

**GOVERNMENT OF INDIA  
MINISTRY OF CHEMICALS AND FERTILIZERS  
DEPARTMENT OF PHARMACEUTICALS**

RAJYA SABHA  
UNSTARRED QUESTION NO. 3071  
TO BE ANSWERED ON THE 28<sup>TH</sup> MARCH, 2023

**Achievements of OSDD**

**3071 # Dr. Radha Mohan Das Agrawal:**

Will the Minister of **Chemicals and Fertilizers** be pleased to state:

the schemes currently operated/was operated in the past under the Open Source Drug Discovery(OSDD) along with the achievements made in the field of new drugs discovery?

**ANSWER**

**MINISTER OF STATE IN THE MINISTRY OF CHEMICALS & FERTILIZERS  
(SHRI BHAGWANTH KHUBA)**

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Open-Source Drug Discovery (OSDD) is a Council of Scientific & Industrial Research (CSIR) led team India Consortium with global partnership with a vision to provide affordable healthcare to the developing world by providing a global platform where the best minds can collaborate & collectively endeavour to solve the complex problems associated with discovering novel therapies for neglected tropical diseases like Tuberculosis, Malaria, Leishmaniasis etc.

OSDD is currently focused on the discovery of novel drugs for TB and Malaria. OSDD collaboratively aggregates the biological, genetic and chemical information available to scientists in order to use it to hasten the discovery of drugs. This provides a unique opportunity for scientists, doctors, technocrats, students and others with diverse expertise to work for a common cause. OSDD is a translational platform for drug discovery, bringing together informaticians, wet lab scientists, contract research organizations, clinicians, hospitals and others who are willing to adhere to the affordable healthcare philosophy agreeing to the OSDD license. The various achievements of OSDD, as informed by CSIR, include:

- i. Understanding the Landscape of Genome Sequence, Structure and Genomic Variations in Indian Clinical isolates of Mycobacterium tuberculosis;
- ii. Comparative whole-genome analysis of clinical isolates towards understanding the characteristic architecture of Mycobacterium tuberculosis pangenome;
- iii. Comprehensive genome variation resource for Mycobacterium tuberculosis, drug resistance and TB susceptibility;
- iv. Machine learning approaches and big data approaches towards identification of molecules with anti-tubercular activity from large chemical biology screening datasets; and
- v. Data intensive scientific research models using a crowdsourcing approach for Mycobacterium tuberculosis.

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