Dr. Moses Kamya
In his office, Faculty of Medicine, Makerere University.
Interviewed by Julia Royall
Kampala, Uganda
April 29, 2008

Transcribed by Alison Oppenheim, May 9, 2008

MK: Thank you for asking me some of these questions about how has increased connectivity been useful for our research programs. I think overall having increased connectivity leads to increased production. I mean we as scientists depend so much on communication. Communication in so many various ways. We need to have access to the literature, we need to have access to opportunities for proposal applications, requests for applications for proposals. We need to have access to a lot of what is going on that is needed for your scientific work. So having connectivity leads to, overall it leads to greater scientific output, but specifically you can have access to almost everything that you need for science. I go on the internet and look for requests for proposal and applications and I go to the internet and check for any malaria updates, HIV updates. I submit my papers on line, published papers that I would have written for publication, I submitted on line. You really can't do without connectivity. You would be completely paralyzed if one is to take away this access to the world through this increased connectivity.

JR: Do you remember what it was like before?

MK: Well before, things were really very, very difficult. It took a real long time to get access to anything. If you wanted to get a published paper you would have to ask a friend outside Uganda somewhere to send it to you. Or you would have to depend on this friend or the other friend who has access to get it to you. Certainly there were lots of delays. And there were lots of lost opportunities because you are really in the dark about what is going on in the field you are working in. In my case I am working on malaria, and to some extent HIV, so you are really in the dark and you are really handicapped especially if you can't get access to the literature, you can't get access to really many things that make a scientist productive.

JR: Can you remember one particular time that was very frustrating when you were trying to get information, or maybe contact someone, or get a particular paper you needed. Is there any particular instance you remember?

MK: I think one of the particular moments I remember when I got particularly frustrated was when I was looking for a paper that was so critical to the paper that

I was going to publish and I couldn't get access to that paper. It wasn't in the library, it wasn't in available, I had to write to, I even considered going to Nairobi to look for it. Eventually a friend of mine managed to track it down and send it to me. So I think that was particularly disturbing.

But right now with the connectivity that is available, you just get it. I know that it is so much different now than it was before.

JR: Have you noticed, I know there's a lot of north/south collaboration, because people collaborate with their funders or with people outside of the region, or agencies, in the UK, US, Europe. Have you noticed particular instances of south/south collaboration that's not dependant on a north/south link, but rather south/south.

MK: Well, I think clearly there is more collaboration between north and south than there is between south to south collaborations, but that doesn't mean that there isn't any. Our group for example has been collaborating to some extent with the Kevin Marsh group in Kilifi. Some level of collaboration. I wouldn't say it is so much, but we have collaborated. And often we have collaborated, for example, we within, we have had collaborations with people in Uganda. People based at Makerere basically at the Med Biotech. So even within country we have had some collaborations. But I can say that we really need more south to south collaborations. There isn't as much as it should be. We tend to have much, much more collaborations between north and south rather than south to south.

JR: Yes. Why do you think that doesn't happen more naturally?

MK: I guess there are several reasons. Partly because funding comes from the north for the most part, so that naturally creates a collaboration. Also right now the expertise is more diversified in the north. I am not saying there is no expertise in the south, but the expertise in the south, you find it in some areas but not in all areas. If you collaborate with a university in the north you have people with different backgrounds, epidemiologists, health economists, ?? , people with basic science backgrounds, so in my experience you find more diverse backgrounds and that can be very helpful with collaborations when you have expertise in various areas. But also I think we have less, sometimes it is easier to move between here and London than moving between East Africa and West Africa. The airline connections are easier. But also I think the internet connectivity between south to south sometimes is not as good as north to south. I think there are several reasons. But I think definitely there are clearly some advantages of having south to south collaborations. So we need to do more.

JR: I was just thinking. You remember the Antimalarial Drug Resistance Network? That was certainly an attempt. Maybe you could talk a little bit more about that.

