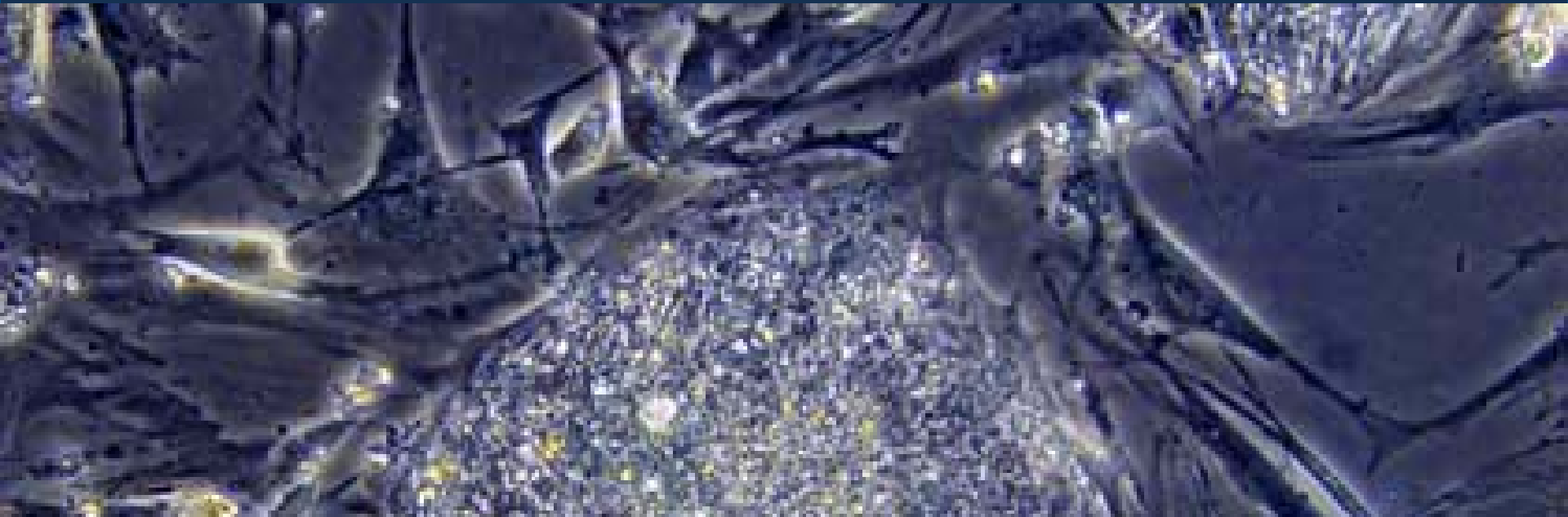


# Financing for Cell Therapy Companies

**Leonide Saad, Ph.D.**  
**Proteus Venture Partners**

**14<sup>th</sup> ISCT Annual Meeting – Miami – May 18, 2008**



# Agenda

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- Proteus Venture Partners
- Venture Capital Metrics:
  - How we evaluate a business
  - Key commercial issues
- How to Attract Venture Capital
  - What we want to see
    - Science/Tech
    - IP
    - Business Model
    - Regulations
- Current Technology and Funding Environment: A New Era
- Other Funding Sources

# Proteus Venture Partners

## ▪ Regenerative Medicine Fund

- Stage Agnostic
- Geographically Diverse
- Top Tier Venture Returns
- 1st Mover Advantage

## ▪ Technology Focus

- Cell Therapies
- Regenerative Compounds
- Tissue Engineering
- Tools & Enabling Devices
- Aesthetic Medicine

