

## Press Release (26.9.2016)

Council of Scientific & Industrial Research

**CSIR- National Botanical Research Institute (CSIR-NBRI) and  
CSIR-Central Institute of Medicinal and Aromatic Plants (CSIR-CIMAP), Lucknow;  
CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun; and  
CSIR-National Aerospace Laboratories, Bengaluru**

**won CSIR Technology Awards 2016**

**And CSIR- Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad  
recognized with Certificate of Merit**

CSIR Technology Awards 2016 under category of: Life Sciences, Physical Sciences including Engineering and Innovation were awarded on the occasion of CSIR Foundation Day, 26<sup>th</sup> September 2016.

The awards were given away by DR. Harsh Vardhan, Hon'ble Minister, S&T and ES to the winners during the Platinum Jubilee Foundation Day of the CSIR. CSIR had instituted 'Technology Awards' in 1990 to foster and encourage multi-disciplinary in-house team efforts and external interaction for technology development, transfer and commercialization.

This year the winners are: CSIR- National Botanical Research Institute (CSIR-NBRI) and CSIR-Central Institute of Medicinal and Aromatic Plants (CSIR-CIMAP), Lucknow; CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun; and CSIR-National Aerospace Laboratories, Bengaluru.

**CSIR-National Botanical Research Institute (CSIR-NBRI) and CSIR-Central Institute of Medicinal and Aromatic Plants (CSIR-CIMAP), Lucknow** has won the award for development of Herbal Composition (NBRMAP-DB) for the Management of Diabetes Type II.

NBRMAP-DB is a scientifically validated and standardized herbal formulation developed by CSIR-NBRI and CSIR-CIMAP, Lucknow. The drug has been launched by AIMIL Pharmaceuticals (India) Limited, New Delhi-the licensee, under the trade name of BGR-34.

NBRMAP-DB is an anti-diabetic, hypoglycemic formulation with immune-modulatory properties and provides relief to people suffering from diabetes through management of blood glucose level. During a short span of less than a year, more than one million diabetic patients have been benefited by this formulation throughout the country with a sale of approximately Rs. 60 crores.

Success of this formulation has given a thrust to cultivation of medicinal plants and thus value addition to the agricultural sector, towards generating employment and thereby uplifting the socio-economic status of farmers.

This award inspires researchers engaged in finding innovative solutions, for affordable healthcare through the amalgamation of modern scientific methods, and India's rich traditional knowledge.

**CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun** has won the award for development of Wax De-oiling Technology and its Commercialization at Numaligarh Refinery.

A state-of-the-art 'Wax De-oiling Technology' with high energy efficiency, low carbon footprint and low capital cost for producing 'Paraffin' and 'Microcrystalline' waxes has been commercialised in collaboration with Engineers India Limited (EIL) and Numaligarh Refinery Limited (NRL).

Based on the techno-commercial inputs from CSIR-IIP and EIL, NRL has set-up the first ever wax plant based on indigenous technology. This wax plant built at a cost of Rs. 676 crores is designed to produce 50,000 Metric Ton Per Annum (MTPA) of high quality and high value 'Paraffin Wax' and 4,500 MTPA of 'Microcrystalline Wax' for making tyre and rubber, candles, adhesives, corrugated board, cosmetics, casting etc.

The successful commercialization of the technology at NRL resulted in several benefits such as enhanced refinery profitability, encouraged small scale entrepreneurs for start-ups with setting-up of medium and small

sized ancillaries to generate direct and indirect employment in 'North-East' region. Besides satisfying local demand, NRL has also started export of wax to numerous countries abroad.

The commercialization of indigenous Wax De-oiling Technology is in the direction with 'Make in India' initiative.

**CSIR-National Aerospace Laboratories, Bengaluru** has won the award for LED Based DRISHTI Visibility Measuring System.

Drishti is a visibility measuring system installed at Indian airports to give information to pilots on the visibility at the runway for safe landing and take-off operations of aircrafts. It is mandatory category transmissometer.

Transmissometers installed at various Indian airports have been of foreign origin. The high cost of imported devices and complications observed in maintaining them necessitated indigenous development of Drishti, a cost-effective and highly precise system.

Drishti stands on par with or better than the imported transmissometers. It has provision to get multi systems visibility data in a single computer with remote health monitoring, multiple display modules, web enabling of data, secured encrypted communication of data from Runway to ATC and many more. Further, Drishti is 1/3<sup>rd</sup> the total cost of imported system.

The state-of-the-Art Drishti system with unique innovative design of the entire hardware (both opto- mechanical and electronic) and software developed with virtual instrumentation concept has made a paradigm shift. Drishti is for all categories of Airports, viz., CAT I, CAT II, CAT III A & B. 27 numbers systems of DRISHTI have been installed in 10 international airports, 70 systems are being installed in other civilian airports while 54 systems are planned for IAF Airbases. The next-gen Drishti to address the needs of Railways and Roadways is on the anvil.

The technology for setting up the commercial plants of 4000 MT per year of para-tert-butyl toluene, 3000 MT per year of para-tert-butyl benzoic acid and 2000 MT per year of para-tert-butyl methyl benzoate from **CSIR- Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad and M/s Vinati Organics Ltd., Mumbai** has been recognized with a Certificate of Merit under CSIR Technology Award-2016 for its potential.

Para-tert-butyl toluene is a speciality chemical which is entirely imported in the country currently. It is of commercial importance as a raw material for production of para-tert-butyl benzoic acid and para-tert-butyl benzaldehyde which are used as process regulator in polymer industry, in production of fragrances and flavours, pharmaceuticals, as lubricating oil additive, regulators for production of polyesters and usage in personal care segment. At present there is no dedicated capacity for production of such chemicals in India.

The three process technologies - continuous production of para-tert-butyl toluene for a commercial plant of 4000 MT per year, para-tert-butyl benzoic acid making with recyclable catalyst for a commercial plant of 3000 MT per year and know-how for para-tert-butyl methyl benzoate from para-tert-butyl benzoic acid for a commercial plant of 2000 MT per year has been developed and licensed to M/s. Vinati Organics Limited, Mumbai. The commissioning of a commercial plant of 4000 TPA production capacity is underway and is scheduled to be completed by 2016.