DESTINATION STARTUP

VitriVax, Inc.

One-Sentence Summary of What You Do: VitriVax is developing a platform to make vaccines more accessible, more effective, and more affordable globally. Our proprietary technology, developed with support from NIH, the state of Colorado, and the Bill & Melinda Gates Foundation, enables the creation of vaccines that don't require refrigeration, and combine multiple doses into a single shot.

Affiliated Institution: University of Colorado Boulder

Have you formed a company yet? Yes

Funding/Financing: Direct/Indirect University Support, Other

Please describe your company and the problem you are trying to solve: Vaccines are one of the most effective public health tools available, saving lives, preventing disease, and reducing overall healthcare costs across the globe. But, two significant challenges exist in delivering effective and affordable vaccines: First, vaccines require refrigeration, and sometimes even freezing, to retain their safety and effectiveness, adding enormous costs and logistical challenges in getting vaccines to at-risk populations. Second, many vaccines require multiple doses (prime and boost) over the course of weeks or months, or can't be administered at the same time as other vaccines, placing a high burden on patients to return to receive additional injections.

VitriVax has combined two technologies, both backed by a strong patents and pending applications, to create a vaccine platform that solves both of these challenges, and is broadly applicable to virtually any injectable vaccine type. Our Thermostabilization technology enables the creation of vaccines that retain their safety and efficacy up to 70 degrees Celsius for months. Our Atomic Layer Deposition (ALD) technology enables a timed release capability, allowing multiple doses to be administered in one injection, exposing later doses after a desired time period, up to six months later. Both technologies are delivered using commercially available manufacturing equipment that scale to volumes well beyond what we will require, even in large scale production.

We have successfully completed multiple animal trials in mice, including a single- shot, thermostable HPV vaccine in partnership with the Gates Foundation that delivered better immunogenic response than the existing multi-shot vaccine currently on the market.

What is/was your go-to-market strategy? The annual market size for human vaccines is estimated to reach $70- 100 billion by 2026, with many billions of doses of vaccines administered each year. The annual market for animal vaccines is estimated to reach $14 billion in that same period. Our technology is applicable to the vast majority of vaccines in each of those markets. Realistically, we'll be focused on new vaccines under development in the human market. However, the lighter

regulatory burden, and easier ROI calculations for animal vaccine developers could open up opportunities for both new and existing animal vaccines.

There are other less effective and less versatile thermostabilization technologies that exist, but none to date can meet the WHO standard for thermostability above 40 degrees Celsius, nor can they be applied to virtually any vaccine. There are no similar or competitive technologies known to provide the timed release functionality of our ALD coating.

VitriVax intends to be a technology platform and service provider to the vaccine industry. We will license our platform, and provide consulting, training, and support to human and animal vaccine developers and manufacturers globally.

How will/do you generate revenue? Our revenue model will include licensing arrangements with up-front fees, milestone fees, and per-dose royalties. In fact, we have already completed our first licensing arrangement to this effect, with a partner focused on vaccines for ricin toxin and ebola.

Our model also includes services revenue for consulting, training, and support. And, we're exploring options for commissions on the manufacturing equipment that is designed to our spec, and potentially renting access to manufacturing equipment in a collocated facility.

How will this showcase benefit your company or technology? We are pursuing our first round of funding, with a combination of grant funds, commercial partnerships, and up to $3M in equity. Our goal with this phase is to build the partnerships, infrastructure, and capabilities to support multiple vaccine developers entering into phase 1 clinical trials.

Who are the members of your team and why is this the right team to get the job done? Our team consists of CEO Matt Raider — a successful entrepreneur with deep expertise in technology commercialization, lean startup operations, business development, venture funding, and intellectual property, and the two co-founders and inventors of our technology, CSO Bob Garcea and CTO Ted Randolph, both professors at CU Boulder, and well known thought leaders in the vaccine industry. We also have our task master, lab and operations manager Kim Erickson, PhD, with deep expertise in the technology. We will be growing the team with additional technical and business development resources as part of this round.

We are in discussions with multiple potential partners interested in using our platform in their vaccine development. We're also in discussions with one of the leading manufacturers of the equipment we use in our ALD coating process, very interested in partnering and investing in this new market.

In addition, the Bill and Melinda Gates foundation just provided a second round of grant funding to the university labs of our two co-founders. The goal of this funding is to get a single-shot, thermostable vaccine ready for phase 1 clinical trials. We intend to be ready to deliver on that project

on the commercial side once the university work is completed.