

Bow Therapeutics

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**Industry:** Pharma

Initial Product: Human monoclonal antibody treatment for Chikungunya virus, which induces debilitating arthritis with chronic symptoms.

Finance:

Financing to Date:
 National Institute of Health Funding 2016

Purpose of Presentation: Seeking \$1M

- Toxicology/ pharmacokinetic studies in non-human primates
- Proof-of-concept efficacy studies ultimately assessing synovial joint arthritis, prophylaxis potential and post-infectious treatment for Chikungunya virus infection.

Executive Leadership

Jose Quiroz MD/PhD candidate.-CEO
 George Georgiev, PhD candidate. -CBDO
 Ryan Malonis MD/PhD Candidate-CSO

Dr. Jonathan Lai, PhD – President
 Albert Einstein College of Medicine

Scientific Advisory Board

Dr. Margaret Kielian, PhD-Alphavirus expert
 Dr. John Dye, PhD- BSL-3 scientist,
 USAMRIID

Company

Anticipated Registration Date: June 2019,
 DE, C-corporation

Biotech spinout of the Albert Einstein College of Medicine

IP: Provisional patent filed through Albert Einstein College of Medicine. Technology will be exclusively licensed to Bow Therapeutics.

Executive Summary: Bow Therapeutics is an antibody discovery company developing a human derived monoclonal antibody treatment for Chikungunya Virus (CHIKV).

Company History: Start-up from Albert Einstein College of Medicine founded by Jose Quiroz and Dr. Jonathan Lai (Dr. Lai's lab). The technology allows the rapid identification of high value antibodies against a variety of targets in viral diseases such as Chikungunya, Alzheimer Disease and cancer immunotherapy

Market Opportunity / Unmet Need: Lead program is directed to Chikungunya Virus (CHIKV) infection and utilizes an immunotherapy approach. CHIKV infection can lead to deleterious and chronic sequelae such as debilitating arthritis. Chikungunya is a mosquito-borne disease that is an emerging threat to general health in the United States. 2.4 million suspected cases since 2013 in the Americas. 2013-15 Caribbean outbreaks study¹ projects US economic burden of \$185 billion.

Products/Services – Launched & Pipeline: Pipeline: Human monoclonal antibodies for Chikungunya virus. Non-human primate (NHP) results are anticipated in 2019-20.

Commercial / Technical Milestones: Protection against authentic Chikungunya virus in a validated mouse model demonstrated (2018). POC study shows that treatment has high immunotherapeutic potential. Next technical milestones are preliminary NHP studies for PK, effector function, and tox.

Competition: There are no approved treatments for CHIKV infection. Vaccines are being developed by PaxVax and Moderna. Bow Therapeutics provides a fully human monoclonal antibody treatment with potential dual use as immuno-prophylactic, or for treatment of active infection. Positioning of product for use in traveler's vaccines and patients contracting active infections.

Financial Projections (Unaudited): Multiple dosing (3) to avoid hyperimmune response of antibody infusion. Dosing price range \$6,000 (Palivizumab for RSV infection)- \$55,000 (Natalizumab for multiple sclerosis). Financials based on ~123,000² cases. \$1Billion (\$20,000USD; 50,000 cases) in gross profit is projected. B/E 2-3 years from launch.

¹ Bloch, 2016, Yale

² PAHO 2017