

Biotech Product & Process Development and Commercialization award



Hon'ble Minister of Science & Technology and Earth Sciences, Dr. Harsh Vardhan handing over the “Biotech Product and Process Development and Commercialization Award, 2017

Biotechnology has the potential to bring about a bio-industrial revolution utilizing the available natural resources and vast pool of human resource of our country. The biotechnological research has proved vital in addressing the problems of deprived and under privileged people. During last two decade, both industry and academia, and various individual companies have come forward to anticipate in biotech product development, packaging know-how, market survey, etc. utilizing the basic scientific knowledge available in our country, and other parts of world.

In order to encourage and support more and more innovators and entrepreneurs joining hands in taking product and process development to new heights, the then Hon’ble Minister of S&T initiated Biotech Product & Process Development and Commercialization Award in 2001. It was decided that award shall be given to scientists, innovators, entrepreneur, institutions, both public and private sector companies to recognize their work in development and commercialization of processes, technology, and product development in the areas of modern biology and biotechnology.

On occasion of Technology Day i.e., the 11th May every year, the five awards are given and carries a cash prize of Rs. 2.00 lakh along with a citation and trophy. However, cash award of Rs.5.00 lakh is given to the awardee if the product developed is commercialized and has much higher utility.

On the occasion of Technology Day i.e., 11th May 2018, Hon'ble Minister of Science & Technology and Earth Sciences, Dr. Harsh Vardhan handed over the “Biotech Product and

Process Development and Commercialization Award 2017" carrying a cash prize of Rs.2.00 lakhs to TERI, the Oil and Natural Gas Corporation (ONGC) and the ONGC Energy Centre (OEC) Trust for its *in situ* generation of methane from coal bed through microbial intervention that can enhance the production of coal bed methane (CBM). On this occasion, Dr Banwari Lal, Senior Director, TERI said that, "It is in the process of commercialization, which will pave the way for clean energy in the future and eventually re-duce dependency on fossil fuels".

The process involved in drilling and maintaining microbial CBM is becoming a costly affair due to fall in gas prices and the competition faced from shale gas production. Therefore, TERI has been working tirelessly on development and demonstration of microbial process for in-situ generation and enhancement of methane from underground coal seams.

The TERI, OEC, and ONGC researchers have discovered a way to produce a three to four-fold increase in the amount of methane gas emitted by naturally occurring microbes living in coal seams. Both organizations have framed a partnership on displaying in-situ stimulation and bioaugmentation for methane generation and enhancement from producing CBM wells of Jharia, Jharkhand. TERI has successfully cultured the microbes in the laboratory and created the same condition as found in the coal seams for domestic use and the innovation can extend the lifespan of coal seam gas wells, and improve the economics of using woody crops and left-over food as commercial sources of biogas.

Furthermore, five year data analysis of the Biotech Product and Process Development and Commercialization Awardees reflects that the award has been bestowed to some of the important commercialized technologies and process developed by Indian researchers and innovators either individually or in collaborations.

On 11th May 2017, Shri Pranab Mukherjee, Hon'ble President of India conferred prestigious "Biotech Product and Process Development and Commercialization Award 2016" to a joint team from ICAR-Indian Institute of Rice Research (ICAR-IIRR) and CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB) for the development and commercialization of improved Samba Mahsuri, a bacterial blight resistant rice variety. Dr. Ramesh V Sonti and Dr. Raman Meenakshi Sundaram led the teams from CSIR-CCMB and ICAR-IIRR, respectively, got the prestigious award.

The Samba Mahsuri or BPT5204 is a popular rice variety that was originally developed by the Acharya N. G Ranga Agricultural University, Andhra Pradesh. The BPT5204 is cultivated in

several million hectares in India. However, the crop is susceptible to the bacterial blight disease which results in huge crop loss ranging from 10-50%. Effective bactericides are not available for controlling the problem, therefore, a joint team of scientists from ICAR-IIRR and CSIR-CCMB decided to address the issue using latest biotechnological tools including marker assisted selection. Thus, the improved variety developed was resistant to bacterial blight.

Prof. Rohit Srivastava, Department of Bioscience & Bioengineering, IIT, Bombay got 2015 award for development of a low cost reader for quantitatively analyzing urine dip sticks.

Prof. Vijay K Chaudhary, Department of Biochemistry, University of Delhi, got 2014 prestigious award for development of *TBConfirm*, a test to confirm the presence of *Mycobacterium tuberculosis* in cultures.

Prof. Daman Saluja, Director, Medical Biotechnology, Dr. B.R. Ambedkar Center for Biomedical Research (ACBR), University of Delhi, was awarded 2013 award for her work on the development of novel method of Beacon based PCR diagnostic kit for *Neisseria gonorrhoeae* and *Chlamydia trachomatis*.

The institutions, scientists, entrepreneurs and individuals who have made significant contributions in terms of research publications, basic research, biotech process and product development and commercialization of such technologies and products are awarded the prestigious award.

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