

## Q&amp;A

# ABDALLAH DAAR'S LONG-TERM COMMITMENT

 by Cristina Serra

*As a researcher, teacher and policy adviser, the Omani TWAS fellow has a prescription for scientific success: Make a long-term commitment. Connect research to social values. And don't be afraid to fail.*

**T**WAS Fellow Abdallah Daar is linked by history and professional ties to the Sultanate of Oman, and he sees positive developments in the Gulf nation's scientific culture: The creation of its Research Council, its commitment to health and communication technology, and its increasing focus on the value of science. But now, he said, Oman must press ahead with efforts to make its research enterprise more focused and sustained for the long-term.

"Great applied research has to produce results that make a difference in a place or community," Daar said during a recent interview. "In other words, it has to be translated into a product, policy or intervention, and these have to be scaled up so that more people in the world can benefit."

His counsel is valuable for many nations in the developing world. During a candid discussion with Omani science communicators at the TWAS 25th General Meeting, Daar's remarks ranged widely, from developing research goals and the potential benefits of brain-drain to the importance – and necessity – of failure.

Abdallah Salim Daar was born in Tanzania and lives in Canada, but he has close ties to Oman. He was the founding chairman of the department of surgery at Sultan Qaboos University, where he helped build the medical school. He worked in Oman for more than a decade. His research at the University of Toronto and affiliated research institutions has focused on how genomics and biotechnology help reduce inequities between developed and developing nations. Today he is a professor of clinical public health and global health at the Dalla Lana School of Public Health and of Surgery in the Faculty of Medicine at the University of Toronto, Canada; he also serves as a member of the elite United Nations Secretary-General's Scientific Advisory Board. He has been a TWAS Fellow since 2007.

He has worked closely with TWAS Fellow Peter Singer at Grand Challenges Canada, where until recently he served as a member of the Board of Directors and chief science and ethics officer; he still serves as chair of the scientific advisory board. Given his accomplishments

and global experience, he has a clear vision of scientific research – especially when it is carried out in developing countries. Focusing on local needs is a priority, he says, and critical thinking is equally important and must be stimulated.

The following is text of Daar's interview, edited and condensed by TWAS staff writer Cristina Serra.

## **Oman is a young nation where science is gaining momentum. What are basic requirements that qualify good research?**

- In order to benefit humankind, top-quality research must be conducted with a view to producing results that make a difference, i.e. have a positive impact, in a place or community. In other words, it has to be translated into a product, policy or an intervention, and these need to be scaled up so that more people in the world can benefit. Ideally it should be published in high-level publications. If scientists do not publish their results, that research may not be noticed and will fail to have an impact. That process leading from the initial idea to its global impact is a long road, as you can imagine. But it is important to pursue.

We mustn't forget that basic scientific research and the generation of knowledge for its own sake is also important. The humanities and social sciences also are important.



**Living in a Western country puts you in a privileged position to observe science in developed and developing countries. Have you seen any major difference between research in the West and in the Arab region?**

● Yes. The first difference lies in the approach to research in Western institutions that I am familiar with. There is much more focus in the choices made within research programmes: Research is carried out within well-defined programmes, which are at the same time open to new ideas and approaches. In this part of the world I have noticed, and you can see this in the lists for publications from university departments, that research is often not carried out in a programmatic way, but rather in an opportunistic way. Also I have observed that researchers often act without long-term strategic planning. Jumping from one isolated project to another is counterproductive.

The second difference lies in the identification of these strategic research priorities. Great research like that produced in the best Western universities can be achieved everywhere, providing that we identify priorities at different levels: national, local, as well as at university and department levels. Recruit the best scientists, build teams that include graduate students, and fund these teams well for the long term, sustaining the focus. Students and young scientists need to be trained well, and exposed, even abroad, to the best research institutions. The focus must be on excellence. All these sound idealistic but they should be long-term objectives.

