

Industry

- Life Sciences
- Medical Devices

Executive Leadership

- Steve Sagon
Advisor & Prospective CEO
- Doug Vincent
Founder & President
- Susan Woods
Advisor & Prospective CFO

Scientific Advisory Board

- Jeremiah Brown, PhD
Dartmouth
- Jack Copeland, MD
Surgeon & SynCardia founder
- Shriprasad Deshpande, MD MS
Emory
- Elazer Edelman, MD
MIT/Harvard/Brigham & Women's
- Kiyotaka Fukamachi, MD PhD
Cleveland Clinic
- Patrick Grady, CCP
Cleveland Clinic
- Robert Jaquiss, MD
Dallas Children's
- Knut Kvernebo, MD, PhD
Oslo University
- Nader Moazami, MD
NYU-Langone

Milestones to Date

- Functional Prototypes built
- Pre-clinical in-vivo testing
*Hemodynamic,
Hemolysis and
Microcirculation data*
- 510(k) Pre-sub meeting
January 2018

Financing to Date

- \$3.5 million Seed

Amount of Financing Sought

- \$6M Series A

Executive Summary:

VENTRIFLO developed a novel heart pump for use in open heart surgery that delivers true physiologic pulsatile flow. This proprietary technology will reduce post-surgical complications, shortening lengths of stay, and reducing readmissions. Angel funding has financed development of the prototype system, successfully used in pre-clinical, in-vivo testing at Dartmouth, the Cleveland Clinic and MGH. VENTRIFLO confirmed no human testing will be required for the straightforward 510(k) regulatory path during a January 2018 pre-submission meeting with the FDA. The highly experienced VENTRIFLO leadership team has assembled a prominent group of clinical advisors from leading institutions who are eager to use the VENTRIFLO True Pulse Pump.

Company History:

VENTRIFLO was a nights and weekend endeavor until Q2 2017 when the company secured a \$1.5 million angel investment commitment. Having reached the milestones of building functional pre-clinical prototypes, 3rd party validation at leading clinical and research centers, and a pre-submission meeting with the FDA, VENTRIFLO is now seeking Series A financing of \$6 million to fund the conversion of the pediatric prototypes into production devices and prepare the FDA 510(k) submission.

Problem/Solution:

For fifty years open heart surgery has endured continuous flow blood pumps because there was no other practical alternative. Though mortality rates have declined, up to 40% of patients experience serious post-surgical complications, such as AKI, resulting in over \$6 billion annual cost to the healthcare system. The problem is prevalent in pediatric patients who require multiple open-heart procedures in a lifetime and getting worse for adults as the population ages and are sicker, more obese with more co-morbidities when open heart surgery is required. VENTRIFLO True Pulse Pumps will become the standard of care by providing true physiologic pulsatile flow, improving microcirculation and reducing complications of open heart surgical procedures.

Market Opportunity:

450,000 open-heart procedures are done per year (US & EU) and that number is growing. VENTRIFLO's market entry point will be in pediatrics due to high need and lower price sensitivity. Pediatric heart surgery is highly concentrated in large centers adjacent to many leading adult centers. Upon entering the adult market, the company will focus on the highly co-morbid and most complex cases, i.e. 30% of the adult patients at highest risk for post-surgical complications. Together these two high-need segments make up a \$1.5 billion market opportunity for the VENTRIFLO True Pulse Pump.

Technical Milestones:

Integrated embedded system design prototypes built, molded single-use disposables demonstrate 20+ days resiliency and preliminary sterilization, hemolysis, hemodynamic performance and in-vivo pre-clinical tests successful.

Intellectual Property:

The company holds 5 issued patents across US, Canada, Europe and Japan and significant proprietary intellectual property. Core innovation is the coupling of a linear motor with a disposable membrane cassette.

Competition:

VENTRIFLO will compete on product superiority of true pulsatile vs. continuous flow. The high margin single-use disposable permits pricing flexibility. The current market leaders (Medtronic, Maquet/Getinge and LivaNova) are unable to provide physiologic blood flow with their centrifugal pumps.

Financial Projections:

Series A round of \$6 million will take VENTRIFLO from the current prototype to the next valuation inflection of FDA 510(k) submission for the VENTRIFLO True Pulse pediatric pump.