2024 SoCal Genome Stability Symposium

Meeting Program

The Scripps Research Institute

8:30 - 9:00 am **Registration and Coffee/Tea**

9:00 - 9:10 am **Welcome Remarks (Xiaohua Wu, Scripps Research)**

9:10 - 10:25 am **Talk Session 1: DNA Repair and Genome Stability (Session chair: Rémi Buisson, UCI)**

9:10 - 9:25 am **Tony Fernandez, Ph.D.** (Binghui Shen's lab, City of Hope)
DNA2 and MSH2 Activities Collectively Remove Chemically Stabilized G4 for Efficient Telomere Replication

9:25 - 9:40 am **Pedro Ortega, Ph.D.** (Rémi Buisson's lab, UCI)
Mechanism Of Fork Breakage During Replication Catastrophe

9:40 - 9:55 am **Christine Joyce** (Chris Richardson's lab, UCSB)
The FANCD2-FANCI heterodimer regulates DNA repair activity and cell cycle progression in response to double strand breaks

9:55 - 10:10 am **Ting Zhao** (Yinsheng Wang's lab, UCR)
Identification and Functional Characterizations of N2-Alkyl-Dg-Binding Proteins

10:10 - 10:25 am **Nadejda Butova** (Irene Chiolo's lab, USC)
Ulp1: a clock for heterochromatin repair

10:30 – 11:00 am **Poster Lightning Talks**

11:10 – 12:45 pm **Poster Session**

12:45 – 1:30 pm **Lunch**

1:30 – 2:45 pm **Talk Session 2: Genomics and gene editing (Session Chair: Shannon Miller, Scripps Research)**

1:30 – 1:45 pm **Peter Chovanec, Ph.D.** (Yi Yin's lab, UCLA)
Towards a single-cell atlas of spontaneous genome instability events in vivo

1:45 – 2:00 pm **Xiaoyu (Lydia) Chen** (Audrone Lapinaite's lab, UCI)
From Structure to Function: How Deaminase Domain Dimerization and Cas9 Interactions Drive Base Editing Efficiency in ABE8e

2:00 – 2:15 pm **Mallory Evanoff, Ph.D.** (Alexis Komor's lab, UCSD)
Directed Evolution Reversion Analysis Produces Minimally Mutated Adenine Base Editor Variants with Improved Efficiency and Precision.

2:15 – 2:30 pm **Seanmory Sothy** (Linlin Zhao's lab, UCR)
Mass Spectrometry-Based Quantification of Base Excision Repair Intermediates

2:30 – 2:45 pm **Shuvro P. Nandi, Ph.D**. (Ludmil B. Alexandrov's lab, UCSD)
UDSeq: A Universal Duplex Sequencing for Precise Genome-Wide Identification Somatic Mutation.

2:45 – 3:15 pm **Coffee Break**

3:15 – 4:30 pm **Talk Session 3: Chromosomal rearrangement and Cancer Treatment (Session Chair: Irene Chiolo, USC)**

3:15 – 3:30 pm **Sameer Shah, Ph.D.** (Xiaohua Wu's lab, Scripps Research)
53BP1deficiency Leads to Hyperrecombination Using Break-Induced Replication (BIR)

3:30 – 3:45 pm **Kaela Makins** (Jeremy Stark's lab, City of Hope)
Defining The Interplay Between DNA-Pkcs and RIF1-53BP1 During Chromosomal Break Repair

3:45 – 4:00 pm **Megha Raghunathan** (Svasti Haricharan's lab, SDSU)
Mismatch Repair Gene-Specific Effects on Breast Tumor Formation, Progression and Genomic Instability

4:00 – 4:15 pm **Shuangshuang Xie, Ph.D.** (Dan Semlow's lab, Caltech)
The Microbiome-Derived Colibactin Genotoxin Activates cGAS-STING-Dependent Pro-Inflammatory Signaling

4:15 – 4:30 pm **Ya Allen Cui, Ph.D.** (Wei Li's lab, UCI)
Tandem Repeat Variation in Human Health and Diseases

4:30 – 4:45 pm **Poster Awards Announcement (Katja Lamia, Scripps Research)**

Closing Remarks

5:00 – 6:30 pm **Dinner (Meet Professors: Career Development)**

6:30 pm **End of the Symposium**