

EPISODE 37. 50 YEARS OF DEVELOPING GLOBAL HEALTH LEADERS

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Garry Aslanyan [00:00:05] Hello and welcome to Season 4 of the Global Health Matters podcast. I'm your host, Garry Aslanyan. In this season, we'll be bringing you more thought provoking and inspirational discussions on a variety of global health topics. We kick off this season with an episode that highlights the remarkable career journeys of two research leaders. And we discuss the role capacity development played in their formation. In this episode, you will hear from Dr Wilfried Mutombo, the Head of Clinical Operations at the Drugs for Neglected Diseases initiative in the Democratic Republic of the Congo, as well as from Dr Yasmine Belkaid, President of the Institut Pasteur in France.

Garry Aslanyan [00:00:51] This episode is produced in celebration of the 50th anniversary of TDR, the Special Programme for Research and Training in Tropical Diseases. Research capacity development has been a central pillar of TDRs work over the years and to mark this occasion, I am joined by the Director of TDR, Dr John Reeder, to start this discussion and to reflect on the challenges and future frontiers of capacity development. Hi, John. How are you today?

John Reeder [00:01:29] Hi, Garry. I'm very well, thank you.

Garry Aslanyan [00:01:31] Great. So welcome to Global Health Matters. You are not a stranger to Global Health Matters, because I remember I actually emailed you first with this idea, and you were very enthusiastic about it.

John Reeder [00:01:47] Great to be here. And I still am very enthusiastic about it, Garry. It's been a fantastic success.

Garry Aslanyan [00:01:52] John, let's get started. You have had an extensive career in research, working in many different settings and institutions, where did your passion for science and research come from?

John Reeder [00:02:06] Science, basically my first day of high school. I walked into a biology class and loved it and realized I'd found my topic. While I was quite good at other topics and other sciences, I've had the love of biology since that day. It really drives it. But I guess turning that into research. The science itself drove me into my first job, which was as a laboratory technician in a hospital laboratory. While studying there, studying for my fellowship, we had to do a research project, and it was to take on one of the problems we were having within the laboratory, which happened to be young children who've got sticky eyes in the maternity ward. So I spent some time looking at that, and I was fortunate to win the prize for the best project that particular year in the fellowship, which meant I could present my work at a national meeting and also publish the work as my very first scientific paper. From that moment, I was hooked, both on research, but also on the fact it was part of what I was doing. It was part of my science. It was part of my job to be doing that kind of research.

Garry Aslanyan [00:03:11] And of course, after that you worked in many different research institutions, settings and countries. But since 2012, you've been the director of TDR. Why were you interested in transitioning from actually doing yourself the science and research to focusing on efforts on strengthening in-country research systems from a global level?

John Reeder [00:03:34] Like all things, these things happen in stages. I loved my time as a research scientist, and I did have the opportunity to work with the malaria research team at the Hall Institute in Australia on some very basic discovery research. But really in the back of my mind was putting this research into action. So the step before coming to TDR was actually when I stepped out of that laboratory and became the Director of the Papua New Guinea Institute of Medical Research. Running the National Institute of Medical Research gave me much more of a feel for how you could put science into action and really address health problems in countries. And of course, there is an element of giving up your own hands on elements of this. But I've learned to really take the pleasure in the achievements of the people around me and the science around me. I often compare it to the fact that you may be an excellent pianist, but if you pick up a baton and you start directing an orchestra, you can pull much more out than you can in your own individual instrument. And I think I've made that transition, first in Papua New Guinea, but then I was very excited to take that up to a more global level with TDR when I had the opportunity.

Garry Aslanyan [00:04:45] And that was where your passion for that came into fruition, by running the programme that really strengthens capacity in low- and middle-income countries.

John Reeder [00:04:56] Exactly. It put all of these parts of my career together. This experience of working in country and realizing the problem, this love of science and research, and even in my own career, which was not a straightforward go to university career. I did all my study part time while working and built a rather hotchpotch career through that, which was based on getting opportunities or meeting good mentors and taking this career forward. So a real passion for making sure that we give an opportunity to everybody with potential, and hopefully this is really still at the centre of TDR's activity.

