

[00:00:00] **Stephen Calabria:** From the Mount Sinai Health System in New York City. This is Road to Resilience, a podcast about facing adversity. I'm your host, Stephen Calabria, Mount Sinai's Director of Podcasting.

[00:00:12] On this episode, we welcome Didier Prada, MD, PhD, an Assistant Professor for Health Equity Research in the Department of Population Health Science and Policy and the Department of Environmental Medicine and Public Health at the Icahn School of Medicine at Mount Sinai.

[00:00:27] Professor Prada's research delves into the impact that humans have on the environment, and in turn, the effects the environment has on humans. Things like air pollution, soot, toxins, and other environmental hazards are all subjects of his research, as well as the ways to mitigate their harm.

[00:00:43] Dr. Prada's contributions to environmental health research has earned him significant recognition among his peers. It also brought him face to face with Colombian drug cartels, and almost cost him his life.

[00:00:54] We're honored to have Professor Didier Prada on the show.

[00:00:59] Professor Diddier Prada, welcome to Road to Resilience.

[00:01:02] **Diddier Prada:** Thank you, Stephen. It's an honor to be here.

[00:01:04] **Stephen Calabria:** Could you share a little bit about your background and how you became interested in environmental medicine and climate science?

[00:01:11] **Diddier Prada:** Absolutely. Well, first, I was born in Colombia. I'm the second son of a low income family in Colombia. But since my very early ages, I wanted to become a doctor at some point, in a way that I could alleviate the suffering of my people in some way.

[00:01:27] All my life I studied in public school, so I went to a public medical school in Bucaramanga, Colombia, in my hometown. And during those years, I want to use that knowledge for help my people.

[00:01:40] So, after my medical school, I spent three years in the rural areas in Colombia, including the Colombian Amazon, providing health care, primary health care to farmers, to coca planters, those areas in Colombia, that's the only way that people can afford, food, shelter for them and for their families.

[00:02:00] And also, native populations from the Amazon. So it was a great experience, almost three years there. After that, I moved to Mexico City to the Mexico General Hospital to continue my postgraduate studies, so I did internal medicine.

[00:02:13] Then I moved to do research. I started a PhD in molecular biology in the National University in Mexico. I studied epigenetics- that is the interface between the environment and the cells and tissues.

[00:02:25] And after my PhD, I moved to Boston. I had to leave my family there, my wife and two kids, because I wanted to continue my research, but we still continue like in touch and try to continue together. We did it very well. And, so I spent a couple of years in Harvard. Then I moved back to Mexico City to work at the National Cancer Institute in Mexico City.

[00:02:45] And then I came back to New York to Columbia University. And I spent there the past three and a half years before moving here to Mount Sinai as an assistant professor to the Institute of Health Equity Research. So it's like a summary of this trip in general.

[00:02:59] **Stephen Calabria:** Right, now, when you were working in the Colombian Amazon, you were working with cocoa planters, and there was a bit of a difficult situation there.

[00:03:09] **Diddier Prada:** Yeah. Yeah, absolutely. It's those three years and a half, almost three years in the Amazon. It occurred around 2001 and 2003. So, I wanted to have that experience of working for people under such a difficult circumstances.

[00:03:25] So I got a job that was to provide primary care attention for people who was living in those areas under those difficult situation. Colombia was in a, at the time, was living in a historical moment.

[00:03:39] I would say the hardest time in their history, of the drugs issue, you know, the alcohol traffic, the cartels, and they have guerrilla paramilitaries, the government funding a lot for the military in order to try to control those areas.

[00:03:55] But it was really complicated. All these groups were fighting each other intensively. All of them were intensive and they have heavy weapons. So they were constantly facing each other and the people was in the middle. So, my plan there at that time was, okay, I'm going to work, I'm going to do my best.

[00:04:12] And during my first tour in the, I had to spend 20 days in the jungle and then 10 days, just 10 days off to take some air in, in my house. My first tour, three hours after leaving the capital city of Guaviare, one paramilitary group kidnapped us, my team and I, and we spent three days under their orders.

[00:04:35] They wanted us, to serve to the people who were being displaced from the fights that they were having near the zone. But we were under the orders. We didn't have any freedom at all. We have to use all of our resources on the people that they wanted us to attend. That means medication, water, food.