**Could you offer some examples related to Oman?**

● There are two interesting examples I can think of now. Oman has some of

the best geological resources in the world, and if someone wants to study geology, Oman is probably the best place to do it. But I don't see this happening on a grand scale, in a focused, systematic way, by Omanis themselves. Is Oman making good use of its geological resources? The answer is probably no, not at the moment.

Secondly, Oman has very close connections with East Africa and Zanzibar, linked by the Indian Ocean. It would be great to see Indian Ocean studies as a long term strategic focus. Cultural interactions between Arabs and East Africans date back to the 10th century and earlier. In this case, social sciences, linguistic studies and historical and economic and trade studies would enrich humanity.

There is good news: Oman has established The Research Council, which is relatively young but very active. And one of its best features is that it is eventually helping to fund research in a programmatic way rather than in an opportunistic way.

**You have done important work in Oman, but now your activities have a more global focus. Did you ever think to launch a national project in this country?**

● Should I bring my research here? There is a possibility. I have talked to scientists in the Gulf region and with my colleague Peter Singer we have proposed establishing a Grand Challenges Gulf – forming partnerships, finding priorities, rewarding excellence and achieving rapid results that have an impact. We now have Grand Challenges initiatives in several countries including Brazil, India and others that are informed by the experience of Grand Challenges Canada.

One area where Oman might take the lead would be doing research

on the Middle East Respiratory Syndrome (MERS) that affects camels and makes people very sick. It could also work on increasing its preparedness for major outbreaks like Ebola.

I think we should also mention the importance of making mistakes.

“ Many researchers in this part of the world are not used to failure ... To innovate successfully, you have to accept some failures. ” *Abdallah Daar*



### What do you mean by “make mistakes”?

● I want to suggest that many researchers in this part of the world are not used to failure. They do not accept it and the culture looks at failure as a terrible thing. Yet to innovate successfully, you have to accept some failures. So we need to inculcate this notion at least among research scientists and innovators. And we should perhaps teach how to fail, in order to succeed.

### What are your views on brain drain?

● What I see is that Oman is a lucky nation: most of the students that my colleagues and I taught here are still here, and many are in senior positions

now. Most of them have not left. This is due in part to the beautiful Omani culture that attracts them back, but also to the fact that in recent times salaries have been increased, so brain drain doesn't really affect this country at present. The people of Oman are the friendliest people I know.

However, if we talk generally about the subject of brain drain globally, I also see some positive aspects. These include the idea of brain recirculation, remittances from workers who have emigrated, sometimes against their will, the building of professional and research networks, and experience in finance, management, etc. Minds open with travel and prolonged interaction with others. People become flexible: after they have settled abroad they may wish to contribute to the source

countries and may come back for short periods to teach and do collaborative research. So rather than condemning brain drain completely, it is more important to think about the subject in a nuanced way, for example by focusing on how we can best make use of the people that have left. There are creative ways to think of brain drain, not always negative.

### What advice would you give to young Omani scientists who want to carry out good research?

● My advice works for all scientists: if you have gone the way of doing a PhD, which really should be about training the mind to think critically, you should be adventurous and not necessarily stick to the very narrow area of your former research. Initially learn a method for doing research, rather than aim to become a world expert on your narrow subject right at the beginning of your scientific career. Be open to new ideas. Find a good mentor early. Fight people who try to close your mind, because the universities are full of them. Do not think in terms of money as a young scientist. Always think critically and open-mindedly. Be incredibly curious. This is largely what research is about.

But let me give some other advice. What young Omanis should do is learn to listen. And to address problems without preformed “ideology”. Listening is one of the most difficult things to learn and do in life. But also learn how to talk to each other respectfully, as we are taught in the Quran. Don't assume that a person with a different opinion is your enemy. This is a very hard lesson to learn. ◻

◀ Abdallah Daar in Muscat (right), during an interview with Omani journalists Sultan Al Sara'ei (left), from Omani Television, and a colleague from Sultan Qaboos University

