

# Technology Sovereignty Will determine Geopolitical Sovereignty: Dr Jitendra Singh at CSIR's 84th Foundation Day

## CSIR, Established before Independence, Continues to Anchor India's Scientific Journey

## From Labs to Livelihoods: CSIR Innovations Driving Industry Linkages and Socio-Economic Change

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“Technology sovereignty will determine the geopolitical sovereignty in the times to come,” Union Minister of State for Science and Technology and Vice President of CSIR, Dr. Jitendra Singh, said as he underlined India's transition into a technology-driven nation.

Speaking at the 84th Foundation Day of the Council of Scientific and Industrial Research (CSIR) here today, the Minister emphasized the organization's legacy, its scientific achievements, and its responsibility in shaping the nation's future path towards Viksit Bharat 2047.

Tracing CSIR's origins to 1942, Dr. Jitendra Singh reminded the audience that it is among the few national institutions established before Independence. He recalled the contributions of its first vice-president, Dr. Syama Prasad Mookerjee, whose academic brilliance often remained overshadowed by his political career, and Sir Ramnath Chopra, regarded as the father of pharmacology in India, who laid the foundations of pharmaceutical research. “CSIR's history is a reminder that science and innovation were integral to India's journey even before freedom,” Dr. Jitendra Singh said.

Shifting focus to the present, the Minister said India must consciously build its strength in emerging technologies if it is to remain competitive globally. With 37 laboratories spread across the country, CSIR has been working in diverse domains from healthcare and pharmaceuticals to agriculture, materials, and defence. Initiatives such as One Week One Lab and One Week One Theme were launched to showcase these contributions more widely.

Dr. Jitendra Singh also called for greater integration across scientific institutions. Citing recent breakthroughs such as the first indigenously developed Nafithromycin, an antibiotic effective against resistant respiratory infections, he said collaboration between CSIR and allied departments like biotechnology is essential to maximise national outcomes.

Industry linkages, he noted, are central to the journey from laboratory to marketplace. “All of our success stories—from vaccines to floriculture—have been possible because of early and robust engagement with industry partners,” he said, urging companies to take greater ownership of innovations emerging from Indian labs.

The societal dimension of CSIR's work was highlighted through examples ranging from lavender cultivation in Jammu and Kashmir to tulip innovation in Palampur, which found mention during national events.

Floriculture initiatives, Dr. Jitendra Singh said, have transformed farmers' livelihoods, while CSIR-developed technologies have contributed to national security, including sensors used in Operation Sindoor. "Our goal is to ensure that science improves ease of living and has a direct socio-economic impact," he said.

Outlining the way forward, the Minister spoke of a three-pronged approach—awareness, affordability, and accessibility—to ensure that the benefits of science reach the widest sections of society. He urged scientists to use modern communication tools and social media to connect directly with citizens and showcase their work more effectively.

The event was attended by leading figures from India and abroad, including Dr. V. K. Saraswat, Member, NITI Aayog; Prof. Ajay Kumar Sood, Principal Scientific Advisor to the Government of India; and Dr. Sethuraman Panchanathan, University Professor of Technology and Innovation at Arizona State University and former Director of the U.S. National Science Foundation .

As CSIR looks ahead to its centenary in 2042, Dr. Jitendra Singh said the institution must aspire to be the torchbearer of India's technological rise. "The real tribute to our founding fathers will be to carry science to every section of society and lead the nation into 2047 with confidence and capability," he concluded.





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