



Programmable tools for DNA, RNA and protein targeting: new approaches, new challenges

Prashant Mali, PhD
Associate Professor of Bioengineering
University of California San Diego



Per the central dogma, one can in principle target a gene at the DNA, RNA or protein levels. Targeting at the DNA level is permanent and from a therapeutic standpoint potentially curative, but targeting at the RNA and protein levels, while transient, offers advantages in tunability and reversibility. In this seminar, I will describe some of our recent efforts on these fronts, and in particular our work on development of CRISPRs, ADARs and protein-protein interaction interfering peptides as programmable tools for enabling DNA, RNA and protein targeting respectively.

ABOUT the SPEAKER

Prashant Mali, PhD, is an Associate Professor of Bioengineering at the University of California San Diego. Prashant received his Bachelor's and Master's degrees in Electrical Engineering from the Indian Institute of Technology Bombay, and a doctorate in Biomedical Engineering from the Johns Hopkins University. His research is in the fields of synthetic biology, functional genomics, and regenerative medicine, with a long-term focus on developing tools for enabling gene and cell based therapeutics. In this regard, he contributed to the early development of CRISPR-Cas9, a powerful genome editing tool derived from microbial systems, and more recently programmable RNA editing using ADARs, a tool derived from endogenous human systems. He has received multiple awards including the Burroughs Wellcome Career Award, Kavli Frontiers of Science Fellow, the Young Alumnus Achiever Award from the Indian Institute of Technology Bombay, and is an AIMBE Fellow.

Monday, March 28 at noon
1003 Engineering Centers (Tong Auditorium)