BioSpectrum the business of Bio & Health Sciences

Tata Trusts, UC San Diego to establish TIAGS

02 November 2016 | News | By BioSpectrum Bureau

Tata Trusts, UC San Diego to establish TIAGS

Tata Trusts and the University of California San Diego has announced that they will together establish the Tata Institute for Active Genetics and Society (TIAGS) for collaborative partnership between the university and research in India. The goal of the Institute is to push the boundaries of bioscience in support of human needs and society, and to build scientific capacity in India.

The Institute will specifically advance global science and technology research to ultimately find solutions to address some of the world's most pressing issues, ranging from healthcare to agriculture.

The initiative's inaugural basic research enterprise-a thrust in Active Genetics-will be focused on applications of "active genetics" to improve human health and agriculture. Developed at UC San Diego, active genetics is a new field of genetics that incorporates a novel method, called "gene drive," for generating mutations in both copies of a gene in a single generation. Research efforts spearheaded by the Tata Institute for Active Genetics and Society will require and foster partnerships with scientific colleagues and government agencies in both India and the United States. A complimentary unit will also support a collaborative research enterprise in India (TIAGS-India).

"UC San Diego's mission to advance society and drive economic impact aligns with our goals, as a country, to build a skilled scientific workforce and to grow the impact and scope of our research enterprise," said Ratan N Tata, Chairman, Tata Trusts. "Together, we will promote bioscience research, discoveries and education that will benefit populations around the globe."

"As one of the of the world's top research institutions, we are committed to the global good," said UC San Diego Chancellor Pradeep K. Khosla. "This international collaboration to establish the Tata Institute for Active Genetics and Society will spark new scientific research and discoveries that will ultimately help us tackle some of the biggest challenges that face humankind in a socially conscious and ethical manner."

University of California San Diego, which is ranked among the top 15 universities in the world, will create 10 endowed chairs, designed to attract and retain top scientists and faculty focused on research that aligns with the Institute's goals.

In addition to a thrust in Active Genetics, the institute will also include a parallel thrust in Society and Ethics, and link Indian experts with larger research and education initiatives to effect societal progress. An important goal of the Center for Society will be to provide ethical guidance for the research activities of the Center for Active Genetics and the application of new technologies developed from the research in efforts to improve human health, agriculture and the environment. That will involve bringing researchers in India together with scholars from UC San Diego in the humanities and social sciences, such as Gender Equity and Health; as well as education, health, social protection, program evaluation, service delivery and environmental ethics.

Leveraging cross-national, joint training opportunities to prepare future generations of scientific leaders in biotechnology and life sciences, the innovative binational structure of the Tata Institute for Active Genetics and Society will streamline transfer of active genetics technology to India. It will also serve to advance the biotechnology sector in India and establish a model for other global scientific endeavors.

Viewing the collaboration with Tata Trusts as an honor for UC San Diego, Khosla said, "Growing up in India, I looked up to Tata family as champions of philanthropy for the human good. The Tata family's impact to bring about societal change and to build the country's infrastructure has been immeasurable. When Mr. Tata visited UC San Diego with researchers, he was immediately drawn to the impact of science and its strong linkages to bettering human society. It is a powerful partnership with unlimited potential to improve the world."

Speaking on genetics, Ethan Bier, professor of biology at UC San Diego and pioneer in the field of active genetics, said, "Recent discoveries in genetics have created a new understanding of genes-not only just what they are or how they work, but also how they change or can be altered. This understanding, combined with novel technology of gene editing, has opened new areas for exploration that have potential applications in areas ranging from new health therapies, to prevention of the spread of disease, to agriculture uses."

Dwelling on the role of the institute, he said, "One of the objectives of the Institute's research efforts will be to develop strains of mosquitoes that are unable to propagate malarial parasites." This effort could lead to the development of an effective way to combat vector-borne diseases, including malaria, a debilitating disease that afflicts hundreds of millions of people in tropical regions around the world. The collaboration also plan to apply active genetic technology to improve crops, enable new forms of cell therapy and develop ways to control microbial pathogens.

The Institute will also host annual opportunities to meet and discuss ground-breaking genetics technologies, as well as to address safety, efficiency and ethics conversations around emerging fields of genetics. Annual symposia are planned in India to consider discoveries, opportunities and challenges for the future.