VERSATOPE
Delivering Immunity

Delivering Novel Pan-Coronavirus Vaccines

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Versatope Therapeutics

Immuno-therapeutic company developing vaccines for broad strain immunity

- Pan-flu vaccine - Lead product candidate
  - pre-IND status with non-dilutive funds to Phase 2
- Privately-held, 17 employees with growth opportunities
- Recent Funding: ~$20M in Federal and Mass. state grant and contract funding
- Fundraising to accelerate development of Pan CoV2 Vaccine

Pan-Coronavirus (CoV2) Vaccine in development

- Key differentiator → broad strain protection
- Computational approach → vaccine design for conserved epitopes
- Ready to Deploy: Internal team with external network for manufacturing and clinical development

Versatope is Ready To Go

Inherent Limitations of COVID-19-specific Vaccines

Key Risk – Prolonged Asymptomatic Transmission & Increased Mutation Potential

- High likelihood for re/newed pandemics
- Increasing probability for animal to human (zoonotic) transmission
- Genetic recombination, antigenic drift causes emergence of new strains

Design Limitations

- Current industry pipeline vs CoV2 based on single-strain designs
- Significant mutations in RNA virus reduce durability to protect with single strain
- Threat of antibody-dependent enhancement of disease

CMC / Manufacturing Limitations

- **High Cost:** RNA and viral vector-derived vaccines are expensive to manufacture
- **Scale up limitations:** Billions of doses may be not feasible within several months

Pan-Coronavirus Vaccine Extends Product life/usefulness

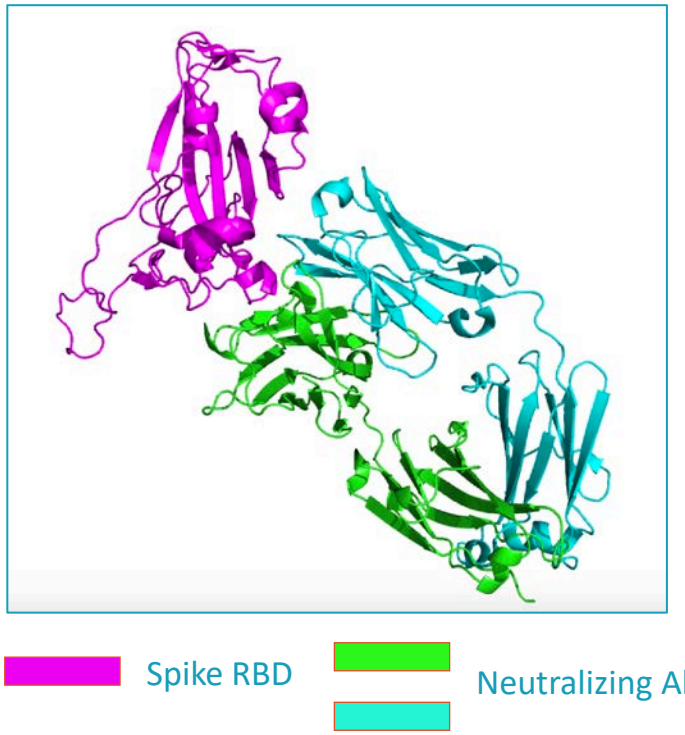
- **Versatope's multi-strain vaccine (pan-CoV) with broad stain viral recognition**
  - Combines multiple strains into a single particle; potent protection
  - Increases vaccine potency through structural computational biology

- **Pan-CoV vaccine based on Versatope platform capabilities and know-how**
  - Technical validation from in-depth diligence
  - Existing formulations applied to drive cellular immunity

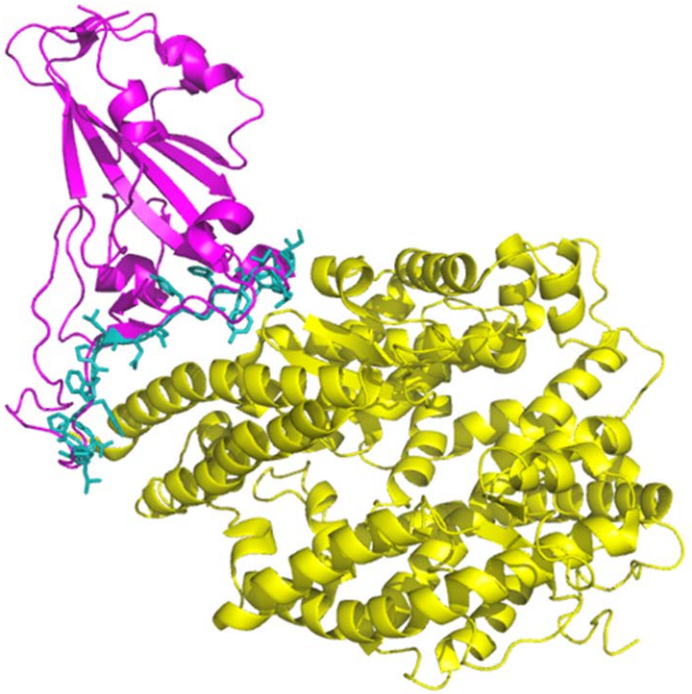
Objectives to Achieve Augmented Coronavirus Immunity

