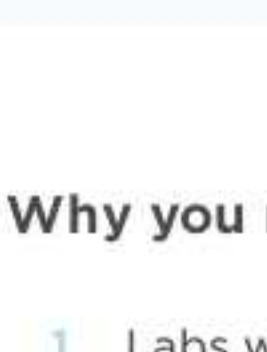


# 3C Bio Inc.

Mobile SARS-CoV-2 (COVID-19) diagnostic laboratories – 2,400 rtPCR tests per lab/day

3CBIO.COM LOS ANGELES CALIFORNIA



The major choke point has been diagnostic testing since the earliest days of the pandemic. With the need for millions of tests per day nationwide, we decided the fastest way to scale effectively was by using automated testing in a mobile environment, and eliminate delays due to building permits. We are at war with a virus, and we want to win.

Mark Mendel CEO & President @ 3C Bio Inc.

## Why you may want to support us...

- 1 Labs will be built in 53' semi-trailers or 40' ISO containers. Deployable worldwide. Massive Scalability.
- 2 2,400 tests per day/per mobile lab. Automated robotic protocol, lower costs, same day results.
- 3 Using multiple labs we can scale to upwards of 5M tests per month in US - no new buildings or real estate required.

## Why investors ❤ us

WE'VE RAISED \$50,000 SINCE OUR FOUNDING



COVID-19 is the most destructive event of the Century. It has killed three times more Americans than died in Viet Nam and it may likely overtake American casualties from World War II. Other countries have fared much better through their extensive testing. We too can test to contain COVID-19.

3CBio has the winning recipe to do just that - they put the lab on a truck and send it where it needs to go to get the results fast. Their 2-part testing regimen effectively separates - the infected - from the never-infected - from the recovered, critical to containing COVID.

I like the way the business scales - make more trucks to test more people to

... read more

IRA Barron Partner, Kensho, LLC

LEAD INVESTOR @ INVESTING \$10,000 THIS ROUND

## Our team

AND OUR MAJOR ACCOMPLISHMENTS



**Mark Mendel**  
CEO & President  
PhD, Bioengineering, University of Pennsylvania, BS, Cornell. Previously with Broadmark Capital, co-founder of RiverVest Venture Partners, and Kauffman Fellow at ARCH Venture Partners.



**D.A. Therrien**  
Chief Strategic Officer, Chief of Design  
David Therrien's work as entrepreneur, engineer and artist sits at the intersection of biological processes, information systems, engineering, and technology. Sponsors of his work have included Apple, Warner Brothers, and the Rockefeller Foundation.



**Jason Goldman, MD, MPH**  
Epidemiology and Infectious Disease -  
Clinical researcher focusing on clinical and translational trials include viral infections and infections in solid organ transplant recipients. He has taken a lead role with local institutions and clinical trials to address the SARS-CoV-2 pandemic.



**Andrea Mander**  
Communications Director  
Healthcare Innovation and Marketing Strategist. Experienced in implementing population-level workplace health solutions on a national scale.



**Myyk Seok**  
Principal Software Engineer  
BSE Electrical and Computer Engineering, Carnegie Mellon Volunteer Mechanic @ non-profit Freecycle & Bikery



**Elliot Roth**  
Scientific & Business Development Consultant  
University Innovation Fellow at the Stanford d.School. B.S. Biomedical Engineering at VCU, started multiple entrepreneurial projects including the DIYbio lab Indie Lab. 12 years experience in synthetic biology.



**Keoni Gandall**  
Diagnostic Systems Scientist  
Keoni Gandall is a biohacker from the Bay Area (Palo Alto, CA) who wants widespread democratic access to and optionality around biotechnology tools, with the end goal of being able to build fully synthetic and understandable cells.



**Jordan Beer**  
Fabrication Lead  
Experience building container laboratories and high-speed SpaceX hyperloop pods, certified welding inspector/welder, CAD drafter.

