

THE FUTURE OF MUTAGENICITY TESTING IS HERE WITH DUPLEX SEQUENCING



SCAN TO
LEARN MORE

VISIT OUR BOOTH
AT EMGS 2023

**DON'T MISS
THESE ecNGS
TALKS & POSTERS**

ecNGS SCHEDULE ON BACK

6x Symposia

15x Featured Talks

2x Poster Presentations



UEMGS 2023 | Sept 9-13, 2023

Palmer House Hilton, 17 East Monroe St, Chicago, IL



**Environmental
Mutagenesis and
Genomics Society**
Synergistic Interactions for a Better World

EMGS 2023 Annual Meeting

Duplex Sequencing / ecNGS Program Guide

SUNDAY Sept 10

SYMPOSIUM 2: In Vivo-Like Testing Strategies for Genotoxicity Risk Characterization

State Ballroom | 9:45 - 11:45 AM

11:15 - 11:30 AM | An overview of MPS systems and the applicability of Duplex Sequencing in a liver-on-a chip: When NAMs meets NAMs [S09]

- Thalita B Zanoni (TwinStrand Biosciences, USA)

SYMPOSIUM 3: Error-corrected sequencing for mutation detection in male germ cells: progress, opportunities, and challenges

Grand Ballroom | 1:15 - 3:15 PM

1:15 - 1:45 PM | Duplex Sequencing characterizes unique chemical mutagenic mechanisms in mouse germ cells [S11]

- Francesco Marchetti (Health Canada, CAN)

2:15 - 2:45 PM | Exploring the role of genome instability in male subfertility [S13]

- Aaron Quinlan (University of Utah, USA)

2:45 - 3:15 PM | Duplex Sequencing - An Error-corrected Method To Study Associations Between Environmental Factors And Mutations In Human Sperm [S14]

- J Axelsson (Lund University, SWEDEN)

POSTER SESSION 1

Exhibit Hall | 5:00 - 6:15 PM

PS089 | Novel DNA Standards for Assessing Technical Sensitivity and Reproducibility of Duplex Sequencing Mutagenesis Assays

- Devon M Fitzgerald (TwinStrand Bio, USA)

PS112 | Reconstruction Experiment Assesses the Sensitivity and Reproducibility of Duplex Sequencing for Mutation Detection

- Shaofei Zhang (Pfizer, USA)

MONDAY Sept 11

SYMPOSIUM 5: Advancing the battery of in vivo testing assays in genetic toxicology

State Ballroom | 9:45 - 11:45 AM

11:15 - 11:30 AM | Adopting Duplex Sequencing Technology for Genetic Toxicity Testing: In Vitro and In Vivo Proof-of- Concept Mutagenesis Experiments with N- Ethyl-N-Nitrosourea (ENU) [S23]

- Stephanie L Smith-Roe (Div. of Transl.Tox. / NIEHS, USA)

11:30 - 11:45 AM | Into the deep: Detailed characterization of benzo[b]fluoranthene- induced mutagenicity using error-corrected next-generation sequencing [S24]

- David M Schuster (University of Ottawa / Health Canada, CAN)

TUESDAY Sept 12

SYMPOSIUM 8: Evaluating genotoxic potential of genome editing for therapeutic use Pt 1

Grand Ballroom | 9:45 - 11:45 AM

10:35 - 11:00 AM | INDUCE-seq: Ensuring the safe development of cell and gene therapies by gene editing [S36]

- Simon Reed (Broken String, UK)

11:05 - 11:30 AM | Detection and characterization of low frequency mutational events induced during gene editing using Duplex Sequencing [S37]

- Jesse J Salk (TwinStrand Biosciences, USA)

SYMPOSIUM 10: Evaluating genotoxic potential of genome editing for therapeutic use Pt 2

Grand Ballroom | 1:15 - 3:15 PM

1:20 - 1:40 PM | Assessment of CRISPR-Cas9 Induced Off-Target Mutagenesis in Gene-Edited Cellular Therapeutics (Induce-Seq + DuplexSeq). A HESI CT-TRACS supported project [S43]

- Mick D Fellows (AstraZeneca, UK)

1:40 - 2:05 PM | Results from the HESI CT-TRACS Study

- Simon Reed (Broken String, UK)

- Jesse J Salk (TwinStrand Bio, USA)

WEDNESDAY Sept 13

SYMPOSIUM 14: Ongoing validations of TGR tech transfer and bridging studies from TGR to ecNGS

Grand Ballroom | 1:15 - 3:15 PM

1:15 - 1:45 PM | Further proficiency establishment and tissue validation of the OECD 488 Big Blue® Transgenic Rodent Somatic and Germ Cell Mutation Assay [S57]

- Matt Tate (Gentronix Ltd, UK)

1:45 - 2:15 PM | Comparing the sensitivity for mutation detection in TGR and ecNGS assays [S67]

- Shaofei Zhang (Pfizer, USA)

2:15 - 2:45 PM | Duplex Sequencing Reveals Quantitative Concordance with a Transgenic Rodent Assay and Provides Novel Insights into Factors Influencing Mutation Susceptibility [S58]

- Danielle PM LeBlanc (Health Canada, CAN)

2:45 - 3:15 PM | Defining Experimental Standards for Mutagenicity Testing with Duplex Sequencing

- Devon M Fitzgerald (TwinStrand Bio, USA)

3:15 - 3:45 PM | A DNA Repair Modulates Mutational Spectra of N- Nitrosodimethylamine [S60]

- Amanda L Armijo (MIT, USA)