

Pre-synopsis Presentation

Project Title: Studies on HIV latency and reactivation in cellular reservoirs

Presenter- Ms. Snehal Kaginkar

Date & Time: 17th June, 2025, 12pm

Venue: NIRRH Library (online)

Guide: Vainav Patel, PhD; Viral Immunopathogenesis laboratory

HIV transmission and disease manifestation has been reduced significantly due to successful roll out of Anti-Retroviral Therapy (ART). However, HIV persists in reservoirs which could contribute to rebound viremia or emergence of drug-resistant viruses. Latent HIV reservoirs are long lived cells harbouring replication competent proviral DNA which is transcriptionally or translationally silenced. As reservoirs are seeded early during the infection early initiation of ART is not enough to prevent formation of latent reservoirs. Also, residual low-level viremia with accompanying viral evolution can cause chronic activation and exhaustion of T cells resulting in seeding/ proliferation of existing reservoirs. Most widely studied strategy towards HIV cure known as “Shock and Kill” focuses on purging the viral expression (latency reversal) along with ART followed by clearance of infected cells via effector cells or due to viral cytopathic effect. Also, HIV being a retrovirus itself may modulate human endogenous retroviruses transcription which are otherwise silenced.

Most of the data pertaining to reservoir dynamics, drug resistance and activity of latency reversing agents has been addressed with HIV-1 subtype B while HIV-1C prevalence is more than 50% globally as well as it is predominant in India. Hence, in this study we focused on subtype C infections, their reservoir dynamics, response to ART in humans (*ex vivo*) and in humanised mice (*in vivo*). Our study unravelled subtype specific differences in disease progression which will be discussed during the seminar.

Please find the link to the online meeting below

Pre-synopsis presentation of Ms. Snehal Kaginkar

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