

# **ICGEB** scientist wins Infosys Prize 2015

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In its 7th year now, the coveted prize this year in Life Sciences was awarded to Dr Amit Sharma (47), group leader, structural and computational biology group, International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi, for his outstanding contributions in deciphering the molecular structure, at the atomic level, of key proteins involved in the biology of pathogenesis of malarial parasite.

Dr Sharma has a PhD from Northwestern University, USA, in Protein Crystallography (1995). He then pursued his post-doctoral work at the Oxford University, UK, between 1996-2000, in the area of structural biology.

His work on the deadly malarial parasite has the potential value for vaccine design, and development of therapeutics for malaria.

The prize consists of cash worth Rs 65 lakh, a 22 karat gold medallion, and a citation certificate.

Previously, winners were given a cash prize of Rs 55 lakh.

Mr Shibulal, president, board of trustees, Infosys Science Foundation, attributed this increase to the current currency exchange rates, while addressing the media on the morning of November 16, 2015, during the official awards announcement at the Infosys Campus, Bangalore.

The Infosys Science Foundation, a not-for-profit trust created in 2009, has been awarding top minds in research and science across 6 categories to foster a culture of scientific thinking and 'restore the romance of research'.

The categories include Engineering and Computer Science, Humanities, Life Sciences, Mathematical Sciences, <u>Physical Sciences</u> and Social Sciences.

The Foundation is funded by a corpus which stands at Rs 130 crore (US \$20 million), contributed by Infosys' former board directors and senior management.

In <u>2014</u>, under the Life Sciences category, <u>Prof Shubha Tole</u>, an associate professor and principal investigator, department of biological sciences, Tata Institute of Fundamental Research (TIFR), Mumbai, won the award.

For 2013, <u>Dr Rajesh Gokhale</u>, director, CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB), New Delhi, bagged the prize for the same category.

The awarding ceremony will be held on February 13, 2016, in New Delhi, with the winners being felicitated by Hon. Indian President Shri Pranab Mukherjee.

For 2015, the organization received as many as 206 nominations in all the 6 categories, compared to 136 in 2009.

Here is the break-up of nominations:

ï,§ Engineering and Computer Science: 44

ï,§ Humanities: 32 ï,§ Life Sciences: 40

ï,§ Mathematical Sciences: 27 ï,§ Physical Sciences: 40 ï,§ Social Sciences: 23

He pointed that the number of nominations have gone up in the last 7 years. "The winners' work will take time for the impact to materialize. These are fundamental research which will get applied over a period of time," he added.

Once a person is nominated, the nomination is valid for 3 years, said Mr Shibulal. "Nominees' merit, their work in India, and an age limit of 50 years, in exceptional situations up to 55, are the basic criteria, and the final decision is taken by the jury," he said.

Nominees are always nominated by peers and has the chance to get nominated again by another peer. However, self-nominations are not considered by the jury.

When asked about the impact of research works of previous years' winners, Mr Narayan Murthy said, "It is not fair to judge people in such shorter periods of time. In the long-term, we will see their works having tremendous impact on the whole world."

He continued, "We have no doubt at all that advancements in scientific research will indeed make India and the world a better place. It makes more sense why we should focus on science, engineering & technology and social sciences, because that's the only way we can create a better world. We have to keep recognizing more and more people who have done excellent work in scientific research... The difference between the rich and poor is coming down. Access to education, healthcare and nutrition has become easier for the poorer masses through advances in science and technology."

The winners of the other 5 categories are:

#### i,§ Engineering and Computer Science

Prof Umesh Waghmare, Professor - Theoretical Sciences Unit, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore, India, is awarded for his innovative use of first-principles theories and modeling in insightful investigations of microscopic mechanisms responsible for specific properties of certain materials such as topological

insulators, ferro-electrics, multi-ferroics and graphene.

#### ï,§ Humanities

Prof Jonardon Ganeri, Global Network Visiting Professor of Philosophy, New York University and Recurrent Visiting Professor, Department of Philosophy, King's College London, UK, is awarded for his outstanding scholarship and originality in interpreting and scrutinizing analytical Indian Philosophy and shedding light on shared ground as well as the dichotomy between Indian and Greek traditions of philosophical reasoning.

### ï,§ Mathematical Sciences

Prof Mahan Maharaj, Associate Professor of Mathematics, Ramakrishna Mission Vivekananda University, Belur Math, Howrah, India, is awarded for his contributions to geometric group theory, low-dimensional topology and complex geometry. In particular, he established a central conjecture in the Thurston program to study hyperbolic 3-manifolds and introduced important new tools to study fundamental groups of complex manifolds.

## ï,§ Physical Sciences

Prof G Ravindra Kumar, Professor, Department of Nuclear and Atomic Physics (DNAP), Tata Institute of Fundamental Research (TIFR), Mumbai, India, is awarded for his pioneering experimental contributions to the physics of high intensity laser matter interactions. In particular for providing, for the first time, unequivocal evidence of turbulent magnetic fields and the discovery of terahertz frequency acoustic waves, in laser produced hot dense plasmas. These results have significance to testing stellar and astrophysical scenarios.

#### ï,§ Social Sciences

Dr Srinath Raghavan, an ex-military officer, and Senior Fellow, Centre for Policy Research, New Delhi, India, is awarded for outstanding research that synthesizes military history, international politics, and strategic analysis into powerful and imaginative perspectives on India in global context.

The winners of the Infosys Prize 2015 were evaluated by a panel of jurors including Prof Pradeep K Khosla (University of California, San Diego, USA) for Engineering and Computer Science; Prof Amartya Sen (Harvard University, USA) for Humanities; Dr Inder Verma (Salk Institute of Biological Sciences, USA) for Life Sciences; Prof Srinivasa S R Varadhan (New York University, USA) for Mathematical Sciences; Prof Shrinivas Kulkarni (California Institute of Technology, USA) for Physical Sciences; and Prof Kaushik Basu (The World Bank, USA) for Social Sciences.