

## BIRAC, Nesta announce international health challenge grant winners

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**Indian startups first to receive Longitude Prize grant to further fund their research.**



Following a competitive pitch, three startups have been awarded up to £100,000 each (around Rs 90 Lakhs) to further develop their rapid diagnostic tests with an aim to reduce avoidable use and better steer the use of antibiotics.

The winner startups are Module Innovations, Pune, NanoDX, Delhi & Hyderabad, and OmiX and Spotsense, Bengaluru.

The grant, termed as 'Boost Grant', is sponsored by Biotechnology Industry Research Assistance Council (BIRAC) as part of longstanding partnership with UK-based innovation foundation Nesta, which runs the Longitude Prize.

The winners are among 78 teams from 14 countries competing for Nesta's longitude prize, a global challenge with a £8 million payout. The challenge is to develop a point-of-care test to detect bacterial infections and ensure that the right antibiotics are used at the right time.

The grants follow a two-day accelerator programme conducted by BIRAC in collaboration with Nesta at the Society for Innovation and Entrepreneurship (SINE), IIT Bombay. The accelerator aimed to help teams become industry ready with guidance from business, technical, regulatory and clinical experts, and advice for overcoming hurdles in the development of their diagnostic tests.

Dr Renu Swarup, Secretary Department of Biotechnology, Govt of India and Chairperson of BIRAC addressed the participants and announced the winners. She said, "It is a pleasure to see the innovative solutions created by Indian start-ups advancing to a stage which is near to the market. Antimicrobial resistance is a global problem and the Indian Government is committed to support a solution for the same. Partnership with Nesta and support for Longitude prize aspirants is one such effort in this direction."

Daniel Berman, lead – global health team and challenge prize centre, Nesta, told BioSpectrum "Though Nesta has got teams in 14 countries, India is a bit special due to the partnership with BIRAC from the beginning when the project was launched in 2014." The 8 Indian teams which had got seed funding earlier have progressed a lot and they are getting closer to have a product that they can submit to win the Longitude prize of 8 million pounds. He referred to a presentation made by a team in

which they showed a test which was much more affordable and a rapid test to know which infection one has and which antibiotic can be used.

Dr Manish Diwan, Head – strategic partnership and entrepreneurship development, BIRAC, explained the concept of the programme. “What these start-ups need is some more knowledge, some more valuation and some more funding so that they propel much faster,” he said.

Sachin Dubey, Cofounder of Module Innovations, said, “We have a product that identifies uropathogens in time frame of just 20 minutes. So, we are essentially trying to bring down diagnosis time for UTI bacteria from 24 hours to just 20 minutes with a simple hand held device.”

It is a credit card size test kit, which detects four major uropathogens in a single test. The sample flows into the four corners of the test device, each specific to a particular bacteria. The colour change from blue to red indicates the presence of the bacteria in urine that is causing a UTI.

NanoDX is creating a point of care test called Septiflo that can detect and stratify the Gram status of bacterial infections in a drop of human plasma in under 10 minutes. Results are visible to the naked eye and semi-quantified using a color score chart. This information can be of immense value in rapid decision-making for the selection of bacterial Gram-specific narrow-spectrum antibiotics.

The collaborative teams OmiX and Spotsense are creating a non-invasive diagnostic test using salivary markers of infection as the basis for diagnostics. It uses voltammetric detection of bacteria as the first step of 15 minutes to determine cases that are negative for infection. The cases that are indeterminate or considered positive are then tested for susceptibility to specific antibiotics for antibiotic selection using a novel, rapid, isothermal amplification platform. The assay goes from sample to result (currently) in 60 minutes. Detection is through digital camera readout of a colorimetric signal.