Drug Discovery Hackathon

July 3, 2020

3The Union Government launched Drug Discovery Hackathon, which is a **joint initiative of MHRD's Innovation Cell (MIC), All India Council for Technical Education (AICTE) and Council of Scientific and Industrial Research (CSIR)** and supported by Centre for Development of Advanced Computing (CDAC), MyGov as well as private players.

Drug Discovery Hackathon

The Hackathon is first of its kind national initiative for **supporting the drug discovery process and will see participation from professionals, faculty, researchers and students from varied fields** like Computer Science, Chemistry, Pharmacy, Medical Sciences, Basic Sciences and Biotechnology.

MHRD's Innovation cell and AICTE will focus on identifying potential drug molecules through the Hackathon while **CSIR will take these identified molecules forward for synthesis and laboratory testing** for efficacy, toxicity, sensitivity and specificity.

The Hackathon will help India establish a new model for expediting the drug discovery process. The Hackathon consists of **challenges that are posted as problem statements** and are based on specific drug discovery topics which are open to the participants to solve. A total of 29 problem statements have been identified.

It will have **three phases of three months each** and the whole exercise is to be completed by April-May 2021. At the end of each phase, successful teams will be rewarded. The lead compounds identified at the end of phase 3 will be taken forward for experimental level at CSIR and other interested organizations.

The Hackathon will have three tracks:

- Track 1 will primarily deal with drug design for **anti-COVID-19 lead generation**. This is done using tools such as molecular modelling, pharmacophore optimization, molecular docking and lead optimization.
- Track 2 will deal with designing/optimizing new tools and algorithms which will have an immense impact on expediting the process of in silico drug discovery.

[in-silico drug discovery utilizes computational methods such as machine learning, AI and big data].

- Track 3 called "Moon shot " allows for working on problems which are '**out of the box**' nature.