

2022

PROGRAM BOOK



CELEBRATIONS AT THE 52ND ANNUAL ASN
ROANOKE, VA 2022



American Society
for Neurochemistry

Hotel Roanoke & Conference Center
April 10 - 14, 2022

52ND ANNUAL AMERICAN SOCIETY FOR NEUROCHEMISTRY MEETING

THANK YOU TO ALL OUR SUPPORTERS!

CONFIRMED SPONSORS

The 52nd Annual ASN Meeting would like to thank the following companies for their support.

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SUPPORTERS



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SUPPORTED BY A GRANT FROM NATIONAL INSTITUTES OF HEALTH (NIH)

Thank you to DORIC LENSES INC., Virginia Center On Aging/College of Health Professions/Virginia Commonwealth University and VCU's office of the Vice President for Research and Innovation for their general support at ASN 2022.



WELCOME TO ASN 2022

Dear Colleagues,

On behalf of all the ASN officers, ASN council, and staff, I welcome you to our 52nd Annual meeting in Roanoke, VA. The belated 50th Anniversary of ASN will also be celebrated as part of our ASN annual meeting. To improve safety for all our attendees, we have a strict guidance for onsite health & safety measures, including vaccinations and mask mandates.

Various committees have worked hard in making sure that there are cutting edge science talks, discussions, poster presentations and opportunities to mingle. I would like to specially applaud the extraordinary commitment and effort by the scientific committee and host committee.

Our 2022 annual meeting would not be possible without our ASN membership, grants, and generous sponsorship. Notably, we are grateful to ISN, NIH, NMSS, and Fralin Biomedical Research Institute at Virginia Tech for their support. We acknowledge continuous financial support of young investigators by industrial partners, Sanofi and JNR Wiley press, along with that of our ASN Neuro Journal.

I hope you enjoy your time attending the scientific sessions and social events. Thank you for being part of our ASN family.

Sincerely,

Seema Kaushalya Tiwari-Woodruff

President
ASN 2021-2023

HEALTH AND SAFETY MEASURES

All participants must adhere to the following terms and conditions that will be imposed and enforced, while attending the ASN 2022 Annual Meeting. By registering for the Event, you are agreeing to the terms below. If you are registering on behalf of another it is your responsibility to ensure that the person attending is aware of these terms and accepts them, and by completing the registration you are warranting that you have made the attendee aware of these terms and that they understand and have accepted these terms.

All registered attendees must be fully vaccinated against Covid-19 prior to entry into the Event. First two shots plus a booster is considered fully vaccinated. All registered delegates will be asked to provide proof of full vaccination prior to being granted entry into the Event.

Access will be denied if proper proof of full vaccination is not provided.

Accepted forms of proof: (Note: Proof of vaccination must match Attendee's name)

- ✓ Copy of an official certificate from your Country/State/Province
- ✓ Photo of the official certificate
- ✓ Digital PDF or document of official certificate on mobile device

Accepted Vaccines: (as per WHO)

- ✓ The Pfizer/BioNTech Comirnaty vaccine
- ✓ The SII/COVISHIELD and AstraZeneca/AZD1222 vaccines
- ✓ The Janssen/Ad26.COV 2.S vaccine developed by Johnson & Johnson
- ✓ The Moderna COVID-19 vaccine (mRNA 1273)
- ✓ The Sinopharm COVID-19 vaccine
- ✓ The Sinovac-CoronaVac vaccine
- ✓ The Bharat Biotech BBV152 COVAXIN vaccine
- ✓ The Covovax (NVX-CoV2373) vaccine
- ✓ The Nuvaxovid (NVX-CoV2373) vaccine



Masks must be worn at all times during the Event in all ASN 2022 meeting rooms and official social functions. Masks can only be removed when you are eating, drinking, or taking medication. Failure to comply with the masking requirement may result in removal from the Event with no refunds.

The meeting organizers and the Planning Committee will in their best effort, provide a safe environment to meet; however, by registering and choosing to attend ASN 2022 in person, you understand there is a risk of contracting Covid-19 even with all the safety measures in place. It is expected that all participants will follow these measures to help reduce the risk.

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ASN2022 COMMITTEES

ASN 2022 PLANNING COMMITTEE:



**Seema Kaushalya
Tiwari-Woodruff, PhD**

ASN 2022 President
Professor, Division of Biomedical
Sciences
Director, Graduate Program in
Biomedical Sciences
School of Medicine, University of
California Riverside



**Dr. Erhard Bieberich
PhD**

ASN Treasurer Professor
Department of Physiology
University of Kentucky



**Tara M. DeSilva
PhD**

ASN 2022 Program Chair
Associate Professor - Vice Chair,
Department of Neurosciences,
Cleveland Clinic



**Dr. Michael A. Fox
PhD**

ASN 2022 Local Committee Chair
Professor and Director, School of
Neuroscience, Virginia Tech
Professor, Fralin Biomedical
Research Institute at Virginia Tech
Carilion
Professor, Department of
Biological Sciences, Virginia Tech



**Marion Buckwalter
MD PhD**

ASN 2022 Secretary
Professor Depts of Neurology
and Neurological Sciences, and
Neurological Surgery Stanford
Stroke Center

ASN 2022 PROGRAM COMMITTEE:

Building the Nervous System

Kathleen Whitlock Sarah C. Kucenas
Wendy Macklin Michael Fox
Terri Wood

Glial Mechanisms & Injury

Arturo Ortega Brian Daniels
Jessica Williams Paul Tesar

Metabolism, Cellular & Molecular Neurobiology

Elizabeth Bradshaw Ranjan Dutta
Nicola Allen Tara DeSilva

Neurodegeneration & Disease

Antoine Louveau Baljit Khakh
Felipe A. Court Jeff Kelly
Seema Tiwari-Woodruff Shinghua Ding

ABOUT ASN ANNUAL MEETING

ABOUT ASN ANNUAL MEETING:

The ASN Meeting is a bi-annual meeting that started back in 1970. For the most part, it has been hosted throughout the United States with only a few meetings hosted outside of the US in Canada and Mexico.

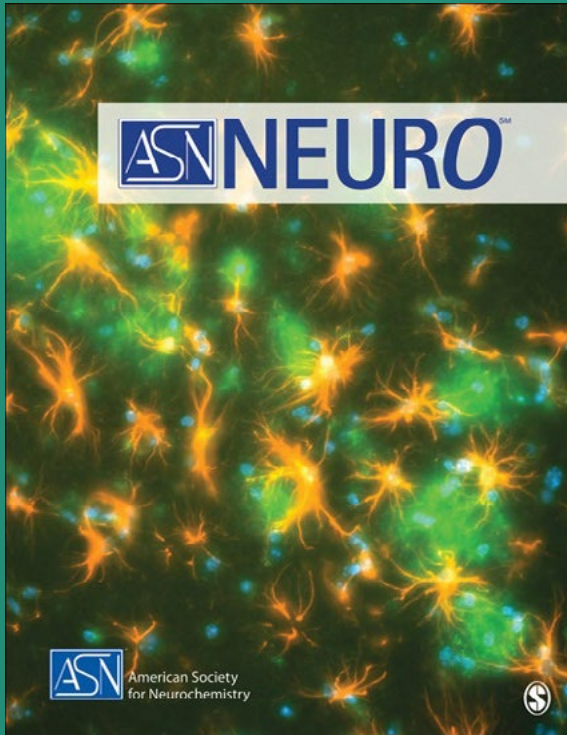
ABOUT AMERICAN SOCIETY FOR NEUROCHEMISTRY (ASN):

The American Society for Neurochemistry's Missions:

- ▶ to advance and promote cellular and molecular neuroscience knowledge;
- ▶ to advance, promote, support, encourage and facilitate communication among investigators in neurochemistry and related neurosciences
- ▶ to promote, support, encourage and facilitate the dissemination of information concerning neurochemical research through scientific meetings, seminars, publications and related activities
- ▶ to promote, support and encourage the research of individual cellular and molecular neuroscientists and to engage in any and all other activities for the advancement of the science of neurochemistry which may be deemed advisable;
- ▶ to insure that all of its activities remain open to the full participation of scholars of all backgrounds and nationalities.



Impact Factor 4.146



Call for Papers

ASN Neuro

Editor-in-Chief:
Douglas L. Feinstein, PhD
University of Illinois, Chicago, USA

journals.sagepub.com/home/asn

ASN Neuro is an open access, peer-reviewed journal uniquely positioned to provide investigators with the most recent advances across the breadth of the cellular and molecular neurosciences. The official journal of the American Society for Neurochemistry, **ASN Neuro** is dedicated to the promotion, support, and facilitation of communication among cellular and molecular neuroscientists of all specializations.

ASN Neuro papers submitted and accepted to ASN will be subject to APCs. For more information please visit the journal website.

