

## Basel Computational Biology Seminar

**Prof. Arjun Raj**

*University of Pennsylvania  
Philadelphia, USA*

# **Emergent cellular ecosystems in melanoma revealed by single cell analysis**

Anti-cancer therapies can often kill the vast majority of tumor cells but a few rare cells remain and grow despite treatment. Non-genetic variability has emerged as a potential contributor to this behavior. However, it remains unclear what drives this variability, and what the ultimate phenotypic consequences are. We have developed a set of new single cell barcoding technologies (Rewind and FateMap) that have enabled us to show how different types of variability can translate into different drug-resistant outcomes upon treatment with drug. We found that even a genetically and epigenetically clonal population harbors latent variability that can produce an entire ecosystem of different resistant cell types.

**Date:** Monday, May 23, 2022  
**Time:** 16:15 h – 17:15h  
**Location:** Online via Zoom  
**Contact:** Daan de Groot (Daan.deGroot@unibas.ch)