



# **Multidisciplinary Centre for Advanced Research and Studies (MCARS)**

**JAMIA MILLIA ISLAMIA**

**Jamia Nagar, New Delhi – 110 025**

*Cordially invites you to attend Lecture on*

***“Probing the basis of Epistasis in Complex Phenotypes”***

**By Dr. Manish Kumar**

***Affiliation: European Molecular Biology Laboratory (EMBL)-Rome,  
Italy***



Occurrence of extreme complex phenotypes in a population can be of interest for both evolutionary biologist and geneticist. From geneticist's perspective, such extreme complex phenotypes will be useful to investigate “Epistasis”- a genetic mechanism that can explain effect of a mutation under different genetic backgrounds. The potential influence of epistasis has been highlighted in a number of disease conditions such as obesity (Dong et al., 2019), Alzheimer's (Raghavan et al., 2017) and systemic lupus erythematosus (Hughes et al., 2012). In this presentation, I will show our recent work, where we have utilized chromosomal substitution strains (CSS, Consomic mice) to investigate extreme phenotype and epistatic mechanism underlying complex phenotypes. Using Immunoglobulin-M (IgM) as a prototype complex phenotype in B cells, we found that chemokine receptor CCR7 is a potential epistatic regulator of high serum IgM levels, a finding that has implications in a variety of immune disorders.

**14<sup>th</sup> February, 2020 Wednesday @ 03:00 pm    Venue: Conference Hall MCARS, JMI**

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