Garry Aslanyan [00:05:32] I spoke to two former TDR grantees, Dr Wilfried Mutombo and Dr Yasmine Belkaid. Both Wilfried and Yasmin had a very remarkable research career. Wilfried started as a medical doctor working in a small village in the Democratic Republic of the Congo, and was confronted by multiple challenges in treating patients affected by sleeping sickness. In particular, there was a drug that was very high in toxicity that was used at the time, and then he received a clinical research fellowship from TDR to be further trained in clinical trial management, and then that enabled him to lead to the first clinical trial in DRC to test fexinidazole. This is a drug that is an oral drug and is for sleeping sickness. Currently, Wilfried is the Head of Clinical Operations in DRC for DNDi, the Drugs for Neglected Diseases initiative. Let's hear from Wilfried.

Wilfried Mutombo [00:06:40] Just after my medical school, I started working in a small village called Casassa, and I was the only medical doctor for the entire village. The village was a small village, but with about 11,000 people, so I was the only one dealing with any cases of disease. And this village was endemic to sleeping sickness, so I was managing those cases of sleeping sickness and at that time, the only drug we had was melarsoprol. So I was treating my patients with that drug and I could cure some people, but others were relapsing and come again and with some very bad and painful experiences because the drug was toxic and it happened that... I lost some of my patients and that was a very bad experience. After my two years spent in this small village, DNDi launched a clinical trial called NECT. I was very interested because I was facing those challenges with this toxic treatment. So I was very interested and I applied and I was selected. That was my very first experience in a clinical trial. I heard it through one of our elders that there was this programme of TDR, and I applied to this programme of fellowship of TDR. I had the support of a recommendation letter from DNDi, so I applied and I was selected and spent six months at Sanofi in Paris and six months at DNDi. That was really a very interesting experience because I could work, share with people doing clinical trials at different levels and in different aspects. So this was a kind of learning by doing but in the very best way.

Garry Aslanyan [00:08:42] John, just before I ask for your reflections, let's also listen from Yasmine. Yasmine is a career scientist and her career started in Algeria. In 1996 she received her PhD from Institut Pasteur in France. This was followed by an illustrious range of research projects during her time at the National Institutes of Health in the USA, and actually, as of January, Yasmine has returned to France and has a new role as the President of Institut Pasteur, and this is what she had to say.

Yasmine Belkaid [00:09:18] It's really a full circle, because my first experience in research was in Pasteur Institute in Algiers, in Algeria, and it was after that when I was lucky enough to receive a fellowship from TDR, which I'm very grateful for, which allowed me to do my PhD in Paris. So this is really a full circle, not only in terms of coming back, but also in terms of this conversation I'm having with you. So coming back to Pasteur is extremely important to me. Pasteur is one of the only institutes in the world that is known across the planet and for the reason that Pasteur exists in 32 countries. So it is for someone like me, like many others who are absolutely passionate about what we need to do for global health, an extraordinary opportunity to contribute to questions of high importance to humanity.

Garry Aslanyan [00:10:15] John, clearly both Wilfried and Yasmine really benefited from the support they've received and having worked in and continuing working in countries and affecting the health of people, in your view, how important are these early capacity investments for the long term trajectory of researchers and addressing the country level research priorities?

John Reeder [00:10:43] So important. And first, let me say you've picked two great examples. Wilfried and Yasmine are people I know and really admire the work that Wilfried did in DRC on fexinidazole in a really difficult situation. And Yasmine, building that career, working at NIH at the very forefront of microbiome research coming out of this. And there are a couple of reflections from this. One is, when you're supporting capacity development, you're not inventing people. These fantastic people were there and they are in every country, and we can expect similar numbers of people in every country. But the problem is, in some countries, those people do not get the opportunity to fulfil their potential. They do not get that break to get the education, to get the research funding and be able to move that forward, and this is what TDR has done really well over the years, is provide an opportunity. Not to everybody. It's a small drop in the ocean, of course, for any one organization, but you can see when you give the opportunity to people like Wilfried and Yasmine, they seize it. They make the most of that opportunity, and it allows them to fulfil what is already in them, which is obviously brilliant scientific careers from this. I often say, when you're looking at science and laboratory science particularly, people get fixated on the expensive equipment and the fancy technology that surrounds this, but the most important investment in a laboratory is the scientist who is in that laboratory, because, all other things aside, the ability to see the problem, think of innovative solutions to test them critically and to have the open mind to be able to see the discovery coming through that, you invest in that and you've got great science.

