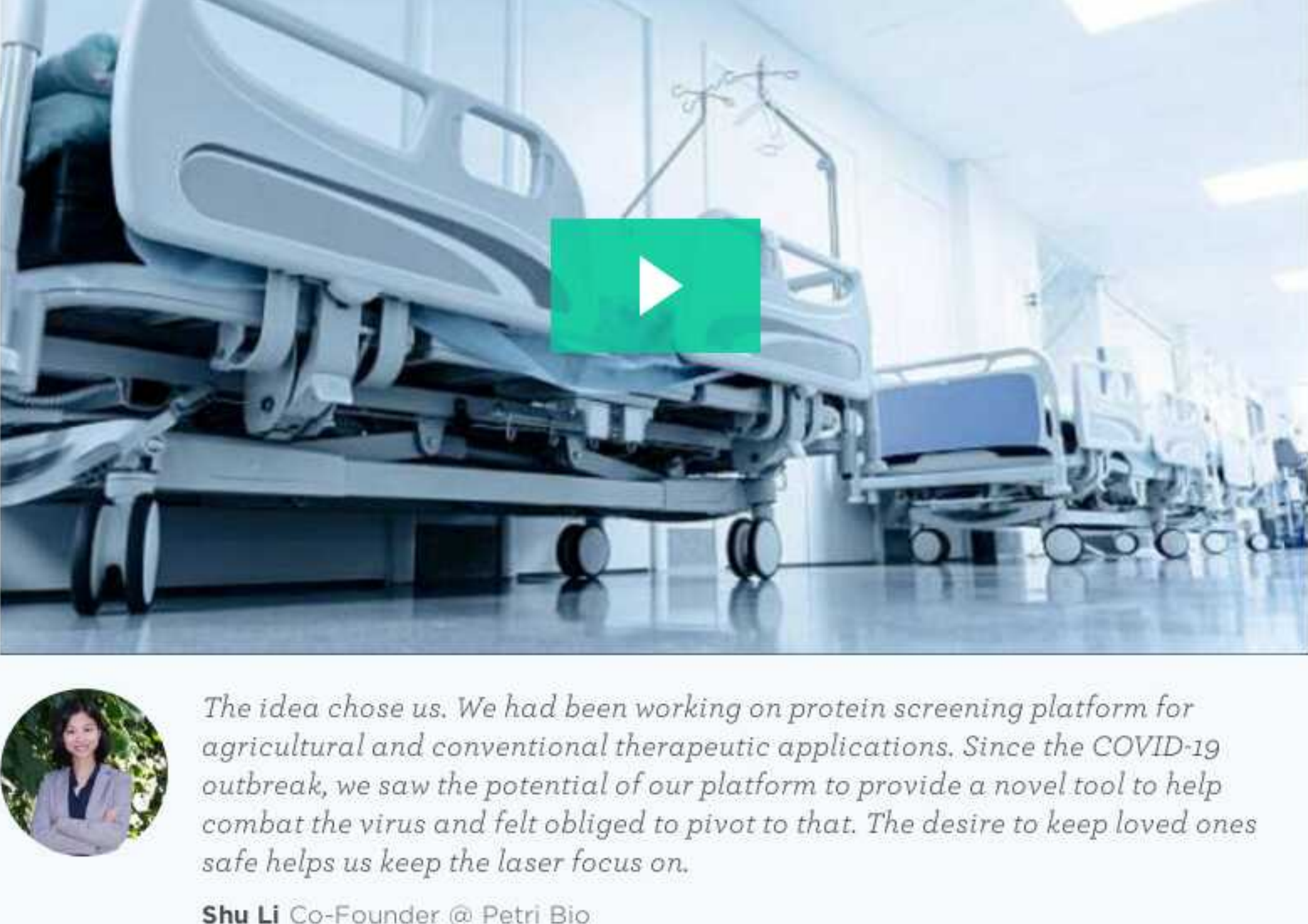


# Petri Bio

Treatment for COVID-19 (and other untreatable diseases)

LINKEDIN.COM/COMPANY/30628997    LOS ANGELES CALIFORNIA



*The idea chose us. We had been working on protein screening platform for agricultural and conventional therapeutic applications. Since the COVID-19 outbreak, we saw the potential of our platform to provide a novel tool to help combat the virus and felt obliged to pivot to that. The desire to keep loved ones safe helps us keep the laser focus on.*

**Shu Li** Co-Founder @ Petri Bio

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

- 1 Developing a long-term treatment for COVID-19 using precision therapeutics.
- 2 Founders are 2 PhD scientists with decades of domain expertise. Y Combinator and LA Biostart alums.
- 3 Pipeline of 3 therapeutics in development with \$25 billion+ combined market size.
- 4 Only minimal tweaks to IP for other profitable biotech applications.

