“Industry and Stem Cells in California, Fostering R&D”

California Institute for Regenerative Medicine
July 25th
San Francisco, CA

Ann Hanham
Managing Director & General partner
Burrill & Company

©2004 Burrill & Company. Confidential & Proprietary.

Venture Capital Requirements

- Strong technology with Patent Protection
- Regulatory & Clinical considerations
- Good markets
- Experienced management team
- Capital requirements to clinical POC and approval
- Exits within 5 to 7 years

©2004 Burrill & Company. Confidential & Proprietary.

Stem Cell Technology

Strengths

- Technology is maturing
- Wide applications from basic research
- Potential to “cure” disease

Concerns

- Still enormous requirements for basic research
- Patents are a significant issue
- Commercialization

©2004 Burrill & Company. Confidential & Proprietary.

Regulatory & Clinical Considerations

- FDA and EMEA review is in development
- Informed consent
- Clinical endpoints and follow up
- “Dose” of stem cells
- Poolability of data
- Long term follow up
- Manufacturing considerations
- QA & QC requirements for small labs

©2004 Burrill & Company. Confidential & Proprietary.

Stem Cell Markets

- Cancer, Diabetes, Parkinson's Disease, Alzheimers, Stroke & Spinal injuries

- One time administration?
- Reimbursement strategy and Pricing?
- Distribution and wholesalers
- Long term follow up & SAE tracking

©2004 Burrill & Company. Confidential & Proprietary.

WHO is financing PRIVATE stem cell companies?

- Aberdeen Murray Johnstone Private Equity (Axordia)
- Allen & Company Incorporated (Cellerant)
- Alliance Technology Ventures (Neuronyx)
- Austria Wirtschaftsservice (Innovacell)
- Austrian Ind. Research Promotion Fund (Innovacell)
- Bailey Capital (Kytaron)
- BD Ventures (Cellerant)
- Bioinfusion (Axordia)
- Boston Scientific (Osiris)
- Cambrex (Osiris)
- Camelot Ventures (Cellerant)
- Chase Capital Partners (Neuronyx)
- Clarion Capital Corp. (Osiris)
- CX Venture Group (Cellerant)
- Eminent Venture Capital (Cellerant)
- Friedli Corporate Finance (Osiris)
- Horizonte Venture Management (Innovacell)
- Horizon Technology (Cellerant)
- Hypo Equity (Innovacell)
- Innovationsagentur GmbH (Innovacell)
- Invesco Funds Group (Osiris)
- Johnson & Johnson Development (Neuronyx)
- Lancet Capital (Kytaron)
- Latterell Venture Partners (Oncomed Pharma)
- LinkMed (Novahep)Genentech (Oncomed Pharma)
- Lombard Odier Darier Hentsch & Cie (Osiris)
- Morgenthaler (Oncomed Pharma)
- MPM Capital (Cellerant)
- National Institutes of Health (Cellartis, Vistagen)
- Novartis Venture Fund (Osiris)
- Novel Bioventures Advisors (Cellerant)
- Reneuron Holdings (Vistagen)
- Safeguard Scientifics (Neuronyx)
- Three Arch Partners (Osiris)
- UltrieaCapital (Osiris)
- Uni-Venture (Innovacell)
- U.S. Venture Partners (Oncomed Pharma)
- Vertical Group (Oncomed Pharma)
- Zurich Pension Fund (Osiris)

©2004 Burrill & Company. Confidential & Proprietary.

Who will finance stem companies?

- **Federal Government**
  - Specific stem cell types (Bush administration)
  - Switch to all stem types? (Democratic administration 2008?)
- **State Government** (All stem cell types?)
  - California (CIRM), Mass, NJ, Wisconsin, others
- **Philanthropists**
  - Bloomberg donation to John Hopkins
  - Gates Foundation
  - Others
- **Celebrity Charitable Organizations**
  - Michael J. Fox Foundation
  - Reeve Foundation
- **Private Equity Investors** (principally VCs)
- **Public Equity Investors**
- **Foreign Governments**
  - BRIC, (Brazil, Russia, India & China) UK, Singapore, Korea & Sweden

©2004 Burrill & Company. Confidential & Proprietary.