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Ã¢â?¬Å?UK-India Free Trade Agreement helps deepen Genomics CollaborationÃ¢â?¬Â•

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Oxford Nanopore Technologies, a global company with its headquarters in the United Kingdom, has signed Letters of Intent with India's Centre for DNA Fingerprinting and Diagnostics (CDFD), and the National Institute of Biomedical Genomics (NIBMG), to develop two new genomic Centres of Excellence Institutes. Their goal is to support skills development, which will position India as a regional leader in advanced genomics, R&D in rare diseases, newborn screening, oral cancer, antimicrobial resistance (AMR), and multi-omics. The company brought its Ã¢â?¬Ë?What Your Missing Matters' (WYMM) tour to Bengaluru in India for the first time, in April, with an intent to further strengthen collaborations with researchers, clinicians, and public health bodies in the region. BioSpectrum Spoke to Dr Gordon Sanghera, Co-founder and Chief Executive Officer, Oxford Nanopore Technologies, UK and Tonya McSherry Vice President of Commercial, EMEAI about WYMM, their presence in India and APAC region, UK-India Free Trade Agreement and much more.



What is the purpose and goal of organising WYMM for the first time in India?

Tonya McSherry: We are committed to deepening our presence in India, and hosting the first WYMM tour in the country is a key part of this for us. It provided a unique opportunity to bring together our experts and leading local scientists to engage in meaningful discussions on a range of topics, from clinical applications to public health strategy. Some personal highlights included conversations around clinical genetics, pioneering microbiome-based wellness initiatives, implementing full-length sequencing in acute healthcare settings, and strengthening the blueprint for future public health resilience.

India faces unique and complex challenges in areas like infectious and rare diseases, and we are committed to work alongside local teams to address these. This is why it was especially great to see deep interest in projects such as building a national respiratory metagenomic network for clinical care, enhancing bio surveillance, and understanding structural variants within Indian populations. Over the course of the tour, hundreds of scientists from across the country joined us and took part in hands-on workshops on full length- sequencing alongside the discussions, demonstrating there is a desire to build sequencing capacity and expertise. Based on the overwhelming and brilliant response we received to the Bangalore Tour, we are looking forward to expanding our team and growing our partnerships across India over the coming months and years.

How are you building your presence in India and the APAC region?

Tonya McSherry: Over the past eight years, we have built strong relationships with key partners across India to support a wide range of sequencing projects, and we have worked with teams across from Kerala and Kamataka, to Delhi, to West Bengal. These partnerships support a multitude of programmes including infectious disease, drug resistance in tuberculosis, and plasmid sequencing as well as deep research, discovery, and pioneering technology, which are driving advancements in healthy aging for India.

We have long-standing research projects and collaborations with organisations including the Centre for Cellular & Molecular Biology and Institute of Genomics & Integrative Biology, as well as the Asian Institute of Gastroenterology in Hyderabad, which has implemented an Oxford Nanopore based solution for a gut microbiome test. This is Asia's largest Institute in this field, and one of only seventeen hospitals in the world designated as a Centre of Excellence for Gastroenterology. These partnerships - alongside our more recently established ones - reflect the importance we place on collaboration and expanding our investment within India.

Beyond individual research projects, we believe our nanopore sequencing technologies are well-positioned to support broader national genomic initiatives, including the Genome India Project, the Programme on Paediatric Rare Genetic Disorders, the Infectious Disease Biology Programme and, the National One Health Mission recently launched by the Office of the Principal Scientific Advisor.

And we are building the infrastructure to support this growth. We recently established our new office in Bangalore, and we are increasing the number of channel partners we work with in India, further strengthening our long-term commitment.

More broadly our activity in APAC is growing too. We are expanding our presence across the APAC region, with a commercial team in Japan and a growing footprint in Singapore. We have expanded our laboratory facilities in the latter, to support training, knowledge transfer, and upskilling of local technical staff, which have received further support through collaborations with Singapore's National Precision Medicine programme and a new distribution partnership with UPS Healthcare. Together, the aim is to create one of the world's most extensive and inclusive reference genome datasets.

Why is the recent UK-India Free Trade Agreement (FTA) so exciting?