## Why investors ❤️ us

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



*Shu and Joe are two all-star co-founders with deep technical expertise and prior startup expertise. By combining first-in-class comparative genomics and directed evolution, they have developed a library of therapeutic candidates for COVID-19 that neutralize the spike protein on SARS-CoV-2 and inhibit infection. Additionally, the peptide inhibitor can be functionally modified to prime the host's immune system for response, cleverly doubling as both a therapeutic and immune-boosting combination, providing treatment throughout the entire course of disease progression. The team has computationally identified high-affinity drug candidates, partnered with a manufacturer, and is ready to*

[... read more](#)

**John Waldeisen** Entrepreneur

LEAD INVESTOR    INVESTING \$1,000 THIS ROUND

## Our team

AND OUR MAJOR ACCOMPLISHMENTS



**Shu Li**  
Co-Founder  
*Ph.D. with 8 publications and 2 patents. Y Combinator alum.*



**Joe Schinaman**  
Co-Founder  
*Ph.D. with 14 years of research experience and 6 top tier publications. LA Biostart alum.*



**John Waldeisen**  
Senior Advisor

[Petribio Wefunder Pitch Deck 2020](#)

# Developing a long-term treatment for COVID-19 — especially for those who have trouble responding to vaccines.

We believe that there are some blind spots in the current approach to COVID-19 therapies — which have been focused on repurposing existing drugs to see if they have some efficacy against the coronavirus.

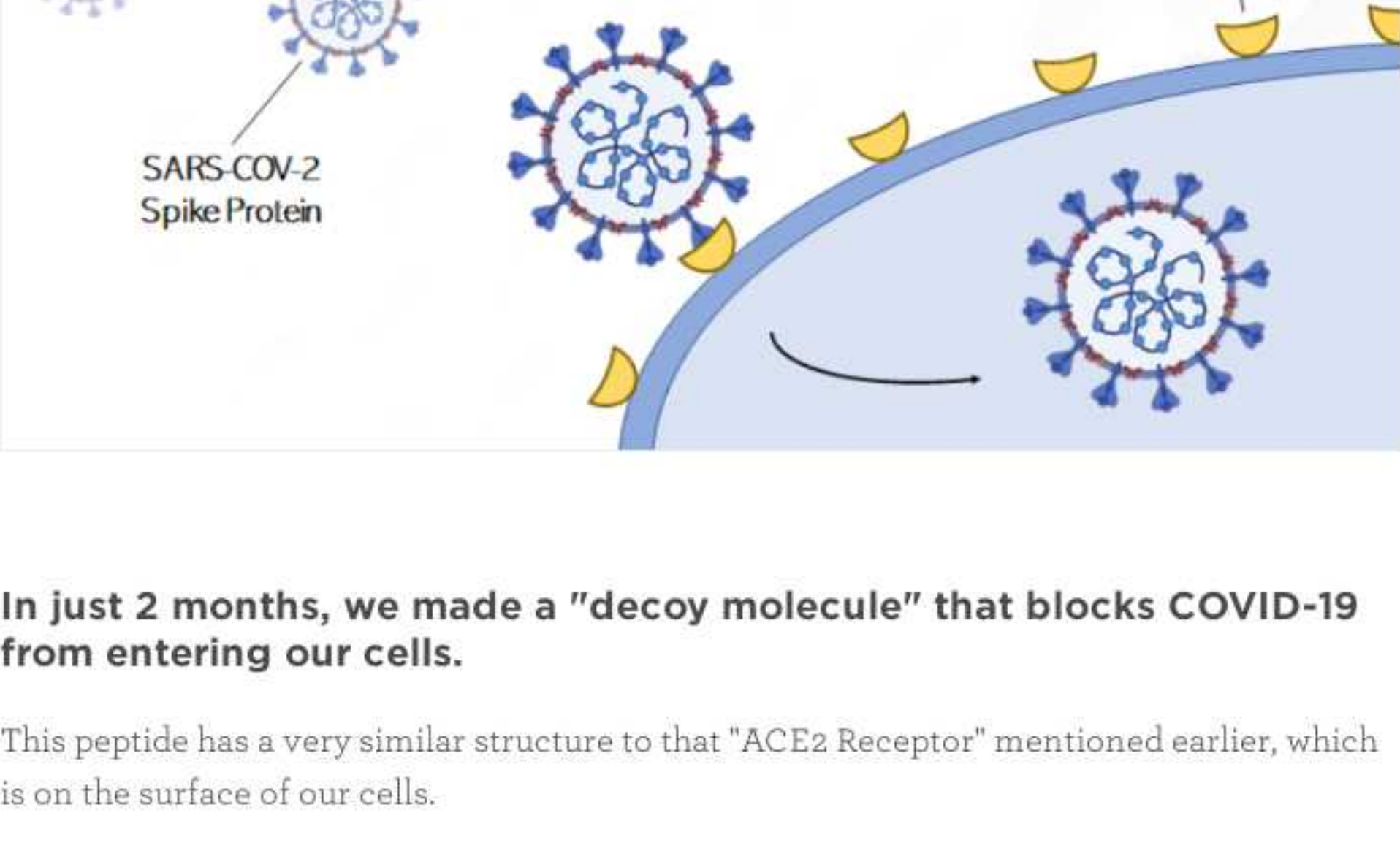
While these therapies will hopefully provide some relief to patients in the short term, ultimately, we also need to develop targeted precision therapeutics to neutralize and destroy the virus. This is where Petri Bio comes in.