MK: Oh definitely. So one of the very, very successful south to south collaborations is the East African Network for Monitoring Antimalarial Treatments. That network was formed to provide a network that caters for East African countries. Uganda, Kenya, Tanzania, Zanzibar, Rwanda, Burundi, so all of those countries would carry out antimalarial drug efficacy studies using standardized protocols, which would mean that they would get results that are comparable. Use standardized protocols, standardized methodologies, and then those countries would meet once a year to share their experiences and then discuss how their results could be used to determine antimalarial drug policies in the region, and definitely that is an example of a real, real successful and very useful collaboration between south to south countries. And actually collaborations between a region that certainly has a lot of similarities in malarial epidemiology and other things.

JR: That's EANMAT right?

MK: EANMAT – East African Network for Monitoring Antimalarial Treatments.

JR: And what policy statements, can you give me an example of some policy influence that's come out of that group?

MK: I think that group, you know we were meeting every year and every country would present their results in the antimalaria drug testings they have done during the year and then the results would be looked at from the different countries, and then we would, of course every country is responsible for its own drug policy, but each of these countries would invite the other countries within the network at the time when they are determining their drug policies. And so the results of those antimalarial drug testing would be…. in order to change policy, we would not only use the results from one country, but we would use the results from the region to determine how to move forward.

But also, we in those meetings, we would also decide the agenda for the next round of testing. What antimalarial drugs should be tested next. So we would set the research surveillance agenda through those meetings by trying to discuss what is coming out and what are the latest drugs for each of the countries at the meetings.

JR: So it was African driven, East African driven.

MK: It was definitely African driven. The chairman, Dr. Mutabingue (sounds like) he was the chairman for a long time, was from Tanzania, but there would also be other colleagues from the north who were involved. Some colleagues from the north but who are working within the region. People like Bob Snow, like Neil Watkins, who were involved but they were working also within the region. But the agenda would be driven by people from the south.

JR: Do you also remember the MIM/TDR Antimalarial Drug Resistance Network, which had some bumps. What would you say in both networks being comprised of African scientists, what were the differences between those two networks? In terms of outcome the differences were quite strident, but what made those outcomes so different?

MK: Well, I participated in the MIM and we, they were all networks. They were slightly different in their structure. I think the East African Network for Monitoring Antimalarial Treatment, it was regional, whereas MIM was all of Africa, although we had, for example we had a MIM grant that we shared within Uganda. So what were the differences?

JR: I'm not sure how close you were to this piece but we set up a secure server at NLM because people wanted to have a secure server and also a website so that people could post data summaries and all that sort of thing, and it kind of never really took off. And so eventually those things had to be dismantled because they were tying up resources.

MK: I actually remember. We submitted our data to a central place where everybody could…

JR: Yes, everybody could see….

MK: Everybody could see when they collected some data. It was like a standardized way that people could report their data as well as data from other countries so you would see all of the data there on that website. I now don't recall some of the details.

JR: That's OK. Just looking at two examples of that happening. And could you talk just a little bit about your group? You are a well respected malaria researcher, scientist here, so could you talk a little bit about your group and also your AIDs work that required being able to communicate with different sites. How has that come along for you? Are you able to communicate with your other sites?

MK: Our group has grown, we started ten years ago and we were a small malaria group …..

JR: This was nascent, because I remember seeing Nelson about 10 years ago and he said well there's really a little bit of malaria, and that's how I got to know about you.

MK: So we actually got a small malaria grant from WHO/TDR, very, very small money. So we started work with that and later on we got a MIM grant, a grant from the MIM and that helped us expand, and then later on we got that grant from MIM/COM was it? It wasn't a grant given in kind of money, but it was to set up the connectivity that we had at the very beginning and that opened up our world to a number of, communication was made easy between Uganda and the US. My collaborators were mainly from the US, although we had some European collaborators as well. So the increase in communications across the continent, the access to other opportunities to apply for funding. We go to the, I don't know what we would have done without the increased access to the world and to everything we need to make the malaria program productive.