[00:04:53] And during the night, my five and I, we were five people. We had to spend the night in a very small place, made of wood, with a room made of zinc, a very hot place. And, at the time, we were just listening to the bullets, the bombs, all the military moving around us. So, we didn't sleep very well, even though we were so tired and with such a high stress.

[00:05:17] But still, we were feeling like we're doing our best for the people, for those people who have been displaced. So we attended more than 1, 000 people in those three days. even though we were And, scared to death, of course,

[00:05:29] **Stephen Calabria:** So the cartel members allowed you to keep caring for these people, even though you were kidnapped?

[00:05:35] **Diddier Prada:** Our plan was not to attend to those people. When you are under the command of the paramilitary, under the order of those people, we have to do what they say. So, they use us to attend all the people that they want us to attend, and use all o resources on them.

[00:05:51] So, we did our best. I think like, okay, we are not free to do whatever we have to do, we wanted to do. But still we are like helping even though we didn't have any freedom at all. We were doing what we wanted to do, that was to serve the people. So the, the pressure was more like, be in the middle and don't take in our own decision.

[00:06:09] Any of our decisions were no, we did what they ask us to do all the time. And after three days they say like, okay, you're free to go. Please go back home. But something really scary happened that last night after the three days, because one of the paramilitary came to my home in San Jose de Guaviare on a motorbike and he said, you know, doctor, you have to come with me.

[00:06:33] So at that time I said, like, why do I should go with you? But, well, I didn't argue with that guy, I just follow his orders, and he took me to the place of one commander, And, in that place, the same, with a gun in his hand and giving me, again, orders to say that my life was under risk if I say something about all the things that I had to see in that place, all the people that I had to meet there.

[00:06:59] So, it's a type of being threatened by such a difficult and horrible situations. As I said, it was my first tour, so probably if someone, the first decision would say, okay, I'm done, but it was not my case. I felt like, okay, these people really need me. So there is no doctors in those villages. So for me, it was like, okay, it's a way to help a lot, even though I will be at risk, like I'm going to take the risk.

[00:07:24] And I spent, yeah, three years, almost three years under those circumstances. And it was not the only time that I was under such difficult circumstances, all the time the guerrilla came to us to threaten us about our lives, saying that we're going to kill us and to kill our families if we say something about the conflict and the way that these people live under their orders.

[00:07:45] So, probably the feeling that you're doing something good, it helps you to make you feel like, okay, this life is not the best life that I can get, but I still am helping someone and that give you some kind of peace in your mind and in your heart that'll help you to move forward to all the things that you want to do with your life.

[00:08:03] **Stephen Calabria:** Well, it sounds like you had developed a very real sense of meaning and purpose in your work that allowed you to continue, versus had you not had that very real sense of meaning, it might have deterred you from keeping on going.

[00:08:19] **Diddier Prada:** That's absolutely true. Actually, all my life, I felt like I'm a little bit coward. But after two years and a half facing those situations, just feeling like, I'm strong, so at the end of this experience I say like, okay, actually, I'm not as coward, you know, I'm a little bit brave. Yeah.

[00:08:37] **Stephen Calabria:** So, moving on to your work with Mount Sinai, what is the focus of your current research at the Icahn School of Medicine at Mount Sinai?

[00:08:47] **Diddier Prada:** Well, I'm doing an environmental health research. I'm very focused in something called environmental justice. This is showing the evidence that those people living under hard circumstances, that means marginalized, discriminated people, socially marginalized, are suffering of most of the environmental pollution.

[00:09:10] So, and also demonstrating, what are the changes, the molecular changes and cellular changes that led these people from the exposure to the disease. So I'm very focused in something called environmental justice.

[00:09:22] **Stephen Calabria:** And what does that typically entail?

[00:09:24] **Diddier Prada:** So, from when I was a child, I say that I grew up in a very poor neighborhood in Bucaramanga. So, we had a cement factory in that, in that neighborhood, and it was producing air pollution 24 hours a day during seven days a week.

