

### **Nathan Wolfe: Virus hunter**

Watch the video here: <https://www.youtube.com/watch?v=pasWagdQSJ4>

As scientists, there's a lot of different things you can study, and I think the kind of science I became interested in very early in life was discovering new things. Many people feel like there's very little left to explore, but the reality is quite the opposite. I spend my life studying the unseen world of microbes, so we spend a lot of time interested in the bugs out there that could potentially really harm us as a species; how can we find them and how can we stop them before they spread?

We know that throughout history there's been a whole range of these viruses that have been devastating to humans; the reality is we live in this fundamentally interconnected world where viruses from animals are constantly ping-ponging at the human species and occasionally they enter and spread.

One of the things we've been very focused on is actually understanding that critical moment at which a pandemic is born; where are these pools of viruses that can potentially become the next pandemic? The answer to that question is: they're in wild animals, so if you ask where in the world we focused, some of the places where we tend to focus are places where there's a tremendous amount of diversity of wild animals. Who's got contact with the widest range of those different organisms? and often, it's the people who are butchering these animals, and it's exactly these sorts of things that we think are the agents that may have the potential to become the next HIV, the next global SARS or flu or other pandemic, that we're not even sort-of capable of thinking about.

If there was a retrovirus like HIV that was spreading around the world, interestingly, we wouldn't know about it. There's always the surprise of *'I'm sure someone's out there determining if there's anything new that's jumping into humans'*

-Not so much! We're actually starting to change the way that this happens; really motivating new diagnostics, new approaches, new ways to actually take a particular virus and determine where it's going to go. The events are conspiring against us with regards to the inevitability of future pandemics.

It's not a matter of *if* it's just a question of *when* there's going to be something that's going to come along and be devastating to the human population. What is the chance that one of these viruses that jumps from an animal to a human will spread globally? If the answer to that is *inevitable*, then the final question is: 'what's the chance that one of these things that enters into humans and spreads globally will be devastating?'

And I think that that's really just a matter of time.