to result (<6min.), can scale to address Point of Care and Central Lab requirements.

### Sustainable Advantage

- Proprietary consumable and optical scanner.
- Highly multiplexed panels leading to "Decision-Tree on a chip"
- Rapid time to result (<6-8min.)
- Low cost consumable
- Simple to use homogenous format (roadmap to CLIA waived)
- Broad assay types (genomic, proteomic, Ab-Ag)

### **Marketing Plan**

- 2010: Address RUO markets for high volume drug screening applications
- 2011: Address RUO markets for gene expression, genotyping applications
- 2012: Deliver 3rd party content on Genalyte platform for near term & point of care diagnostics in partnership with industry partner
- 2013: Deliver proprietary content (clinically relevant) on Genalyte platform

### Market Size:

2010 market size estimates:

- RUO: \$400M (toxicity and drug screening)
- Molecular Dx: \$5.2B
- Immunoassay Dx: \$8.0B

### **Revenue Projections:**

Research Use Only (RUO):

- 2010 \$4.7M
- 2011 \$14.6M
- 2012 \$31.1M

Clinical Diagnostics:

- 2012 \$10M
- 2013 100% growth feasible/annum through line extension & new panels

### **Management Team:**

Yash Singh, CEO, 20 years in semiconductor industry chip design & manufacturing, 3 successful startups Dr. Lawrence Gunn, CTO, 10 years in silicon photonics, > 80 patents issues and >20 in process, 1 successful startup Dr. Martin Gleeson, VP Assay Technology, >20 years in Life Sciences, on board of Zygem (reagent sample prep start-up), prior Dir of Research lab (Life Technology), past experience at SIBIA, Ligand.

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Company or Organization Name: MediVas LLC (incubator for spin-off company called MONA Technologies) Address: 6275 Nancy Ridge Drive, San Diego, CA 92121 Venture Roundtable Presenter: Kenneth Carpenter, Founder, Chairman and CEO Telephone: 858-622-2005 Email: kencar@medivas.com Website: www.medivas.com Industry/Sector: Biotech/pharmaceutical Has a Company been Established? If so, when and what is the legal form: We have existing shell California corporations, one of which will be used to house MONA Technologies, Inc. (MONA is MediVas Oncology Nanoparticles utilizing Albumin). Technology Readiness Level: Have completed preclinical testing including animal studies. Ready for cGMP manufacture of test materials, preclinical testing of cGMP materials, preclinical animal study and NDA application within 12 months. Patents Awarded: More than 30 patents Patents in Progress: Approximately 30 applications in process Amount of Capital Raised and Source: Exceeds \$60 M, Japanese investors (corporate and private.) Current Investors: Two largest investors are Japanese (one corporate and one private investor). Annual Revenue: \$77 M over past twelve years; \$7 M thus far in 2009. Number of Employees: 25 in US and 2 in Asia. Amount of Funding Sought: (\$10 M to complete NDA approvals for two products and complete Phase I on one product

### **Company Overview**

MediVas LLC was formed in 1998 as an incubation company. MediVas has spun-off three companies and has licensed its technologies to nine companies. MediVas licensed its original polymer technology from Cornell University and still works closely with Cornell on the development of new polymers, while also developing new polymers and commercializing the polymers developed. MediVas holds worldwide exclusive rights to the polymer technology licensed from Cornell.

The company's primary current activities involve the use of its novel bioabsorbable and biocompatible polymeric drug and biologic delivery system. The company has licensed its technologies for a wide variety of applications, from OPCAB surgery to DES coatings to the delivery of nucleic acids. MediVas has licensed its technology to Fukuda Denshi Corporation, Guidant Corporation, Boston Scientific Corporation, Merck, Wyeth, DSM Biomedical, Afmedica Corporation. Blue Medical Devices NV and others.