[00:09:40] So, I was exposed, my person was exposed to this air pollution. I suffered from some respiratory conditions. And also, I witnessed that all my people, all the people around me, my family, my friends, my neighbors, They were suffering from respiratory disease, from cardiovascular disease, cancer, dementia. So, I was sensitive, okay, I have to do something.

[00:10:01] What I realized after being here and studying environmental justice is that, yeah, marginalized communities, they suffer from this high impact of air pollution. But also of violence because of the poverty, because of the lack of economical political power.

[00:10:18] So all these combination of factors of poverty, of high exposure to pollutants, the water that this community receives, usually contaminated, for example, with metals as occurred with the Flint community Michigan.

[00:10:31] So it's affecting their bones, their brains, their hearts, their kidneys. So, this made you, again, feel like, okay, I need to do something and that something's okay. I can do research. I know how to do research.

[00:10:44] And then, the people who take decisions, they need evidence to try to propose a change, to try to create a better environment for everyone.

[00:10:53] So okay, I'm going to dedicate my life to that. I'm going to do work on environmental research to provide that evidence, to demonstrate that these air pollutants are affecting so much all these marginalized communities.

[00:11:05] **Stephen Calabria:** Well, let me ask, so anybody who lives in a city or really any environment that has a great deal of pollution is going to be affected by it regardless of their socioeconomic class.

[00:11:16] A person who lives in Beijing, for example, as I used to, has to encounter horrific pollution on a daily basis. To what extent does socioeconomic status affect how people would survive or live in a situation like that?

[00:11:35] **Diddier Prada:** You say something that is completely true. If you are exposed to air pollution, you're going to suffer some level of damage. But if you are in a high socioeconomic position, you can like get healthy food. You can do more physical activity in a greener space because usually you live in areas with better green space.

[00:11:55] So you're kind of protected for some other factors that are affecting you. But the people who lives in these marginalized communities, they don't only have their pollution. They cannot go out because there is violence out there for them or for their children.

[00:12:07] They cannot access to clean environment, to parks. They don't have health care, preventive health care for them.

[00:12:14] So there are other factors that play in a role there, we call them social determinants of health, that contributes to balance the damage or to increase even the damage that they are receiving because of air pollution.

[00:12:25] So, to untangle this relationship between air pollutants and social determinants of health is not an easy work, but it's something that we are developed to try to clarify, okay, where we should focus our attention, improve their income, improve their education, improve all the other factors to try to reduce the damage that is caused by pollutants.

[00:12:46] **Stephen Calabria:** So, is there a measurable correlation between levels of poverty and vulnerability to these sorts of problems brought about by the environment?

[00:12:58] **Diddier Prada:** There are plenty of studies demonstrating this connection between low socioeconomic status and higher exposure to metals in water, to air pollutants, to other types of chemicals. So this is something that we already know. However, we need to demonstrate, okay, which is the specific connection between these factors.

[00:13:19] When you talk about vulnerability, usually people think in poverty, okay? This is people who is marginalized, they don't have the resources, but we already know and we are demonstrating that the social vulnerabilities is also connected with the higher exposure risk.

[00:13:35] So it's like these two big factors that may determine that the higher mortality than, for example, we observe in black women after a fracture. We know that the mortality is higher than, for example, in non white postmenopausal women. That's a fact that's a health disparity that we need to address in some way to eliminate those health disparities.

[00:13:56] That is also a focus of my research.

[00:13:59] **Stephen Calabria:** To what extent does climate change enter into your research and what trends would you say you're most concerned about?

[00:14:08] **Diddier Prada:** Yeah, climate change. Well, my research started doing air pollution research, and we know that air pollution is completely, it's totally related to climate change.

[00:14:19] We know that, for example, carbon dioxide, it's a greenhouse gas that it helps to accumulate all the heat in the atmosphere. And, contributes to increase the temperature levels all around the world.

[00:14:32] We also know that other air pollutants like nitrogen oxides, monoxide, and dioxide, which are product of fossil fuel combustions, uh, gas. And this type of oils, they contribute to global warming in general.

[00:14:46] There are some other components in air pollution, like for example, black carbon that contributes to increase the levels of temperature all around. And we know that they play a critical role in this increased level, this progressive increase in temperatures all around.

