



# Integrated BioTherapeutics, Inc.

**Dr. M. Javad Aman**  
**President and CSO**  
**Integrated BioTherapeutics, Inc. (IBT)**





# Our Company

## Mission

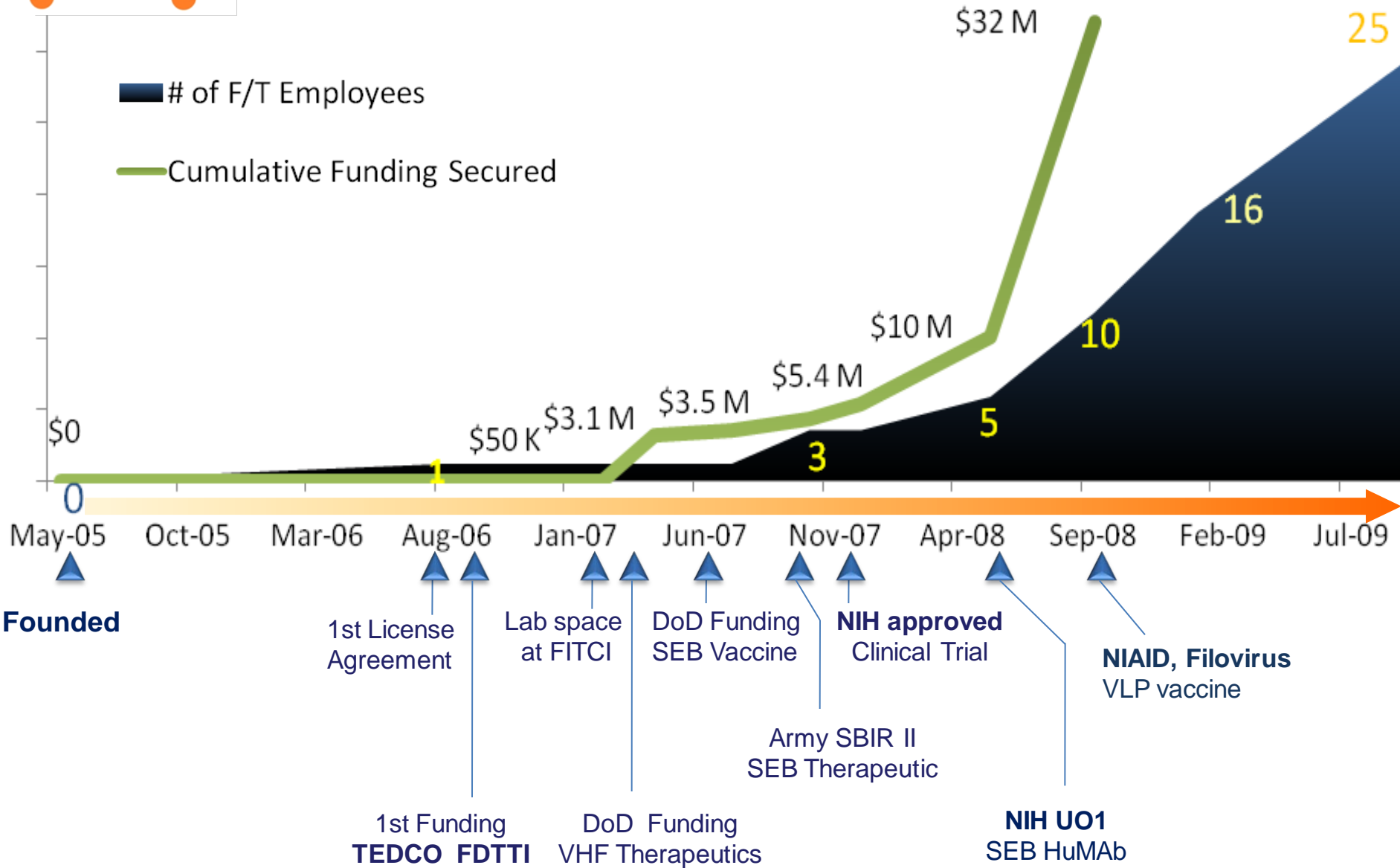
**Develop vaccines and therapeutics for infectious agents**

