Genomics Data Science Workshop

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Dr. Vinitaa Jha, Director Research and Academics at Max Healthcare, PI GHRU North India was awarded the NIHR GHR CADA-R4-005 grant, which supported the Genomics Data Science Workshop held in New Delhi, India, from 15 to 19 September 2025. Her keen interest in advancing research and capacity and capability building amongst researchers was invaluable to the highly successful workshop delivered to enhance global south research output.

A five-day **Genomics Data Science Workshop** was conducted to build critical skills in genomics, bioinformatics, and statistical analysis among early-career researchers. The programme combined lectures, laboratory sessions, and interactive discussions to strengthen regional capacity for managing and interpreting large-scale omics datasets and to foster a collaborative genomics research community across South Asia.

Delivered in a **hybrid format**, the workshop featured expert faculty from leading national and international institutions. Participants engaged in hands-on molecular and cytogenomics training, explored transcriptomics and high-dimensional data visualisation, and examined the integration of artificial intelligence in precision medicine and genomic discovery.

Highlights included sessions by **Prof. Rakesh Mishra** (TIGS) on the evolving landscape of genomics in healthcare, **Dr. Atul Thatai** (Max Healthcare) on molecular diagnostics and NGS, and **Prof. Marie Loh** (Singapore) on statistical thinking for omics data. **Prof. L.S. Shashidhara** (NCBS/IISER Pune) addressed genomic profiling in breast cancer and research ethics, while **Prof. Tavpritesh Sethi** and **Prof. Gaurav Ahuja** (IIIT-Delhi) demonstrated AI's transformative role in gene signature discovery and oncology decision-support.

The workshop concluded with discussions on community-based genomics research and oral health equity, highlighting the potential of interdisciplinary collaboration to address public health priorities through data-driven science.