- **Novel vaccine for CoV2 based on broad-strain recognition**
- **Key design-goal: limit CoV2's ability to escape detection and immune response**
  - Use structural and computational biology to design multiplex vaccine
  - Engage Natural Killer (NK) cells, Memory T cells, effector cells
  - Reduce antibody-dependent enhancement of disease
- **Measures of design-goal attainment:**
  - Induce antibodies; target the virus-infected cell and neutralize the virus
  - Induce immune responses for rapid protection and early immune response
- **Commercial product**
  - Apply existing formulations to drive cellular immunity
  - Future use as a preventative and therapeutic vaccine

Durable Solution Target Conserved Domains



Neutralizing Antibody Blocks the Receptor Binding Domain



Neutralizing antibody overlaps with host cell receptor binding domain (ACE-2)

Clinical Data within Two Years

Precedent of polypeptide platform

- Human experience/validated approach

Recombinant polypeptides are rapid and feasible for industrial scale

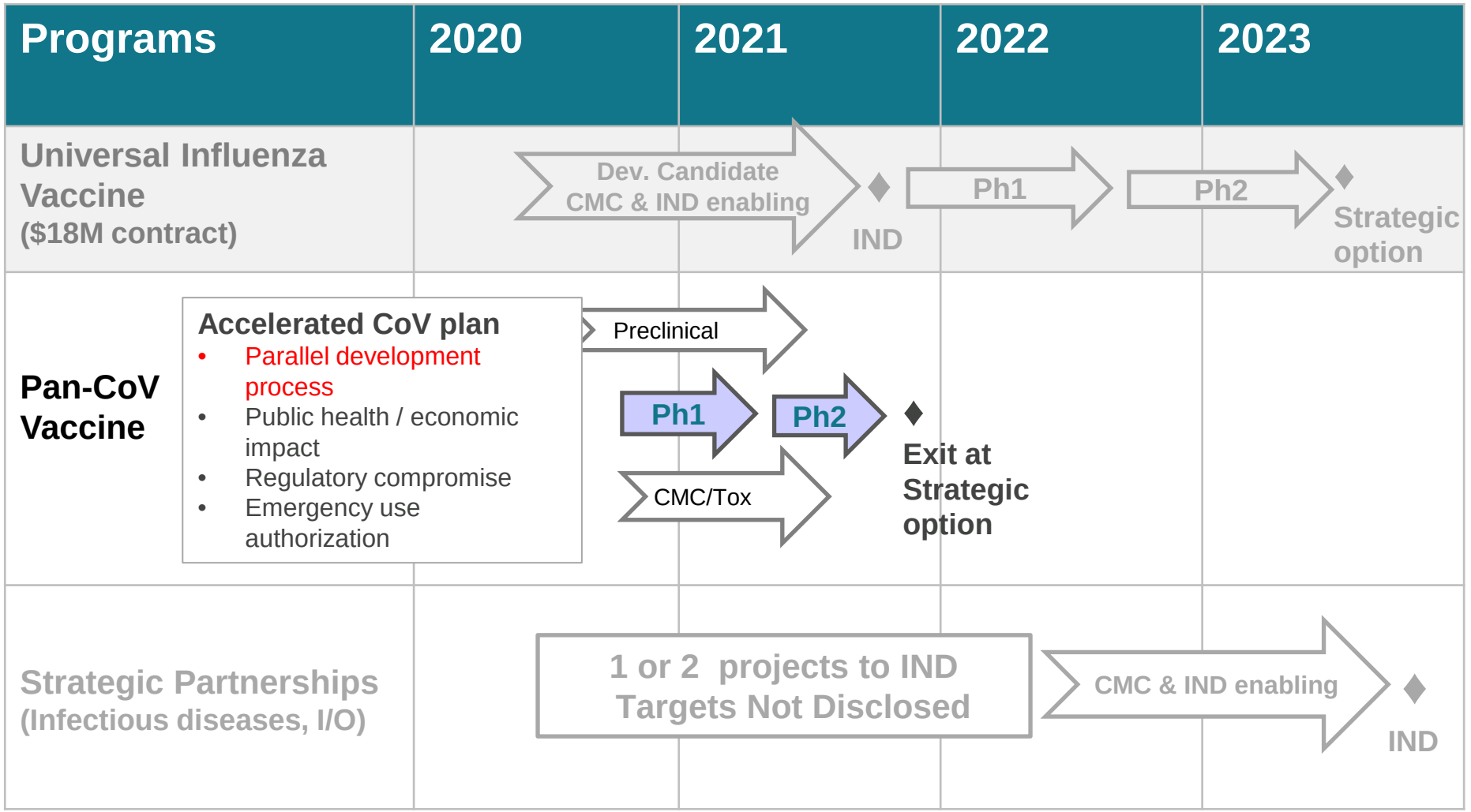
- Billions of doses
- GMP batch for clinical study

