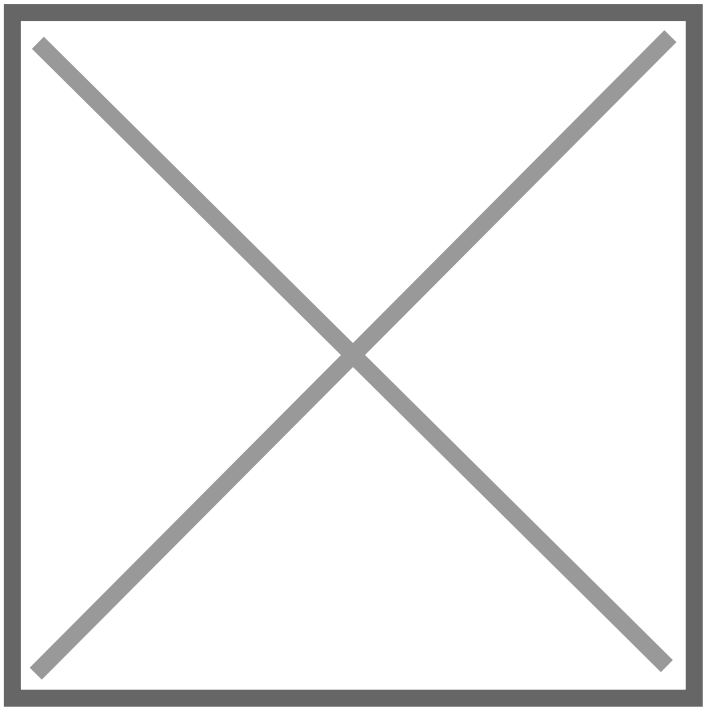
BioSpect
the business of Bi
24 years of leveraging the business of Bio
www.biospectrumindia.co

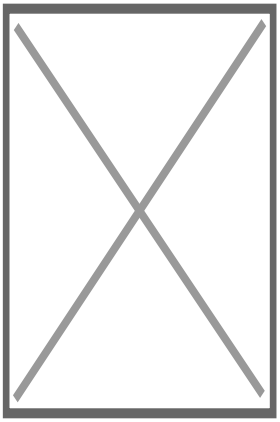
NCBS gets $4 m Japanese funds for joint research programs

16 August 2005 | News



NCBS gets $4 m Japanese funds

for joint research programs



Prof. Satyajt Mayor

The National Center for Biological Sciences (NCBS), Bangalore, has become the first Indian research institution to get funds for joint research programs from the Japan Science and Technology Agency (JST).

Prof. Satyajt Mayor of NCBS and Prof. Akhiro Kusumi at the Department of Nanobioprocesses, Kyoto University will take up their joint collaborative project to understand the membrane mechanisms.

The five-year research project will get $4 million (Rs 17.2 crore) from JST to enhance the infrastructure and equipments and other facilities needed to conduct the research work. Nearly 30 researchers from both institutions will work on the project. NCBS will spend an equal amount on the research project.

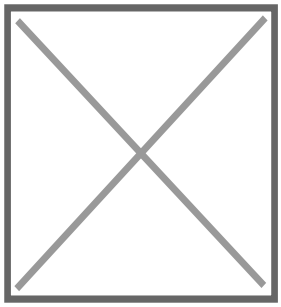
Kazuki Okimura, president of JST and Dr VijayRaghavan, director, NCBS, signed the agreement for the project in Bangalore on July 26. JST has so far funded nearly 50 such collaborative
research programs globally, but most of them are with big research institutions in the US and Europe. JST has funded five research programs in countries like Malaysia.

This is the first-ever funding of a
research project with an Indian institution, a member of the five-member
Japanese delegation to India said. JST is also planning to fund few more projects with India's Department of
Science and Technology (DST),
New Delhi. As it plans to increase its engagement with Indian researchers, JST is exploring the possibility of opening an office in New Delhi to coordinate the activities in this country.

The JST project with NCBS is an outcome of the recent visit of Japanese Prime Minister Junichiro
Koizumi to India.

Membrane mechanisms

Cells may be a part of biology but the membranes surrounding them have many physical properties. These physical features provide many clues into the biological functions performed by a cell.



Dr VijayRaghavan

First, if the membrane may be considered as a two-dimensional fluid, this would lead to an enormous enhancement in interactions happening between molecules in the membrane and molecules approaching it from outside or inside the cell. This is simply due to a reduction in dimensionality from 3 (in solution) to 2.

Secondly, one can look at the membrane as a liquid mixture which is made up of a variety of molecules that may attract or repel other molecules. These could form different regions of distinct composition, some of which allow particular molecules to come near and others that push other molecules away. This characteristic of a membrane can have dramatic implications for the control of signaling from the exterior of a cell.

Third, cell membranes do work closely with the rest of the cell. A study of this relationship would lead to a better understanding of membrane shape, formation of areas which attract or repel other molecules, movement of membrane molecules and other complexes in the domain.

The Indo-Japan project has been conceived to examine these ideas and clarify how they may be applicable to fundamental biological problems of signal transduction and trafficking of membrane-associated molecules in cells.

Source: NCBS

Â