## Our strategy is unique.

We are creating molecules called peptides that neutralize the virus *without* triggering the immune system — which is what a vaccine does. We hope that our solution will be useful *in addition* to vaccines so that we have a form of attack for those who experience trouble responding to vaccines (in particular, the immunocompromised and the elderly).

## How COVID-19 infects us...

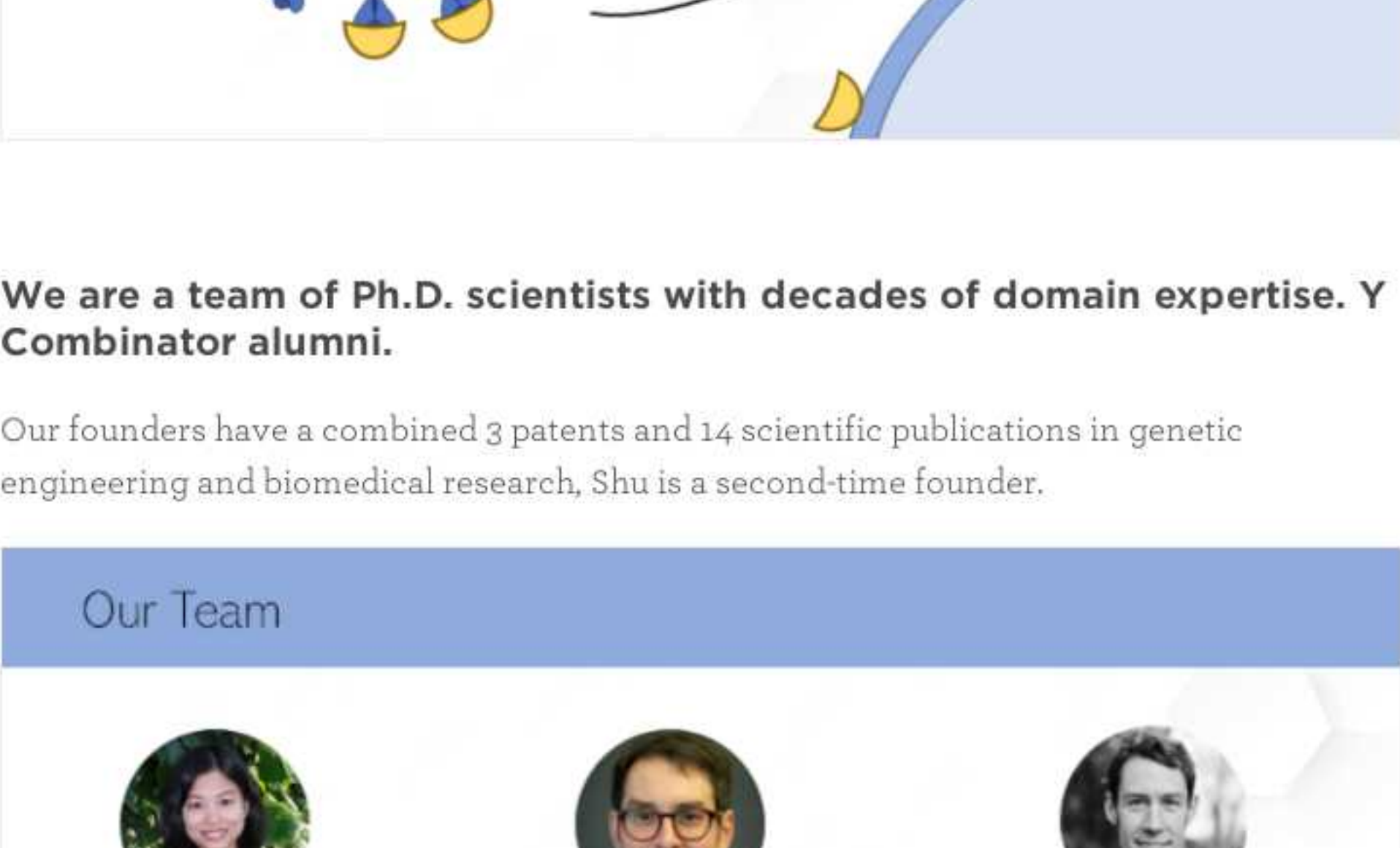
The virus has a "spike protein" on its surface, which then binds to another protein, called the "ACE2 Receptor," which is on the surface of many of our cells.