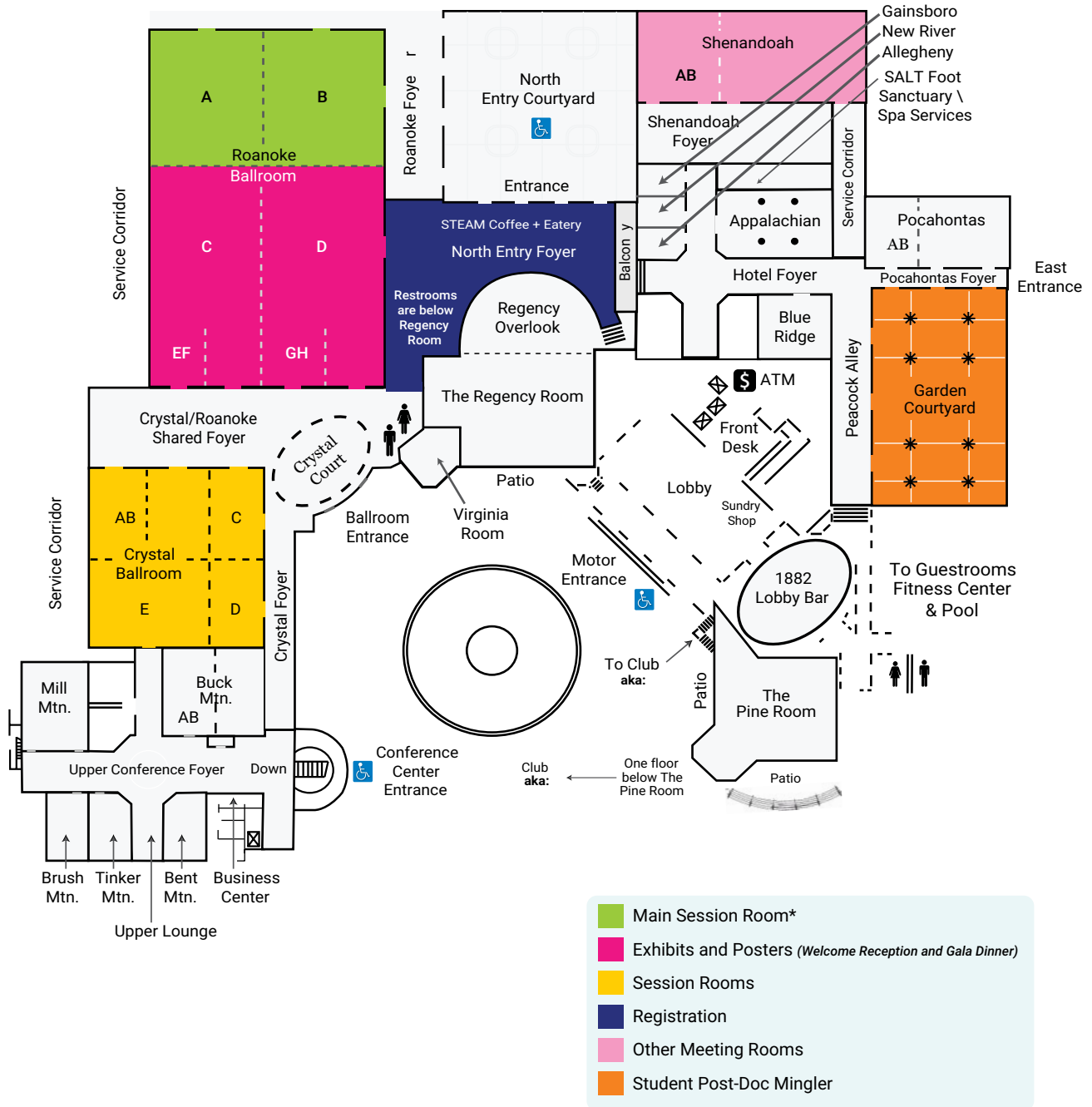
When you publish in **ASN Neuro**, you will benefit from:

- Rapid online publication
- Impact Factor of 4.146
- Indexing in Web of Science, PubMed/MEDLINE, SCOPUS, and DOAJ
- Open access format driving high visibility for maximum global exposure
- Global free access to their article, under a Creative Commons license

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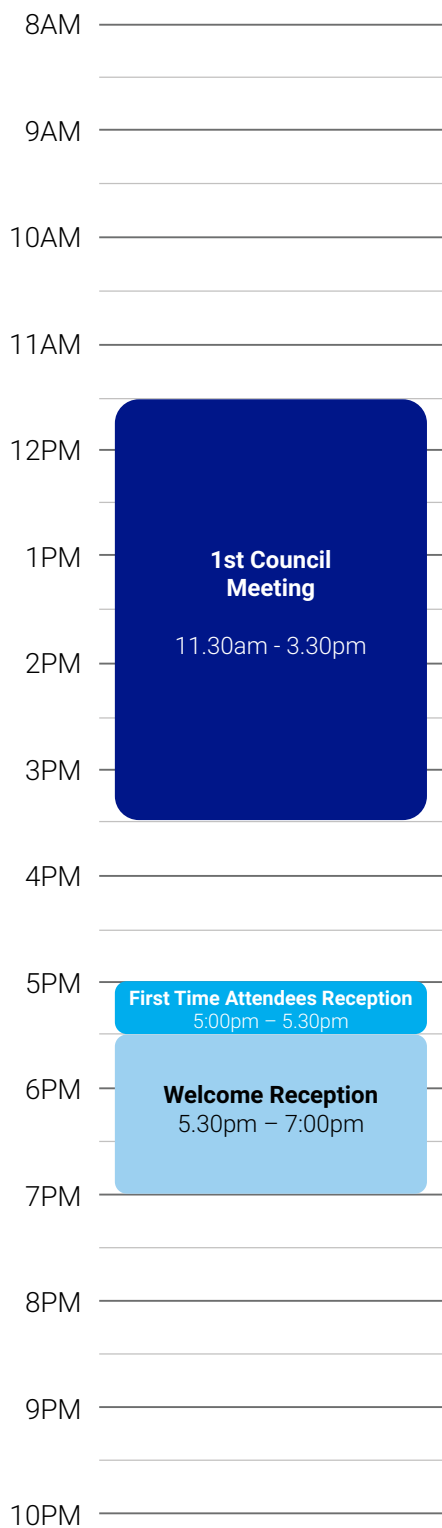
 **SAGE openaccess**

