

Pathways to Save the World

Distinguished Alumnae Regina Rabinovich, M.D., '82, sits down with two medical students to strategize

Written by Karen Carlson

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Three hours before she was given SIU School of Medicine's Distinguished Alumnae Award, Regina Rabinovich, M.D., '82, sat down with two medical students, Lacey Stelle and Chris Slater, at their favorite coffee shop near the medical school's campus. Dr. Rabinovich, an expert in infectious diseases, barely touched her steaming latte as she carefully listened to the excited and ambitious students seeking guidance for their dream of building global health awareness at SIU School of Medicine.

The students, with that youthful mix of excitement and frustration, bubbled with eagerness. "We have all these pieces," says an intense Lacey. "We're trying to figure it all out."

"This is about how you get things to change," Dr. Rabinovich says. "If you can put it all together, you have a way of bringing it back to what global action means." She lists some of the pieces involved in global health programs and glances up through her dark curls. "This is what I do," she says.

That coffee shop chat is a miniscule fraction of the scale of effort Dr. Rabinovich makes every day as director of the infectious disease program at the Bill and Melinda Gates Foundation in Seattle.

She has helped the Foundation distribute a billion dollars around the world for efforts to fight infectious diseases, including malaria, HIV, tuberculosis, pneumonia, and Guinea worm. More recently, she has focused on the development of tools such as drugs and vaccines.

Calmly, Dr. Rabinovich tempers the students' frameless enthusiasm, helping them focus their ideas and strategize their goals. If you could wave a magic wand, what would you want to achieve?"

"We're looking to do anything that works," Lacey says. "Right now we're ordering pizzas and watching documentaries." She is part of a new Population Global Health interest group at SIU.

"It's good to be ambitious for the program, but you need to be strategic in what you're trying to achieve," Dr. Rabinovich tells the students. "You need to take a longer view — you can't fit it all into four years. And realize that not everyone wants to do this. I don't know why, but not everyone has an interest in this area."





Dr. Rabinovich talks global health with SIU medical students Chris Slater and Lacey Stelle.

Working in infectious diseases is in Dr. Rabinovich's blood. Born in New York of Peruvian parents, she had her first microscope when she was 5 years old, thanks to her at-home tutor: her father, Sergio Rabinovich, M.D., the former chair of Internal Medicine at SIU School of Medicine. "Dad would tell stories of challenges he was going through at SIU."

Still, earning a medical degree originally wasn't her goal. She was an undergraduate studying anthropology when she had an epiphany. "I was visiting archeological sites in Mexico when I realized that I wanted to have an impact. Just studying people was too distant for me, too passive."

An eager and impatient 24-year-old Regina approached SIU. "I said, 'The only way I can be a doctor is to go to medical school, so tell me what I need to do.' I was in a hurry."



The SIU students are in a hurry, too, hoping to push global health awareness at SIU. Talking for over an hour at the coffee shop, Dr. Rabinovich listens to the students' frustrations of the unorganized way students find opportunities to help citizens in faraway places. Chris Slater has visited Uganda and Tanzania.

"I want to create something more permanent rather than just going for a couple weeks."

Dr. Rabinovich empathizes. "You take more than you give at this early stage, and that's OK."

"Everybody goes by themselves or with other groups," Lacey laments. "Some 'Google' to find out how to do it. You have to do it completely on your own."

Chris adds, "There are a lot of pieces of the puzzle sitting around. There's no connection."

"You need someone's time to compile the resources," Dr. Rabinovich says.

"That's a bookshelf," Lacey replies.

"It is a bookshelf, but it's more than that," Dr. Rabinovich assures. "It's a resource center, an acknowledgement that this is important to people at the medical school."

"Maybe we should go somewhere else where it already exists."

Dr. Rabinovich reassures them. "You're creating a pathway. There are two extremes: huge funding to build a super highway, or no funds and creating the dirt path — that's what you're doing now. Do it in the belief that it will be utilized by others who will create more of a road out of it."

“The interest is there, let’s use it,” Lacey says plainly. “Why can’t we figure out how to put it all together and do something rather than talk about it?”

“No one said saving the world would be easy. You’ve got to think strategically,” Dr. Rabinovich instructs. “What are the steps toward your goal? A formal center needs staff, space — are you ready for that yet? That’s why I went to Chapel Hill — they let you get engaged in places.”



Chapel Hill is where Dr. Rabinovich completed her residency in pediatrics at the University of North Carolina School of Medicine. She stayed to earn a master’s of public health degree. “Pediatricians think they’re inherently trained in infectious diseases because so much of what we do is infectious diseases. At the school of public health in Chapel Hill, I was interested in epidemiology — the evaluation of patterns of disease and transmission.”

Epidemiology led her to a fellowship at the National Institutes of Health’s Epidemiology and Biometry Branch of the National Institute for Allergy and Infectious Diseases, Division of Microbiology and Infectious Diseases. “I learned that you can either treat or prevent; it’s a lot easier to prevent. I realized the most important tools are vaccines.”

She adjusts her silk scarf that bursts a splash of bright red dots, which are actually images of red blood cells. “This is my malaria scarf,” she explains.

Malaria has been Dr. Rabinovich’s concentration for nearly a decade, beginning when she was director of the Malaria Vaccine Initiative for PATH (Program for Appropriate Technology in Health). “In the past, people didn’t know what malaria was. People thought there was a vaccine. Even bed nets weren’t being used.”