## In just 2 months, we made a "decoy molecule" that blocks COVID-19 from entering our cells.

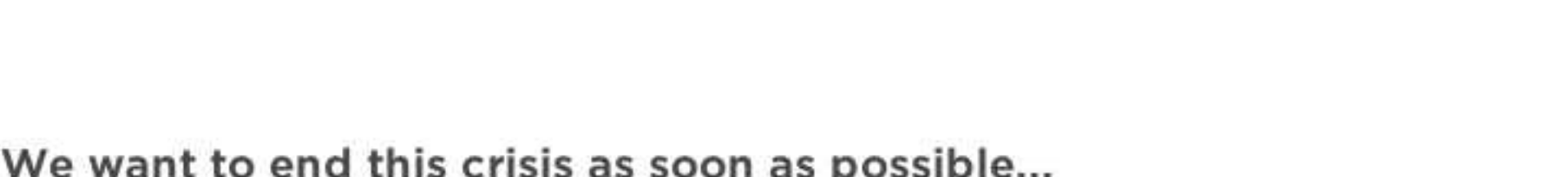
This peptide has a very similar structure to that "ACE2 Receptor" mentioned earlier, which is on the surface of our cells.

This "decoy molecule" binds much tighter to the virus, thereby effectively blocking the virus from entering our cells. Once the virus gets covered by the decoy, the virus is harmless and will be cleared by the immune system.



## We are a team of Ph.D. scientists with decades of domain expertise. Y Combinator alumni.

Our founders have a combined 3 patents and 14 scientific publications in genetic engineering and biomedical research, Shu is a second-time founder.



**Shu Li, Ph.D.**  
Co-founder

Genetic Engineer  
8 papers, 3 patents  
YC S17  
shu@petribio.com

**Joe Schinaman, Ph.D.**  
Co-founder

Microbiome Scientist  
6 papers, 1 patent  
LA Biostart alumni  
joe@petribio.com

**John Waldeisen, Ph.D.**  
Senior Advisor

Serial Entrepreneur: YC W15  
NSF Fellow Scientist  
Co-founder & CEO, Lucira Health  
Co-founder & CTO, Animalia Health

## We want to end this crisis as soon as possible...

...by whatever vaccine or therapy gets us there the fastest! Thus, we don't see ourselves competing with other treatments for COVID-19.

That said, it's our hope that our offering can be used with an established pharmaceutical company's product. We have already received some interest from a vaccine manufacturer and we are currently under evaluation for potential sponsorship.

## Join us and fight the virus.

We are aiming to generate pre-clinical data in the next 2-3 months. Invest as little as \$100 to help us make this treatment a reality for as many people as possible and build a healthier future for everyone.