VENUE FLOORPLAN

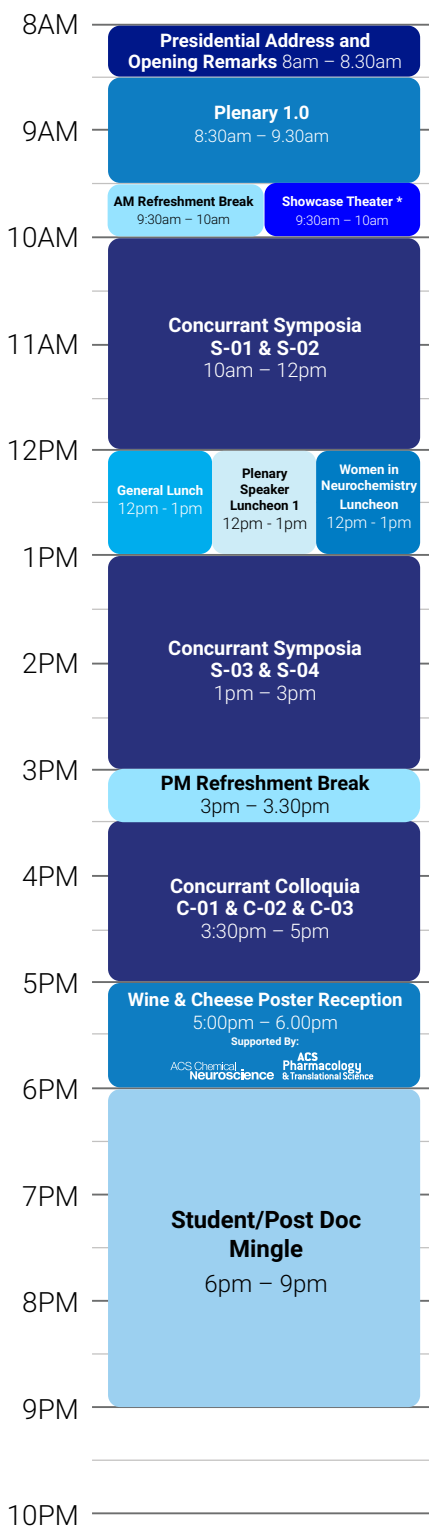


SCHEDULE AT A GLANCE

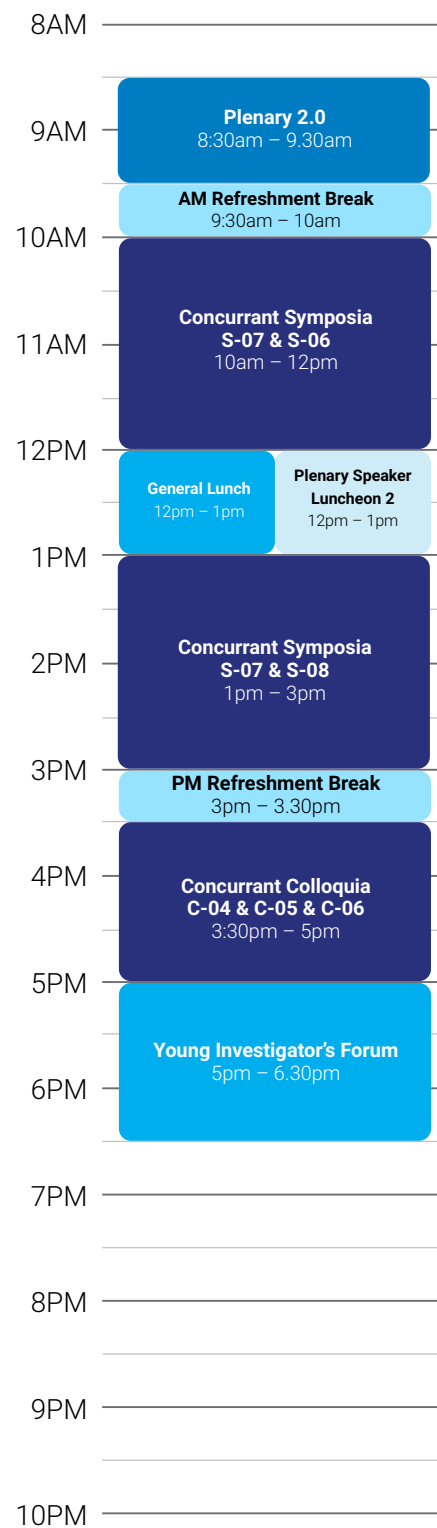
SUNDAY



MONDAY



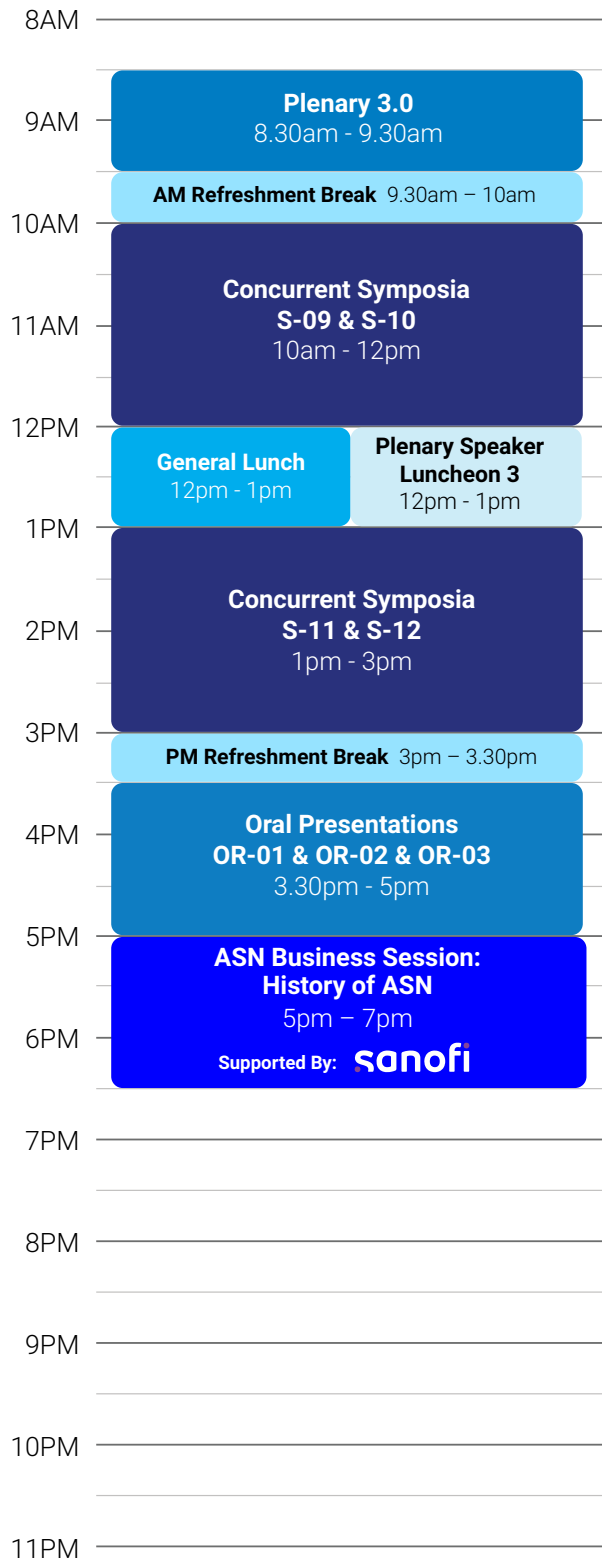
TUESDAY



* Showcase Theater sponsored by:  **REBUS BIOSYSTEMS™**

SCHEDULE AT A GLANCE

WEDNESDAY



THURSDAY

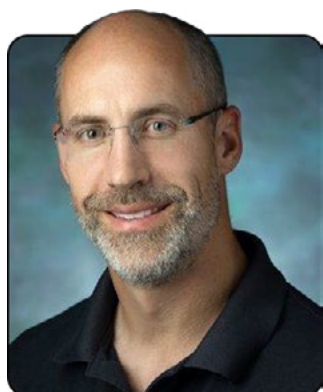


PLENARY SPEAKERS



L. FELIPE BARROS, MD, PHD
CENTER FOR SCIENTIFIC STUDIES-CECS

L. Felipe Barros was born in 1963 in Santiago, Chile. He is married to Karen Everett and proud father of Miranda and Tomás. Having qualified as a medic at the University of Chile, he obtained his PhD at the same university in 1993, advised by David Yudilevich. His postdoc was with Steve Baldwin at the University of Leeds, United Kingdom, supported by a Wellcome Trust Fellowship. After returning to the University of Chile as an Assistant Professor, he moved south to join the Centro de Estudios Científicos in Valdivia, where he is now principal investigator. How does a cell adapt to workload? His students, associates and collaborators enjoy searching for new phenomena using optical techniques based on genetically-encoded sensors for metabolites.



DWIGHT BERGLES, PHD
JOHNS HOPKINS UNIVERSITY

Dwight Bergles is Professor and Vice Chair of Research in the Solomon H. Snyder Department of Neuroscience at Johns Hopkins University. There he serves as Director of the Kavli Neuroscience Discovery Institute and the Multiphoton Imaging Core facility. Dr. Bergles received his bachelor's degree in Biology from Boston University in 1990 and PhD in Molecular and Cellular Physiology from Stanford University in 1995. He completed a postdoctoral fellowship with Craig Jahr at the Vollum Institute in Portland, Oregon, before joining the Hopkins faculty in 2000 as Assistant Professor. The goal of his laboratory is to understand how interactions between glial cells and neurons influence nervous system development, synaptic function, and neurodegeneration in diseases such as multiple sclerosis (MS). He has analyzed neuron-glia cell interactions in a variety of physiological contexts, defining how astrocytes contribute to glutamate clearance from synapses, how glial cells in the cochlea initiate spontaneous activity in the developing auditory system, and how glial progenitors enable the continued production of oligodendrocytes and myelin in the adult CNS. He received the Daniel Nathans Scientific Innovator Award for his studies of neuron-glia interactions in the CNS and the NMSS Barancik Prize for his studies of oligodendrocyte progenitors and myelin repair.



MARIA LEHTINEN, PHD
HARVARD MEDICAL SCHOOL

Maria Lehtinen is an Associate Professor at Harvard Medical School in the Department of Pathology at Boston Children's Hospital. Her research focuses on the mechanisms by which the choroid plexus, an important brain barrier and producer of cerebrospinal fluid (CSF), contributes to brain development and lifelong brain health. Dr. Lehtinen received her Ph.D. in Neurobiology from Harvard University where she trained with Dr. Azad Bonni on molecular mechanisms regulating neuronal survival and death. She joined Anna-Elina Lehesjoki's lab for her early postdoctoral work at the University of Helsinki, where she investigated the role of redox homeostasis in progressive myoclonus epilepsy. Lehtinen carried out further postdoctoral training with Christopher A. Walsh at Harvard, where they found that secreted factors in the CSF play active roles in instructing the development and health of the mammalian brain. Dr. Lehtinen established her own laboratory at Boston Children's Hospital in 2012, where she takes an interdisciplinary approach to study choroid plexus-CSF-based signaling in the brain, with applications ranging from neural development to age-associated neurologic diseases. Dr. Lehtinen currently holds the Hannah C. Kinney, MD, Chair in Pediatric Pathology Research and is a New York Stem Cell Foundation – Robertson Neuroscience Investigator.




SUSAN ACKERMAN, PHD
UNIVERSITY OF CALIFORNIA SAN DIEGO


Dr. Ackerman's pioneering work using mouse genetics has identified novel genes, pathways, and networks involved in neurodevelopment and age-related death of neurons in the central nervous system. Dr. Ackerman is the Stephen W. Kuffler Chair of Biology and a professor in the Neurobiology Section in the Division of Biological Sciences at the University of California, San Diego; she is also a professor in the department of Cellular and Molecular Medicine and the Vice Dean of Research for the UCSD School of Medicine. She received her Ph.D. from UCLA and was a postdoctoral fellow at University of Illinois Medical School and the Wistar Institute. Prior to her move to UCSD in 2016, Dr. Ackerman was a professor at The Jackson Laboratory in Bar Harbor, Maine, where she was a faculty member for nineteen years. She has been an Investigator of the Howard Hughes Medical Institute since 2005. She is a member of the National Academy of Sciences, the National Academy of Medicine, and the American Academy of Arts and Sciences.


SOCIAL EVENTS

SUN
10
APRIL

First Time Attendees Reception

 5:00pm – 5:30pm


 Roanoke Ballroom C-H


 Open to all registered attendees. Name badge must be worn and visible for entry. Ticket required for guests.


We look to welcoming all first time attendees and new ASN members to this special reception.

SUN
10
APRIL

ASN 2022 Welcome Reception

 5:30pm – 7:00pm


 Roanoke Ballroom C-H


 Open to all registered attendees. Name badge must be worn and visible for entry. Ticket required for guests.


What better way to kick off this year's meeting than with a drink and some light fare surrounded by your ASN colleagues! Join us at the Welcome Reception and catch up with some old friends or make new ones and don't forget your mask!

MON
11
APRIL

Plenary Speaker Lunch 1

 12:00pm – 1:00pm

 Shenandoah A


 Pre-registration required


Meet the plenary speakers over lunch


SOLD OUT
THIS EVENT IS SOLD OUT!

MON
11
APRIL

Women in Neurochemistry Lunch

 12:00pm – 1:00pm

 Shenandoah B


 Pre-registration required


The Women in Neurosciences luncheon will be an interactive discussion on how to navigate, enjoy and succeed in a career in neurochemistry. Come and meet others, network, and exchange tips on how to create an ever more inclusive and diverse space in which we can all be outstanding scientists and mentors. There will also be an opportunity to set up peer mentoring groups at the luncheon. All are welcome


Supported by NIH

MON
11
APRIL

Wine & Cheese Poster Reception

 5:00pm – 6:00pm

 Roanoke Ballroom C-H


 Open to all registered attendees. Name badge must be worn and visible for entry.


Learn about new research and network


Supported by:  

MON
11
APRIL

ASN 2022 Student Post-Doc Mingler

 6:00pm – 9:00pm


 Garden Courtyard


 Open to student/post docs. Pre-registration required.

Meet some of your fellow students or post docs in this casual outdoor setting!

