

## **IFGTB commercializes an affordable technology on isolation of Nucleic acid**

The technology on “Isolation of nucleic acid from plant tissues” developed at Institute of Forest Genetics and Tree Breeding, Coimbatore was successfully transferred to Rapid Genomics Solutions, an R&D company based at Coimbatore in a function held on 10 July 2014 at the Institute premises. The inventors of the technology are Dr. Modhumita Dasgupta and Dr. Radha Veluthakkal of IFGTB. The meeting was attended by scientists/officers of IFGTB and Shri S.K. Viswanath, General Manager (Marketing), Rapid Genomics Solutions. While welcoming the participants, Dr. R. Yasodha, Head, Division of Plant Biotechnology, IFGTB expressed that it was the first product to be commercialized at IFGTB and considered it as a proud event for the Institute. Shri T.P. Raghunath, Group Coordinator (Research), IFGTB spoke on the importance of commercialization in R&D laboratories and explained that the key to any commercialization is innovation. He also highlighted that several innovations did not reach the public due to commercialization lags leading to obsolescence of the technology. He stressed on the requirement for continuous innovations in research institutions.



Subsequently, Dr. Modhumita Dasgupta, Scientist IFGTB and co-inventor of the technology explained the competitive advantages of the technology over the existing technologies in the market. She informed that the technology was rapid, low cost and resulted in high recovery of both DNA and RNA in a single reaction. Additionally, she also mentioned that the technology did not involve the use of any bio-hazardous chemicals and was designed for difficult tissues especially from tree species. Further, she explained the process of commercialization and informed that the technology transfer was facilitated by Biotech Consortium India Ltd, New Delhi, a company promoted by Department of



Biotechnology, Government of India. It was further explained that the technology was transferred to Rapid Genomics Solutions on non exclusive basis and a tripartite license agreement was developed in consultation with IFGTB, BCIL and RGS.

The license agreement was signed by Dr. N. Krishna Kumar, Director, IFGTB and Shri S.K. Viswanath, GM (Marketing), RGS. This was followed by the handing over of the 'Technology Docket' to Shri Viswanath and reciprocated by handing over of the first instalment towards technology transfer to Dr. Krishna Kumar.

Subsequently, Dr. Krishna Kumar addressed the gathering and congratulated Dr. Modhumita Dasgupta for her efforts in effectively transferring the technology to a company. He explained that the present technology was developed in 2009 and the process of commercialization was initiated in 2011 with the support of BCIL. He stressed on the importance of commercialization in forestry sector and expressed that the forest genetic resources are an important source supporting the livelihood of populations. He also expressed that the commercialization prospects of non timber forest produce were enormous and urged that the Institute should involve in developing products useful for general masses. He expressed the immense social and ecological responsibility of forestry researchers and insisted that revenue generation through commercial use of forestry products is essential for sustainability.



### The Hindu dated 11 July 2014

**New technology to reduce cost, time of research, commercialised**

Smaller scientific research institutes to benefit

Staff Reporter

**COIMBATORE:** The Institute of Forest Genetics and Tree Breeding (IFGTB) here has developed a new technology that will significantly reduce the cost and time of research on plant tissues. It has come up with a cost-effective but highly efficient protocol to isolate nucleic acid from a tree tissue to extract the DNA and RNA, the fundamental requirements for molecular biological studies and research in plants.

This technology could enable smaller institutes to carry out scientific research projects that were hitherto unaffordable for them.

The Institute has entered into a tripartite agreement with Biotech Consortium India Limited (BCIL), a firm promoted by the Centre's Department of Science and Technology which assessed the technology and declared it as viable for commercialisation, and Rapid Genomics Solutions, a Coimbatore-based private research and development company that will market the technology.

IFGTB director N. Krishna Kumar, on Thursday, signed a memorandum of agreement with both these firms in the presence of S.K. Viswanath, general manager (marketing) of Rapid Genomics Solutions and T.P. Raghunath, group co-ordinator (research) of IFGTB. Modhumita Das Gupta, the IFGTB scientist who developed this technology with Radha Veluthakkal, who was a research scholar in IFGTB, said that the existing methods took nearly a day and a half to isolate the nucleic acid and involved the use of bio-hazardous material and high-end equipment such as ultracentrifuge.

This new technology, she said, could produce the result just about in an hour and a half using simple equipment that did not require hazardous substances. The cost could be reduced at least by ten times compared to existing methods. This technology could be fit into existing equipment. Further, this process was simple and would yield un-degraded RNA and DNA.

This was perhaps the only technology in country that was designed to test tree tissues. Now, the kits used for crops and plants were being used to test tree samples, she said.

Rapid Genomics Solutions, to which this technology has been transferred, will manufacture the kits and market it.

Mr. Viswanath of Rapid Genomics, said that almost 100 per cent of the testing kit for trees was imported now. This domestic technology can reduce costs significantly and increase access to more firms. While the testing was done manually now, plans were afoot to automate the process.

Mr. Krishna Kumar, said that this project was conceived in 2009 and developed by 2011, when the initiative for commercialisation was taken up and completed now. He expected the commercial kits of this technology to hit the market in nine months.

*Krishna Kumar (second left), Director, Institute of Forest Genetics and Tree Breeding exchanging an MoU with S.K. Viswanath (right), General Manager, Rapid Genomics Solutions, in the city on Thursday.-PHOTO:PERIASAMY*

He further mentioned that the Institute is working towards developing other products which would be commercialized in the future.

Shri S. K. Viswanath, GM (Marketing), RGS expressed his views in the perspective of a R&D company and mentioned that most of the products used in molecular biology research were imported in India, resulting in high cost. Hence, he felt that indigenous technologies need to be developed and marketed effectively to address this gap in research. He assured the Institute that the present technology would be launched in the market at the earliest and all efforts would be taken by the company to market the product. He also envisioned that the company would work towards up-grading the technology with the support of the Institute to facilitate automation.

The meeting ended with the vote of thanks by Dr. Modhumita Dasgupta.