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www.reachmd.com

info@reachmd.com

(866) 423-7849

Surplus: Sharing Equipment With the World

EFFORTS OF SEEDING LABS

You are listening to ReachMD, The Channel for Medical Professionals. Medical researchers and practitioners in the developed world can pursue their work with hardly a thought to the availability of supplies or equipment. In fact, the abundance of supplies is often kept in storage or thrown away prematurely. The story is very different for colleagues in other parts of the world, who struggle to do their work without adequate equipment. Today we will discuss the efforts of Seeding Labs, a group working to share the surplus of supplies enjoyed by some scientists with scientists in need around the globe. Welcome to The Clinician's Roundtable. I am Dr. Cathleen Margolin and joining me from Boston, Massachusetts is Dr. Nina Dudnik, Co-founder and Executive Director of Seeding Labs.

DR. CATHLEEN MARGOLIN:

Welcome Dr. Dudnik.

DR. NINA DUDNIK:

Thank you.

DR. CATHLEEN MARGOLIN:

The idea of reclaiming used lab equipment is ingenious. What inspired you to make the idea a reality by creating Seeding Labs?

DR. NINA DUDNIK:

Well, I'd actually worked abroad in developing countries trying to do science for number of years, more specifically I spent a year in a laboratory in the Ivory Coast in West Africa where one of the technician's part of her job was to wash and dry the plastic wares, small plastic disposable test tubes. I spent a year there and about 3 weeks after I left found myself working in the labs at Harvard Medical School where the idea of reusing those disposable items was absolutely unthinkable, and if you dropped one on the table, you would throw it out and you will get another one anyway and it was moving from such a situation of need to such a situation of plenty that was incredibly striking and really motivated me emotionally to do something much more concrete to address the needs of scientists with whom I had worked abroad who are very talented people, but who had such limited resources.

DR. CATHLEEN MARGOLIN:

Does your group take responsibility for sterilizing the equipment and making it usable or do you send it to them and know that they will take care of these things?

DR. NINA DUDNIK:

We make sure that everything that we donate works to the best of our abilities. We have limited capacity right now. This is another aspect we would love to improve on in the future. We have limited capacity right now to test and fix lab equipment, but everything that we pass on does work to the best of our abilities. It's absolutely decontaminated from any possible biohazardous contamination or radioactivity because although the scientists that we are helping work in resource-poor environment, they still deserve the highest possible quality of instrumentation and that is our goal to provide them with.

DR. CATHLEEN MARGOLIN:

You relate the importance of this work to fighting brain drain in the developing world and you are talking about the talent that those people have, it's the equipment they lack.

DR. NINA DUDNIK:

There are 2 parts to that. One is that by and large to get an education in science, there are very few countries in the world that have excellent facilities for doing that and anyone who has the talent and the opportunity to come to the United States, to certain countries in Europe or Asia takes that chance. That being said there are lots of people in the rest of the world, who have the talent to do science as well. The lab that I worked in the Ivory Coast, both of the technicians in that lab had never finished high school and they were doing molecular biology. In fact, they were teaching me molecular biology techniques that I hadn't learned before and they were incredibly talented and so there are some people who managed to leave, and when they do leave, they often don't go back to their home countries, and then there is the other half of the population who is talented, doesn't get the opportunity to leave, and also doesn't get the opportunity to develop their talents because they stay at home, and I think with Seeding Labs, what we are trying to address is both of those populations because by giving the opportunity to more and more people to be able to pursue scientific careers, we make the most out of the International pool of talent. They can contribute the most to solving the problems that their countries face.

DR. CATHLEEN MARGOLIN:

I have noticed that you list on your website seeding relationships among scientists around the world as your groups most important accomplishment, why is that?

DR. NINA DUDNIK:

You can't do science in a vacuum no matter where you are. We are very lucky at the universities in the United States to have a huge community around us of people working on similar issues, working with similar techniques, you can always go across the hall, upstairs, down the hall to talk to somebody about your work and we have talked to some of the scientists around the world that we have helped so far with Seeding Labs and one of the things that they cite as a problem is the difficulty in meeting colleagues from elsewhere who are

working on their topics and on making it to the International conferences where these topics are addressed and so one of the things that we feel is an absolute priority for building the strength of the entire global scientific community is to make it truly global, to make those relationships possible regardless of distance.

DR. CATHLEEN MARGOLIN:

Can you get us an example of a lab that has received reclaimed equipment?

DR. NINA DUDNIK:

One of the earliest scientist, who got in touch with us was a man named Ricardo Morbidoni. He was a postdoctoral fellow at Albert Einstein College of Medicine in New York and had just returned home to Argentina, not working in the capital. He was hired as a professor in a small town called Rosario at the University there, and he moved into a lab that was essentially empty. He sent us photographs of it and it had tables and chairs and shelves and essentially very, very little by way of lab equipment and what he works on is drug-resistant tuberculosis. If you probably remember there was one very highly publicized case of this in US last year. In Argentina, there are about 3000 cases a year and worldwide there are millions of cases and Ricardo got in touch with us in early 2004. We equipped his lab in 2005 and then again in 2006 we sent him more equipment and actually last month he wrote us and said that he and his lab staffs have optimized a protocol for testing clinical isolates of tuberculosis samples. It used to take 45 days, as a result of Ricardo and his team, it now takes 2 days to determine whether someone is infected with drug-resistant tuberculosis and this protocol is going to be implemented in their National Public Health Service.