Clinical studies 30 subjects

- Dose escalation
- Massachusetts Clinical Trial Site
- Replicons for COVID-19 Spike available in the coming months
  - *Possible to include Phase 2 challenge study for clinical PoC*

Parallel Track Clinical Development Activities for a Pan-CoV

Target Investor Exit 12-15 months from funding



Milestones for Pan Coronavirus Vaccine Development

	Timing
Milestone 1. Does it work?	
• Vaccine production (non-GMP)	Q3 2020
• Evaluation of immunogenicity	Q3 2020
◦ Optimization of Formulation included	
• Salaries, project management, CROs	Q3 20-Q1 21
• Medical writing and regulatory consultants	Q3 20-Q2 21
Milestone 2. Is it safe and well tolerated?	
• Protection in challenge animal models	Q4 20-Q121
• Scale up of GMP product	Q4 20-Q121
• Phase 1 clinical study, 30 subjects	Q4 20-Q221
Milestone 3. Clinical Efficacy?	
• Phase 2 clinical study, 90 subjects	Q2/Q3 21
◦ Medical monitoring, statistics, bioassays	
◦ Consultants, med writers, regulatory team, salaries	Q2/Q3 21

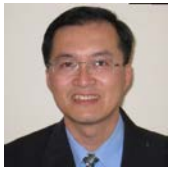
- ***Exit following Phase 2 completion, demonstration of pan-beta-CoV activity in animal models and clinical studies; see comparables of licensed vaccines at this stage***

Raising ~$15 Million, Series A

Versatope Leadership Team

Christopher P. Locher, PhD Co-Founder and CEO also has over 20 years of experience and is the CEO and a co-founder of Versatope Therapeutics. He was previously a Senior Director at Vertex Pharmaceuticals where he was responsible for establishing external R&D programs.

Carlos H. Faerman, PhD Sr Dir Structural Biology Dr. Faerman is an expert in molecular modeling with extensive training in structural biology, chemical physics and protein ligand interactions. He carries out predictions and designs for new vaccine constructs that address the problem of antigenic variation.



Ly T. Phan, PhD, EVP Translational Medicine Dr. Phan is the Executive Vice President, Portfolio Management & Preclinical Development and has more than 23 years of start-up/biotech and large pharma experience in antibacterial drug discovery and development.

Steven M. Jones, PhD, Sr Dir Immunopharmacology Dr. Jones has over 15 years of experience leading multiple infectious disease biology/pharmacology projects and has conceived and designed multiple innovative pharmacology models. A hands on manager, Dr. Jones' expertise in infectious disease animal models, pharmacology, and pharmacokinetics has led to multiple successful drug development campaigns.

Alan T. Barber, CFO Mr. Barber is the CFO and has worked in the Life Science industry for more than 20 years and has raised over $500M in IPOs, secondary public offerings, private equity and venture capital financing. He and his team at the Prestar Group provide financial, human resources and operation services to early-stage biotechnology companies. He has successfully completed numerous strategic acquisitions and managed the post-transaction integration of acquisitions. He is a Certified Public Accountant and received his B.S. degree from Florida State University.

