
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, State of Rhode Island
 - Option agreement with large Biotech

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