TUE
12
APRIL

Plenary Speaker Lunch 2

 12:00pm – 1:00pm

 Shenandoah A


 Pre-registration required


Meet the plenary speakers over lunch


SOLD OUT
THIS EVENT IS SOLD OUT!

TUE
12
APRIL

ASN 2022 Young Investigator's Forum

 5:00pm – 6:30pm

 Shenandoah B

 \$15 registration fee. Pre-Registration required




"Decisions, Decisions, Decisions: A Glance at Your Future Career."

Curious about the career options you have upon completion of your PhD or post-doc? Unsure which area of the scientific community is the right fit for you? Panelists will provide firsthand insight on their career trajectories and expertise on how to excel beyond a PhD or postdoc in an array of different career paths.

Supported by NIH

WED
13
APRIL

Plenary Speaker Lunch 3




-  12:00pm – 1:00pm
-  Shenandoah A
-  Pre-registration required

Meet the plenary speakers over lunch



WED
13
APRIL




ASN 2022 Business Meeting - History of ASN

-  5:00pm – 7:00pm
-  Roanoke Ballroom A-B
-  Open to all registered attendees. Name badge must be worn and visible for entry

Supported by: 

THURS
14
APRIL

Plenary Speaker Lunch 4






-  12:00pm – 1:00pm
-  Shenandoah A
-  Pre-registration required

Meet the plenary speakers over lunch



THURS
14
APRIL

50th Gala Reception & 50th Gala Dinner



-  6:00pm – 7:00pm
-  Crystal/Roanoke Foyer & Roanoke Ballroom E-H
-  7:00pm – 10:00pm
-  Roanoke Ballroom C-D
-  Open to all registered attendees. Name badge must be worn and visible for entry. Ticket required for guests.

Wind down and join your fellow colleagues at this Gala Reception. Join the gala dinner and widen your network over a delicious meal.

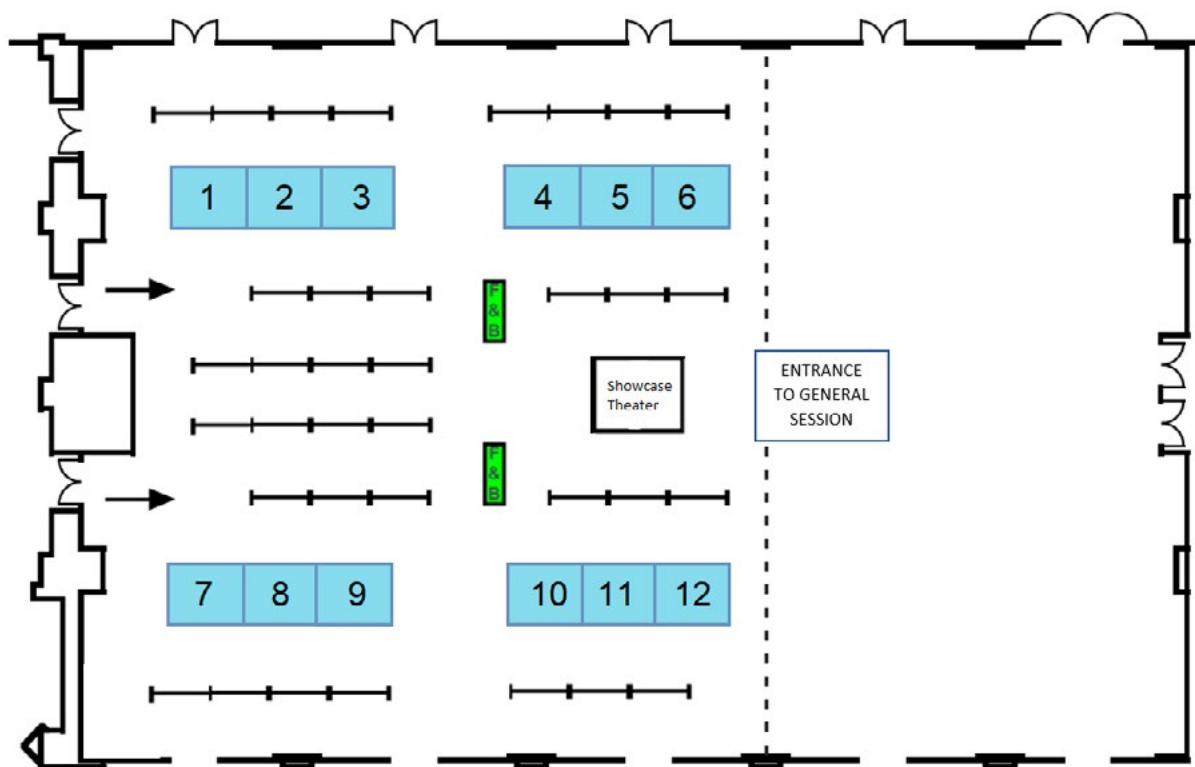
EXHIBITOR INFORMATION

EXHIBIT HALL HOURS

Location: Roanoke Ballroom C-H

Sunday, April 10	5:00pm – 7:00pm (Welcome Reception)
Monday, April 11	9:30am – 5:00pm
	5:00pm – 6:00pm (Poster Reception)
	Supported by:  
Tuesday, April 12	8:30am – 3:30pm
Wednesday April 13	8:30am – 1:00pm

FLOORPLAN



- | | |
|--------------------------------------|---|
| 1 Kent Scientific Corporation | 7 Agilent Technologies |
| 2 VectorBuilder Inc. | 8 Uniformed Services University of The Health Sciences |
| 3 Rebus Biosystems | 9 Gene Tools, LLC |
| 4 Stoelting Co. | 10 Neuroscience Associates, Inc. |
| 5 Particle Metrix Inc. | 11 International Society for Neurochemistry |
| 6 Bristol Myers Squibb | 12 Louis Irwin |

EXHIBITOR LISTING

Agilent

Bio: Agilent is growing in the cell analysis space. What started as a unique offering of solutions focused on understanding cellular functionality based on underlying metabolic programming has transformed into a market-leading set of innovative tools. Explore a breadth of solutions in real-time, impedance-based analysis of cell function, real-time cell metabolism, flow cytometers, and more.



Find Out More: agilent.com

ASNeuro

Bio: ASN NEURO is an open access, peer-reviewed journal which focuses on the most recent advances across the breadth of the cellular and molecular neurosciences. This journal is the official publication of the American Society for Neurochemistry.



Find Out More: asneurochem.org

Bristol Myers Squibb

Bio: Bristol Myers Squibb is a leading global biopharma company focused on discovering, developing and delivering innovative medicines for patients with serious diseases in areas including oncology, hematology, immunology, cardiovascular, fibrosis and neuroscience. Our employees work every day to transform patients' lives through science



Find Out More: BMS.com

Gene Tools, LLC

Bio: Gene Tools manufactures Morpholino oligos for blocking translation, modifying splicing or inhibiting miRNA activity. Morpholinos are used in cell cultures, embryos or, as Vivo-Morpholinos, in adult animals. Morpholinos are effective, specific, stable and non-toxic. Backed by Ph.D.-level customer support, Gene Tools designs and synthesizes Morpholinos and offers cytosolic delivery options.



Find Out More: gene-tools.com

EXHIBITOR LISTING

International Society for Neurochemistry

Bio: The International Society for Neurochemistry (ISN) is a non-profit membership organisation and the only global society focused on neurochemistry. With a proud history dating back to 1965, ISN strives to promote all relevant aspects of molecular and cellular neuroscience. ISN also has its own journal, The Journal of Neurochemistry (JNC).



ISN
International Society
for Neurochemistry

Find Out More: neurochemistry.org

Kent Scientific

Bio: For over 30 years Kent Scientific has served medical and research scientists as a worldwide provider of integrated solutions for pre-clinical research and drug discovery advancement. As the world leader in noninvasive blood pressure, physiological monitoring and anesthesia systems for rodents, we enable researchers to achieve fast, consistent, accurate results.

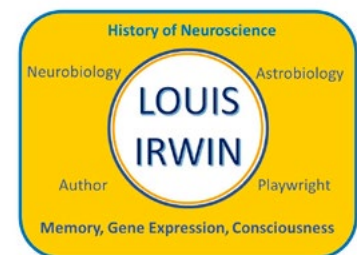


Kent Scientific
CORPORATION

Find Out More: kentscientific.com

Louis Irwin

Bio: Louis Irwin is a neurobiologist, astrobiologist, playwright, and author of over 80 research publications, plus two books on neuroscience, two on astrobiology, one on evolution, and six plays. In retirement from the University of Texas at El Paso, he continues to write in the fields of neuroscience, astrobiology, and evolution.



Find Out More: lirwin.org

Neuroscience Associates, Inc.

Bio: Proprietary MultiBrain® and MultiCord® technology enables NeuroScience Associates to embed, section and stain up to 40 neuronal tissues simultaneously. NSA has 30+ years of experience applying classic histological stains and IHC with custom antibodies. Additionally, NSA offers digitization of slides and remote viewing of scans via Internet (Proscia).



NEUROSCIENCE
ASSOCIATES, INC.

Find Out More: neuroscienceassociates.com

EXHIBITOR LISTING

Particle Metrix Inc.

Bio: Particle Metrix sells instruments to measure the size, concentration, zeta potential of nano sized particles with Nanoparticle Tracking Analysis (NTA) systems. Applications include exosomes, EV, Liposomes, Protein Aggregates, drug delivery, and various other nano materials.



Find Out More: particle-metrix.de

Rebus Biosystems

Bio: Rebus Biosystems creates revolutionary tools to enable spatial omics research without compromise. The Rebus Esper, is a fully integrated, automated spatial omics platform that delivers quantitative single molecule, single-cell data with subcellular resolution. Advanced imaging, on-system chemistry, and intuitive software combine to provide researchers with the resolution, scale and speed for multiple applications.



Find Out More: rebusbio.com

Stoelting Co.

