

Drug Discovery Hackathon training programme launched

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New Delhi, Jul 14 (India Science Wire): The Drug Discovery Hackathon (DDH), 2020 training programme kick-started with lectures on different topics. It is an online platform to take open source drug discovery to a higher pedestal in the crusade against the COVID-19 pandemic.

Dr Shekhar C. Mande, Director General, Council of Scientific and Industrial Research (DG-CSIR) delivered a lecture on "Rational Drug Design: An Overview". He laid emphasis on target identification and validation, assay development, virtual screening (VS), high throughput screening (HTS), quantitative structure-activity relationship (QSAR) and refinement of compounds, characterization of prospective drugs, testing on animals for activity and side effects, clinical trials and Food and Drug Administration (FDA) approval, protein-ligand docking, docking softwares etc. He expressed his hopefulness that the participants will be able to imbibe with the enriching knowledge on drug discovery through DDA 2020 and with an element of rationality will proceed forward in the quest for an effective drug against COVID-19.

Dr G. Narahari Sastry, Director, CSIR-North East Institute of Science and Technology (CSIR-NEIST), Jorhat delivered a lecture on "Mathematics and Biology". He told that a combination of biology and mathematics is essential for drug discovery. "Drug discovery is highly indispensable and is highly interdisciplinary which need to have the participation of people from diverse science background to come out with an effective drug" said Dr Sastry. He mentioned that Computer-Aided Drug Discovery (CADD) Services Market is growing manifold, given the fact that it is highly useful in early stages of drug discovery especially in lead optimization, hit-to-lead, hit generation, target validation and target identification. The current crises of COVID will give much more impetus to CADD and computational methods are indispensable to any design and discovery, let alone drug design and discovery.

Given the complexity in the nature of SARS-CoV-2 virus there is a need for a collective intelligence to understand the virus and identify an effective drug against it. Therefore, this platform has been created to draw in plethora of promising talents across the world under one umbrella so as to come out with an effective and permanent solution to this execrable pandemic. The prime objective of the programme is to discover an effective molecule against COVID-19 virus and to inculcate the culture of developing and writing software codes for drug discovery. The targets/tools/lead molecules identified through the process of DDH 2020 will be taken forward to undergo the conventional and routine procedures and system of drug discovery programme which involves chemical synthesis and biological testing.

The DDH-2020 is a collaborative initiative by the Office of Principal Scientific Adviser, Govt. of India (GOI), Council of Scientific and Industrial Research (CSIR), MHRD's Innovation Cell (GOI), All India Council of Technical Education (AICTE) and Ministry of Human Resource Development (MHRD), GOI with partners like National Informatics Centre (NIC), MyGov, Pharmacy Council of India, C-DAC, Pune, Schrödinger and ChemAxon. DDH 2020 was launched on 02 July, 2020 by Prof. K. Vijayraghavan, Principal Scientific Adviser, GOI. (India Science Wire)

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