

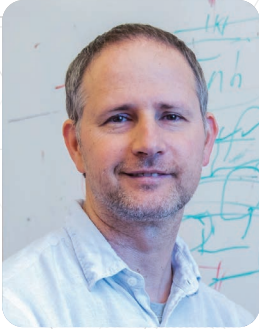
ASHBi

DISTINGUISHED SEMINAR

Functional characterization and therapeutic targeting of gene regulatory elements

Lecturer: **Nadav Ahituv Ph.D.**

Professor, Department of Bioengineering and Therapeutic Sciences, UCSF
Director, Institute for Human Genetics, UCSF



Date: **Thursday, 11 December 2025**

Time: **15:00 - 16:00**

Venue: **Seminar Room**
1F, Faculty of Medicine Bldg. B

Eligibility: **Academic Researchers and Students**

Register here



Nucleotide variation in gene regulatory elements is a major determinant of phenotypes. Despite continual progress in the cataloging of these elements, little is known about the code and grammatical rules that govern their function. To this end, we are using massively parallel reporter assays (MPRAs), including capture-C based MPRAs, to simultaneously test the activity of thousands of gene regulatory elements and their target promoter in parallel. Regulatory elements can also serve as therapeutic targets. By targeting regulatory elements via CRISPRa, we show that they can be used to rescue a variety of haploinsufficient diseases (having only one functional allele). In addition, utilizing CRISPRa to engineer adipocytes and adipose organoids to outcompete tumors for nutrients, we show that they can be used as a novel cancer therapy, termed Adipose Manipulation Transplantation (AMT).

Hosted by Institute for the Advanced Study of Human Biology (WPI-ASHBi)

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