[00:15:00] And so we need to try to, again, show evidence that air pollution is important, try to give to the policy makers all the evidence that we need to reduce the levels of air pollution by different ways.

[00:15:13] And also the evidence that we are trying to demonstrate in some collaboration that we have with some scientists at Columbia University. We're trying to demonstrate that climate change is linked, for example, with cognitive decline, with increased risk for Alzheimer's disease.

[00:15:27] We just submitted a proposal to NIH to try to get funding to demonstrate the mechanism of that connection, because the evidence suggests that is higher mortality associated with climate change, with climate distress.

[00:15:39] So the connection between air pollution, climate change is there. And also we know that it's connected with our health. As climate change is moving forward, it's affecting our planet.

[00:15:49] So we are currently seeing an impact of climate change on human health. So, we need to do more to reduce climate change to try to slow down to even prevent it and also to be prepared for all the consequences of climate change in a way to be resilient to climate change.

[00:16:07] **Stephen Calabria:** Well, in that vein, what does resilience mean to you in the context of environmental medicine?

[00:16:14] **Diddier Prada:** We need to see this from an individual perspective of resilience, but also at the community level and also at a bigger level, at the society level, in a way that, okay, I know that climate change is coming.

[00:16:27] I know that there is increased number and frequency, and also impact of hurricanes, of floodings, of wildfires, of heat waves, droughts. So I need to be prepared in my place, in my home, prepare my family, because at some point these natural disasters are going to affect me. So I need to be prepared individually, in my family.

[00:16:49] And the next step is the community. I need to work with my community to be prepared because a hurricane is not going to affect just me. It is going to affect all around, all the houses around mine, all the people who is living around me, working around me.

[00:17:02] And we need to be prepared, especially because those more vulnerable, I'm talking about older individuals, the children, pregnant women, and also the people with the low amount of resources, the poorest, the marginalized, they are more vulnerable to climate change.

[00:17:18] So we need to be prepared, not only us, but also help those more vulnerable to help them to resist this type of events that are coming.

[00:17:27] At the society level, we need to work with policy makers, provide them evidence to make changes to improve the infrastructure of the cities, of the



roads, of the buildings,, all around the rivers, for example, to prevent the flooding.

[00:17:40] Some cities have been doing it, for example, in the Netherlands, to prepare all the areas around the rivers, to reduce the impacts of the flooding. So these types of things that are necessary preparing for this, natural disaster that are coming.

[00:17:53] And just to be aware that there is going to happen, it's going to affect us in some way. And, when you're preparing for the worst, you know, the outcomes are always better when the worst is coming.

[00:18:03] **Stephen Calabria:** So we should expect the worst, but hope for the best. So you've talked about resilience among individuals and resilience society wide. Let's talk about resilience of healthcare systems. How can health care systems, in your opinion, build resilience against climate related health impacts?

[00:18:26] **Diddier Prada:** We need to continue the discussions. We already know that some hospitals have been prepared for natural disaster. There are some plans, some codes to respond in case of natural or even human caused disasters.

[00:18:39] So, this type of infrastructure, it works. We as scientists, we are also providing suggested changes that has to be done. For example, we just published a paper in Nature Medicine the last week, the last two or three weeks, suggesting that we need to continue understanding the mechanism of damage.

[00:18:57] So, we need to continue moving, understanding, okay, what's going on when a heat wave came to us in a way that, okay, we cannot do anything to prevent or to reduce the heat wave, but when it happened to so many people, we try to find which one are the bad ways that lead this person to disease in a way that we can modulate that response to reduce the impact on their health and even prevent deaths from this natural disasters.

[00:19:21] So there is much to do. We need to continue discussing all the people working in the in the hospital to try to be better prepared for the disaster to be more resilient for the climate change.

[00:19:33] **Stephen Calabria:** Can you share examples of successful resilience strategies or interventions that have been implemented in healthcare or communities?

[00:19:42] **Diddier Prada:** I know that some cities, some European cities, for example, are improving or reducing, for example, the mobility using cars, but improving the mobility by using bikes, which here in the United States, we need to do a lot of work because the car here is used for everything.