Bio: Stoelting Co. has been an innovator in producing neuroscience research equipment since 1886. Moreover, we proudly offer a complete line of behavioral testing equipment, anchored by ANY-maze™; a powerful yet easy-to-use video tracking software for automated measurements of many types of behavioral paradigms.



Find Out More: stoeltingco.com or anymaze.com

EXHIBITOR LISTING

Uniformed Services University of The Health Sciences

Bio: The USUHS Neuroscience Program, located in Bethesda, MD, is an interdisciplinary PhD and MD/PhD program. There's no associated military commitment for civilians. Courses and research training are provided by over 60 Neuroscience Faculty members holding appointments in a wide range of basic science and clinical departments within USUHS.



Find Out More: medschool.usuhs.edu

VectorBuilder Inc.

Bio: VectorBuilder is a revolutionary online platform that provides researchers with a one-stop solution for all vector design, custom cloning, and virus packaging needs. VectorBuilder also offers many molecular biology services such as stable cell line generation, library construction, and exceptional GMP facilities for a wide range of clinical applications.



Find Out More: vectorbuilder.com

DETAILED PROGRAM

SUNDAY, APRIL 10, 2022

First Time Attendees Reception

SESSION TIME: 5:00pm - 5:30pm

SESSION ROOM: Roanoke Ballroom C-H

ASN 2022 Welcome Reception

SESSION TIME: 5:30pm - 7:00pm

SESSION ROOM: Roanoke Ballroom C-H

MONDAY, APRIL 11, 2022

PL-01 Plenary Session 1

SESSION TIME: 8:00am - 9:30am

SESSION ROOM: Crystal Ballroom A/B

PL-01 mRNA Translation in Neurons - When Things Go Awry

Susan Ackerman

Plenary Speaker supported by NIH

Showcase Theater - Rebus Esper: Innovative optics, novel chemistries, and intuitive software for unlimited spatial discoveries

SESSION TIME: 9:30am - 10:00am

SESSION ROOM: Crystal Ballroom C-H

Rebus Biosystems has developed the Rebus Esper™, an integrated platform that combines resolution-enhancing Synthetic Aperture Optics (SAO) with automated fluidics to enable multiple assays for detecting biomarkers at single-molecule, subcellular resolution. The streamlined workflow minimizes hands-on time and reduces variability by automating the laborious steps required for multiplexed single-molecule detection.

Sponsored by  **REBUS BIOSYSTEMS™**

S-01 Neurotherapeutics

SESSION TIME: 10:00am - 12:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Evanthia Bernitsas

CO-CHAIR: Jun Li

S-01-01 Gene Therapy and Neurological Disease

Peter LeWitt

S-01-02 Identifying Molecular Targets Among the Network of Pro-Inflammatory and Anti-Inflammatory Cytokines

Rebecca Sappington

S-01-03 Gut Microbiome, Bacterial Toxins, CNS Immune Privilege, and Inflammatory Demyelination

Timothy Vartanian

S-01-04 Unlocking the Drivers of Neuroinflammation in Neurodegenerative Disease

Katerina Akassoglou

S-02 Cellular and Molecular Mechanisms of Myelin Maintenance and Remyelination

SESSION TIME: 10:00am - 12:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Terri Wood

CO-CHAIR: Vittorio Gallo

S-02-01 Elucidating Molecular Mechanisms of Neural Stem Cell-Derived Gliogenesis in Remyelination

Katrina Adams

S-02-02 Immunoregulation in CNS Remyelination

Jeffrey Huang

S-02-03 An Fbxw7/Myrf Axis Regulates the Extent of Myelination in the CNS

Hannah Collin

S-02-04 TSC/mTOR Signaling and Myelin Maintenance

Terri Wood

S-03 Emerging Views On Molecular and Cellular Mechanisms of Neural Circuit Establishment

SESSION TIME: 1:00pm - 3:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Tracy Tran

CO-CHAIR: Martin M. Riccomagno

S-03-01 To Branch or To Prune? That Is the Question for Plexin-A4 Signaling in Neural Circuit Development

Tracy Tran

S-03-02 An Adhesion Signaling Module Essential for the Establishment of the Cortical Scaffold

Martin Riccomagno

S-03-03 One Glycoprotein To Rule Them All: The Many Roles of Dystroglycan in Neural Circuit Development

Kevin Wright

S-03-04 Heavy Metal Neuroscience: Tracking Neural Development With Single-Cell Mass Cytometry

Christopher Deppmann

S-04 Lipid Metabolism of Myelin

SESSION TIME: 1:00pm - 3:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Jian Hu

CO-CHAIR: Xianlin Han

S-04-01 Qki Regulates Dynamic Lipid Turnover in Mature Myelin

Jian Hu

S-04-02 Early Myelin Lipid Losses Occur in Mouse Models of Diabetes: Lipidomics Sheds Light on Diabetic Neuropathy

Xianlin Han

S-04-03 Macrophage-Schwann Cell Cross Talk in Sphingolipidosis

Laura Feltri

S-04-04 Fatty Acid Binding Protein-8 in Myelinating Schwann Cell Metabolism

Sophie Belin

C-01 Glio-Vascular Mechanisms Regulating Brain Health and Disease

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Dimitrios Davalos

CO-CHAIR: Richard Daneman

C-01-01 Regulation of the Blood-Brain Barrier in Health and Disease

Richard Daneman

C-01-02 Impact of Blood Pressure on Neurovascular Function

Jessica Filosa

C-01-03 Pericyte Structural Plasticity and Capillary Blood Flow Regulation

Andy Shih

C-01-04 Blood-Brain Barrier Dysfunction in Neuroinflammatory Disease

Dimitrios Davalos

C-02 Endosomal/Lysosomal Trafficking: An Update from a Pan-neural Point of View

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Roanoke Ballroom A/B

CHAIR: Babette Fuss

CO-CHAIR: Christian Gonzalez-Billault

C-02-01 Coordinated Roles of Small GTPases Define Neuronal Morphology

Christian Gonzalez-Billault

C-02-02 Neurotrophic Signaling From Endosomes and Exosomes: New Cellular Pathways

Bettina Winckler

C-02-03 Synaptic Function and Dysfunction in Lysosomal Storage Diseases

Ernesto R. Bongarzone

C-02-04 The Role of Sulfatide in Intracellular Trafficking of Myelin Proteins

Jeffrey Dupree

C-03 Nanodelivery Systems for CNS Therapeutics

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Lee Korshoj

CO-CHAIR: Tammy Kielian

C-03-01 Targeted Antibiotic Delivery With Bioprinted Scaffolds and Nanoparticle Micelles for Treatment of Craniotomy Infection

Lee Korshoj

C-03-02 Poly (beta-Amino Ester) - Cyclodextrin Nanoparticles for Intrathecal Drug Delivery

Rachel Sirianni

C-03-03 Nose-to-Brain Delivery of Nucleic Acid Therapeutics (Recorded Presentation)

Mansoor Amiji

C-03-04 Nanoparticles for Delivery to and Treatment of Neurological Disorders

Forrest Kievit

Poster Reception

SESSION TIME: 5:00pm - 6:00pm

SESSION ROOM: Roanoke Ballroom C-H

Supported by:  

ASN 2022 Student Post-Doc Mingler

SESSION TIME: 6:00pm - 9:00pm

SESSION ROOM: Garden Courtyard

TUESDAY, APRIL 12, 2022

PL-02 Plenary Session 2

SESSION TIME: 8:30am - 9:30am

SESSION ROOM: Roanoke Ballroom A/B

PL-02 Metabolic Recruitment in Brain Tissue

L. Felipe Barros

Plenary Speaker supported by NIH

S-05 Neuroepigenetic Regulation of Brain Function and Dysregulation in Disease - Supported by the Basic Neurochemistry

SESSION TIME: 10:00am - 12:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Elizabeth Heller

CO-CHAIR: Frances A Champagne

S-05-01 Chromatin Regulation of Synapse Maturation in Postmitotic Neurons

Anne West

S-05-02 Epigenetic Mechanisms of Persistent Gene Expression Across Abstinence

Elizabeth Heller

S-05-03 3D Genome Dynamics in the Mouse Brain Across the Estrous Cycle

Marija Kundakovic

S-05-04 Prenatal Stress Influences on the Epigenome and Associations With Biobehavioral Outcomes

Frances Champagne

S-06 The Many Faces of Calcium Signaling in Astrocytes

SESSION TIME: 10:00am - 12:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Isabella Farhy

CO-CHAIR: Rahul Srinivasan

S-06-01 Regulation of Synapse Development by Astrocytic Store Released Calcium

Isabella Farhy

S-06-02 Ca²⁺ Influx Signals in Astrocytic Mitochondria in a Mouse Model of Early Parkinson's Disease

Rahul Srinivasan

S-06-03 Astrocytic Network Encoding of Glutamate and GABA (Recorded Presentation)

Kira Poskanzer

S-06-04 Developing New Tools To Functionally Interrogate Astrocyte Diversity in the Brain

Benjamin Deneen

S-07 Emerging Roles of Signaling at the Synapse in Goal-Directed Behavior

SESSION TIME: 1:00pm - 3:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Adema Ribic

S-07-01 Astrocyte-Neuron Interactions Shape Cortico-Striatal Circuits To Control Goal-Directed Behaviors

Francesco Paolo Ulloa Severino

S-07-02 The Role of Neuropilin-2 in Corticostriatal Synaptic Transmission and Function

Tracy Tran

S-07-03 Cell Adhesion Control of Reward-Related Action Flexibility

Shannon Gourley

S-07-04 Examining Neurexin1a Function in Neural Circuits Supporting Value-Based Choice

Marc Fuccillo

S-08 Expanding the Toolbox: Using PET and MRI in Animal Models To Answer Neurochemistry Questions

SESSION TIME: 1:00pm - 3:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Pedro Brugarolas

S-08-01 An Introduction to Brain PET Imaging, or Adventures of the 21st Century Psychonauts