## The Mission of 3C Bio

The primary 3C Bio mission is to construct a nationwide network of quickly deployable mobile diagnostic laboratories for rtPCR testing in order to screen at-risk and mission critical communities for SARS-CoV-2 infections - food and transportation workers, health care facilities, schools, critical infrastructure workers - and also provide large scale testing for elective activities like sports, conventions and cultural events. We want to reopen the economy as efficiently and safely as possible.

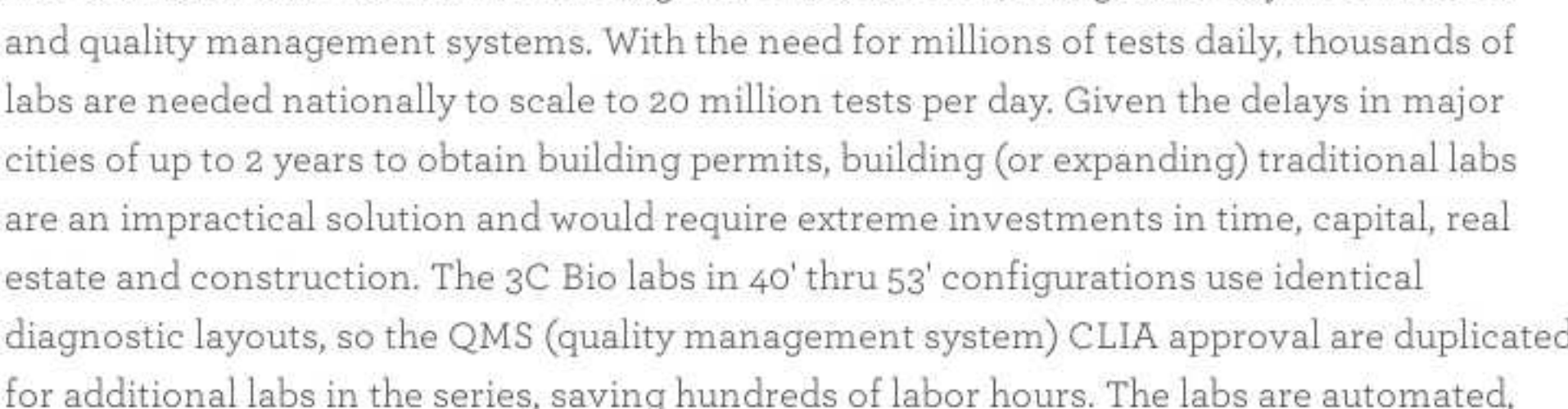
Upon examining the potential problems the SARS-CoV-2 pandemic and the resulting shutdown of the world economy would bring, the 3C Bio team rapidly engaged to come up with an effective response to the outbreak. The team, consisting of professionals with deep experience in biotechnology, complex fabrication and systems integration, were inspired by an idea to build-out and deploy diagnostic laboratories in easily transportable mobile systems, deployable to anywhere in the world.

For the first three months our energies were committed almost exclusively to R&D, designing and outfitting laboratories to be extremely efficient and at the cutting-edge of current diagnostic technology. We focused on defining a business model and identifying ways to lower manufacturing, sampling and testing costs while still performing tests as accurately and as fast as technologically feasible.

We are excited to begin building our labs and contribute to the fight in combating this, and future, outbreaks.

## Confirm, contain and control.

In April, we called for the nation to get to three million Covid-19 tests a week by July and to 30 million by October. To beat this virus we need a massive national effort to get to 30 million and beyond with tests that are easy, fast, and cheap. Only then can we keep the economy open and protect our most vulnerable. **Rockefeller Foundation**



3C Bio 53' trailer based laboratory outfitted with PPE room, BSL safety hood, 9 Openrons OT2 robots and 3 ABI Real-Time FAST Diagnostic rtPCR instruments. Labs are fully self contained with water and power, including solar and battery back-up.