### **Technology or Product Description**

MediVas novel biomaterials allow for the stabilization and delivery of fragile biologics. This is possible due to the nature of the novel MediVas biopolymers, which are constructed of essential amino acids and carbon spacers (diols and diacids) that are degradation products of sugars and fats. This produces a protein-like polymer which is both biodegradable and biocompatible. While having many characteristics of a protein, the polymer is constructed in a manner which does not induce an immune response.

The MONA products are nanoparticles (average size of 150 nm) that incorporate insoluble oncology drugs such as the taxane drug group. The insoluble drug is rendered soluble by the addition of Human Serum Albumin (HSA) bound to the outside of the particles. This process allows the drug to be delivered without a steroid or growth factor co-therapy which is the standard of care to counteract the hypersensitivity to the toxic agents used to delivery the insoluble on-cology drugs. This co-therapy is expensive, time consuming and often difficult for the patient to tolerate.

MediVas has developed two products using this technology. One product, MVNp-27, is a fully soluble Paclitaxel, similar to Abraxane<sup>®</sup> from Abraxis Pharmaceuticals. The second product, MVNp-28, is a fully soluble Docetaxel product. This product is aimed at the patented drug Taxotere<sup>®</sup> from Sanofi-Aventis, which is scheduled to come off patent in the US in 2012.

### Competition

Many companies are making generic version of Paclitaxel, but only Abraxis has a product which does not require the co-therapy and as such, Abraxis is the leader in the sales of a Paclitaxel product for its approved indication (treatment of breast cancer after failure of combination chemotherapy for metastatic disease or relapse within 6 months of adjuvant chemotherapy.)

However, the process used by Abraxis to produce its Abraxane product was successfully challenged in court by Elan Pharmaceuticals which won a \$55 M settle plus cross-license agreement (Abraxis is appealing.) In addition the process used by Abraxis/Elan, which involved direct binding of HSA to the insoluble drug, does not work with Docetaxel, since the drug does not have a binding site for HSA. A similar problem exists for using the Abraxis/Elan technology for many other of the insoluble oncology drugs.

Abraxis had sales of approximately \$400 M in 2008 and has a current market valuation of approximately \$3B.

### Sustainable Advantage

The MONA technology provides a novel, patented method to solubilize virtually any insoluble oncology drug, thereby giving MONA the opportunity to produce a wide range of co-therapy free generic oncology products.

Since the APIs in the MONA drug candidates (Paclitaxel and Docetaxel) are already approved and proven to be effective, and since the MONA technology has been shown to be capable of delivering the insoluble oncology drug safely into the bloodstream of animal models, they have an extremely high likelihood of success in the clinic. In addition, MONA would follow the lead of Abraxis in filing for 505b(2) NDA applications, which require much shorter and smaller clinical studies for approval.

Finally, the MONA technology is based on MediVas polymer technology which is well protected by patents, patent applications and trade secrets which protect the MONA technology and provide a clear path to commercialization of the entire MONA product line.

### **Marketing Plan**

MONA intends to take MVNp-27 through to an issued NDA, at which point it would license this product in Asia. We have already had numerous discussions with pharmaceutical companies in China, Taiwan and India regarding licensing of Asian rights to MVNp-27. All three countries require a US FDA approved NDA before they will license the rights to the product. We anticipate upfront license revenue from these countries to be approximately \$5 million. In addition we will seek a non-Asian licensee for the product, possibly Bristol Myers Squibb, whose product Taxol<sup>®</sup> has been overtaken by Abraxane<sup>®</sup>.

At the same time we intend to take MVNp-28 through the NDA approval process and into a Phase I safety study by Q1 2010. We anticipate a relatively small safety study requirement based on the fact that Abraxane only required a

60 person Phase I trial. After successful completion the Phase I trial, we will evaluate an early exit via a license of the entire MONA technology to a major pharmaceutical company or large generic drug company.

If the determination is made that we should continue on through a Phase II/III equivalence trial in order to maximize the value of the technology, we would do so. Abraxane received approval for its first (and so far only) indication with a 450 person Phase II/III equivalence trial, with about two thirds of the patients included in studies outside the US.