JR: And also to your colleagues right here on campus, right? Fred and…..

MK: Definitely. When we got our connectivity we had about five sites. Here in my office, Fred Kironde, because he was doing a lot of our lab work in his lab, and then we had a clinic, which is up the hill, so that was all connected. So we had a data center, we had a lab, a clinic, and offices, so they were all interconnected. So even within the project locally, here on site, there was increased communication as a result of the connectivity that we had.

JR: So what do you think is the really burning question in malaria research that could be answered by researchers here in Africa because they are able to be in touch with one another that may be that's important because it could only be answered here. And it doesn't necessarily mean just Africans working in Africa, but your other colleagues as well, like Bob Snow and people like that who live here and have worked here for a very long time. Do you think there's any kind of special edge on any question that folks living here have because they are living here, in an endemic area?

MK: So you mean a research question that could be answered because people are living here? I think that there are some questions that are best answered by people living here especially for example we are currently rolling out artemisinin combination treatments and there are some questions around… we have had some people who think that they don't work very well just because of their perceptions and the way they perceive drugs and the acceptability of drugs and issues around that. So understanding how best to, say for example to rule out ACTs, we know that they are efficacious, they work very well. But in order to optimally deploy

them you need to understand how people perceive, how people understand, the acceptability of these drugs within the communities here.

JR: It's a lot of pills to take. Compliance is an issue, isn't it?

MK: It's a lot of pills to take. Some people think that they don't work very well because they don't provide the antipyretic and anti-inflammatory effect of chloroquine, of the drugs that we used to use before, which we no longer use. So the artemisinin don't provide that good feeling that chloroquine used to give, and therefore, some people think these drugs are not as effective as they should be.

Anyway, overall I think that there are some questions that require understanding of the local communities and understanding of people's behavior and of perceptions and attitudes that can best be answered locally and by people who understand those communities.

JR: It's a little bit off topic, but I understand that there are these community health teams, and I was talking with a doctor in Tororo the other day, whom you probably know, Tom Ocha and he was saying that one member of the team is the drug dispenser. They don't have drugs right now, so it's kind of a moot point, but I said that if it's left up to that one person, how do they, with all of the feedback that we've gotten from Mifume village about how people call almost everything malaria, how does that person determine that the sick person, the patient, really has malaria and give the drug, or is it just opening the door for drug resistance by dispensing this drug every time somebody has a fever. Do you see that as a problem?

MK: What you are talking about is the home based management of fever, the presumptive treatment of fever without lab confirmation or without a person coming to the health center and then getting evaluated for their fever. There is a very big debate whether antimalaria treatment should be given in that fashion, I mean where fever could be treated at home without any evaluation, without any lab diagnosis. We know very clearly that if you give drugs that will cause some fevers with malaria, some fevers will be ?? . If the fever is malarial, of course you will have given drugs in a timely fashion, and that patient will be saved, they will have received drugs early and they are less likely to progress to severe disease and their outcome is better. But the downside to giving drugs just like that is that you end up with over treatment. You treat many people who don't have malaria, and that can potentially result in, first of all you waste drugs, because artemisinin combination therapies are very expensive, so you end up wasting a lot of drugs. You end up giving drugs to people who don't need them and they might develop side effects to those drugs, when they actually in the first place did not need them. But you also create an environment in which drug resistance develops quickly. So