## Why Mobile Labs?

Scalability, efficiency, economy and speed. Our mobile laboratories, designed for high complexity rtPCR testing, can be built and programmed in as little as 10 days, up to 24 months faster than traditional building based laboratories, using assembly line methods and quality management systems. With the need for millions of tests daily, thousands of labs are needed nationally to scale to 20 million tests per day. Given the delays in major cities of up to 2 years to obtain building permits, building (or expanding) traditional labs are an impractical solution and would require extreme investments in time, capital, real estate and construction. The 3C Bio labs in 40' thru 53' configurations use identical diagnostic layouts, so the QMS (quality management system) CLIA approval are duplicated for additional labs in the series, saving hundreds of labor hours. The labs are automated, designed to process up to 2400 tests daily using our 9 robot rtPCR system, significantly reducing the number of technicians required, technicians which are expensive and in short supply.

## 20', 40', 45' & 53' - one size doesn't fit all

53' labs are designed for the North American market, which would allow a lab to be deployed nearly anywhere in the US within 24 hours, as well as Canada and Central America. 40' (+45') labs and a dual 20' airlift version would be sold and used in international markets, as well as certain US locations, can be transported by ship, plane and truck on difficult roads and rivers. In addition to building and operating our own labs, we plan to sell labs worldwide, and in specific cases, license our designs, software and technology to international system integrators and public health agencies outside the US, in order to increase global testing capabilities.

3C Bio labs are designed to be used on-site in order to fully screen and clear a workforce or event the same day, an essential requirement to prevent outbreaks and reopen the economy. By locating labs on-site, sample collection and testing speed is optimized - with no delays. Samples go directly into the testing cue, minimizing, transport, handling and storage requirements. An event with 2,400 people would use 1 lab on site, an event or workforce with 24,000 would use 10 labs on site.

## Screening & Clearing via rtPCR testing

Initially we will be using rtPCR testing methods, reagents and protocols that have received Emergency Use Authorization (EUA) by the FDA. Currently, rtPCR is the best method for quickly determining asymptomatic infections, our prime target. As better, faster testing methods are approved by the FDA, we will integrate them into our system.

## Events and Revenue

Over 2 billion people attended paid events in 2018. Comprehensive audience testing would allow some of these events to resume, combined with other safety practices. Just one percent of this one market would represent \$3 billion in testing annually at current prices.



## White Papers

<https://www.rockefellerfoundation.org/national-covid-19-testing-and-tracing-action-plan/>  
[https://ethics.harvard.edu/files/center-for-ethics/files/roadmaptopandemicresilience\\_updated\\_4.20.20...](https://ethics.harvard.edu/files/center-for-ethics/files/roadmaptopandemicresilience_updated_4.20.20...)  
<https://blog.openrons.com/testing-for-covid-19-with-openrons/>  
<https://www.opencell.bio/coronavirus>  
<https://www.notion.so/Octant-SwabSeq-Testing-9eb80e793d7e46348038aa80a5a90cfdf>

## Investor Q&A

### What does your company do?

3C Bio will build, operate and sell mobile labs based on semi-trailer or container platforms, equipped with automated testing facilities for SARS-CoV-2, utilizing HIPAA compliant software for sample collection, notification, screening and contact tracing - primarily for workplace, event and passenger screening. Our system employs robotic sample processing, high throughput rtPCR instruments, technologies and practices to increase speed while lowering testing cost. (Pending CLIA and FDA/EUA)

### Where will your company be in 5 years?

Future pandemics are nearly certain. We want to be positioned to provide worldwide diagnostics for whatever threatening virus or bacteria appears next. We hope to be acquired by an existing diagnostics provider (LabCorp or Quest) or a major government contractor with interest in epidemic/pandemic prevention, or to have our excess lab capacity contracted by governmental agencies.

### Why did you choose this idea?

The major choke point has been diagnostic testing since the earliest days of the pandemic. With the need for millions of tests per day nationwide, we decided the fastest way to scale effectively was by using automated testing in a mobile environment, and eliminate delays due to building permits. We are at war with a virus, and we want to win.