Versatope Scientific Advisory Board

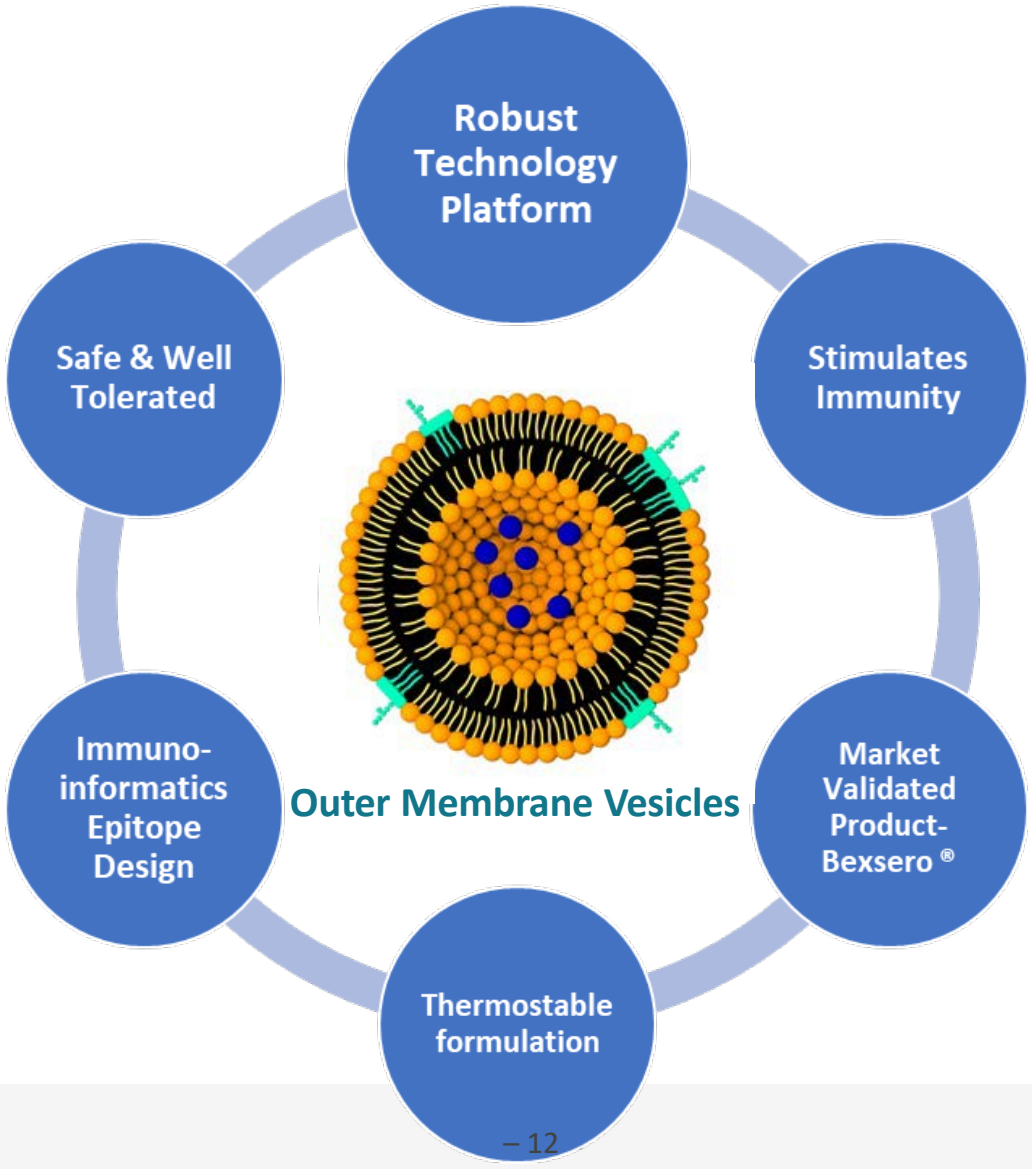
David J. Topham, PhD Professor - Department of Microbiology and Immunology , Center for Vaccine Biology and Immunology (SMD) and Co-Director of the New York Influenza Center of Excellence-a robust, collaborative program for basic and translational investigation of influenza virology, pathogenesis, immunology, and vaccines.

Stacey Schultz-Cherry, PhD St. Jude Faculty, Deputy Director, World Health Organization Collaborating Centre for Studies on the Ecology of Influenza in Animals and Birds. Expert in Influenza and Astrovirus Virus Pathogenesis, Novel Vaccines and Therapeutics, and Microbial Co-Infection.

Ralph A. Tripp, PhD Professor and University of Georgia Research Alliance Chair of Animal Health Vaccine Development, GRA Eminent Scholar. Research includes developing translational disease intervention approaches for respiratory viruses and the mechanisms of immunity and disease pathogenesis associated with respiratory virus infection.

Frederick G. Hayden, MD Professor Emeritus, Medicine: Infectious Diseases and International Health, University of Virginia. The scope of studies ranges from in vitro assays of viral susceptibility and antiviral mechanisms of action to clinical trials involving experimentally induced and naturally occurring infections. His research includes antiviral agents for the prevention and treatment of respiratory viral infections.

Versatope's Revolutionary Platform Technology



Business Model

Discovery and development - Advantages of platform & IP - Technological know-how - Limited competition - IPO and investor exit within 5 years	**Sublicensing** - Partnership opportunities for different disease indications - Royalty streams from short term opportunities
Non-dilutive funding **Risk mitigation, reduced R&D costs** - Leverage external resources - Access to services and expertise - Clinical development NIH, BARDA or DoD	**Research collaborations** - FTE support and milestones - Joint research and sharing costs and rewards

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