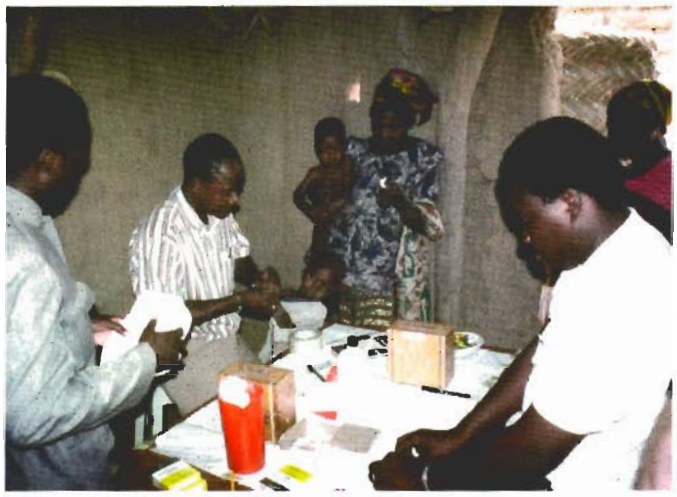
By Harold Varmus

OPINION

Time for a Global Science Corps

Spend a year in a lab in a developing country, and build scientific capacity around the world



A malaria research clinic in a Malian village.

In 1882, Iranian scholar and political activist Sayyid al-Afghani made a prescient argument that there is no "European science" or "Muslim science." Those who say there is, he went on, "have not understood that science is that noble thing that has no connection with any nation and is not distinguished by anything but itself."[1] Today, in a world increasingly fractured by national and cultural differences, we scientists should be seeking ways to promote science as a universal activity with the potential to advance public welfare.

One way to do this – and to help reduce economic and social disparities between nations – is to provide opportunities for well-trained scientists to work at those few places in developing countries where excellent scientific work is already possible. That's the goal of the Global Science Corps (GSC), a new program to build scientific capacity in the developing world. The GSC aspires to place scientists and engineers, referred to as GSC fellows, at research facilities in developing countries for one-year terms to collaborate with local partners.

Such efforts need not be drudgery or self-sacrifice; they can be productive intellectual adventures. Imagine spending a postdoctoral year in Botswana collaborating with local chemists and ecologists to study the largest inland delta in the world. Consider a sabbatical year in Chile as a member of an international network of scientists conducting applied research on complex engineering systems. Think about collaborating as a senior scientist with Ugandan colleagues in biochemistry and bioinformatics as they study antimalarial drug resistance and malaria vaccines.

Astronomy in Brazil, epidemiology in Vietnam, and molecular biology in Cameroon are among the opportunities that will be available. The hope is that with the right funding, five to 10 fellows could be selected next year, with growth after that. Placements will be custom-designed to suit the strengths and needs of fellow and host. Typically, fellowships will emphasize research and include some lecturing and teaching. The program will encourage and support long-term collaboration through electronic communication, possible exchange visits, and the establishment of a GSC alumni network.

Since I introduced the idea in 2001 at the Nobel Jubilee Symposium in Stockholm, www.mskcc.org/mskcc/html/6285.cfm the GSC concept has gradually gained attention and support from organizations and individuals around the world. It moved toward implementation when it found an administrative home with the Science Initiative Group (SIG), a small, international team of leading scientists. SIG also works in informal partnership with the World Bank to manage the Millennium Science Initiative (MSI), which supports competitively selected centers of scientific excellence in developing countries. MSI centers will be among GSC host institutions, and SIG, with its extensive international network of contacts, will help make appropriate placements for GSC fellows.

Inquiries and suggestions from scientists in developing countries and from faculty and researchers in the United States and Canada are helping to shape the program. Some universities are offering the GSC as a sabbatical experience for faculty members, using sabbatical salaries for this purpose or a fellowship opportunity for postgraduates. The United Nations Development Program is supporting the development of a GSC component targeting scientists who have left the poor countries of their birth and others from advanced developing countries. In January, the African Academy of Sciences co-convened a workshop to assess demand on the receiving side (which, predictably, is high) and provide advice about GSC design. We'll then measure success, first by satisfaction among fellows and host institutions, and eventually by the number of papers published, improvements at host institutions, and other factors.

As with many new ideas, GSC's success rides on a few key factors: the determination of the people responsible for its implementation, adequate funding, and the talent and enthusiasm of GSC fellows. SIG will help with the GSC's infrastructure; I hope multilateral organizations, universities, foundations, and philanthropists will recognize the virtues of investing in the GSC. We seek inspired scientists who will offer their expertise to promote science in the developing world. Visit us at www.globalsciencecorps.org. ■

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1. Cited by Vartan Gregorian in *Islam: A Mosaic not a Monolith*, Brookings Institution Press, 2002.