### Why is this a good idea, right now? What changed in the world? Why wasn't this done a few years ago?

When we started 3C Bio in March, SARS-CoV-2 testing was extremely important and unavailable. Now, it is even more critical, and with a potential lack of immunity or an effective vaccine, our best weapon. A few years ago it wouldn't have been possible to integrate the robotic and diagnostic testing density that current technology makes possible and apply it in a mobile solution.

Pandemics and wars push what is possible, changing technology and approaches to solving problems. FDA Emergency Use Authorizations allow us to move fast, integrating the best current automation and diagnostic technologies into our platform. Smartphones allow us to build software that significantly reduces our labor costs, while providing greater functionality.

### How far along are you? What's your biggest obstacle?

Design is finished for the labs and diagnostic systems. Equipment specifications and testing protocols are nearly finished. We have mapped out elegant solutions to the logistical challenges involved in sample collection, while protecting our workers from virus exposure.

Obstacles include fundraising fast enough to allow us to scale nationally, obtaining diagnostic equipment/test kits in short supply and hiring the large crews of trained medical and lab professionals necessary to operate at scale. While the 3C Bio labs are semi-automated and can run thousands of tests with a 3 to 4 technician crew, sample collection requires up to 40 qualified workers per shift (nurses, phlebotomists, runners) to collect 2400 samples per day.

### Who competes with you? What do you understand that they don't?

COVID-19 testing is currently provided by companies like LabCorp and Quest, but capacity is severely limited, resulting in 7 day to 2 week waits. Estimates of 5M to 20M tests daily are required to fully control the pandemic, while current capacity is less than 5% of that (800,000). 15,000 of our base model labs, running 24/7 - or a 45' shipping container or traditional labs - would be required to achieve this number. By using mobile labs, we can scale significantly faster than our competition.

Our focus is on-site sample collection, verification and testing at the point of care, where there is currently no competition.

### How will you make money?

We sell SARS-CoV-2 sample collection and testing as a package - from 500 to 50,000 per day at any one site - completing all sampling, testing and providing results in 24 hours. We will sell contracts for repetitive testing and monitoring to employers, event promoters, etc. to provide same day results at reasonable, market rates. We will be pricing for gross margins of approximately 50% initially, but hope to drop this somewhat as our capacity increases. Additionally, we will sell fully outfitted mobile laboratories to foreign operators and government disease control agencies, as well as license our engineering plans, parts, lab equipment, QMS and expertise to organizations that have the capability to build and verify their own labs.

### What are the biggest risks? If you fail, what would be the reason? What has to go right for you to succeed?

If the pandemic is eventually mitigated via an effective therapeutic or vaccine, the extreme demand for our testing solution will be significantly reduced. If a successful vaccine is developed, it may take year or more to deploy, with herd immunity a year or two beyond that. Recent antibody research suggests a vaccine may not be effective beyond a few months.

These risks can be mediated by managing growth judiciously, designing new labs with the versatility to adapt to new epidemiological scenarios and financing new labs through testing revenue and lab sales.

To succeed we need to raise capital and fill management gaps timely, close key customers, and quickly learn from any mistakes.

### What are the equity splits?

51.5% Mark Mendel, PhD - Chief Executive Officer  
47.7% D. A. Therrien - Chief of Strategy and Operations  
0.5% Elliot Roth -  
0.4% Jordan Beer Fabrication Lead

### What is the biggest disagreement you've had with your cofounders?

We have disagreed on growth strategies, how many variations of our labs we should offer and for which markets, whether we should sell labs to direct competitors, profit margins on testing, and how to subsidize testing for at risk communities. We have resolved nearly all of these issues through better communication and innovative design - working out better solutions. Lab design is now nearly identical, whether it is in a 40' or 45' shipping container or in a 53' trailer, with a dual 20' airlift version available for the international market, while keeping our parts and custom fabrication inventory at a minimum.

Disagreements led to streamlining both manufacturing and operations, allowing us to lower our projected testing costs.