Garry Aslanyan [00:12:31] That's so interesting because this issue of how sometimes the actual capacity or actual researcher is an afterthought in some of these projects, it's the buildings, it's the equipment, and this is so spot on. John, I'd like to ask you next about the capacity support still required in countries, but let's listen to Wilfried who shared about the challenges he and his team faced when setting up that first clinical trial in DRC, and also what needs are still there and are remaining.

Wilfried Mutombo [00:13:10] The first challenge is to reach those areas because to perform a clinical trial, you need to go there in those areas, in those remote area, and as you may know, we have bad roads and sometimes this is not very safe. The second challenge is, when you are in those areas, you can imagine in what state those health facilities are. So the health facilities are in very bad state, but if you want to perform a clinical trial, the highest quality clinical trial, you must do it in the acceptable standard. So we had to improve these health facilities. To build, improve the laboratory, patient ward, the office

of investigator, to provide water, to provide electricity by generator or solar system and internet connection, that is important in any research project. So we had to set up all this. Another challenge is the health workers. Health workers are there but they are not aware of what a clinical trial is. To have a high quality clinical trial, they needed to train them and have a very, very close supervision of their activities. So we organized all this. We had to train them first on good clinical practice and after on study protocol on all those aspects, on SOPs and all this and after had a very close follow-up. I can say I am a little bit proud of what a strong network we had of those health workers. They can be involved in a clinical trial. They know things about trials and so on and now they are able to be involved in any trials about any disease. But we need to support them. And first, let me say, a programme like this TDR programme, this is one of the very interesting programmes that need to be continued, because I am the fruit of this, and as you can see, what I am doing now. So we need to keep this and to continue but we need to connect all those clinical sites and just to keep them because after a project is finished, we are fearing that a site can fall down. So to keep all this, we need for research to connect them with research institutions locally like universities and so on, so that as they have this basic knowledge of what research is, they can continue working in this environment. So we need our governments to create those connections and to give more support and more money to maintain those facilities. This is very important for government because the first step and very important step, has been done, but now we need to maintain them at that level. So all this is important and to maintain this network, to connect them with research institutions, local research institutions, national and international research institutions, because they need to remain in that environment.

Garry Aslanyan [00:16:42] John, clearly establishing this trial infrastructure in DRC was not an easy thing.

John Reeder [00:16:48] Incredibly difficult for a number of different circumstances. But Wilfried hit some really great points there about... So often big trials in those sort of circumstances are driven from the North for the purpose of getting the results and leave little behind in terms of the structure in them. I hope we're changing, and certainly I know DNDi, who Wilfried works with, has got a very different model of this, but that issue of sustainability and creating capacity that's useful to the country are really critical aspects.

Garry Aslanyan [00:17:21] I know after Covid and some of the role that WHO is trying to have at the global level, and of course TDR is also involved in continuing this capacity strengthening. What do you think is the role of international organizations, WHO and TDR and others, to really contribute to this sustained capacity in countries?

John Reeder [00:17:46] Look, it's got to be on the top of the agenda of anybody who's driving research now in countries. I can only speak for TDR, and I don't want to speak for others, but I think firstly, I'd like to hope that TDR has always been a model for centring on the scientists in low- and middle income countries. It's its foundation. Our board and our governance is based on voices from the South coming in to that. But of course, our model has not always reflected that. If we went back 20 years, we would have the model of trying to find people to develop capacity, by pulling them out of their own country, sending them into the North, doing very good degrees, and some of them have done extremely well from that, but leaving very little behind in the countries for continuity in this way. So I think one of the main strategic shifts we've had in recent times is that all of our training now happens in the South, and we invest in building the institution as well as training the individual, because then you have sustainability beyond your immediate fellows in that time. It's also really important to look at where the research agenda is set and how we respond to that, and obviously it should be set in the countries, looking at the topics that they have prioritized in this way. So simply flipping to this mindset, not thinking of what we think is for the greater good of the global health, but actually asking countries what they need and trying to respond to that is a second really important point, and a really important shift of the