**Emphasis on:**

- **Biodefense Market (Filoviruses: Ebola and Marburg)**
- **Emerging Infectious Diseases (Staph)**



# Company History





# A Growing Maryland Business



May 2008

IBT wins Incubator Company of the Year award for “Best Life Sciences Company”

June 2008

- IBT graduates from FITCI business incubator
- IBT moves into Avalon facility in Germantown

May 2009

The Tech Council of Maryland Awards IBT the “Emerging Company of the Year” for the state of Maryland



# IBT Partnerships: Funding, Collaborations and Partnerships



National Institute  
of Allergy and  
Infectious Diseases



Funding Support

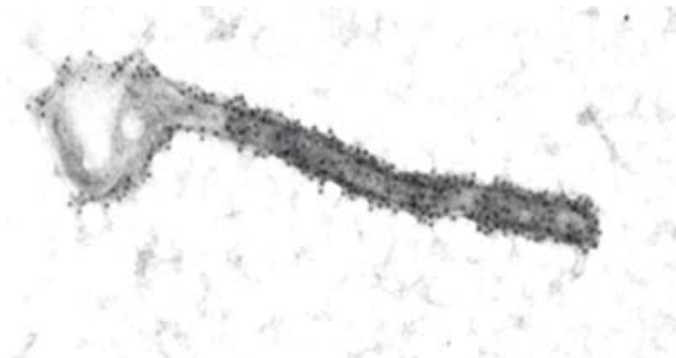


Collaboration



## ***Recombinant Vaccines*** for Staphylococcal and Streptococcal Exotoxins

- STEBVax                      IND-                      Biodefense
- SEB-HIG                      Preclinical- Biodefense
- TSS-HIG                      Preclinical- Toxic Shock, Sepsis
- SEB-HuMab                      Preclinical- Biodefense



***Virus-Like Particle Vaccines*** for  
 Filoviruses (Ebola & Marburg)  
 Arenaviruses (Lassa & Junin)  
 Bunyaviruses (RVFV)



# IBT Product Pipeline

Discovery    Pre-clinical    Phase I    Phase II    Phase III/  
Pivotal Studies    FDA  
Licensure

Vaccines

FiloVax  
Panfilovirus VLP vaccine

STEBVax  
Recombinant SEB vaccine

Multivalent Staph Vaccine

Therapeutics

SEB-HIG  
HyperImmune Globulin Therapeutic to SEB

SEB-HuMab  
Human Monoclonal Ab Therapeutic

TSS-HIG  
Toxic shock syndrome Therapeutic



# NIAID Proposal

IBT was a four person company at the time

Primary Writers:

Dr. Javad Aman – Founder of IBT

Dr. Kelly Warfield (then at USAMRIID)



Photo by Skip Lawrence

**IBT's Advantage:** Superior technology and data to show it.

**IBT's Challenges:** Young company/ limited infrastructure

**The Solution:** Build a team to enhance capabilities

*IBT secured a team of subcontractors to win the proposal*





# NIAID Contract Development Plan

## **Base Period – 4 years, ~ \$22 M in funding**

- Assay Development
- Scale Up and Process Development
- Formulation and Stability
- Bridging, Efficacy, and Immune Correlate Studies

## **Options Phase - ~43 M in Funding**

- cGMP Manufacturing and IND
- Phase I Dose Escalation Safety Clinical Trial
- 200,000 Dose Manufacturing
- Lyophilized Formulation
- Phase II Immunogenicity Clinical Trial



# FiloVax Program

- Recognized expertise in Filovirus research
- Very strong technical knowledge of the technology and model
- Original inventors of the Army's Filovirus VLP Vaccine Candidate
- Ongoing partnership via CRADAs with USAMRIID team to develop VLP vaccine





Special Thanks to:

Maryland TEDCO

The National Institute of Allergy and  
Infectious Diseases and NIH