



# JEAN BOSCO GAHUTU: A BETTER LIFE FOR RWANDA

**D**r. Jean Bosco Gahutu, a Rwandan physiology researcher, was named to give a TWAS Medal Lecture at the Academy's 27th General Meeting. He was born in 1961; he completed his primary, secondary and medical education in Rwanda. He did PhD studies at the University of Ghent in Belgium from April 1990 to December 1993, then returned to Rwanda in early 1994, just before the genocide against the Tutsi. His experience mirrors the nation's: a time of unspeakable loss, followed by a profound commitment to recovery. Today Gahutu is a professor of physiology in the School of Medicine and Pharmacy of the University of Rwanda and head of the Clinical Department of Medical Biology at Butare University Teaching Hospital. He is also acting director of research, innovation and postgraduate studies at the College of Medicine and Health Sciences, University of Rwanda.

When I was young, I lived with my family in the countryside. There was not even a small town. My father was a carpenter. He was so bright – even the intellectuals liked him – but when he was young, going to school was difficult. So he wanted me to do it – he wanted me to be bright, and he really encouraged me.

We spoke Kinyarwanda at home, but my father and mother taught me some French and some arithmetic. I even went to kindergarten. To go to primary school, I would walk three or four kilometres – some people walked a longer distance. This was a good experience, because I know Rwandan culture from living in the countryside. The primary schools were built correctly, with benches and everything. It was not under the trees.

The difference from today is that there were not many schools, and not many children going to school.

I was always trying to go ahead of what the master is asking of me, to go and advance and learn fast. Each time I would learn to count – say, from 1 to 20 – I would give myself an assignment: count from 1 to 50. When the teacher gave us an assignment to count to 50, I would count to 200.

It was exceptional to go to secondary school in that time. You had really to work hard. If you had a class of 30 to 40 pupils, possibly only two would go to secondary school. I attended a school in a small town 25 kilometres from home. Most students would stay at the school and go home only for holidays.

After secondary school, I was sent to the National University of Rwanda [today

the University of Rwanda] to study medicine. It was a good opportunity – I thought I could make my career. The School of Medicine then was supported by the University of Ghent in Belgium. When I came to the university, there was a mixture of teachers, Rwandese and Belgians. After graduation as a medical doctor, in 1986 I became university staff, in the department of physiology, thanks to my good scores. After a few years, I went to Ghent University for my doctoral studies.

In the early 1990s, I went through a difficult period. For health reasons, I had to interrupt my studies and return home to Rwanda. It was in December 1993, a very difficult period. I was really afraid, actually, but I didn't tell anybody. In that time, I didn't have a capacity to work. I stayed home for a while, and then after a few months there began this period of genocide. I lost my father and my mother and many others, hundreds of members of my large family.

When the university re-opened, on 18 April 1995, I was the first to give a lesson; it was in physiology. We were not many lecturers at the university – about 30 in total. We were determined to work as much as we could, that



was the most important aspect. Many others came back in the following months. At the time there was a great patriotism— everyone doing his or her best to rebuild the university. I felt honoured to be able to teach.

There was great uncertainty in those days. In a laboratory, you might not have anything, but people did their best. But some countries supported us to acquire some equipment and renovate the university.

The students in those first years after the genocide were very, very hard-working at school, but also in their reflection about the problems the country faced at that time. They would organise conferences and invite people for lectures and discussions.

They were really committed. With time, we felt that now we had a good institution. In 1999, a research commission was established at the university with limited funds provided by the government – that was a first step. And then in 2002, Sida – the Swedish International Development Cooperation Agency – came to support the university. Then people could get some funds for research.

When I started my fieldwork again, it



was about physiological adaptation to moderate altitude in Rwanda. My project was producing results and I felt happy. I submitted it for publication and it was accepted, and things were evolving. The University of Ghent came back to Rwanda in 2003 in a cooperation project. Four of my professors from Ghent had continued to supervise me. And so in 2007, I was the first person to present my PhD thesis in Rwanda

▼ Dr. Jean Bosco Gahutu with colleagues at the University Teaching Hospital of Butare in Rwanda. [Photo provided]

– it was a first, I was a pioneer, and I received my PhD in medical sciences.

My current research – the work on biofortification of beans is very interesting. Between 1.5 and 2 billion people worldwide suffer from iron deficiency. We have been working with HarvestPlus, an international programme for nutritional research, with headquarters in Washington D.C. They target micronutrient malnutrition, like deficiency in zinc, iodine, vitamin A and iron, by developing biofortified crops, with high micronutrient content through cross-breeding. For iron, one of the crops that can be targeted is beans.

Every day a Rwandese consumes on average 150 grammes, and 80% of Rwandese – the rich and the poor – eat beans every day. So if you want to address the problem of iron deficiency, biofortified beans will be efficient. Over the last 10 years, based on the research results, HarvestPlus proposed new varieties of beans to the Rwanda Agricultural Board and similar institutions in other countries. So now people are interested in getting these beans.

Of course for Rwanda there are still challenges, most of the time financial. But it's up to scientists and academicians to really work at a level that is capable of producing results, to make a difference in the lives of people. ◼