it is a real debate among people who treat malaria, and program managers, and international bodies whether it's a good idea to give drugs that way as opposed to having someone report to the health care center, they are evaluated, get a blood smear, and be treated if they have malaria. And also get a chance to be treated for something else, if they do not have malaria. Because the downside to treating for malaria if someone does not have malaria is that you will also, you do not only waste drugs and create a situation where drug resistance develops quickly, but you also deprive that person of being treated for the right diagnosis. Say if they have an ear infection and you are giving them an ACT, you are wasting the drug and you are also creating a problem where this patient is not being treated for another illness which they have. So I mean it's a real dilemma. It's a dilemma because people believe that prompt treatment saves lives and therefore drugs should be given as quickly as possible, and if possible one should deliver those at home, but that situation creates many other problems. So I think that the cost benefit is really up in the air. Whether that should be done or whether that should not be done. Many African countries have said that it's a good idea and therefore home based management of fever programs have been implemented, but really there is a lot of debate over whether that's a good idea. Especially in the era of ACTs because they are more expensive and we don't want to lose them because they are very effective drugs. We don't want to create resistance to ACTs early.

JR: Well, I don't want to take much more of your time. It would be so interesting to hear more about malaria because I'm seeing so many things in the village.

Is there anything else that you would like to say in terms of your work either in malaria or HIV/AIDs, either where you think you are going with it, what's your next big project, and if you can say how that will depend on certain kinds of connectivity being in place.

MK: I think, in terms of our future directions, I think I can mention three things. Number one, we are trying to expand and consolidate the work we have been doing in sentinel surveillance of malaria, in morbidity and mortality. We've established ten central sites where we collect high quality data on malaria morbidity and mortality and we have created a list of variables with questions that we ask, a set of data that we collect and we are aiming to have computerized data collection at those sites and it would be ideal if those data could be transmitted from those sites to Kampala, to our center here in town. So that we want to have a real robust surveillance of malaria morbidity at those sites, but really analyzing the data centrally. So we would like to have electronic transfer of that data. We have tried to do it, but it is not yet completely functional. I think it needs some more connectivity in terms of having those data electronically transferred to our central data center.

JR: Is it large amounts of data? Because that might be part of the problem, the data is too large for the bandwidth that it is traveling through.

MK: Yes, it is a large amount. Because you can imagine, we are collecting data on all patients that come at the health center and so we collect those data from all patients and then we subdivide those who have fever, and among those who have fever, how many have malaria, and then among those who have malaria, how many of those received the correct treatment for it, so we are collecting data from all people who show up at the health center. It's a lot of data.

JR: And right now, it's written down? Somebody writes it down on paper?

MK: So right now we enter it on site and then we have to transport it.

JR: So it's actually being entered electronically?

MK: At some of the sites yes, but not all of them.

JR: Good for you! Researchers are very wary of entering anything electronically. I'm glad to hear that you are past that.

MK: We are also ….

JR: So if you could get that data back in a timely fashion, what difference would that make?

MK: What difference would it make? It would make a difference because right now, first of all it would save costs, because right now it means that you have got to go out to the center and get the physical forms and bring them over. If you enter it on site, then maybe periodically you have to get it saved up and then brought back to the center. If you are able to transfer it electronically it would be much more efficient. It would save money, it would decrease the amount of time you have got to go to the sites. You can do the data cleaning and then get back to the sites. I mean you don't have to go there, do data cleaning, bring back here the data and clean it from here. So if everything was transmitted in real time it would be much more efficient.

JR: What might you see if things got back, if the data got back quickly to you. Would you see things more quickly in terms of the surveillance that would involve saving lives?

MK: Definitely yes. If the data gets back, certainly people at the site are not as complex, as experienced as the people at the center. The more we see the data

quickly, the more we can give feedback and the better the treatment practices, the patient management. The more you can rapidly respond.

JR: Yes. Very interesting. OK so in wrapping up, please just say your name and whatever you want to say about a title or a way to describe yourself and that you know you are being recorded.

MK: My name is Dr. Moses Kamya, I am an associate professor with the Department of Medicine at the Makerere University Faculty of Medicine. My major interest is in malaria, especially in malaria treatment, and in HIV/malaria interactions. I am also very interested in HIV care as well. So really malaria and HIV treatment and the interaction between the two diseases.

JR: And you know you are being recorded. Thank you very much!