Peter J.H. Scott

S-08-02 [18F]3F4AP: A Novel PET Tracers for Imaging Demyelination

Pedro Brugarolas

S-08-03 Detecting and Tracking Immune Responses in the Brain and Beyond Using PET

Michelle L. James

S-08-04 Experimental Autoimmune Encephalomyelitis (EAE) in the Common Marmoset: An Alternative and Promising Model to Study Multiple Sclerosis

Maxime Donadieu

C-04 The Back and Forth Impact Between Inflammation and Neuronal Signaling

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Roanoke Ballroom A/B

CHAIR: Ira Blader

CO-CHAIR: Anna Cliffe

C-04-01 Astrocyte-Microglia Crosstalk During Activity-Dependent Synaptic Remodeling

Travis Faust

Interferon Gamma and Neuronal Apoptosis Signaling

C-04-02 Mohanish Deshmukh

C-04-03 Mechanisms Underlying Selective Remodeling of Inhibitory Circuits in Parasitic Infection

Gabriela Carrillo

C-04-04 Intersection of Neuronal Innate Immune Signaling Pathways With the Latent Herpes Simplex Virus Genome

Anna Cliffe

C-05 Molecular Diversity Underlying Neural Circuit Heterogeneity

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Sharon Swanger

CO-CHAIR: Shannon Farris

C-05-01 The Temporal and Molecular Heterogeneity of Central Synapse Development in Olfactory Circuits

Timothy Mosca

C-05-02 Mitochondrial Diversity as a Mechanism for Shaping Neural Circuit-Specific Functions

Shannon Farris

C-05-03 Synaptic Receptor Diversity Enables Cell-Type-Specific Tuning of Corticothalamic Circuit Function

Sharon Swanger

C-05-04 Cell-Type-Specific Morphology, Physiology, and Modulation of Pain in the Amygdala

Yarimar Carrasquillo

C-06 Inflammasomes in CNS

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Kiran Bhaskar

C-06-01 ASC-ing for Trouble: A Causal Link Between Microglial Inflammasomes and Tau

Kiran Bhaskar

C-06-02 Inflammasome Driven Neurodegeneration- a Possible Therapeutic Target? (Recorded Presentation)

Michael Heneka

C-06-03 How Does Amyloid- β Conformation Impact Neuroinflammation (and Vice Versa)

Michael Nichols

C-06-04 Targeting Maladaptive Microglia To Treat Tauopathy

Li Gan

ASN 2022 Young Investigator's Forum: Decisions, Decisions, Decisions: A Glance at Your Future Career

SESSION TIME: 5:00pm - 6:30pm

SESSION ROOM: Shenandoah B

Supported by NIH

PANALIST LIST: **Marion Buckwalter**

She/her, Professor, Stanford, Clinician Scientist

Luipa Khandker

She/her, Senior Scientist, Industry

Tanya Brown

She/her, Scientific Director, TESS Research Foundation, Non-Profit

Aparna Shah

She/her, Collegiate Assistant Professor, Virginia Tech Academia

Marisa Jeffries

She/her, Postdoctoral Associate Academia

WEDNESDAY, APRIL 13, 2022

PL-03 Plenary Session 3

SESSION TIME: 8:30am - 9:30am

SESSION ROOM: Roanoke Ballroom A/B

PL-03 Illuminating the Choroid Plexus – Cerebrospinal Fluid System

Maria Lehtinen

Plenary Speaker supported by NIH

S-09 Functions of the Meninges in Brain Development and Function

SESSION TIME: 10:00am - 12:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Antoine Louveau

CO-CHAIR: Jasmin Herz

S-09-01 Making and Breaking Meninges Barriers: Arachnoid Barrier in Development and Disease

Julie Siegenthaler

S-09-02 The Zebrafish, a Clear Choice for Studying the Meninges

Brant Weinstein

S-09-03 Neuroimmune Crosstalk in Meningeal Spaces

Jasmin Herz

S-09-04 Regulation of Brain Maturation by the Meningeal Lymphatics

Antoine Louveau

S-10 Novel Regulatory Mechanisms of MS Pathogenesis and Repair

SESSION TIME: 10:00am - 12:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Anastassia Voronova

CO-CHAIR: Soheila Karimi

S-10-01 Understanding the Functional Plasticity of Adult OPCs To Promote Remyelination in MS and AD

Alban Gaultier

S-10-02 Neuregulin-1; an Emerging Regulator of MS Pathogenesis and Repair

Soheila Karimi

S-10-03 Fractalkine Signalling Engages Endogenous CNS Precursor Cells for Enhanced Oligodendrocyte Genesis and Remyelination

Anastassia Voronova

S-10-04 Enhancing Remyelination by Modulating the TGFb1 Pathway

Jayshree Samanta

S-11 Astrocytes in Stroke: Blocking the Bad and Boosting the Good To Promote Recovery

SESSION TIME: 1:00pm - 3:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Elena Blanco-Suarez

CO-CHAIR: Marion Buckwalter

S-11-01 Astrocytes in White Matter Stroke/Vascular Dementia Neural Repair

Amy Gleichman

S-11-02 Region-Specific Roles of Astrocytes in Post-Stroke Plasticity

Elena Blanco-Suarez

S-11-03 Comprehensive Transcriptional Analysis of the Astrocytic and Microglial Response to Stroke

Victoria Hernandez

S-11-04 Reversing Age-Induced Epigenetic Modification in Astrocytes To Improve Stroke Outcomes

Farida Sohrabji

S-12 Unexpected and Overlooked Partnerships Shaping Neuroimmune Outcomes in Brain Function and Disease

SESSION TIME: 1:00pm - 3:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Monica Carson

CO-CHAIR: Paula Da Silva Frost

S-12-01 Sex-Specific Mechanisms in Microglia Action of TLR4-Induced Pain and Inflammation

Michael Burton

S-12-02 Microglia: Bona Fide Component of the Neuro Vascular Unit

Ukpong Eyo

S-12-03 It Takes Guts: How the Microbiota-Gut-Brain Axis Controls Neuroimmune Interactions

Melanie Gareau

S-12-04 Sex Differences in Adipose Tissue Distribution Determine Vulnerability to Cognitive Impairment in Ob (Recorded Presentation)

Alexis Stranahan

OR-01 Oral Presentation Session 1

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Roanoke Ballroom A/B

CHAIR: Terri Wood

CO-CHAIR: Lindsay Festa

OR-01-01 Micro-RNA-22 Secreted from Microglial Exosomes is a Major Regulator of Oligodendrocyte Differentiation

Adya Sapra

OR-01-02 Astrocytic GABAB Receptor Regulates Astrocyte Morphological Maturation

Yi-Ting Cheng

OR-01-03 Characterizing the Emergence of Senescent Cells in a Mouse Model of Focal Demyelination

Phillip Gross

- OR-01-04 **Regional Differences in Oligodendroglial Cholesterol Acquisition and Astrocyte Cholesterol Export**
Marie Mather
- OR-01-05 **Molecular Mechanisms of Environmental Enrichment-Induced Recovery from Neonatal Brain Injury**
Evan Goldstein
- OR-01-06 **Characterization of a Specific Subpopulation of Astrocyte Precursors in the Subventricular Zone**
Alain Guillem

OR-02 Oral Presentation Session 2

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Seema Tiwari-Woodruff

- OR-02-01 **Prostate Apoptosis Response-4 is Transported Via Extracellular Vesicles from Astrocytes to Neurons to Induce Mito - and Neurotoxicity**
Ahmed Elsherbini
- OR-02-02 **Interleukin 4-induced 1 (IL4i1) Facilitates Remyelination by Modulating Lesion Metabolic Microenvironment in the Central Nervous System (CNS)**
Jingwen Hu
- OR-02-03 **Formin Protein Daam2 Modifies Neural Circuit and Neurovascular Unit in the CNS**
Juyeon Jo
- OR-02-04 **Sonic Hedgehog-Dependent and Activity-Independent Recruitment of GABAergic Neurons into Developing Visual Thalamus**
Rachana Deven Somaiya
- OR-02-05 **RIPK3 Signaling Reduces Neuronal Sensitivity to Excitotoxic Cell Death Following Zika Virus Infection**
Irving Estevez
- OR-02-06 **Fragile X Gene Mutation Alters Hypothalamic GnRH Neuron Activity with Consequences on Reproductive Function**
Pedro Villa

OR-03 Oral Presentation Session 3

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Tara DeSilva

CO-CHAIR: Gabrielle Mey

OR-03-01 Interferon- γ Regulates the Novel Transcription Factor BATF2 to Enhance Astrocyte Inflammatory Potential

Rachel Tinkey

OR-03-02 Cognitive Impairment and Neurovascular Pathology in SARS-CoV-2 Infected Mice

Sarah Lutz

OR-03-03 Lipid Metabolism in Dopaminergic Neurons Influences Circadian Rhythm Regulation

Jessica Ellis

OR-03-04 Cyclic GMP-AMP Synthase-Stimulator of Interferon Genes Pathway Activity is Activated by Mitochondrial DNA Generating Detrimental Neuroinflammation During Traumatic Brain Injury

Lauren Fritsch

OR-03-05 The Astrocyte Circadian Clock in Autophagy and Endolysosome Function

Celia McKee

OR-03-06 Fibrillar α -synuclein Induces Neurotoxic Astrocyte Activation via RIP Kinase Signaling and NF- κ B

Tsui-Wen Chou

ASN 2022 Business Meeting - History of ASN

SESSION TIME: 5:00pm - 7:00pm

SESSION ROOM: Roanoke Ballroom A-B

Supported by 

THURSDAY, APRIL 14, 2022

PL-04 Plenary Session 4

SESSION TIME: 8:30am - 9:30am

SESSION ROOM: Roanoke Ballroom A/B

PL-04 Oligodendrocyte Dynamics in the Adult Brain – A Mechanism for Plasticity and Repair

