



Society of Toxicology 2019

Baltimore, Maryland

March 10-14

Symposia and Workshops

Monday, March 11

4:30 PM – 5:30 PM | CC ROOM 338

EXHIBITOR HOSTED SESSIONS – LONZA AND AXION BIOSYSTEMS

4:30-5:30 **Refining the Use of Microelectrode Array Technology: Lessons Learned from the NeuTox Pilot Study for Neurotoxicology and Safety Pharmacology Assessment: Presented by Lonza**

Lonza and Axion BioSystems

Tuesday, March 12

12:00 PM – 1:00 PM | CC Room 338

EXHIBITOR HOSTED SESSIONS - NEUCYTE

12:00-1:00 **Building Confidence in Neurotoxicity Testing Using an In Vitro Phenotypic Assay Platform Based on Human iPSC-Derived Neurons: Presented by NeuCyte, Inc.**

NeuCyte



Thursday, March 14

8:30 AM – 11:15 AM | CC BALLROOM I

CARDIOVASCULAR TOXICOLOGY/HEMODYNAMICS

3283 **Prediction of Liabilities with Chronic Drug Treatment in iPSC Derived Cardiomyocytes Using an MEA Platform**

9:30-9:45 C.J. Strock

Cyprotex US, LLC, Watertown, MA

Thursday, March 14

8:30 AM – 11:15 AM | CC ROOM 314

SAFETY ASSESSMENT: PHARMACEUTICAL – DRUG DEVELOPMENT II

3307 **Trial to Detect Significant Metric Parameters and to Find Novel Methodologies for Drug-Induced Seizure Liability Using Microelectrode Array Data Analysis and Primary Rodent Neurons**

8:45-9:00 N. Miyamoto, A. Ojima, S. Inaba, T. Kitamura, T. Osada, I. Suzuki, A. Odawara, N. Matsuda, and T. Yoshinaga

Eisai Co., Ltd., Tsukuba, Japan; Consortium for Safety Assessment using iPS Cells (CSAHi), Kawasaki, Japan; TechnoPro R&D Company, Tsuchiura, Japan; LSI Medience Corporation, Kamisu, Japan; LSI Medience Corporation, Chiyoda, Japan; and Tohoku Institute of Technology, Sendai, Japan.

3313 **Evaluating the Utility of Microbrains Using Microelectrode Array, Calcium Oscillation, and Calcium Imaging Technologies for Compound-Induced Seizure Risk Assessment**

10:30-10:45 Y. Chen, J. Kanerva, J. Ma, V. Cerreira, S. Young, and J.E. McDuffie

Janssen Research and Development, LLC, San Diego, CA

Poster Sessions

Monday, March 11

9:15 AM – 4:30 PM | CC Exhibit Hall

NEUROTOXICITY: GENERAL

#1323: P378 Evaluating the Effects of Muscarinic Receptor Agonist Pilocarpine on Neural Network Activity Using Three Cell Types on Different Days In Vitro on a Microelectrode Array Platform

9:15-10:45 J.A. Bradley and C. Strock
Cyprotex US, LLC, Watertown, MA

#1333: P388 Functional Characterization of Neural Network Activity in Human iPSC-Derived Neuron/Glial Cocultures

9:15-10:45 T Molla, L. Saavedra, P. Zhou, J. Hsieh, A. Fua, H. Liu, J. Davila, and D. Haag
NeuCyte, Sunnyvale CA

#1347: P402 Comparison of Acute Effects of Neurotoxic Compounds on Network Activity in Human and Rodent Neural Cultures

9:15-10:45 L. Saavedra, K. Wallace, T. Freudenrich, M. Mall, W.R. Mundy, J. Davila, T.C. Sudhof, T.J. Shafer, M. Wernig, D. Haag
NeuCyte, Sunnyvale, CA; Stanford University School of Medicine, Stanford, CA; and US EPA/NHEERL, Research Triangle Park, NC

#1371: P428 Neuroactive Compounds Alter Neural Network Formation Measured in Microelectrode Arrays with Potencies Lower Than Median Toxcast Potencies

9:15-10:45 T Shafer, J. Brown, B. Lynch, S. Davilla-Montero, K. Paul-Friedman, K. Wallace
US EPA/NHEERL, Research Triangle Park, NC; Michigan State University, East Lansing, MI

Monday, March 11

9:15 AM – 4:30 PM | CC Exhibit Hall

NEUROTOXICITY: DEVELOPMENTAL

#1356: P413 Identifying Neurophysiological Signatures of Neurotoxicant Action Using Classification Models

9:15-10:45 S. Davila-Montero, T. Shafer, K. Wallace, B. Lynch, and A. Mason

Michigan State University, East Lansing, MI; and US EPA/ORD, Research Triangle Park, NC.

#1361: P418 Comparison of Chemical Effects on Acute Neural Network Function in Mature Cultures and Effects on Neural Network Development

9:15-10:45 J Fink and T Shafer

US EPA Research Triangle Park, NC

#1373: P430 Integration of Genomic and Metabolic Data Streams in an *In Vitro* Neuronal Development Model

9:15-10:45 C.A. Marable, S. Hester, W. M. Henderson, B.N. Chorley, K.A. Wallace, T.M. Freudenrich, T.J. Shafer

US EPA/NHEERL, Research Triangle Park, NC; US EPA, Athens, GA

Monday, March 11

9:15 AM – 4:30 PM | CC Exhibit Hall

NEUROTOXICITY: PESTICIDES

#1418: P478 Differential Effects of Organophosphate Insecticides and Their Metabolites on Neuronal Network Development and Function Assessed in Primary Rat Cortical Cultures Using Microelectrode Array (MEA) Recordings

10:45-12:15 H. Heusinkveld and R. Westerink



US EPA Research Triangle Park, NC

Tuesday, March 12

9:15 AM – 4:30 PM | CC Exhibit Hall

BIOLOGICAL MODELING

#1821: P202 Computational Modeling of an *In Vitro* Neural Network: Microelectrode Assay for Neurotoxicity Screening

1:30-3:00 R.B. Conolly and T.J. Shafer

Institute for Risk Assessment Sciences, Utrecht, Netherlands; National Institute for Public Health and the Environment (RIVM), Bilthoven, Netherlands

Thursday, March 14

8:30 AM – 11:30 AM | CC Hall A

CARCINOGENESIS; CARDIOVASCULAR; IMMUNOTOXICITY; INFLAMMATION

3359: P148 Assessing Cardiac Gap Junction Intercellular Communication Toxicity in Response to Chemicals Used in Medical Devices

8:30-11:30 D. Guerrelli, M. Ramadan, N. Posnack

Children's National Health Systems, Washington, DC

Thursday, March 14

8:30 AM – 11:30 AM | CC Hall A

NEUROTOXICITY



3408: P202 Functional Assay of Neural Activity with Cell-Based Neural Culture Models and Microelectrode Array Technology for Proconvulsant Risk Assessment in the Neutox Pilot Study

8:30-11:30 D.C. Millard, H. Hayes, A. Nicolini, C. Arrowood

Children's National Health Systems, Washington, DC