

New Tools and Technologies for Health and Agriculture
October 24th-25th, 2018
NCBS and inStem, Bangalore, Karnataka, India

October 24th- Auditorium, New inStem Building

Breakfast	8:00am – 9:00am	NCBS Main Canteen, 1st Floor
<u>Introduction</u>		
Dr. Satyajit Mayor, NCBS and inStem	9:00am – 9:20am	inStem welcome
Dr. Suresh Subramani, UC San Diego and TIGS	9:20am – 9:40am	TIGS mission and vision
<u>Mechanisms and Applications of New Technologies – Chair: Dr. Ethan Bier</u>		
Dr. Amit Choudhary, Broad Institute, Harvard	9:40am- 10:00am	Synthetic activators, inhibitors, and degraders of CRISPR-associated nucleases
Dr. Girish Ratnaparkhi, IISER	10:00am – 10:20am	SUMO regulates innate immune signaling in <i>Drosophila</i>
Dr. Norbert Perrimon, Harvard Medical School	10:20am – 10:40am	Functional genomics in <i>Drosophila</i>
Break		
10:40am – 11:00am		
Dr. Jeff Sekelsky, University of North Carolina	11:00am – 11:20am	How cells repair double-stranded DNA gaps
Dr. Baskar Bakthavachalu, TIGS	11:20am – 11:40am	Effector systems to control insect-borne diseases
Dr. Michael Bassik, Stanford University	11:40am – 12:00pm	Development of high-throughput functional genomics tools to study drug interactions and mechanisms of cellular uptake
Panel discussion – Chair: Dr. Ethan Bier		
12:00pm – 12:30pm		
Lunch		
12:30pm – 2:00pm		
<u>Developing New Tools and Technologies to Combat Vector-Borne Diseases – Chair: Dr. Anthony James</u>		
Dr. Ethan Bier, UC San Diego	2:00pm – 2:20pm	Approaches to reducing vector-borne diseases in India
Dr. Omar Akbari, UC San Diego	2:20pm – 2:40pm	Innovating genetic technologies to combat human disease vectors
Dr. Aparup Das, ICMR-NIRTH	2:40pm – 3:00pm	Diversity of mosquito vectors in India: Challenges for vector control
Dr. Mahul Chakraborty, UC Irvine	3:00pm – 3:20pm	Hidden genetic variation in fruit flies and their implications
Dr. Subhashini Srinivasan, IBAB	3:20pm – 3:40pm	Distilling information nuggets from NGS data
Break		
3:40pm – 4:00pm		
Dr. Austin Burt, Imperial College	4:00pm – 4:20pm	Population suppression for malaria: Requirements for success

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Dr. Jane Carlton, New York University	4:20pm – 4:40pm	Introducing genomic epidemiology to field sites in India: The Center for the Study of Complex Malaria in India
Dr. Shaibal Dasgupta, TIGS	4:40pm – 5:00pm	Toward a sustainable control of <i>Aedes aegypti</i> as a vector
Dr. Valentino Gantz, UC San Diego	5:00pm – 5:20pm	Strategies to control safe gene technologies
Panel discussion – Chair: Dr. Anthony James	5:20pm – 5:50pm	

October 25th- Auditorium, New inStem Building

Breakfast	8:00am – 9:00am	NCBS Main Canteen, 1st Floor
<u>New Tools and Technologies to Combat Malaria – Chair: Dr. Omar Akbari</u>		
Dr. Anthony James, UC Irvine	9:00am- 9:20am	Vector population alteration and prospects for malaria eradication
Dr. Gregory Lanzaro, UC Davis	9:20am- 9:40am	Pathways toward the application of genetic technologies for the control of malaria
Dr. Patrick Duffy, NIH	9:40am – 10:00am	Vaccines for malaria control and elimination
Dr. Elizabeth Winzeler, UC San Diego	10:00am – 10:20am	Using genetics and genomics to find next-generation cures for malaria
Dr. Andrea Crisanti, Imperial College	10:20am – 10:40am	Systematic assessment of molecular solutions to overcome the development of drive resistance in the malaria vector <i>Anopheles gambiae</i>
Panel discussion – Chair: Dr. Omar Akbari	10:40am – 11:10am	
Break	11:10am – 11:30am	
<u>New Tools and Technologies for Agriculture and Human Health – Chair: Dr. Suresh Subramani</u>		
Dr. Martin Yanofsky, UC San Diego	11:30am – 11:50am	Developing new technologies for plant genetics
Dr. Arun Kumar, Southwest University, China	11:50am – 12:10pm	New technologies for agricultural pest management
Dr. Bipin Nair, Amrita University	12:10pm – 12:30pm	Tackling multi-drug resistant <i>Pseudomonas aeruginosa</i>
Ms. Hannah Grunwald, UC San Diego	12:30pm – 12:50pm	Super-Mendelian inheritance of a genetic element in the female mouse germline
Lunch	12:50pm – 2:20pm	

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Dr. Stephen Hedrick, UC San Diego	2:20pm – 2:40pm	Reprogramming T-cells for tumor immunotherapy
Dr. Sonia Sen, University of Oregon	2:40pm – 3:00pm	Generating neural diversity in the brain: Developmental mechanisms and their implications for reprogramming stem cells
Dr. Maneesha Inamdar, JNCASR and inStem	3:00pm – 3:20pm	Stem cells as models for human diseases
Panel discussion – Chair: Dr. Suresh Subramani	3:20pm – 3:50pm	
Break	3:50pm – 4:10pm	
<u>Societal, Ethical and Policy Issues Governing the Use of New Technologies – Chair: Dr. K. (Vijay) Vijayraghavan</u>		
Dr. Stephanie James, FNIH	4:10pm – 4:30pm	Pathways to the development of modified mosquitoes as a public health tool
Dr. John Evans, UC San Diego	4:30pm – 4:50pm	Overview of the social and ethical concerns with Active Genetics applications
Dr. Sanjay Mehta, UC San Diego	4:50pm – 5:10pm	Measuring real-world outcomes of technological interventions
Dr. Karthik Muralidharan, UC San Diego	5:10pm – 5:30pm	Tackling malaria in India: A policy perspective
Panel discussion – Chair: Dr. Vijayraghavan	5:30pm – 6:00pm	