After a successful Phase II/III trial, we will again evaluate whether to license or sell the technology or to proceed into the market with the product.

### **Market Size**

The current market for Taxane drugs worldwide exceeds \$10 billion. Sales of Taxotere<sup>®</sup> alone exceeded \$4 billion in 2008. Sales of all insoluble oncology drugs exceed \$44 billion annually. Sales of steroid and growth factor co-therapies for pretreatment of insoluble oncology drugs were approximately \$750 million in the US in 2007.

Demand for "super-generic" drugs, those being generic drugs that been reformulated and re-patented, is the most rapidly growing area of the pharmaceutical industry. Every major pharmaceutical company now has a generic drug division. This creates a huge demand for technologies such as MONA which can produce a series of new products with relatively low development costs and a high likelihood of attaining market approval.

### **Revenue Projections**

These projections assume taking MVNp-28 into the market with no early exit and no other products entering the market.

(In \$Million)	2009	2010	2011	2012	2013
MVNp-27 Asia licenses 5					
MVNp-28 Asia licenses		8			
Initial MVNp-28 Launch				40	
Early market penetration					135

### **Management Team**

Chairman and CEO Kenneth Carpenter, full time, 17 years in the medical and biomedical fields, eleven years at Medi-Vas. Third start up company.

President and COO Joseph Dowling, full time, four years in biomedical field, four years with MediVas. Prior experience as an investment banker with CitiGroup, Boston Consulting. Second start up company.

Chief Scientific Officer William Turnell, full time, 22 years in the biomedical field, five years at MediVas. Second start up company. Previous experience includes Acambis and Roche and academic appointments at Cambridge University and the University of Paris.

Director of Biology Catherine Charles, full time, sixteen years in biomedical research and development, four years with MediVas. Prior experience includes research positions at UCLA and with numerous San Diego based biotech companies.

Director of Polymer Chemistry Zaza Gomurashvili, full time, 19 years in polymer researcher and development. Dr. Gomurashvili was one of the developers of the original PEA polymers in the Republic of George in the early 1990s. He later held academic and research positions in Germany and Canada before joining MediVas six years ago. This is Zaza'a first start up company.

Director of Biochemistry Jeffrey Anderl, full time, seven years in research and development of biochemical compounds at Amgen before joining MediVas three years ago. First start up company.

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Company or Organization Name: <b>Ridge Diagnostics, Inc.</b> Address: 1780 Kettner Blvd Suite 110, San Diego, CA 92101 Venture Roundtable Presenter: <b>Stan Sewitch, CEO</b>			
Phone: 619-300-6678 Email: sewitch1@cox.net Website: www.ridgedx.com			
Industry/Sector: Diagnostics Has a Company been Established? If so, when and what is the legal form: 2007 - Delaware Corporation Technology Readiness Level: Commercial ready Patents Awarded: None Patents in Progress: 8 filed			
Amount of Capital Raised and Source: \$1.2M Angel investors lead by KI Investment Holding, SBIR, NSF and NC Bio- tech loans Current Investors: Angel investors lead by KI Investment Holdings Annual Revenue: NA			
Number of Employees: 4 full /4 part Amount of Funding Sought: \$3 M to cash flow positive in CLIA laboratory with total of \$10 to FDA IVD test kit launch			

### **Company Overview**

Ridge Diagnostics is a Neurodiagnostic company with first -in class- blood test for Major Depressive Disorder. The company is developing the first franchise of proprietary blood tests for neuropsychiatric diseases.

### **Technology or Product Description**

A diagnostic Blood Test for Diagnosiing and Monitoring Major Depressive Disorder (depression). Proprietary Biological markers tested in a panel with diagnostic algorithm utilizing the company's propriatary Human Biomarker Library and HyperMap Technology. Product is currently offered to psychiatrists and later to primary care providers as a testing service through a company owned CLIA certified laboratory. The company plans to perform FDA studies for IVD test kit approval while building the market awarness, product acceptance and sales revenue.