## ▪ Addressing Large Markets

- Aging Population
- Large Unmet Medical Needs
- Increasing Healthcare Spend



Greg



Jeff



Basil



Leonide

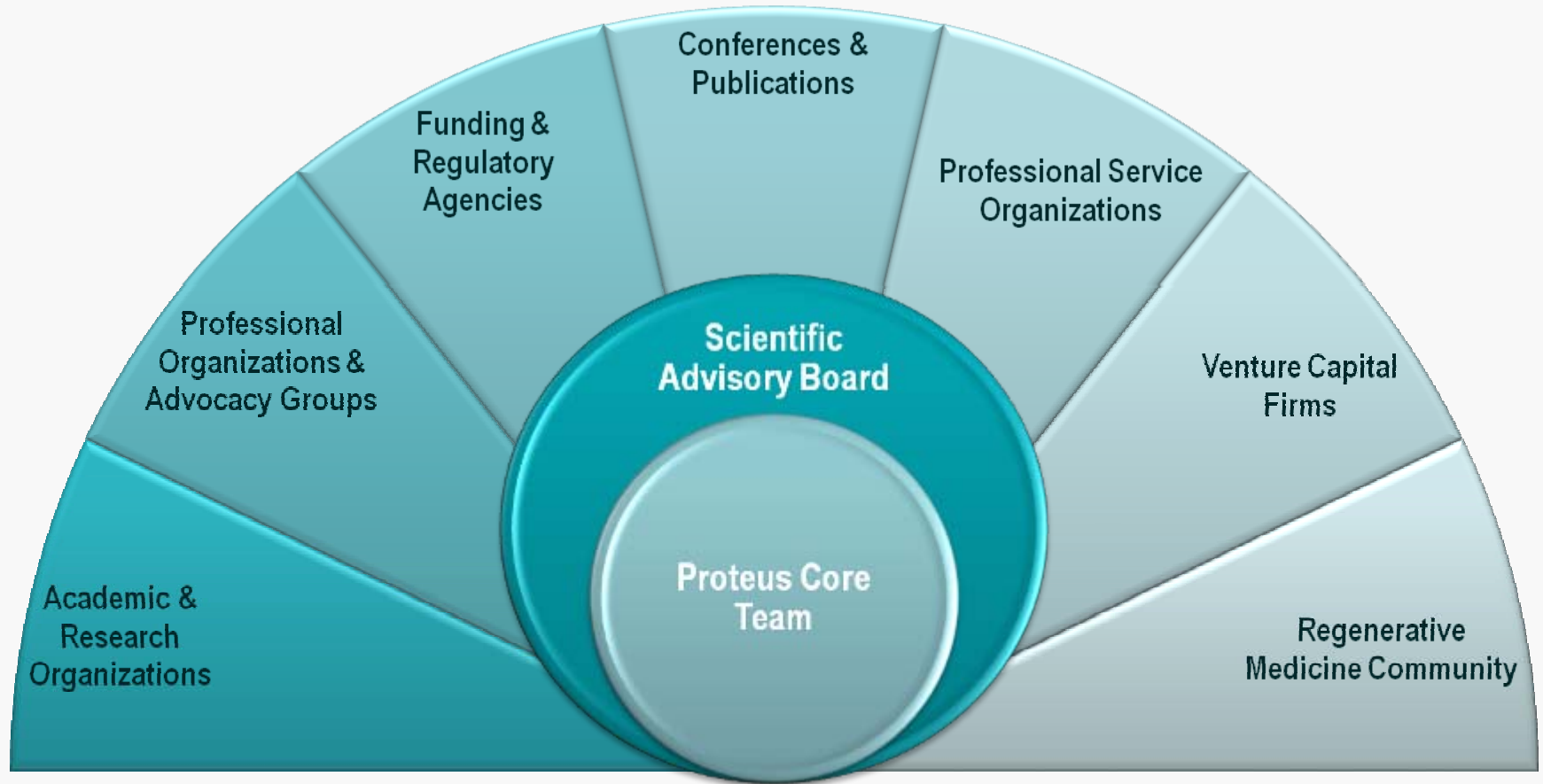


Daniel

# Worldwide Coverage of the Regenerative Medicine Space



# The Proteus Network: 7 Major Components



# VC Metrics / Key Commercialization Challenges

## Commercialization Challenges: Value Chain Perspective



- Isolate and Expand Cells or Tissue
- Cell Type (Auto vs. Allo vs. Xeno), Embryonic vs. Adult, Differentiated vs. Stem
- Cell Quantity / Source / Viability / Robustness
- Animal Model
- Delivery Vehicle
- Product Efficacy
- Immunology Barrier



- Target Indication
- Characterization
- Manufacturing
- Safety Profile
- Consistency



- Viable Business Model
- Cost Issues
- Scalability



- Simplify into a marketable "product"
- Political Issues
- Market Appetite
- Establish Appropriate Distribution Channels
- Doctors' acceptance
- Reimbursement
- Clinical Trial Issues
- Partners



- Litigations
- Embryonic Stem Cell issues
- Patents vs. Trade Secrets
- Freedom to Operate Opinions
- Publish or perish?



