

Featured Participants

Additional Resources

Indian Institute of Science, Bangalore
www.iisc.ernet.in

Council of Scientific and Industrial Research (CSIR)
rdpp.csir.res.in/csir_acsir

Indian Institute of Technology, Delhi
www.iitd.ac.in

Department of Biotechnology (DBT)
dbtindia.nic.in/index.asp

Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)
www.jncasr.ac.in

Department of Science and Technology (DST)
www.dst.gov.in

National Centre for Biological Sciences (NCBS), Bangalore
www.ncbs.res.in

Indo-U.S. Science and Technology Forum (IUSSTF)
www.indoustf.org

Tata Institute of Fundamental Research, Mumbai
www.tifr.res.in/index.php/en

Rajiv Gandhi Centre for Biotechnology
rgcb.res.in

University of Wisconsin-Madison (UW) Khorana Program
www.biochem.wisc.edu/faculty/ansari/khorana_program

Wellcome Trust/DBT India Alliance
www.wellcomedbt.org



Solar Cells

Both theoretical and translational research in India is moving forward with areas such as nanotechnology, energy, and health at the forefront.

careers. The DBT Rapid Grant for Young Investigators and the DST Swarnajayanti Fellowships Scheme provide comparable support for younger scholars. And the Wellcome Trust/DBT India Alliance, an £80 million initiative funded equally by the Wellcome Trust and the DBT, provides competitive life sciences and biomedical fellowships for postdocs and other early-career scientists. Furthermore, numerous universities and research centers, such as the NCBS and the Rajiv Gandhi Centre for Biotechnology, also have their own in-house fellowship programs for postdocs.

Growing Talent Early

The new funding may prove fruitful for innovation, but there is a need for greater access to education for Indians—approximately half of whom are under 25 years old. The government has responded to calls for greater educational opportunities for young people from a wider spectrum of society, and recently the DST launched the Innovation in Science Pursuit for Inspired Research (INSPIRE) program, with the aim of attracting students to science and expects to have funded one million young scholars by 2014.

This is just one program that seeks to build research capacity by giving students the opportunity to gain vital research-related skills. This is important in order to sustain global competitiveness among progressive nations like China. China, states Rao, currently produces almost as many journal articles as the United States, and he believes that the country will soon overtake the U.S. He further estimates that China graduates some 20,000 Ph.D.s annually. Says Rao, “How can we compete with this?”

Policymakers want India to increase the number of top scientific publications. “To achieve this we need more high-quality submissions, and to achieve that we need more good people,” says Rao.

One of the challenges to finding “good people” is that many Indian students prefer to major in engineering rather than science, because of the promise and prestige of lucrative industrial career opportunities. But India’s leaders recognized the need to motivate more youngsters to pursue science careers and hone research skills by forming five Indian Institutes of Science Education and Research (IISERs) in 2007. Here, faculty members have the freedom to pursue interdisciplinary projects while engaging their undergraduates in research.

“I watched K. Ganesh [the director of IISER Pune] build IISERs from the ground up,” says Aseem Ansari, a professor of biochemistry at the **University of Wisconsin-Madison (UW)** in the United States and director of the Khorana Program, a cross-cultural exchange program for Indian and American students. “I believe IISERs are going to do for science (not just Indian science) what IITs did for technology and engineering. The first batch of students graduated recently and the impact of these ‘research-oriented’ students will be felt in the next five to 10 years.”

The Khorana Program is an international consortium also designed to enhance research capacity within India and across borders. Jointly supported by UW, DBT, and the Indo-U.S. Science and Technology Forum (IUSSTF), and launched in 2008, the program grants Indian and American students the opportunity to pursue research at universities in each other’s nations. **continued>**

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