### Competition

An existing product or service does not currently exist. The current "gold-standard" for the diagnosis of depression is a clinical interview which is subjectively administered and subjectively completed. The company's product provides objective, qualitative biological evidence of the disease.

### Sustainable Advantage

- First mover no competitive tests to date
- Patent strength and founders "know how"
- Pending large menu of Neuropsychiatric disease testing ex. PTSD, bipolar, etc. to leverage investment
- Flexibility through CLIA lab:
- Continuous product/test improvement
- Response to market trends

- Rapid new product development and market launch
- Planned test obsolesce
- Proven reimbursement strategy with high margins
- Revenue in 2009 cash flow positive 20 months
- Decision for FDA IVD kit trials at end of year 2

### **Marketing Plan**

Enter market with CLIA laboratory testing service to psychiatrists then expand to broader market through IVD test kit with strategic partners

### **Market Size**

Approximately 60 million testing opportunities annually in the US. Ave revenue/test of CLIA lab= \$220.

### **Revenue Projections**

Approximately 60 million testing opportunities annually in the US. Ave revenue/test of CLIA lab= \$220. YR1 YR2 YR3 YR4 YR5 \$1.2M \$6.9M \$19.6M \$63.1M \$120.7M

### **Management Team**

Stan Sewtich CEO Investor; CEO KI Investment Holdings, CEO coach and former founder and CEO. Greater than 20 years experience establishing successful companies as founder and entrepreneur

Anita Busquets

CFO - part time

Investor, CFO KI Investment Holdings, Greater than 20 years experience in technology and pharmaceutical companies as CFO, co-founder and president

Bo Pi, Ph.D. CTO- full time Co-founder and investor. Greater than 15 years experience in medical device technology companies including former co-founder, CEO and president

John Bilello, Ph.D

CSO -full time Co-founder and investor. Greater than 20 years experience in biopharmaceutical research and clinical diagnostics research and development.

Lonna J. Williams

CCO - full time

Greater than 20 years experience marketing, sales and business development of IVD and CLIA laboratory diagnostic companies. Former founder and CEO, CCO and COO of start up and early stage companies

Perry Renshaw MD, Ph.D CMO - part time Director of Magnetic Resonance, Utah Brain Institute, Professor of Psychiatry, University of Utah School of Medicine, USTAR Investigator, Former Professor and Dept Chairman Harvard University

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### **Company Overview**

EyeCyte is an early-stage ophthalmology research and development company based in La Jolla, California. They are currently developing a progenitor cell therapy to treat diabetic macular edema (DME), the leading cause of blindness among diabetics.

### **Technology or Product Description**

Progenitor cells isolated from a patient's own peripheral blood are introduced into the eye through a standard intravitreal injection. This type of injection is commonly used to deliver anti-VEGF drugs to patients with age related macular degeneration (ARMD). The progenitor cells home to damaged areas of the retina and promote vascular repair which corrects the underlying

### Competition

Laser photogoagulation is the current standard of care to treat DME. This treatment only decreases the risk of substantial visual loss by 50% in ideal patients and is ineffective in approximately 40% of cases. In addition, laser therapy permanently destroys treated areas of the retina rendering those areas unable to detect vision ever again.

Other technologies under investigation to treat DME include anti-VEGF drugs, steroid injections or implants, combination therapy with laser photocoagulation, and vitrectomy. To date, each of these technologies has been shown to either cause significant side effects or provide minimal efficacy in treating DME.

### Sustainable Advantage

EyeCyte's therapy is based on nearly a decade of research performed by Dr. Martin Friedlander and his laboratory at The Scripps Research Institute. His research has established proof of concept for progenitor cell therapy in mice. To ensure exclusivity administering this therapy, EyeCyte is sublicensing a portfolio of intellectual property generated by the Friedlander laboratory.

### **Marketing Plan**

EyeCyte's therapy will be administered at outpatient centers owned and operated by EyeCyte. These centers will be located in close proximity to the top 20 ophthalmologic clinics throughout the US.