way that we fund our research. And part of that is moving a little bit away from the pure specialism that we might have had in the past, because while of course, we want a cadre of specialist academic researchers, where many countries are missing, research is the power of applying it on the ground and training people who are also practitioners into this space. Again, I think one of the big shifts we've seen over the last few years in TDR is what we've been talking about is democratizing the science. So thinking about the science not just as an academic pursuit, but also as a tool to really help push forward the agendas of the countries and help them to solve the health issues on the ground themselves. So that means extending beyond universities and academics, working with practitioners and implementers of programmes. And one of the more recent successful programmes has been working with social innovators at a grassroots level, but giving them tools to be able to see whether their innovations are scalable. So getting it out there, making sure we have not only the connection into the South, but the power and ability to train, to set the priorities and also to use the research, must sit with the countries that need to attack their own health problems.

Garry Aslanyan [00:20:37] And of course, in the last 50 years, capacities have improved globally when it comes to research, and TDR has its role, but the needs also change. Hence, these adaptations and kind of engaging other stakeholders who need to be engaged in this enterprise is really critically important, from what I hear from you.

John Reeder [00:21:00] Absolutely. And we've really got to understand that we, as researchers, are only one small piece of the puzzle within countries, and also that if we are health researchers, we need to look much broader into multisectionality and multisectorality and realize that what we do is part, at one level, on a One Health basis, but even that is too narrow, it's part of the entire ecosystem within the countries. And I think you hit the nail on the head of this transference because ultimately, the ambition, of course, is that the countries themselves drive the capacity development and build the ecosystem within the countries themselves. At the moment, many are not in a position to do that, and so we continue to assist in those ways. But the ultimate goal has got to be for country driven, country built strong research systems that serve the needs of the countries.

Garry Aslanyan [00:21:53] So in my conversation with Yasmine, I also asked her about factors that enabled her journey as a researcher and also what vision she holds in her now role as the President of Institut Pasteur for the future of capacity building. Let's hear from her.

Yasmine Belkaid [00:22:12] My support was extraordinary beliefs from my family from the get-go, and I think this gave me an energy that I'm still carrying with me, which is this belief in me as a young girl, women in science and the belief of my family was incredibly empowering. But I think what we need to do is to make sure that we allow talented people, people with passion, to grow, is to create infrastructures and mentoring support that allow people to overcome certain difficulties that will exist in the context of care, especially if you come from low- to middle-income countries, and making sure that you actually maintain this mentorship for a long time. Protect people. Allow them to actually express their passion. Find opportunities for them. Allow them to build resilience when needed. Give them opportunities. I think it's extremely important to identify talent across the planet and put all our energy to make sure that they reach their full potential. I am myself a product of TDR vision about investing in humans, investing in leadership. I truly believe that actually everything will be about investing in human capital, and to make sure that we build the leaders of tomorrow internationally. No research should be done anywhere in the planet without this in mind, that we need to make sure that we empower local leadership, and we actually empower infrastructures locally to develop truly sustainable, collaborative research. So my vision is this one, which is the fact that everything needs to be done in a highly respectful way, but also always, always coupled with empowerment of local leadership. I think if there is anything I can do over the next few years is hopefully to help in any way I

can to grow, nurture the leaders of tomorrow internationally. The way we are, we will position ourself, is to become truly collaborative. So Pasteur Institute is part of a network of 32 institutes. The way we see moving forward is to develop a truly collaborative project where the Pasteur Institute is one of the collaborators of federating projects. This is really how I see moving forward is the dimension of Pasteur to me, and its strength is the fact that it belongs to this network. It's its identity. We need to actually develop truly collaborative and federating projects where we become all part of one collaborative network. This is really how I have envisioned the future. No longer in a way that has often been very... I'm not sure if I should use the word, but neocolonialistic approaches, which is really no, we are part of a network and we will develop mutually, element that allows us to grow as a community and as a collaborative network. So no project will ever be done unless it is part of a growth that happens as a network, and we are one of them.