Her work at PATH led her to the Gates Foundation, which gave grants to her PATH projects. She relocated her family — husband Dr. Franco Piazza and three children: Alex, 23, Adriana 22, and Max, 17 — across the country from Rockville, Maryland to Seattle, Washington to join the Gates Foundation.

Since 2003, Dr. Rabinovich has been a strategic player with the Foundation’s work to decrease the rates of infectious diseases in African countries through better pharmaceuticals and insecticides. “In Zambia, 50 percent fewer people have parasites in their blood; the mortality rate in children has dropped. I sat down with the team and asked, ‘what are we trying to do with the vaccine?’ The ambition was to save the 800,000 children who die each year. We realized things like medicine and bed nets could be used as package rather than a silver bullet. We can use imperfect tools at the community level and still have an impact.”



An eager Lacey is impatient to have an impact on the SIU campus. She folds her arms and leans forward, asking Dr. Rabinovich, “So what should we do?”

Dr. Rabinovich smiles. “You’re doing what you need to do.”



Lacey: “Why can’t we figure out how to do something rather than just talk about it?”

“It needs structure,” Lacey insists.

“The allies are your faculty,” Dr. Rabinovich says. “Get them to own it. Two years from now, you’re not going to be here to keep it going. You need something that exists so students don’t have to recreate it.”

“But there’s no money,” Chris says.

“It’s not about money,” Dr. Rabinovich explains. There are opportunities that aren’t about bringing in huge sums of money. Global health is not just about infectious diseases. It’s integrative. It’s about management. It’s about creating partnerships. It’s good public health.”

The director has worked with individuals from a variety of fields, from advocacy to financiers to managers and economists. “I’ve learned it’s not just about physicians; you need all the other disciplines, too.” She tells Lacey and Chris, “Don’t limit yourself. Think about allied professions and bringing those groups together. There’s strength in numbers.”

She recalls her skepticism of the World Health Organization’s “3 by 5” plan: three million people taking anti-retroviral drugs by 2005. “I was skeptical that in Africa (where we couldn’t hang a bed net) we were going to do antiretrovirals — screen, test, give drugs we can’t afford and monitor them? And yet today, those three million people are on antiretrovirals, and it has stabilized societies where 25 percent of African women having babies are HIV infected. But we didn’t get there in one jump.”



That experience taught her persistence. These days, Dr. Rabinovich is excited about a dream that may become a reality: a vaccine for malaria. “One vaccine under development protected six out of seven people tested in United States. Although that may seem like a small number, creating an immune response that protects six out of seven is meaningful.”

This vaccine, called the RTS,S/AS02A vaccine, is a partnership between the PATH Malaria Vaccine Initiative (a grantee of the Gates Foundation), pharmaceutical firm GlaxoSmith Kline, and the Walter Reed Army Institute of Research. In results of a Phase IIB trial, 30 percent of 2,000 children in Mozambique

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had reduced incidence of infection and a 50 percent reduction of severity. Infants 10-18 months old given a course of the vaccine had a 62 percent reduction in infection. After a two-year planning effort, Phase III clinical trials have begun at 11 different sites in Africa involving 16,000 children. Data will be available in two years, with full analysis by 2013. “We could actually have a malaria vaccine,” Dr. Rabinovich declares.

Beyond a vaccine, Dr. Rabinovich has been instrumental in creating dialogue about a sensitive word in the world of infectious diseases: eradication. “We asked, ‘You want to decrease death by 80 percent. So the challenge is, what 20 percent of children do you want to die?’ None would be acceptable in the United States.”

She acknowledges that it may be decades to reach eradication. “We need to take a step back from the front lines and think more strategically,” she says. “We need to talk to community and make it a priority. This means global engagement by many partners including the National Institutes of Health and engaging the scientific community to solve hefty challenges while moving forward with the tools we have.”



Three minds in a coffee shop, though at opposite ends of experience in global health, together share a dream of changing the world. Lacey, Chris, and a handful of others at SIU hope to build on the ideals to which the alumnae has dedicated her career.

Dr. Rabinovich acknowledges that global health at SIU is a unique niche for the medical school, much like being her work in global health is a unique niche for an SIU School of Medicine graduate. “I thought by all objective measures of performance by this medical school I would be the biggest failure: I’m not in clinical practice, and I’m not practicing in southern Illinois.”

Still, Dr. Rabinovich is grounded in medicine and prevention and has carried lessons learned at SIU to her work as a key player in healing the world. “Much of what we learned in med school is no longer true in terms of facts. But SIU’s

curriculum is about problem solving. You’re not learning a cookbook of what to do; you’re learning an approach to thinking about the problem.”

To the budding physicians she says, “I think you’re on track to create something that’s more structured. It will be challenging — it’s not a natural here — but it’s shared by students at other universities. This is global health with out walls. You don’t need walls to do this. Set it up so the next group has it easier. That’s a good two-year goal.”

Lacey wants more. “But what do you call it? There has to be a name. There has to be an e-mail sent out, a meeting.”

Dr. Rabinovich laughs. “She’s going to run the world one day!”

But she understands the medical students’ frustrations. “I am continually astonished that people think global health is too difficult, that it can’t be done. You can have impact now and be very effective, as well as invest in tools for future impact. But you have to have passion for what you do. There are so many niches to have an impact — pathology or clinical medicine, primary care, research — but it only matters if you’re truly excited about what you’re doing. Follow your nose.” ●●●