- Funding Source
- Cash Burn Rate / Timeline
- Product Pipeline Strategy
- Exit: IPO vs. M&A vs. Licensing

# What VCs Want to See (Ideal Conditions)

## **Proprietary Commercial Technology**

- Great Science ≠ Great Business
- Core Research Completed
- Proof Of Concept Established

## ▪ **Strong Management Team**

- Board
- SAB

## ▪ **Solid Intellectual Property Position**

- Freedom To Operate
- Defensible IP (Patents & Trade Secrets)

## ▪ **Large Market Opportunity**

- Target markets > \$1B/year

## ▪ **Defensible Business Model**

- Allo v. Autologous
- Product v. Service

## ▪ **Differentiation**

- How Is Your Approach Different?
- Why Is It Better?

## ▪ **Exit Strategy**

- IPO Vs. M&A (Attractive Products For Acquirer)
- Realistic Timeframe

## ▪ **Acceptable Risk/Return Profile**

- Multiple Chances To Win

# What VCs Want to See (Practically, for Early Stage)

## ■ IP

- Try to have your IP in place
- Get a freedom to operate opinion
- Do a thorough IP landscape analysis
- Talk to your tech transfer office for more advice

## ■ Management Team

- Key scientists need to be on board
- Strong advisory board
- One “good business guy”

## ■ Competition

- Had done extensive analysis of:
  - Competition (where they are, where they go)
  - Current Standard of Care
  - Future substitute treatments

## ■ Talk to VCs early and often

- Proteus is the VC of choice
- Ask VC for advice first. Money will come later
- Update the VCs often about your progress
- Prepare a strong business plan with milestones, uncertainty analysis, potential modes of failure, business model

# 700 Products under Development

## 3 Technology Sectors

### ■ Therapeutics

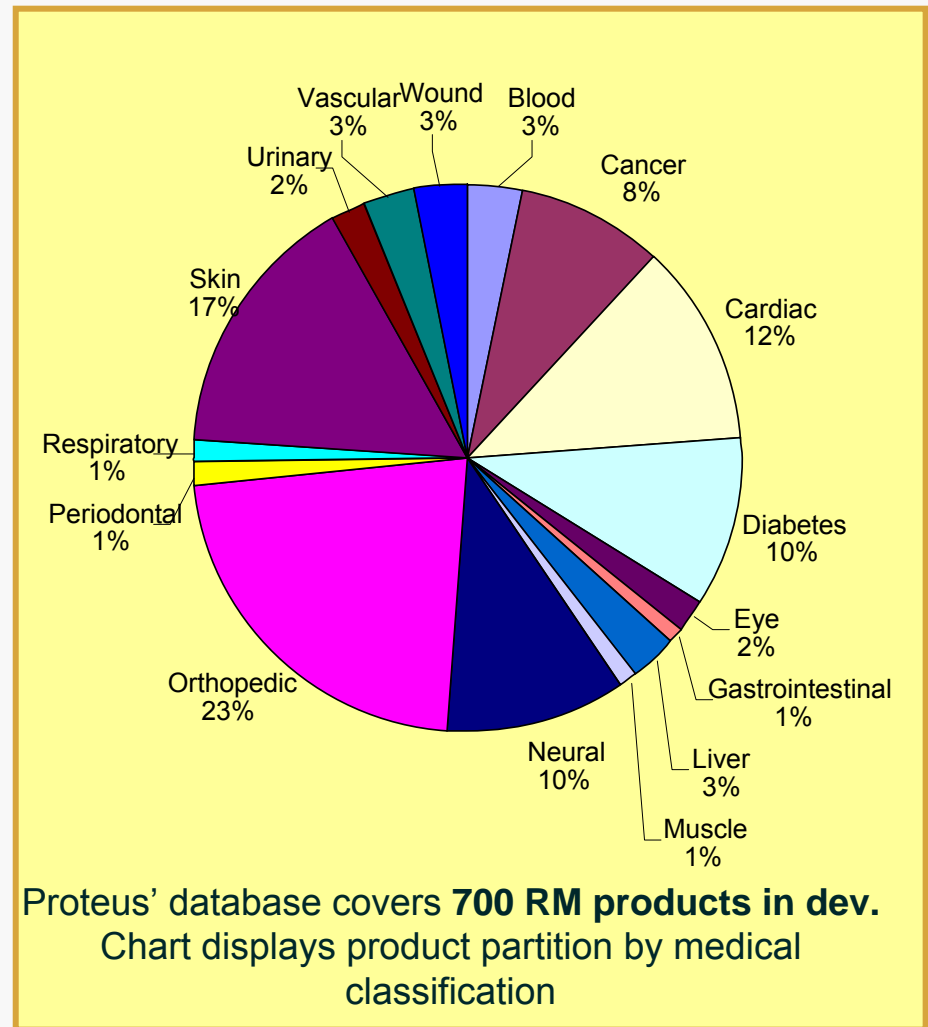
- Cell Therapies
- Tissue Engineering
- Regenerative Compounds