# Investor Q&A

## What does your company do? ▾

We are making treatment for COVID19. COVID19 infects us by binding a protein on our cells. Our treatment is a molecule that binds to COVID19 and blocks it from entering our cells. It works by acting as a decoy, looking really close to the protein the virus wants to bind to in the body. It's designed so that the virus wants to attack the molecule even more than our cells, and leaves our cells alone. Once the virus gets covered by the decoy, it's harmless, and gets cleared by the immune system.

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

Our platform can rapidly create biomolecules to bind specific proteins. Currently, the most pressing use of this is in creating a decoy for COVID-19. However, the platform can be adapted to create molecules to interact with any kind of living tissue. Five years from now, with COVID19 behind us, we hope to use the platform to create biomolecules for more "peacetime" applications, such as sustainable agrochemicals, while maintaining the expertise to treat outbreaks quickly should another arise.

## Why did you choose this idea? ▾

The idea chose us. We had been working on protein screening platform for agricultural and conventional therapeutic applications. Since the COVID-19 outbreak, we saw the potential of our platform to provide a novel tool to help combat the virus and felt obliged to pivot to that. The desire to keep loved ones safe helps us keep the laser focus on.

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

It is plain to see why we need treatments for COVID19 as soon as possible. What has changed in the world is that a virus has mutated from a form not infectious to humans to a form that is highly infectious. The mutational capability of infectious agents is at the heart of why this is hard to do years in advance. What we are trying to do at Petri is not only to attack this current crisis that's underway, but to create a platform to rapidly develop therapies for future outbreaks more quickly, supported by a sustainable business model during normal periods. Given that our ability to predict these things in advance is unreliable, we need a diverse array of companies and organizations that can respond in a nimble way to whatever comes our way.

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

The initial design is complete. Pending funding, with a manufacturing partner in place we will be able to prototype and test designs within six weeks. After this, we plan for a round of design improvements using directed evolution. We have an experienced partner assisting us as well, using a proven technique to enhance the protein binding characteristics of biomolecules. This is set to take another six weeks. Our biggest obstacle at this point is funding. We have done as much design as we can while bootstrapping, and have partners in place for downstream steps to derisk the prototyping and manufacturing of this as much as possible. That said, it won't move past the idea phase without some financial help.

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

Like everyone else, we are pulling for this to be over as soon as possible, using whatever solutions possible. As such, we don't see ourselves as locked in competition with other COVID19 therapeutics, but complimentary. That said, we feel there are some blind spots in the current approach to COVID19 therapies. The approach thus far has focused on repurposing existing drugs to see if they have some off label efficacy against COVID19. These hopefully will indeed provide some relief to patients in the short term, but ultimately we also need to develop targeted, precision therapeutics to neutralize and destroy the COVID19 virus (and as mentioned before, develop the pipeline to have precision therapeutics more quickly next time).

## How will you make money? ▾

Once we can prove the effectiveness through preclinical data, we can partner up with incumbent pharmaceutical companies to lead the clinical trials with their established pipelines. The partnership would help take the product to the market and patients. Although profit is not our main concern during the crisis, such an arrangement could also generate revenue from common industry practices such as royalties and milestone payments. One model by which such a therapeutic could sustainably generate revenue once the crisis has subsided is through government contracts. Many world governments stockpile drugs deemed potentially useful in pandemics (such as Tamiflu), and contracts such as those for Tamiflu are worth billions of dollars.

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

With any therapeutic, the path to regulatory approval is challenging. This can only be de-risked so much, but we do have a plan. We have reached out to Curebase, to help us design and execute the safety and efficacy trials. This will ensure that clinical trials start on time, are done correctly and reflect a diverse and representative patient population. We also have a former pharmaceutical CEO as advisor to help guide us as to how to partner with a larger pharmaceutical firm to give our treatment the maximum reach as quickly as possible. Furthermore, treatments for COVID19 are currently being fast-tracked and given priority status by the FDA, and as such are being completed in weeks, rather than years.

## What's life for Petri Bio post-pandemic? ▾

Life after the pandemic...

## What inspired you to start the company? ▾

Petri Bio is founded on the philosophy that the designs for the next generation of therapeutics are all around us; they just need to be found and fine-tuned. We screen for peptides, chemicals encoded directly by genes, that are found in the genomes of plants, animals, and microbes for useful functions.