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IISc team to develop novel diagnostic technology

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Bhushan J Toley has recently won the Grand Challenges Exploration grant of $100,000.



Bhushan J Toley, an Assistant Professor at the Indian Institute of Science (IISc), Bengaluru, in the chemical engineering department has recently won the Grand Challenges Exploration grant of $100,000.

He has won this grant for the development of a new technology that could improve the diagnosis and monitoring of infectious diseases in remote areas.

In 2003, the Bill & Melinda Gates Foundation launched Grand Challenges in Global Health, which focuses on 14 major scientific challenges that, if solved, could lead to key advances in preventing, treating, and curing diseases of the developing world.

The technology being developed by the IISc team would be used to dry and stabilise sputum, urine, or blood samples collected in rural and remote locations so that they can be stored for a long period of time. The dried samples can then be transported and used for DNA or RNA analysis in a laboratory for the detection of infectious diseases such as tuberculosis.

Drying the samples would help protect the DNA, but this requires a sterile method that can handle larger volumes of multiple types of specimens.

The technology is at a very early stage. However, the idea is novel and has not been used for sample collection before. IISc had filed a provisional patent application to protect it and in the next one year, the team plans to file a full patent application.