[00:19:58] Everything. We don't have like, pathways for bikes. We don't have infrastructure. It's minimal. In large cities, we need to be better prepared for that. At the hospital levels, I know that, for example, that is in this institution, it's continuously working and moving the discussion to try to be prepared for, for example, for flooding, for example, for hurricanes because of the geographical condition.

[00:20:20] So I know that people is interested. The health system is interested. We're doing something, but we need to continue this mobilization, new ideas. New technologies, we need better science to try to predict these natural disaster that sometimes are very unpredictable.

[00:20:37] **Stephen Calabria:** Are there any innovative technologies or approaches in your field that you believe hold promise for enhancing resilience to climate impacts?

[00:20:48] **Diddier Prada:** Actually, we're doing, we're running some projects to try to understand the role of, for example, mitochondria. We know that it's important for, when, when someone is affected by a heat wave, because the mitochondria play a critical role in controlling the temperature of the individual.

[00:21:02] So we're trying to explore all these biological mechanisms, all these potential mutations that occur in the mitochondria, in a way that we can predict who is most susceptible to this natural disaster to these climate related events.

[00:21:17] In a way that before of the event occur, we, we can know, okay, who is more vulnerable, who is more susceptible and try to prevent this person to be affected for this climate related event.

[00:21:28] **Stephen Calabria:** How do you deal in your line of work with skepticism of climate science and climate change? I imagine there's a great deal of pushback to a lot of your work. What is the approach to that?

[00:21:41] **Diddier Prada:** I'm a scientist, so any idea that I try to express to support it with evidence, with the results of the studies that we do every day that are published every day. I know that there's some people, they don't believe in the evidence. For me, it's something crazy. You cannot believe it.

[00:21:58] Evidence is evidence. It's a fact. It's there. But, it's a combination between probably ignorance, probably lack of education. Some people is obsessed, and we have to deal that we can, we have the right to think different, right?

[00:22:11] So we have to do our best to try to convince the people, these people, these skeptic people, and um, they're going to be there, but still most of our people believe in evidence.

[00:22:22] So we need to insist in providing more evidence, in doing more research, and being present in the news, showing that, what is the reality, and that everyone needs to be protected, even those that don't believe in the facts.

[00:22:36] **Stephen Calabria:** How does interdisciplinary collaboration contribute to building resilience in environmental medicine?

[00:22:45] **Diddier Prada:** Interdisciplinary collaboration are critical everywhere, in every field. Nowadays that we have such a large amount of information available, So, we need to count on engineers, on scientists, on doctors, on administrative people, because all the experience that we have will contribute to generate better ideas.

[00:23:05] So, it has to be like a team where all of us should be interested, because all of us live in the same planet. There is no planet B. So, we need to work together at the different level, individuals, at the community level is very important, this type of multidisciplinary collaboration but also get involved with policy makers.

[00:23:24] Be around them, be supportive on them in a way that they take the best decisions for all of us and contribute all of us with the best ideas that we can get.

[00:23:33] **Stephen Calabria:** Well, to that point, what role do you think policy and regulation play in fostering resilience to environmental health challenges?

[00:23:42] **Diddier Prada:** It's, it's very important. You know, we cannot fight all by ourselves. We had a hurricane, so it's when you just run away from them. And I, with a heat wave, what can I do? Yeah, I try. I can try to improve my house, but we all do live together in big cities.

[00:23:57] Most of the population of the world live in big cities and the cities are controlled by laws and these laws need to be prepared and modified in

response to our necessities and the necessities, okay, we need to protect the people.

[00:24:11] So the, that, that involvement of this, of, of the policymaker is critical and we need to be close to them or provide them evidence and to show them where they should focus their effort and their resources to try to prepare better our cities for all those climate disaster that are coming.

[00:24:30] **Stephen Calabria:** What are some emerging environmental health risks that you think the public should be more aware of?

[00:24:38] **Diddier Prada:** We saw it the last year, for example, with the, here in New York City, with the wildfires that occur from Canada. We receive here a lot of air pollution.

[00:24:47] People was not prepared, the city was not prepared, and we spent like two or three days with levels so high of particulate pollution that was affecting all of us. So, this is just an example of what is coming.

