Profile

Ogobara Doumbo: building capacity for malaria research in Africa

One day towards in the late 1960s, a doctor came to visit a small village in eastern Mali where the young Ogobara Doumbo and his family lived. He asked the 10-year-old what he wanted to be when he grew up. “I said, ‘I am planning to be a doctor like you’,” Doumbo recalls. “He was very surprised for a small child to be so convinced he wanted to be a doctor.” Considering Doumbo’s father and grandfather were both traditional healers, perhaps his response was not really so surprising. From that year, Doumbo began travelling with his grandfather to other mountain villages, absorbing his strongly ethical approach to treating ailments ranging from infectious diseases to breast inflammation. “I spent enough time to see his practice and follow him carefully.”

At school, Doumbo did well enough to win a scholarship to university in the capital, Bamako. “It was the first time I’d got into a car; the first time I saw electric light”, he remembers. Before he left, his grandfather gave him some advice: “He said, ‘You know, if you don’t want to take care of my cows and my mutton, and you want to spend your time in big cities, that’s your choice.’ But he recommended to me three things—to be very honest, to share anything that I have, and to work hard. Those things have driven my life.”

After 6 years at Bamako’s National School of Medicine and Pharmacy, Doumbo worked for 4 years as a bush doctor with expertise in surgery. He says that “It was exciting and enjoyable. But I was working 18 hours a day. We were a generation of young doctors who wanted to solve all the problems by working hard. Eventually, I realised that it was impossible to do if you were alone. It was too much; I decided the best way was to become a university teacher, to drive more young people, to increase the critical mass.”

So Doumbo left for France where he studied in Marseille and Montpellier, specialising in parasitology, epidemiology, and tropical medicine. Inspired by advice given by parasitologist Philippe Ranque and internist Bernard Duflot, he returned to Mali during his study breaks between 1985 and 1992: “They pushed me to have a permanent contact with the villages and really influenced my life like my grandfather did. These days, this kind of foreign person who commits themselves to capacity building in Africa has become very rare.”

On his return to Mali, Doumbo made another career-changing connection, this time with American malariologist Louis Miller, who was looking for ways to develop research capacity in Africa. “He said to me, ‘Ogo, we have failed in Africa to eradicate malaria, and in my analysis that was because we have no Africans capable of doing high-level science and developing a high-level body of evidence. For the rest of my life, I want to build capacity to enable African people to have an impact at this high level.’ That has changed completely my view.”

With Miller’s help and the commitment of the US National Institute of Allergy and Infectious Diseases and the National Institutes of Health (NIH), Doumbo and his colleague Yeya Touré founded the Malaria Research and Training Centre in Bamako in 1992, gaining the support of the Malian government, WHO, the Rockefeller Foundation, and others. Their aims were three-fold: to build capacity in specialties such as entomology, molecular biology, and epidemiology; to undertake operational research into malaria control; and to participate in international efforts to develop vaccines.

In the past 16 years, the centre has been remarkably successful in achieving those goals. Doumbo and his colleagues Thomas Wellemes, Christopher Plowe, and Abdoulaye Djimde have mapped the disease burden of malaria and chloroquine resistance around the country, helping put government control initiatives across the continent on an evidence-based footing. They have also helped to develop newer artemisinin-based combination therapies, shown the benefits of intermittent treatment with sulfadoxine-pyrimethamine for pregnant women, and begun doing phase I and II trials. Wellemes and Dapa Diallo also do more basic research on malaria genetic resistance.

Perhaps most impressively, the centre has proven that it is possible for an African institution to send its young researchers overseas to train, and manage to have them return home to work. The centre has 12 well-established, independent research groups led by Malian researchers, each funded by their own competitive research grants. It also boasts 20 assistant professors and 15 postdoctoral fellows who have returned from abroad within the past 2 years. “I try to understand how this has happened”, Doumbo says. “I think the first thing is the commitment of the senior scientists such as myself to stay in our home country. The second thing is that we have had partners in the government, the NIH, and WHO and have a long-term vision to build capacity in Africa.”

Another important factor is that Doumbo insists that all the trainees who go overseas for Masters’ degrees or doctorates return home on a regular basis. “Every year they come back, and they transfer the technology from the USA or wherever to Mali. We don’t wait the 4 years until they finish their PhD.”

Now, the model that Doumbo and his colleagues have been operating so successfully in Mali is beginning to spread to countries such as Burkina Faso, Guinea, Senegal, and Chad. “I think WHO and all our partners are trying to multiply this kind of experience in Africa”, Doumbo says. “We have shown it can work, and people now believe. It has been done in Mali, it could be done elsewhere.”

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