Aspects of Leadership in Biotechnology Careers

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CWSEM
Key Factors for a Successful Biotech Company

• Technology
• Management team
• Scientific/Medical advisors
• Board of Directors
• Investors
• Dedicated and enthusiastic employees
Key Factors for a Successful Biotech Company

• Business strategy is driven by
  – Strength of technology
  – Medical need
  – Market size and accessibility
  – Financial environment
  – Investor confidence
  – Exit strategy
Key Factors for a Successful Biotech Leader

- Passion
- Resilience
- Flexibility in approaches
- Experience
  - Science
  - Development
  - Medical
  - Commercial
  - Investor relations
- Extensive network
Background

- Ph.D. in Biochemistry; University of Illinois
  - Regulation of cholesterol synthesis
  - First to clone a gene at UI
- Postdoctoral fellow; Harvard University in Wally Gilbert’s lab (founder of Biogen)
  - Molecular Biology
- Biogen (now Biogen Idec)
  - Molecular Biology; Cell Biology; Immunology; inflammation, autoimmune diseases
- ImmuLogic Pharmaceutical, Inc.
  - Allergy and autoimmune diseases
- Point Therapeutics, Inc.
  - Hematology and oncology; Business Development; financing and investor relations
- BioTransplant, Inc
  - Organ and bone marrow transplantation; Investor relations
- ZIOPHARM Oncology, Inc.
  - Oncology, Business Development
- Chymic Therapeutics, Inc
  - Oncology
Biogen

How development and clinical trial processes can influence outcome of project – and how being passionate and flexible can save a project

- Identified and cloned several genes involved in diseases
  - Therapeutic targets
  - Proteins as agonist or antagonists
- Initiated T cell activation project
  - To identify factors involved in autoimmune diseases
  - Inhibit ongoing T cell activation in AI by blocking CD2/LFA3 interactions
  - Cloned and expressed LFA-3
  - Soluble LFA-3 had low CD2 binding affinity
  - Minimal effect on T cell activation
  - Management suggested to terminate the project
Biogen

How development and clinical trial processes can influence outcome of project – and how being passionate and flexible can save a project

• LFA-3/IgG fusion protein Amevive®
  – dimer with strong inhibition of T cell activation

• Needed to re-establish excitement in management and team members for the project

• Initial preferred target RA
  – Lengthy clinical trial
  – High placebo effect

• Psoriasis as second choice
  – Objective endpoints
  – Faster path to market approval

• Amevive® received market approval
  – Now marketed by Astellas Pharma
Point Therapeutics
How a market event can re-direct your company

• Founded October 1996
• Technology licensed from Tufts University
  – Small molecule DPP IV inhibitor
    • Preclinical data indicated anti-inflammatory
    • Some data for hematopoietic stimulation
• Raised small amount of money paid CRO for additional assays – potent hematopoietic stimulation
• Raised $ 1.5 MM from friends, families and private investors within 4 months
• Expanded research on hematopoietic stimulation
• Raised $ 5MM from private investors and small VC in 6 months
• Obtained $ 80MM deal with a big Pharma within 1 year based on preclinical data on hematopoietic stimulation
• Phase I clinical trial for hematopoietic stimulation
• Amgen obtained market approval for PEG-GCSF
• Lost interest from investors, partners, PI for clinical trials
Point Therapeutics

How a market event can re-direct your company

• Demonstrated potent anti-tumor activity for compound
  – Tumor basal membrane is similar to bone marrow stroma in terms of growth factors etc.
• Took company public through reverse merger
• Developed compound through Phase III clinical trials
• Acquired by Dara Biosciences
Chymic Therapeutics
How the economic environment can re-direct a start-up company

• Technology platform for design and synthesis of small molecules to treat cancer, autoimmune and infectious diseases (licensed from MIT)
• Two lead compounds in oncology
• First round of financing
  – Started with VCs
  – Unfavorable economic environment
• Changed approach
  – Private investors
  – Academic associations
    Recruited by University of Rhode Island, Sate of Rhode Island
  – Option agreement with large Biotech
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