Dwight E Bergles

S-13 Promoting Repair Following Neuroinflammatory Demyelination

SESSION TIME: 10:00am - 12:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Larry Sherman

CO-CHAIR: Seema Kaushalya Tiwari-Woodruff

S-13-01 Roles of Hyaluronan Catabolism in Inflammatory Demyelinating Disease

Larry Sherman

S-13-02 Novel Hormone-Based Approaches to Modulating Inflammatory Demyelination

Seema Tiwari-Woodruff

S-13-03 How Cytokine Signaling by Oligodendrocytes Impacts Inflammatory Demyelination

Xiaoxia Li

S-13-04 How Oligodendrocytes Influence Neuroinflammation Following Coronavirus Infection (Recorded Presentation)

Stanley Perlman

S-14 Non-Coding RNAs in Normal CNS Development and Diseases

SESSION TIME: 10:00am - 12:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Yue Feng

CO-CHAIR: Bing Yao

S-14-01 MicroRNA Dysregulation in Patient-Derived Neuron Model of Huntington's Disease

Andrew Yoo

S-14-02 CircRNA Landscape and the circRNA-miRNA-mRNA Axis in Human Oligodendroglia Differentiation

Bing Yao

S-14-03 A Novel Schizophrenia miRNA-lncRNA Pathway in Human Neuron Development

Yue Feng

S-14-04 Repeat Associated Non-AUG (RAN) Proteins in Neurologic Disease: Molecular Insights and Therapeutic Opportunities

Laura Ranum

S-15 Unravelling Novel Cellular and Molecular Pathways in Microglia Signaling: From Neonatal Brain Injury to Aging Related Neurodegenerative Disorders

SESSION TIME: 1:00pm - 3:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Jasna Kriz

CO-CHAIR: Bahareh Ajami

S-15-01 Microglia-Derived Extracellular Vesicles As Modulators of Inflammation and Injury in Neonatal Stroke

Zena Vexler

S-15-02 Understanding the Role of Microglia in Motor Neuron Vulnerability in Amyotrophic Lateral Sclerosis

Bahareh Ajami

S-15-03 Microglial PARP-1 Signaling Driving Synaptotoxicity and Cognitive Decline in Alzheimer's Disease (Recorded Presentation)

Tiina Kauppinen

S-15-04 SRSF3 Controls Innate Immune Genes Translation and Microglia Activation in Acute and Chronic Brain Neurodegeneration

Jasna Kriz

S-16 Supplying the Synapse from the Inside and Out

SESSION TIME: 1:00pm - 3:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Zila Martinez-Lozada

CO-CHAIR: Mikhail V. Pletnikov

S-16-01 Regulation of ATP Supply and Demand in the Postsynaptic Compartment of Neurons (Recorded Presentation)

Shelley Halpain

S-16-02 Regulation of MAP2 Interaction and Function by Phosphorylation

Robert Sweet

S-16-03 Neurons and Endothelia Regulate Astrocyte Transcriptome

Zila Martinez-Lozada

S-16-04 Deficient Metabolism in Astrocytes Contribute to Synaptic Pathology

Mikhail Pletnikov

C-07 Aerobic Glycolysis

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Crystal Ballroom A/B/C

CHAIR: Robert Zorec

CO-CHAIR: Nina Vardjan

C-07-01 The Role of L-Lactate Production in the Brain in Health and Disease

Pierre Magistretti

C-07-02 Adrenergic Regulation of Aerobic Glycolysis and Lipid Droplet Production

Nina Vardjan

C-07-03 Fast Modulation of Astrocytic Glycolysis by K⁺

Ivan Ruminot

C-07-04 The Role of D-Glucose and L-Lactate in the Release of Astroglial Glutamate

Vladimir Parpura

C-08 Reactive Astrocytes and Therapeutic Potentials in CNS Injury

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Roanoke Ballroom A/B

CHAIR: Shinghua Ding

CO-CHAIR: Selva Baltan

C-08-01 Bioenergetics and Metabolic Reprogramming of Reactive Astrocytes After Ischemic Stroke

Shinghua Ding

C-08-02 Functional Characteristics of Aging Astrocytes in White Matter

Selva Baltan

C-08-03 Adenosine A1R/A3R Agonist AST-004 Reduces Lesion Growth Rate and Volume in a Transient MCAO in Non-H

James Lechleiter

C-08-04 Delineating the Heterogeneity and Regulation of Reactive Astrocytes in Spinal Cord Injury

Jiaqian Wu

C-09 Sterols in Neurologic Disorders

SESSION TIME: 3:30pm - 5:00pm

SESSION ROOM: Crystal Ballroom E/D

CHAIR: Zita Hubler

C-09-01 Interactions of Genetics, Pregnancy and Medications on Developing Brain

Zeljka Korade

C-09-02 One Pathway, Two Products: Differential Effects of Cholesterol and 24,25-Epoxysterols on Oligodendrocyte Formation

Zita Hubler

C-09-03 C-09-03 Role of Bile Acid Metabolism in Neuroinflammation

Pavan Bhargava

50th Gala Reception

SESSION TIME: 6:00pm - 7:00pm

SESSION ROOM: Crystal Roanoke Foyer & Roanoke Ballroom E-H

50th Gala Dinner

SESSION TIME: 7:00pm - 10:00pm

SESSION ROOM: Roanoke Ballroom C-D

POSTER LISTINGS

BUILDING THE NERVOUS SYSTEM - P01-01 TO P01-09

P01-01

Preterm Birth Related Changes in Neural Activity

Mona Fariborzi

P01-02

The Function of Meningeal Lymphatic Vessels Influences Neuronal Activity and Social Behavior in Autistic Mice

Gabriel Tavares

P01-03

Hyperoxia Inhibits the Growth and Differentiation of Mouse Forebrain Oligodendrocyte Progenitors

Lisamarie Moore

P01-04

dscaml1 Is Required for Hypothalamic Neuron Development and Neuroendocrine Stress Axis Function

Yuchin Pan

P01-05

Gestational Iron Deficiency Alters Development of Human Ventral Forebrain Organoids

Garrick Salois

P01-06

Rett Syndrome Mice Have Aberrant Astrocyte Gene Expression and Morphological Maturation During CNS Refinement

Raymundo Hernandez

P01-07

p75NTR Regulates Oligodendrocyte Progenitor Development in the Subventricular Zone of Postnatal Rats

Subhashini Joshi

P01-08

High Environmental Temperature: Insights Into Behavioral, Neurodevelopmental and Gut Microbiome Changes Following Gestational Exposure in Rats

Olamide Adebiji

P01-09

Cas Adaptor Proteins Are Required for Cortical Tract Fasciculation

Jason Estep

GLIAL MECHANISMS & INJURY - P02-01 TO P02-47

P02-01

Role of Tim-2 in Central Nervous System Myelination

James Connor

P02-02

Gap Junction Association With Mitochondria, Transendocytosis, and Extracellular Vesicles in a Mouse Model of Autism

Randy Stout

P02-03

Effect of Chronic Rapid Eye Movement Sleep Deprivation-Induced Oxidative Stress on Hippocampal Oligodendrocytes and Spatial Memory of Rats

Konakanchi Suresh

P02-04

Physiology and Function of Astrocyte-Neuron Interactions in the Striatum

Anna Yu-Szu Huang

P02-05

Alterations in the Transcriptome and DNA Methylome of the Magnocellular Neurosecretory System May Underlie the Age-Induced Loss of Neuronal Plasticity

Derick Thompson

P02-06

Roles for Astrocytic RIPK3 Signaling in Parkinson's Disease Pathogenesis

Nydia Chang

P02-07

Brain Metal Dyshomeostasis Attributed to Gestational Iron Deficiency and Lead (Pb) Exposure Is Refractory to Iron Supplementation

Janine Cubello

P02-08

Sex-Dependent Disruption of Normal Social Behavior and Sensorimotor Gating in System Xc- Null Mice

Shannon Pitt

P02-09

Reactive Astrocyte Characterization and Profiling During Chronic Inflammation

Zoe Figueroa

P02-10

Astrocyte System Xc- Conditional Null Mice Demonstrate Resistance to Chemical Kindling

Samantha Sutton

P02-11

Liver Kinase B 1 Negatively Regulates Antigen Presentation Gene Expression in Primary Murine Astrocytes and Human Astrocytoma Cells

Rylee Cisney

P02-12

Astrocyte Specific JAK1 Knockout Is Protective in Experimental Autoimmune Encephalomyelitis
Jacob Feldmann

P02-13

Glial Complement Activation in Radiation-Induced Brain Injury: Impact on Brain Function and Cancer Therapy
Munjal Acharya

P02-14

Crosstalk Between AMPK and Akt Signaling Pathways in Glial Cells After an Acute Neurotoxic Insult
Jazmín Soto-Verdugo

P02-15

Astrocytic RIPK3 Confers Protection Against Deleterious Neuroinflammation During Zika Virus Infection
Juan Angel

P02-16

In Vivo Changes in Astrocyte Translation After Developmental Alcohol Exposure in ALDH1L1-EGFP-RPL10A Mice
Marina Guizzetti

P02-17

Nkx6-1+ Ventral Spinal Cord Astrocytes Regulate Motor Circuit Integrity and Function in a Sex Specific Manner
Navish Bosquez

P02-18

Targeting Astrocytes Improves Hyperemic and Brain Function in a Diet-Based Model of Vascular Contributions to Cognitive Impairment and Dementia (VCID)
Pradoldej Sompol

P02-19

Transcriptomic Profiling of Astrocyte Development
Xiaoran Wei

P02-20

BDNF/Astrocytic TrkB.T1 Signaling as a Mechanism Underlying Perisynaptic Astrocyte Process Recruitment
Beatriz Torres

P02-21

Wireless Epidural Stimulation of the Ventral Spinal Cord To Promote Recovery of Forelimb Function After SCI in Rats
Matthew Hogan