Patients with DME will be referred by their ophthalmologist to one of EyeCyte's outpatient centers. At these centers, progenitor cells will be isolated from the peripheral blood of patients. Patients will then receive a singe injection of their own progenitor cells into each affected eye by an ophthalmologist. Each patient's insurance provider will then be billed by the EyeCyte center to collect reimbursement.

EyeCyte's marketing strategy will focus on generating peer-reviewed literature through collaborations with key opinion leaders, performing cost-effectiveness studies, and developing a strong referral network with ophthalmologists. EyeCyte will facilitate these activities through being acquired or forming strategic partnerships. Target acquirers or partners include Pfizer, Novartis, Bausch & Lomb, Bayer, and Allergan.

### **Market Size**

Treatment of DME remains a large unmet medical need. In the US, over 800,000 people have active DME, which corresponds to 1.1 million affected eyes at any point in time. This population is growing at about 5% per year.

The current market size for treating active DME is aproximately \$686.4 M, under the current standard of care. However, EyeCyte believes the potential market for treating DME is over \$2 B. Superior therapies for vision preservation have demonstrated the ability to significantly grow markets. Consider that anti-VEGF drugs are estimated to grow the market for treating ARMD from \$275 M to \$2.3 B by 2013.

### **Revenue Projections**

FDA approval is expected in 2020 with revenue that year of approximately \$250 M.

#### **Management Team**

### Mohammad A. El-Kalay, Ph.D., Founder, CEO - Full time

Dr. El-Kalay has over 20 years of academic and biopharmaceutical experience. He also has extensive experience leading scientific teams developing progenitor cell therapies at SyStemix, Osiris Therapeutics, and MorphoGen Pharmaceuticals. He earned his Ph.D. in Biomedical Engineering from Strathclyde University in Glasgow, Scotland.

### Martin Friedlander, M.D., Ph.D., Founder, Chief Scientific Officer - Part time

Dr. Friedlander is Chief of the Retina Service at the Scripps Clinic and Green Hospital. He completed his Ph.D. at the University of Chicago in the Committee on Developmental Biology and his M.D. at the Sate University of New York (SUNY) Downstate Medical Center. After medical school he completed his ophthalmology residency and retina fellow-ship at UCLA's prestigious Jules Stein Eye Institute.

### Matthew Ritter, Ph.D., Manager of Research & Development - Full time

Dr. Ritter has over 14 years of experience working in the field of vascular biology and nearly a decade working in vision science. He is a co-inventor of EyeCyte's core technologies and the author of numerous scientific articles, reviews and patents. He holds a B.S. degree in Biological Sciences from The University of California, Irvine and a Ph.D. in Biochemistry and Molecular Biology from the University of Southern California.

#### Noushin Dunkelman, Vice President of Process Development - Full time

Ms. Dunkelman joined EyeCyte with over 18 years experience in research, bio-process engineering, and product development of cell-based therapies. She has held several management positions including Senior Director of Cell Process Development at Microlslet, Telos Pharmaceuticals, and ValeocyTe Therapies. She was also the Director of Product and Process Development at MorphoGen Pharmaceuticals.





### About CONNECT

CONNECT is a non-profit organization dedicated to creating and sustaining the growth of innovative technology and life science businesses in San Diego. Serving as a proven neutral broker, CONNECT is widely regarded as the nation's most successful regional program linking high-technology and life science and entrepreneurs with the resources they need for success: technology, investment, markets, management, partners, and support services.

CONNECT's services are tailored to meet the varying needs of San Diego entrepreneurs at all stages of their business life cycles and growth. Since its inception in 1985, CONNECT has assisted in the formation and development of over 1,250 companies. CONNECT's success is directly attributable to the generous, unfailing support of its friends and supporters. For more information on CONNECT or its programs, contact us at (858) 964-1300 or visit www.connect.org.



www.connect.org

Fax: (858) 964-1301