

REACT - RECOVERY - RESILIENCE

SBDC IOWA CLIENTS SHARE THEIR COVID-19 JOURNEY

NANOBIO DESIGNS Aaron Santos, President

How did NanoBio Designs begin?

NanoBio Designs is a start-up company dedicated to fast, easy-to-use, genetic detection devices. The company grew out of nanotechnology research conducted by chemistry professor Derek Lyons, Ph.D. and former physics professor Aaron Santos, Ph.D. while working together at Simpson College. Nanotechnology is the study of objects that are millions of times smaller than an inch. Lyons and Santos developed a new way of making tiny particles that could be programmed to assemble specific tiny shapes.

Knowing that their technology had numerous potential commercial applications, Santos and Lyons recognized the importance of focusing their work on addressing a particular need. Being based in Iowa, the two scientists looked for agricultural problems to solve with nanotechnology. They found that farmers and seed companies lacked a way to measure seed genetics in the field in order to optimize crop growth; and so, they set out to develop a testing platform that would be reliable, easy to use, yield results in minutes and be functional in a dusty environment. Using their technology, the two were able to build a proof-of-concept prototype within a couple of months. It was then that Lyons and Santos formed NanoBio Designs and brought in Todd Kielkopf as CEO for his business and financial leadership experience.

How has the SBDC helped with your business?

This is where the small business development center is providing assistance. According to Aaron Santos, Laurie Pieper (Tech Director at America's SBDC Iowa) and the SBDC "have been invaluable at identifying opportunities that would allow NanoBio to gather the resources it needs to expand its testing options." As a startup, management at NanoBio has limited time to search for opportunities outside of its existing network. Understanding the company's potential, the SBDC assists by looking for valuable resources and connections, providing assistance in evaluating options, and in reviewing materials for submission in order to pursue opportunities.

How has COVID-19 impacted NanoBio Designs? Have operations pivoted?

NanoBio Designs is in a unique position to help fight the spread of COVID-19. The research team at NanoBio Designs believes that they should be able to modify their current genetic detection device, ExpressSeed, so that it can detect COVID-19 viruses in under 10 minutes. This result would provide a fast, inexpensive means of increasing testing for this virus to the point where Americans could safely return to their daily lives. NanoBio Design's team is exploring resources that would allow them to establish the feasibility of detecting COVID-19 with minor modifications to their existing technology.

With reliable, fast and easy-to-use genetic detection tests, according to Santos, the team at NanoBio Designs, hopes to improve U.S. food supply and provide valuable safety testing that could provide early detection of disease outbreaks – in plants, humans or animals. Santos hopes that NanoBio Design’s testing platform will be employed to detect COVID-19 in order to reduce its spread and also utilized to prevent future pandemics through early detection of infectious diseases.

Find NanoBio Designs at <https://www.nanobiodesigns.com>.



NanoBio Designs LLC