Dr Gordon Sanghera: The UK-India Free Trade Agreement represents far more than a trade policy. It's a catalyst for action and collaboration. At Oxford Nanopore, we've always believed that innovation should be borderless and accessible to all. This agreement provides the confidence and framework for companies like ours to invest, scale, and co-create with India's scientific and healthcare ecosystems in transformative ways, that weren't possible before. With its depth of scientific talent and global ambition, we believe that India is uniquely positioned to lead the next phase of genomics innovation.

As mentioned already we're working alongside leading Indian government research institutions to support key national health initiatives on newborn screening to antimicrobial resistance. However, the FTA enables us to move beyond technology deployment, toward building shared capability, research excellence, and real-world impact. Once in place the Agreement will allow UK based companies to competitively bid for government procurement contracts, which is a significant opportunity for our respective companies. For example, a specific area the Free Trade Agreement discusses is AMR and Oxford Nanopore has a lot of expertise in this area that could benefit Indian citizens and industries. FTA also helps deepen UK-India Genomics Collaboration.

Beyond the FTA, we also have significant expertise we could share with the India Government and healthcare system around infectious diseases, and pandemic prevention, preparedness, and response, a key area outlined in the India/UK Health and Life Sciences MOU for co-operation, and the India/UK Technology Security Initiative.

So, as genomics shifts from centralised labs to portable, real-time sequencing, India's scale and momentum make it a critical partner for us. This is a two-way collaboration rooted in shared goals and trust, and we're proud to help turn bold ideas into real outcomes.

Where do you see the biggest opportunities in sequencing in the near future?

Dr Gordon Sanghera: I'm particularly excited about the potential of proteomics. Over the past two decades, we've transformed our understanding of biology through DNA and RNA sequencing, but proteins remain one of the most complex and underexplored layers of biology. They are the true workhorses of the cell and central to disease pathways, diagnostics, and therapeutic development. We believe the ability to read proteins directly, in their native form, could unlock entirely new dimensions in personalised medicine and biological research.

At our 2025 London Calling conference, we announced our first steps into this space, focusing on protein biomarker detection and barcoded protein sensing using our core nanopore technology. These approaches aim to deliver simple, scalable tools for early disease detection and diagnostics. Looking further ahead, our vision is to enable full-length, de novo protein sequencing, allowing researchers and clinicians to identify unknown proteins, post-translational modifications, and structural variations in real time. Just as we've done with DNA and RNA, our goal is to make protein analysis accessible, fast, and decentralised. It's a bold ambition, but one we believe will fundamentally shift how we understand and treat disease.

How are your technology platforms making a difference?

Dr Gordon Sanghera: Our platform is redefining what's possible in genomics - from DNA and RNA to epigenetics - by delivering richer information, faster and more accessibly and affordably.

As an example of some of this groundbreaking work, in the UK we are enabling a world-first pathogen surveillance system across 30 hospital sites in the UK to create a real-time, early warning biosecurity framework. We are also supporting work on the analysing the biomarkers of 50,000 genetic samples to create the world's first large-scale and comprehensive epigenetic dataset to support targeting of novel genomic discoveries in cancer, dementia, human genetic disease and infectious disease. These and other unique capabilities are already having a tangible impact on research into patient care, including improving AMR by supporting medicine prescription choices made in ICU wards.

Projects like the Genome India Project and the National One Health Mission are ideally matched to similarly benefit from the flexibility and scalability of nanopore sequencing, enabling rapid, decentralised, and high-resolution data generation. Across India, we're seeing growing demand for accessible, multi-omic tools that accelerate discovery and healthcare impact.

Beyond research, we're supporting clinical and biopharma applications with new platforms like GridION Q and the upcoming PromethION Q, both designed for regulated environments. Our platform's ability to directly sequence native RNA is also gaining traction, particularly as RNA-based therapeutics and vaccines gain prominence. We're collaborating with industry to explore how our direct RNA sequencing can enhance vaccine QC workflows and support biomarker discovery. Looking ahead, we're expanding into proteomics to unlock entirely new layers of biological insight, and we believe India will continue to play a key role in this next chapter of innovation.

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