

WRITING SAMPLE

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Lonestars on the Medical Frontier

Lisa McDonald and Andrew Nerlinger Work to Prevent Future Pandemics

By Mary Ann Roser

They met as medical school students at Yale and shared a passion for global health and innovation. They wed and married their two interests. The result is PandemicTech, a company that supports worldwide efforts to prevent pandemics.

Physician-entrepreneurs Lisa McDonald and Andrew Nerlinger live in Austin and co-founded Endura Ventures, an international consulting company that connects investors with health care innovators. PandemicTech was an Endura Ventures project, but McDonald and Nerlinger spun it out as an independent company last year.

PandemicTech connects health care entrepreneurs to funding and collaborations that can help them pursue research and technologies for identifying threats from novel viruses before they become a crisis. The company collaborates with global health organizations, including the World Health Organization (WHO) and the Global Health Security Network, focusing on "hot spots" in African countries, India and other places where infectious diseases pose a threat.

That work dovetails with McDonald's other role as director of health care at the University of Texas Austin Technology Incubator. In fact, a new incubator project that has 50 public, private and academic collaborators working to improve pandemic readiness and response, received seed money from PandemicTech. Called TEXGHS, the Texas Global Health Security Innovation Consortium is coordinating collaborative innovative research efforts to combat COVID-19 and future pandemics.

McDonald and Nerlinger recently discussed their company and its work to prevent the world's next infectious disease crisis.

Is PandemicTech a matchmaker?

Nerlinger: We're an enabler rather than a matchmaker. It's not about just introducing people.

McDonald: We're a resource provider. PandemicTech is a clearinghouse for innovation, like a one-stop shop. If you have an idea and innovation and you're looking for partnerships and (financial) support, we can raise your profile.

Why is that important?

McDonald: Local innovation systems are the best way to respond to emerging disease threats. You improve the chances that you don't see the rapid spread of a disease, like we're seeing with COVID-19. We're creating an ecosystem around the health sector that's designed not just to prevent a COVID-19-type pandemic but to help communities address the disease spread.

Do you do research, too?

Nerlinger: We don't do research, but we sponsor research. Our \$100,000 innovation fellowship (is split among) four fellows. We tailor it for every innovator, find out what their needs are ... and make an equity investment in them.

McDonald: We did two years of canvassing health sector innovators and working with pilot projects. That gave us an opportunity to understand more about getting resources around promising entrepreneurs to support innovations. ... We are trying to build resiliency into Austin and Texas so they can really address COVID-19, so (the work) will last beyond this pandemic. People don't need to be frightened because we are creating the capacity to prevent this from ever happening again.

How do we prevent future pandemics? Do your partners do surveillance of animal populations to see what is killing large clusters of animals and then identify ones that are most likely to spread a dangerous disease to humans?

Nerlinger: We have aggressively looked at animals and ... we did training in Egypt in a veterinary research program on how to recognize animal issues. A lot of it is preventing human-animal interface. It's pretty obvious that's the risk. We're very interested in people doing animal surveillance.

Is PandemicTech the only company doing pandemic prevention work?

Nerlinger: Pre-COVID, we were the only ones doing this ... but others groups are shifting to this.

So, you have competition?

McDonald: That would be wonderful. That would be a win all the way around.

Nerlinger: We are trying to play a small but important role ... in this enormous effort. The priority is bridging the tech community and the global health sector community. They had no idea how to do this, to implement entrepreneurship concepts. It was a community that relied very heavily on grant funding. That has to change.

We want this model out there as a functional thing. Africa is also trying to build collaborative and innovation systems. ... In Nigeria, there's a ton of interest in developing locally scaled solutions and using entrepreneurship, but often the infrastructure isn't quite there. Our goal is to bring entrepreneurship to this. We believe that the more people who create these ecosystems, the better it will be.

Are animal markets the most dangerous sources for pandemics, and are bats the biggest threat?

Nerlinger: I wouldn't say that. It was contact with camels that led to the MERS (Middle East Respiratory Syndrome coronavirus).

McDonald: I have a hard time to rank-ordering risk. Imagine if there were a contagion in the canine population.

Is the biggest cause of pandemics viral diseases that are respiratory?

Nerlinger: Yes, before COVID, it was pandemic influenza.

On a happier note, what is giving you hope right in the face of COVID-19 or your work with PandemicTech?

McDonald: Even among those of us who warned of the dangers of pandemic infectious disease, we were shocked by the extent and totality of the change to our existence. (But) there has been an overwhelming appetite for collaboration and cooperative efforts to address COVID-19 now and prepare for future infectious disease threats. I am confident that our work now to formalize a structure to support innovations at the intersection of health security and technology will provide a framework to prevent future pandemics. We are working to provide a blueprint that can be applied globally, and that work has been done by a growing team of volunteers whose efforts and vision give me hope.

Nerlinger: I am most encouraged by the sustained interest and dedication displayed by our communities in Texas to fight the COVID-19 pandemic. Lisa and I are part of the Austin technology community, and it's been incredible to see how many of our colleagues and friends have supported both PandemicTech and TEXGHS. The best part is that this

dedication has been sustained over the last six months and is focused on the long term. I think that Austin, and more broadly, Texas, will be better for how our technology and innovation communities have committed to responding to COVID-19 and the next pandemic.
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