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India launches first indigenous CRISPR based gene therapy for Sickle Cell Disease

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CSIR-IGIB and Serum Institute sign technology transfer agreement for affordable gene therapies

Union Minister of State (Independent Charge) for Science & Technology Dr Jitendra Singh has launched India's first indigenous "CRISPR" based gene therapy for Sickle Cell Disease, which particularly affects India's tribal population.

The therapy, named "BIRSA 101" is dedicated to Bhagwan Birsa Munda, whose 150th anniversary was observed few days back and who is remembered as a great tribal freedom fighter.

Dr Jitendra Singh emphasised that the breakthrough, developed at CSIR–Institute of Genomics & Integrative Biology (IGIB), has demonstrated India’s capability to produce pathbreaking therapies at a fraction of global costs, potentially replacing treatments priced at Rs 20–25 crore overseas. He underlined that this innovation carries deep national significance, especially for tribal communities in central and eastern India, where the disease burden is highest.

During the visit, Dr Jitendra Singh inaugurated a new advanced research and translational facility at CSIR-IGIB.

A formal technology transfer and collaboration agreement was exchanged between CSIR-IGIB and the Serum Institute of India, enabling translation of IGIB’s engineered enFnCas9 CRISPR platform into scalable, affordable therapies for Sickle Cell Disease and other critical genetic disorders.