### ■ Enabling Technologies

- Media
- Growth Factors
- Manufacturing

### ■ Tools / Devices

- Cell Lines
- Disease Modeling
- Drug Screening Assays
- Predictive Tox



# Funding Environment : Entering A New ERA

## RM Market is Maturing: Key Metrics

### ▪ Rapidly Expanding Market:

- **\$3.6B** in 2005
- **\$11.5B** in 2010
- CAGR of **27.5%**

### ▪ Dramatic Revenue Growth

- **\$130M** in 2001
- **\$1.5B+** in 2007

### ▪ Worldwide funding for research Increasing

- **\$1.2B** Now
- **\$14B** in 10 Years

### ▪ Clinical Programs

- Over **800** Clinical Trials
- Over **75** ex-Oncology

### ▪ Commercial Products

- **26** on the Market
- **94** in Development

### ▪ Patients Treated with RM Products: **1.2M+**

### ▪ Public Companies

- **50+** Public Companies
- **\$4.7B** Total Market Cap

# Other Funding Sources: Government/State Funds/University

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- **Traditional Government Funding**
  - NIH Funding (\$600M/year, 4% of NIH budget)
  - DARPA
- **Non-Traditional Government Funding**
  - **AFIRM** (Armed Forces Institute of Regenerative Medicine)
    - **\$50M Collaboration** between Universities & Commercialization Partners
- **State RM Funds:** CIRM Funding Coming On-Line; Many Other States
- **Regional Development Funds:** UK; Singapore; Gulf; India
  - Tech Transfer; Develop Biotech Industry
- **“Incubators/Accelerators”**
- For very early stage technology: **University/Hospital Grants** (“Deshpande Center” at MIT, “Partners Innovation Fund”)

# Other Funding Sources: University/Philanthropy/Other

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- **Philanthropic Foundations & Disease Advocacy Groups Provide Funding**
  - JDRF; Michael J Fox Foundation, CNS Foundation
  - Stowers Institute
- **Corporate Venture Groups**
  - JJDC: Tengion; NovoCell
- **Creative Sources of Funds:**
  - Out license non-core technology
  - Provide consulting or lab services to generate cash flow
  - Work with a strategic partner
    - Biotech, Pharma & Device Companies
  - Merge with a cash rich company that is tech poor
- **Angel Investors and Venture Capitalists Are Slowly Reentering the Field**
  - Tengion (\$50M in 2006); NovoCell (\$25M); Cellerix (\$36M); Orthomimetics(\$10M), TxCell (\$15M); Aldagen; Q Therapeutics (\$15M)

**Thank you !**

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**Reply Guaranteed!**