The 2007–08 academic year marked SIG’s tenth as an outreach program of the Institute for Advanced Study dedicated to building science capacity in the developing world. SIG was created in 1998 to provide scientific guidance for the Millennium Science Initiative, a project inspired by the vision of James D. Wolfensohn, then Chairman of the Institute’s Board of Trustees, and developed jointly with the World Bank to support centers of scientific excellence in the developing world.

The year saw the beginning of a new SIG initiative inspired by another Institute trustee, Vartan Gregorian, President of Carnegie Corporation of New York. The Regional Initiative in Science and Education (RISE) will provide Ph.D. training in selected areas of science and engineering through university-based research and training networks in sub-Saharan Africa. Each RISE network will comprise universities and research institutes in at least three countries. The program’s primary goals are to prepare new faculty to teach in Africa’s universities and to help existing faculty members upgrade their qualifications, thereby helping to strengthen the universities that make up the networks. RISE is funded by a grant from Carnegie Corporation of New York.

Faculty development was identified in a survey of African university leaders as the single most pressing need in higher education in their countries. Throughout sub-Saharan Africa, the shortage of qualified faculty is acute, especially in the sciences. RISE networks will provide comprehensive graduate training programs, where students and faculty seeking Ph.D.s can take advantage of the complementary instruction and research opportunities available at each institution within the network. Networks also will enable researchers from multiple universities to use specialized scientific instrumentation that may be available at only one of the sites, or to pool resources to obtain new equipment.

The network structure will benefit not only the individual researchers, but the universities as well, as each will stand to gain through affiliation with the others. In the words of one of the successful applicants, “The principle to be employed is to exploit the respective strengths of individual partner institutions for the collective benefit to build capacity.”

Three networks were selected in a competition that attracted forty-eight proposals involving twenty-nine African countries. Scheduled to begin work in late 2008 or early 2009, the new RISE networks are:
African Materials Science and Engineering Network (AMSEN)
Academic Director: L. A. Cornish, Director, DST/NRF Centre of Excellence in Strong Materials, University of the Witwatersrand, Johannesburg, South Africa

Other participating institutions:
University of Nairobi, Kenya
University of Namibia
Federal University of Technology, Akure, Nigeria
University of Botswana

Southern African Biochemistry and Informatics for Natural Products (SABINA)
Academic Director: John D. Kalenga Saka, Professor of Chemistry, Chancellor College, University of Malawi

Other participating institutions:
University of Namibia
University of Dar es Salaam, Tanzania
University of Pretoria, South Africa
University of the Witwatersrand, South Africa
CSIR (Council for Scientific and Industrial Research), South Africa
Tea Research Foundation of Central Africa, Malawi

Western Indian Ocean Regional Initiative in Marine Science and Education (WIO-RISE)
Academic Director: Alfonse M. Dubi, Associate Professor and Director, University of Dar es Salaam Institute of Marine Sciences, Zanzibar, Tanzania

Other participating institutions:
Eduardo Mondlane University, Mozambique
University of Cape Town, South Africa

SIG Board
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Harold Varmus, President, Memorial Sloan-Kettering Cancer Center, New York, New York