[00:25:02] We have seen increases in wildfires, in hurricanes, in the intensity of the flooding that occurred in Brazil, for example, and destroyed a complete village with thousands of people living there.

[00:25:15] We need to keep in mind that these natural disasters are coming. They can occur in any place at any moment and without any particular alert before the day comes. So just keep it in mind, be prepared months, days, years before it occurred in a way that the impact of this disaster don't be so strong on us and all the people that we care.

[00:25:41] **Stephen Calabria:** What strategies do you use to engage with the public and communicate rather complex scientific concepts effectively?

[00:25:51] **Diddier Prada:** Well for me it's critical to try to do the best science as possible. I work for example, with a Women's Health Initiative. That is a large US cohort in the United States. It included more than 160, 000 women in a way that my scientific studies, my papers that we call them, they have a strong impact in the scientific journals.

[00:26:12] In that way, we call the attention of the media. We have the results of our studies in CNN, in the U. S. News, in some of the most important media, in a way that people are aware that, okay, Dr. Prada discovered something that

he discovered in a thousand women, and so this should be very real, it should be very important, and it was published in a very good paper.

[00:26:34] So it's a way to people to keep them alert that, okay, we're providing evidence, something you don't have to believe. These, these are the facts. The air pollution is increasing the risk of health damage, so be aware of that.

[00:26:45] And also to work, for example, with clinicians. We work a lot disseminating our results with them in a way that, okay, for clinician is now important air pollution on bone health. They are discussing with their patients that they should be out of larger streets, avoid air pollution on the streets in a way that they protect their bones.

[00:27:05] So for us, this type of engaged work between clinicians and scientists is very important because the clinicians are in touch directly every day with the people, with the patient.

[00:27:15] We are scientists, we are living in laboratories, in front of the computer. So working with people who is in front of the communities for us is very, very important.

[00:27:25] **Stephen Calabria:** Well, don't forget also appearing on podcasts.

[00:27:27] **Diddier Prada:** For example.

[00:27:28] **Stephen Calabria:** Which is absolutely necessary.

[00:27:29] **Diddier Prada:** That's one of the reasons I am here, yeah.

[00:27:31] **Stephen Calabria:** Looking at the environmental situation, it would be very easy, perhaps, to succumb to cynicism or outright negativity. We talk on this show a lot about realistic optimism, seeing things as they are, not as, perhaps, we wish they could be. What motivates you in your work and keeps you motivated? Let's say realistically optimistic about the future, despite our environmental challenges.

[00:27:59] **Diddier Prada:** I see that from a double perspective. One is from that experience that I had in the Amazon. So sometimes you have to deal with bad people. Sometimes you have to deal with bad situations.

[00:28:11] And you don't know if you are really prepared for this adversity, but after you succeed over those situations, you feel like, okay, I'm strong. I'm stronger than I thought.

[00:28:23] So, just be mentally prepared that at the end of the day, if you face those challenges, we will be like feeling much better. We get it through. We will make it the best for us and for the people who is around us.

[00:28:38] So it's important that, okay, there is a brave person inside of everyone to face any challenge. Those challenges, I thought that I wasn't prepared, but it seems I was, and I survived for two years and a half, so it's important.

[00:28:52] And at the society level for climate change, for me, I would say that humanity has faced critical challenges during history. World wars, disparities, immigration, several historical challenges that we have super rated, we have moved forward as a society, working together in a cycle of planning, action, improving, and starting again.

[00:29:16] So we need to continue with that. We need to be involved. We need to do our best for those more vulnerable in a way that we protect our people, feel like. We're doing something good for, for, not only for us, for, for the others. And that gives you like a big satisfaction.

[00:29:33] So for me, something like helping too much to be resilient, to help the other, I think it gives me some kind of deep peace in my mind and in my heart, which for me is very, very important. I'm pretty sure that it happens not only to me too, but to anyone else outside.

[00:29:49] So, let's keep the hope high. That, I would say, is the message. We're going to face this, but at the end of the day, we will create a better society and, something that is important, we need to create a more equitable society.

[00:30:04] Environment, it doesn't have to be just for the rich. It has to be for everyone. And we, all of us, we need to share clean air, clean water, good resources for everyone. It is possible and we need to make it possible.

