

# The Khorana Program™

*Promoting scientific cooperation between India and the United States*

**Update: August 2008**

## **UPDATE: THE FIRST NINE MONTHS**

In January, 2008, a University of Wisconsin-Madison (UW) delegation visited Indian universities, government agencies and others to plan the Khorana Program. The Program is designed to strengthen scientific cooperation between the US and India and to honor Har Gobind Khorana, who won the Nobel Prize in 1968 while a member of the UW faculty. The program's three objectives are:

1. *Exchange of students and scholars;*
2. *Rural development;*
3. *Industry-academia linkages.*

### **1. Exchange of Students and Scholars**

Following the January meetings, Indian universities submitted more than 50 prescreened nominations of outstanding undergraduates. Fourteen were selected for 10-week placements in UW research labs this past summer. They came from 5 IITs (10 students), Aligarh Muslim University (2), Jawaharlal Nehru University (1), and Punjab Agricultural University (1).

The students joined international lab teams and were each given their own research project to work on under the guidance of their own faculty mentor. At summer's end, they presented their projects at a public symposium. Their findings have become parts of pending publications and opened new fields of inquiry. The students' work has won wide praise at UW and in their home universities.

Student research topics covered a wide range of the sciences, as these examples indicate:

- Nanotech Fabrication—Ankit Omar;
- Stem cells & Synthetic Biology—Unnati Gupta;
- Integrated Circuits—Rangharan Venkatesan;
- Food Science Biotechnology—Sumita Kapoor;
- Diabetes & Molecular Biology—M. Saifee Soni.

In the future, Indian students will continue to spend research summers at UW, and starting in summer 2009, UW students will spend research summers in India. Plans call for expanding the exchange to PhD students, postdoctoral scholars, and medical students.

### **2008 Khorana Research Interns**

**Front row, left to right:**

Vivek Tiwari, IIT-Kanpur  
Rangharajan Venkatesan,  
IIT-Roorkee  
Devesh Bhimsaria, IIT-Roorkee  
Unnati Gupta, IIT-Kanpur  
Nuzhat Ahsan, Aligarh Muslim  
University  
Sumita Kapoor, Punjab Agricultural  
University  
Arpita Mandan, IIT-Kanpur  
Taran Khanam, Aligarh Muslim  
University  
Vidhi Mathur, Jawaharlal Nehru  
University

**Back row, left to right:**

Ankit Omar, IIT-Kanpur  
Mufaddal Saifee Soni, IIT-Madras  
Sarat Chandra Cautha, IIT-Madras  
Neeraj Gupta, IIT-Roorkee  
Ankur Menghwni, IIT-Kanpur



## 2. Rural Development

Wisconsin's strength in basic science research is complemented by its strength in the agricultural sciences. Since March, 2008, the Khorana Program has initiated cooperation with several organizations, including Mahindra and Mahindra (soils), the Rajiv Gandhi Charitable Trust (dairy), the Agricultural Consultancy Management Foundation (demonstration farms), Tasty Bite (vegetables), and Punjab Agricultural University (entomology). A major grant proposal was submitted to the US Agency for International Development to support rural development cooperation, and discussions are underway with other potential partners.



*Dr. Aseem Ansari (left) and Dr. Kenneth Shapiro visit a women's self-help group with the Rajiv Gandhi Charitable Trust.*



*UW dairy expert Robert Kaiser helps with the daily milking.*

## 3. Industry-Academia Linkages

Wisconsin is home to a vibrant, rapidly growing biotechnology industry; the UW patent and licensing office is widely regarded as a global leader in the field; and the University Research Park has nurtured more than 200 high-tech companies. The Khorana Program seeks to place Indian students as interns in Wisconsin companies, and UW students as interns in Indian companies. In addition, plans are evolving for new courses in technology transfer and entrepreneurship for Indian and US participants.

## Support for the Khorana Program

The Khorana Program gratefully acknowledges "launching support" for this first phase from the Indo-US Science and Technology Forum, UW, and private donors. The Program's remarkably rapid success is due in large part to their generosity and vision. Discussions about ongoing funding are underway with these contributors, the Department of Biotechnology, and other friends of the Khorana Program. In addition, the Khorana Program leadership also works to identify

grants that may be applicable for certain program elements, such as specific rural development projects. We look to private donors and corporations for that ongoing margin of excellence that can make the Khorana Program truly extraordinary and a fitting tribute to a great scientist shared by two countries. Those wishing to become contributing Friends of the Khorana Program are encouraged to contact the co-directors, Aseem Ansari ([ansari@biochem.wisc.edu](mailto:ansari@biochem.wisc.edu)) and Kenneth Shapiro ([kshapiro@cals.wisc.edu](mailto:kshapiro@cals.wisc.edu)).



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