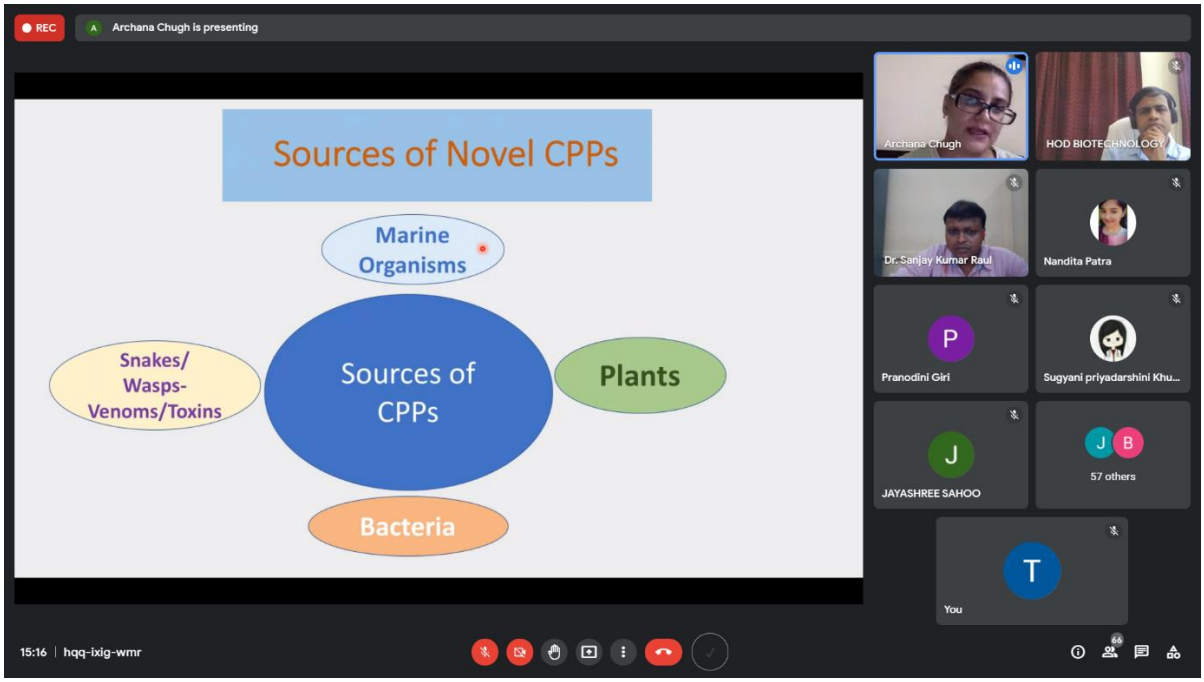
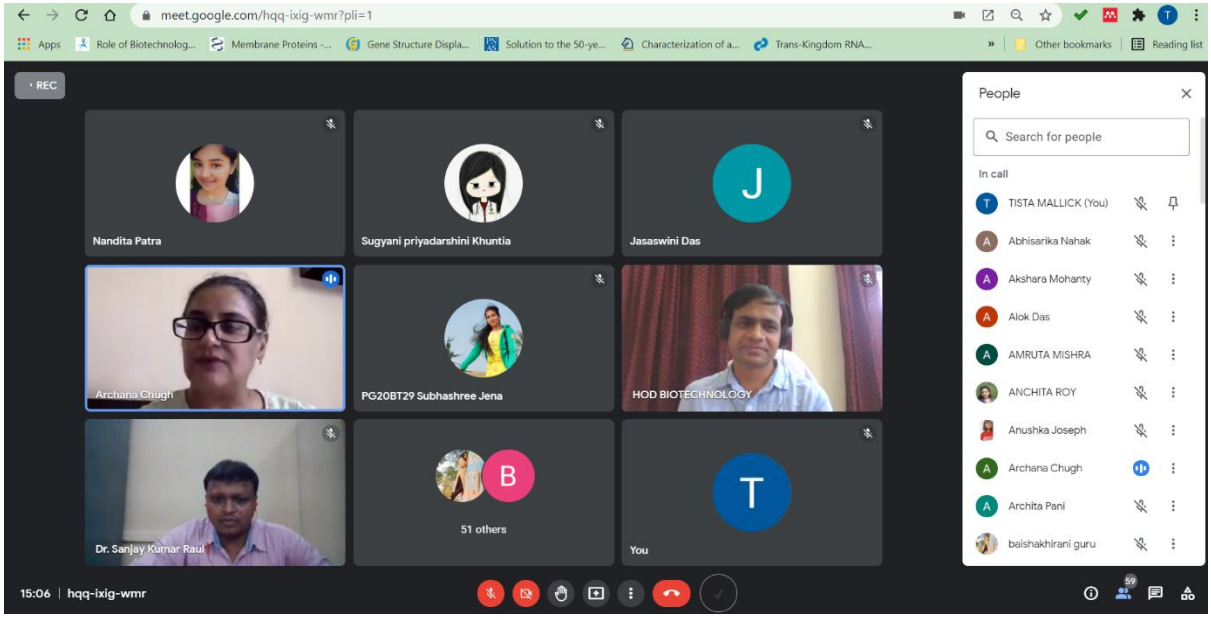
NAME OF THE DEPARTMENT: Dept. of Biotechnology

SL NO.	**3**
TITLE OF THE WEBINAR	**ROSALIND FRANKLIN SEMINAR SERIES on "Peptide mediated therapeutics "**
DATE & TIME	3 PM to 5 PM; Date: 08.10.2021 (Friday)
DETAILS OF EXPERT SPEAKERS	Dr. Archana Chugh, Kusuma School of Biological Sciences, Indian Institute of Technology, Delhi
NO. OF PARTICIPANTS	71
MEETING PLATFORM USED	Google Meet
BRIEF REPORT ON THE WEBINAR	Dr. Chugh talked about the role of peptides in drug delivery, the difference between the Cell penetrating peptides (CPPs) and antimicrobial peptides (AMPs) and the various sources which are being explored for CPPs including marine organisms, snakes, wasps venom or toxin. The webinar provided insights into the drug delivery ability of CPPs, emphasizing on Fungal Keratitis. The first and primary line of treatment approved by FDA for the treatment of fungal keratitis is Natamycin. Dr Chugh discussed her research findings about how CPPs can be used to deliver natamycin to the cells, which will help to solve the problem of natamycin's low permeability and eventually reduce dosage frequency. The webinar also provided insights into the research regarding the evaluation of antifungal efficacy of natamycin and CPPs conjugated natamycin in murine model of fungal keratitis. Dr Chugh also talked about the use of CPPs for anticancer drug delivery. For this purpose, antimiR210 molecule has been studied which is expressed in Glyma, A rare form of Brain Cancer. CPPs against the Glyblastoma (GBM) cell lines were screened & found out that Tachyplesin(Tpl), derived from horseshoe crab has the ability to cross the blood brain barrier. CyLoP-1 is the CPP used against Methicillin resistant *Staphylococcus aureus* (MrSa) which is derived from snake toxin & has cysteine residues. To evaluate the antibacterial potency, cell penetrating properties and mechanism of action of Latarcin Derived Peptides (LDP) against MrSa, Latarcin-1 has been used which is derived from spider venom. Addition of NLS (Nucleus Localizing Sequence) to LDP promoted its CPP activity in bacterial cells. Hence, it can be said that CPPs are amenable therapeutics and prospective candidates of peptide antibiotics.





Dr. Archana Chugh, Kusuma School of Biological Sciences, Indian Institute of Technology, Delhi speaking on "Peptide mediated therapeutics" on 8.10.2021 (Friday)