DR. CATHLEEN MARGOLIN:

That's a perfect example of how that research benefits everyone. Dr. Dudnik, what countries have benefitted from this program so far?

DR. NINA DUDNIK:

So far, we have worked on an individual scientist-by-scientist basis. Again, part of sort of our ethos of building these relationships that are very strong, 1 scientist at a time, and the scientists that we have worked with are in actually 12 countries around the world. We started with focus in Latin America due to our partnership with the Sustainable Sciences Institute located in Berkeley, California, and I can list all of the countries for you actually. We have helped scientists in Argentina, Brazil, Guatemala, Ecuador, Haiti, Paraguay, Venezuela, Chile, Madagascar, Ethiopia, Nigeria, and the Congo.

DR. CATHLEEN MARGOLIN:

That's an impressive list. Can you talk to us a bit about the appeal for donors?

DR. NINA DUDNIK:

I think that scientists, specifically biological scientists don't have a lot of obvious outlets for philanthropic work. One of my hopes is that Seeding Labs is that outlet and it's a very direct tie for them to say this is my job, and by sharing my surplus resources that I would already be getting rid off, I can actually do more and I think that resonates very deeply with the scientists, who helped us so far by

donating their used lab equipment. It's much like donating canned goods at the holidays or your clothes during clothing drives in the winter. It makes you aware of what you have that actually can do more and I think that that's a novel experience for research scientist and I think it's one that is becoming very valuable for them.

DR. CATHLEEN MARGOLIN:

Has this been an expensive or logistically complicated endeavor?

DR. NINA DUDNIK:

The logistics are a bit involved absolutely with shipping considerable amounts of equipment overseas. There are lot of customs and legalities to be worked out, but it's not as difficult as you might initially think and I believe that that's possibly why no one has done this before us. We literally did start this as a small group of volunteers on a shoestring budget and even so we managed to do an enormous amount and so I think that the logistics are absolutely overcomeable. The expenses are mostly involved in the turning around of the lab equipment as well as the shipping of it overseas.

DR. CATHLEEN MARGOLIN:

What is the connection between Seeding Labs and Harvard University?

DR. NINA DUDNIK:

Those that have actually started Seeding Labs were all graduate students at Harvard University. This was back in 2002. I was a graduate student in molecular biology as well as 2 other fellow students in the same program, and for the last 5 years, it has grown under the auspices of Harvard Medical School with a lot of support from personnel and facilities there.

DR. CATHLEEN MARGOLIN:

Do you have any other student groups involved yet from other universities?

DR. NINA DUDNIK:

We are working to help a couple of student groups, one in Houston and another in New York City.

DR. CATHLEEN MARGOLIN:

Some of our listeners may want to participate or perhaps donate you through unwanted equipment or even start a program in their area, how would they go about participating?

DR. NINA DUDNIK:

Well, we would be happy to talk to anyone who is interested in doing this. I certainly think that the opportunity to do this exist in every major research facility in the country, and I would love to see this spread. So, we would be happy to talk to anyone about the logistics involved and share some of our protocols that we have developed overtime certainly for working with Universities as well as with the private sector, which we are now partnering with.

DR. CATHLEEN MARGOLIN:

Because as you mentioned it's a simple idea, but I am sure a huge obstacle for people is just how you get this done and here you are paving the way with your group.

DR. NINA DUDNIK:

I think it is a little bit daunting at the beginning especially in terms of the physical logistics of handling the equipment, and again, we are working on developing protocols that we can disseminate to make that easy for new groups to start up.

DR. CATHLEEN MARGOLIN:

And so other than just growing larger, what are the other plans that Seeding Labs have for the future?

DR. NINA DUDNIK:

One of the things that we would really like to do is to be able to do more to publicize the work of the scientists that we are helping. I talked about the relationships that we would like to build between ourselves and them, but also important to build those relationships among scientists globally and so we would love to be able to publicize the specific research achievements of these scientists, but also to build specific research collaborations with the scientists in the US and those scientists abroad that we have had equipped.

DR. CATHLEEN MARGOLIN:

I have noticed that on your website you have listed some publications by some of the people that you have helped.

DR. NINA DUDNIK:

Yes, actually we have found that the scientists we have helped have published over 47 articles in the last 5 years since receiving equipment from Seeding Labs. They have published 47 articles in journals that are both national and international research publications.

DR. CATHLEEN MARGOLIN:

Wow and they would credit having this equipment and able to do this work.

DR. NINA DUDNIK:

Yes, in some cases, they have specifically cited Seeding Labs as what enabled them to do their research.

DR. CATHLEEN MARGOLIN:

This is a terrific idea and I wish you best of luck with it in the future.

Thank you for listening to The Clinician's Roundtable on ReachMD, The Channel for Medical Professionals. I am Dr. Cathleen Margolin and my guest has been Dr. Nina Dudnik, Co-founder and Executive Director of Seeding Labs. Thank you so much Dr. Dudnik.

DR. NINA DUDNIK:

Thank you.

DR. CATHLEEN MARGOLIN:

For comments and questions, send your e-mail to XM@reachmd.com and thank you for listening.