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Indo-German centre to spearhead research on lipids

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It will be located at the National Centre for Biological Sciences of the Tata Institute of Fundamental Research (TIFR) in Bangalore.

While the cultural part of 'Germany and India: Infinite Opportunities,' the marking the 60 years of the Indo-German diplomatic relations, kicked off India's Sivamani and Germany's Christoph Haberer, cooperation in basic science, the inauguration of the second Indo-German Max-Planck Centre in India.

The Max Planck-NCBS Centre for Research on Lipids will be located at the National Centre for Biological Sciences (NCBS) of the Tata Institute of Fundamental Research (TIFR) in Bangalore.

The centre is a collaborative venture of the Department of Biotechnology (DBT) and the Max-Planck Society, an outcome of the long-standing fruitful collaborative research between the Max-Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG), Dresden.

German Minister of State at the Federal Foreign Office Cornelia Pieper did the inauguration in the presence of M.K. Bhan, Secretary, Department of Biotechnology; K. Vijayalakshmi, Director, MPI-CBG; and scientists and other officials of the two countries.

At a meeting held in Bangalore on September 22, a formal Memorandum of Understanding (MoU) on the functioning of the centre, was signed.

The Indo-German Max-Planck Centre for Computer Sciences (IMPECS) was inaugurated by the Department of Science and Technology (DST) and the Max-Planck Society at the IIT-Delhi in February 2011, marking the 60th anniversary of research between the IIT-Delhi and the Max-Planck Institute for Informatics.

These centres are set up with equal contributions (in value) from both sides, with a total expenditure of about €20 million a year. In terms of cash flow, India contributes about €10 million and Germany about €10 million.

The rest of Indian contribution will be in terms of infrastructure and other facilities. Lipids are a broad group of molecules occurring in all living organisms, and many of them have been identified.

They include fats, waxes, fat-soluble vitamins and fatty acids and their derivatives.

glycerides. Lipids constitute one of the main structural components of cell. They also act as important signalling molecules and have a significant role. The mechanisms of their synthesis and biological functions are still largely unknown. MPI-CBG, an expert in cell biology.

As he explained, with the genome sequences of various organisms now available, the architecture of the cell structure, but different aspects of the “brick and mortar” are still unknown. “This is the crucial missing link in the realisation of the promise of understanding the linkage between genes and the functional molecules,” he said. It is important to understand this gene to lipid linkage. Lipidomics could develop in developmental biology, molecular medicine and nutritional science,” he added.

One of the important objectives of lipid research today is to carry out an in-depth study in organisms such as *Caenorhabditis elegans* and *Drosophila* to understand the mechanisms of lipid synthesis and how they are involved in the organisation and functioning in higher organisms, including humans.

According to an NCBS release, during the Centre's start-up phase, which will be set up in Dresden and Berlin. Its researchers will be involved in the study of biological membranes and the genetic analysis of lipid metabolic processes. The special expertise the NCBS will bring to this collaboration is new imaging techniques that have been developed to observe processes at nanoscale within the cell, according to the release.

From the DBT's perspective, the centre for research on lipids will become part of the Cluster for research and development in biology along with the already established Centre for Regenerative Medicine and the Centre for Cellular and Molecular Platforms.

All the institutes established thus far are under the NCBS umbrella, and the Centre is governed by a Memorandum of Understanding between the DBT and the Department of Science and Technology administrative department.

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