[00:30:18] **Stephen Calabria:** For those who want to get involved, what advice would you give to young researchers or students interested in pursuing a career in environmental science?

[00:30:28] **Diddier Prada:** Well, in my case, it wasn't an easy journey. You know, I belong to an underrepresented minority. I'm a Hispanic, researcher. When I was doing my PhD, I realized that, okay, there are not too many Hispanic scientists in the world, so we are like a minority.

[00:30:46] And then you realize that only 6 percent of the NIH-funded scientists come from underrepresented minorities. So you know that, okay, the challenges are high. You are like swimming against the current of the water. But sometimes your life show you some opportunities.

[00:31:03] For example, I was presenting my results in a conference in Athens last year when a top scientist from here, from Mount Sinai, Dr. Luz Claudio, she came to me and she was interested in my research.

[00:31:15] She started the conversation and at the end of the conversation she offered me the possibility of applying for this faculty position here at Mount Sinai. So before that, I was working for some other scientific group. I didn't have like my own research.

[00:31:29] And they say like, okay, this kind of opportunities occur because you are interested, because you are motivated, because you want to do something for the environment, for climate, for health.

[00:31:39] So you're doing the best that you can for the people and the things that you care about. So this opportunity came to me.

[00:31:47] So I applied and after some months of presenting my results, of talking with people here, I became part of the Institute for Health Equity Research here in Mount Sinai, which is focusing the research that I want to do in environmental justice and in health equity.

[00:32:04] **Stephen Calabria:** How do you envision the field of environmental medicine evolving over the next decade?

[00:32:10] **Diddier Prada:** In environmental medicine, we are in a critical historical moment. As we were in genomics 25 years ago, where we just, we start exploring the genome in all their complexity.

[00:32:22] Now, we have the ability to determine thousands of chemicals in one time point, and at the same time, we can include not only the chemicals that are in your blood, we can also include information about the green spaces, the place where you live, the house where you live, the air pollution you're exposed,

because we have all this information from, from satellite models, from demographic databases that are available, census information.

[00:32:46] And we can put together all this information to try to discover which one are the determinants of the health or disease, and what can we modify individually to improve the outcome.

[00:32:59] So, I'm pretty convinced that in the next few years we will see like a great explosion, revolution, development of environmental medicine as we saw with, with genomics, finding easily biomarkers of disease, predictors of disease, and also, therapeutics markers to reduce any or some diseases.

[00:33:17] For example, we have improved cancer mortality in lung cancer based on those knowledge that we acquired in genomic studies. We exactly will do the best with environmental medicine results.

[00:33:29] **Stephen Calabria:** Is there anything else you'd like our listeners to know about building resilience in the face of climate change and environmental health challenges?

[00:33:37] **Diddier Prada:** Just to insist that we live in an unequal society, so there are people who needs from our effort and our work and that we, that they need that we care of them because no one else is going to do.

[00:33:52] So we need to keep working for those more vulnerable, for those who have suffered from historically redlining, marginalization, in a way that something that is true is that we improve something for those vulnerable, we improve it for all.

[00:34:09] So, we're doing this type of additional effort for the vulnerable, we're improving society for everyone. It doesn't matter that some people is not on their vulnerability, if we improve something for them, we improve it for all.

[00:34:22] So, it's one of the critical messages that I would like to insist today.

[00:34:26] **Stephen Calabria:** Diddier Prada, thank you so much for joining us.

[00:34:29] **Diddier Prada:** Stephen, it was a pleasure. Thank you so much.

[00:34:31] **Stephen Calabria:** Thanks again to professor Didier Prada for his time and expertise. That's all for this episode of Road to Resilience. If you



enjoyed it, please rate, review, and subscribe to our podcast on your favorite podcast platform.

[00:34:44] Want to give us feedback or offer suggestions for a future episode? Email us at [podcasts@mountsinai.org](mailto:podcasts@mountsinai.org).

[00:34:50] Road to Resilience is a production of the Mount Sinai Health System. It's produced by me, Stephen Calabria, and our executive producer, Lucia Lee. From all of us here at Mount Sinai, thanks for listening, and we'll catch you next time.