Garry Aslanyan [00:25:15] John, reflecting on some of the thoughts from Yasmine and earlier from Wilfried, how do you envision the future with the changes in global health and how we approach various organizations and going forward? How can we work towards a new vision for capacity in research in countries?

John Reeder [00:25:36] Firstly, I very much agree with Yasmine's perspective and it's really exciting for the Pasteur to be now under her leadership and her being able to bring that high quality science and that experience of countries and networking and very much in this way. I think the important point she's making there, though, is for us to let go of our ego and be respecting the needs of the countries we are working with, and really pushing hard to make sure that we are building something sustainable and building something that will be with them and owned by them and taken on by them and in the foreseeable future. We know the world isn't the perfect place we would wish it is, that some people are going to need a real hand with that. But we've got to do this in this respectful manner. We don't have the answers, but we perhaps have some more of the resources. So really, if we can help answer the questions they are asking, then I'm really optimistic about how we push forward. Back again to, you've heard it off Wilfried, you've heard it off Yasmine, is it's about the individuals. In the end, we can talk about systems, we can talk about institutions, but building leadership, building vision and that vision to be from country, and really understanding the needs of that country, is absolutely critical. I think one of the things that really struck me in listening to Yasmine and her own story is that sometimes when we are running schemes for supporting this, we have numbers, and one of the things we like to say within the team at TDR is, step back off the numbers and realize every single number is somebody whose life has been changed by this investment, and somebody who has the potential for leadership and real impact in the world of tomorrow. And I find that fantastically exciting. That gets me out of bed in the morning and motivates our team here, and particularly when we have those examples from the past that we can see in front of us Wilfried, Yasmine, many, many other scientists who've come through in this way, we know we're on the right path because we see them. We just need more of them, and we need to be listening very hard to the countries to make sure we're delivering the kind of scientists that they can really use to help them take forward their health agenda.

Garry Aslanyan [00:27:53] Thanks, John, for those reflections and it was a really great conversation. I learned so much from Wilfried and Yasmine, and I feel that the future is quite hopeful in a way we plan for these kinds of capacity strengthening programmes. So really, thank you for joining me today.

John Reeder [00:28:13] Thanks, Garry. A pleasure to be here.

Garry Aslanyan [00:28:18] Capacity development is not inventing people, but harnessing their potential, as John reminded us. Low- and middle-income countries are filled with talented people who, if given the opportunity, can become impactful leaders. Wilfried and Yasmine are both remarkable examples of local and global health leadership. Wilfried highlights the importance of maintaining and sustaining the capacity created through local investment and commitment. Yasmine's vision for the future of research capacity development is one that nurtures through collaboration, by respecting the needs and contributions of all involved.

Garry Aslanyan [00:29:05] Let's hear from another one of our listeners.

Julie Storr [00:29:13] I have followed Global Health Matters podcast since its launch, and back then I was looking for something to fill a gap. Podcasts are a big part of my day, and in the global health space, I was really struggling to find something that engaged and enlightened and inspired, and then through Twitter, I came across Global Health Matters, and I felt confident that given the calibre of the host, this potentially was going to be interesting and I haven't been disappointed. The podcast has quality topics, it's got quality guests, and it really spans a wide range of issues that are on trend and relevant, and I also learned something. And at the end of the day, that's what I want from a podcast, to feel that I've really got something out of it, that it's added value to my working day. And I've particularly enjoyed the new Dialogue series and I'm looking forward to what's in store in 2024.

Garry Aslanyan [00:30:20] Julie, thank you for being such a loyal listener since 2021. Our team is excited about Season 4 and the conversations to come. To learn more about the topics discussed in this episode, visit the episode web webpage where you will find additional readings, show notes and translations. Don't forget to get in touch with us via social media, email, or by sharing a voice message, and be sure to subscribe or follow us wherever you get your podcasts. Global Health Matters is produced by TDR, a United Nations cosponsored research programme based at the World Health Organization. Thank you for listening.