P02-22

The Lysosomal Ca²⁺ Channel TRPML1 Regulates Oligodendrocyte Process Extension: Implications for Actin Cytoskeleton Dynamics During Differentiation
Lindsay Festa

P02-23

Nanoparticles Loaded With MK2 Inhibitor To Target Activated Microglia/Macrophages for Modulation of Neuroinflammation After Spinal Cord Injury

Cinzia Stigliano

P02-24

Regulation of Leptomeningeal Anastomoses by EphA4/Tie2 Signaling Following Ischemic Stroke

Alexandra Kaloss

P02-25

mTOR Signaling Is Required for Healthy Myelin Maintenance and Cholesterol Biosynthesis in the Adult Brain

Marisa Jeffries

P02-26

Cortical Stimulation in a Cervical Spinal Cord Injury Model Results in Myelin Sheath Plasticity and Axonal Branching

Philip Horner

P02-27

Effect of Neural Stem Cell CPT2 Knockout on Neurogenesis Post Traumatic Brain Injury in Adult Mice

Tiffany Chu

P02-28

HIV-1 Tat and Morphine Have Region-Specific Effects on Myrf Gene Regulation and Transcriptional Targets in CNS White Matter/Oligodendrocytes

Kelly Flounlacker

P02-29

Targeting Very Long -Chain Fatty Acids Metabolism in Multiple Sclerosis

Qi Ye

P02-30

Microglia Depletion Elicits Neuroprotective Effects To Alleviate Vascular Damage and Neuronal Cell Loss in the Diabetic Retina

Kaira Church

P02-31

Investigating Microglia Morphology in a Prolonged Stress Mouse Model of Post-Traumatic Stress Disorder

John Holsten

P02-32

Soluble and Membrane-Bound Isoforms of Fractalkine Differentially Regulate Microglia Activation and Vascular Damage in the Diabetic Retina

Derek Rodriguez

P02-33

The Aryl Hydrocarbon Receptor as a Novel Glutamate Transporters Regulator

Janisse Silva

P02-34

Spinal 12/15-Lipoxygenase Activation Contributes to Pain Hypersensitivity That Is Unresponsive to Nonsteroidal Anti-Inflammatory Drugs

Ann Gregus

P02-35

Characterizing Gene Expression of Distinct Oligodendrocyte Lineage Cell Populations Throughout Focal Lesion Remyelination

George Melchor

P02-36

In Vivo Vasculo-Neuronal Coupling in a Mouse Model of High Blood Pressure Variability

Perenkita Mendiola

P02-37

Aging-Dependent Transcriptomic Changes in Oligodendrocyte Precursor Cells

Dongeun Heo

P02-38

Oligodendrocytes Form Paranodal Bridges That Generate Chains of Myelin Sheaths That Are Vulnerable to Degeneration With Age

Cody Call

P02-39

Repopulated Microglia Have a Sexually Dimorphic Protective Effect Against Seizure Severity

Jordan Benderoth

P02-40

Microglial Engulfment of Oligodendrocytes in Developing Cerebellar White Matter

McKenzie Chappell

P02-41

Dock1 Regulates Developmental and Regenerative Schwann Cell Myelination

Ryan Doan

P02-43

Perineuronal Nets Regulate Homeostatic Functions of Astrocytes

Bhanu Tewari

P02-44

Investigating Non-Canonical STAT3 Functions Governing Astrocyte Survival After Spinal Cord Injury

Joshua Burda

P02-45

Lipocalin-2 Expression After Stroke With and Without Obesity

Karen Bradshaw

P02-46

Myelinating Models: We Are Not There Yet

Anne Boullerne

P02-47

The $\alpha 7$ Nicotinic Acetylcholine Receptor Is Required for the Acceleration of Remyelination by Vagus Nerve Stimulation

Yaakov Levine

NEURODEGENERATION & DISEASE - P03-01 TO P03-55

P03-01

Validating SNPs Tagging Multiple Sclerosis-Hla Alleles Across the World

Anne Boullerne

P03-02

Vagus Nerve Stimulation Reduces Disease in a Rat Eae Model of Multiple Sclerosis

Yaakov Levine

P03-03

C698R Lrsam1 Knock-In Mouse Model for CMT2P

Bo Hu

P03-04

Astrocyte Interferon-Gamma Dampens Inflammation During CNS Autoimmunity via Pd-1/Pd-L1 Signaling

Brandon Smith

P03-05

Reduction of α -Synuclein Spreading by Selective Targeting of the TLR2/MyD88/Nf- κ B Pathway

Debashis Dutta

P03-06

Chebulinic Acid: A Phyto-Active Molecule: Mechanistic Insights To Develop a Treatment for Dementia Associated With Alzheimer's Disease

Rimpi Arora

P03-07

Neuroprotective Potential of Embelin in Streptozotocin-Induced Diabetes-Associated Cognitive Decline: Behavioral and Biochemical Evidences

Rimpi Arora

P03-08

Calpain Activation in the Production of Inflammatory Cytokines and Chemokines in Parkinson's Disease

Azizul Haque

P03-09

Brain-Derived Neurotrophic Factor in Mitochondrial Energy Production and Dynamics.

Maryann Swain

P03-10

Lanthionine Ketimine Ethyl Ester Accelerates Remyelination in a Mouse Model of Multiple Sclerosis

Douglas Feinstein

P03-11

Axonal Injury in Central Nervous System White Matter Precedes Retrograde Loss of Neuronal Cell Bodies During Autoimmune Demyelination

Gabrielle Mey

P03-12

Myelin-Binding Immunoglobulin From Ms Patients Affects Myelin Recovery and Oligodendrocyte Differentiation In Vitro

Andrew Lapato

P03-13

Sulfatide Is Essential for CNS Myelin Maintenance in Adulthood

Elizabeth Dustin

P03-14

Loss of CD49a Expression Improves Cognition and Pathology in an Alzheimer's Disease Mouse Model

Natalie Frederick

P03-15

Fluoride Exposure Modifies xCT Function in Retinal Müller Glial

Andrea Ocharan

P03-16

Heterogeneity of Cytokine Responsive Astrocytes During the Course of Experimental Autoimmune Encephalomyelitis

Sarah Milne

P03-17

Regulation of Interleukin 6 During Endoplasmic Reticulum Stress in Neuroinflammation

Claire Kisamore

P03-18

No Evidence for Neuroprotection via Astrocyte-Specific Inducible Deletion of the Vrac Subunit LRRC8A in a Mouse Model of Focal Ischemia

Mustafa Balkaya

P03-19

The Hyaluronidase Cemip Is Dysregulated in Inflammatory Demyelination and Inhibits Oligodendrocyte Differentiation

Alec Peters

P03-20

Chronic Microglial Responses to Traumatic Brain Injury in the Aged Brain Are Linked With Apoe

Sangderk Lee

P03-21

Evaluation of 2-N-Hexyl-Lke-P as a Neuroprotective Agent and Antioxidant

Travis Denton

P03-22

RNA-Seq Transcriptomics Reveal Potential Regulatory Role of nSMase2 in Neurodegenerative Diseases

Zhihui Zhu

P03-23

Role of Astrocytic G6PD in Bioenergetics and Oxidative Stress After Ischemic Stroke

Zhe Zhang

P03-24

Central Nerves System Deficiency of Sulfatide, a Class of Myelin-Specific Lipids, Leads to Neurogenic Bladder
Sijia He

P03-25

Restored Neurogenesis by Intranasally Infused GD3 Ganglioside in A53T Parkinson's Disease-Model Mice
Takahiro Fuchigami

P03-26

Treatment With SARM1 (Sterile Alpha and Toll/Interleukin-1 Receptor Motif Containing 1) Inhibitor Does Not Mitigate Retinal Ganglion Cell Axon Degeneration
Micah Feri

P03-27

Vascular-Immune Crosstalk in the Regulation of Blood Brain Barrier Breakdown Following Trauma
Caroline De Jager

P03-28

Delayed Intranasal Leukemia Inhibitory Factor as a Treatment for White Matter Loss in Concussive Head Injury
Steven Levison

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Assembly of Mitochondrial Complexes in the Brain of a Rat Model of Alzheimer
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GENERAL INFORMATION

ACCESS/SECURITY

Name Badges will be provided to all delegates and participants and can be picked up at the ASN 2022 Registration Desk. Please wear and ensure your name badge is visible at all times as it is your admission pass to all Plenary and Concurrent sessions, the Exhibit Hall and social events. Delegates will not be able to access the conference meeting space without their badge. There is a \$50.00 USD reprint fee for any lost or misplaced badge.

HEALTH & SAFETY MEASURES

All participants, must adhere to the following terms and conditions that will be imposed and enforced, while attending the ASN 2022 Annual Meeting. By registering for the Event you are agreeing to the terms below. If you are registering on behalf of another it is your responsibility to ensure that the person attending is aware of these terms and accepts them, and by completing the registration you are warranting that you have made the attendee aware of these terms and that they understand and have accepted these terms.

1. All registered attendees must be fully vaccinated against Covid-19 prior to entry into the Event. All registered delegates will be asked to provide proof of full vaccination prior to being granted entry into the event.

Accepted forms of proof: *(Note: Proof of vaccination must match Attendee's name)*

- ✓ Copy of an official certificate from your Country/State/Province
- ✓ Photo of the official certificate
- ✓ Digital PDF or document of official certificate on mobile device

Accepted Vaccines: *(as per WHO)*

- ✓ The Pfizer/BioNTech Comirnaty vaccine
- ✓ The SII/COVISHIELD and AstraZeneca/AZD1222 vaccines
- ✓ The Janssen/Ad26.COV 2.S vaccine developed by Johnson & Johnson
- ✓ The Moderna COVID-19 vaccine (mRNA 1273)
- ✓ The Sinopharm COVID-19 vaccine
- ✓ The Sinovac-CoronaVac vaccine
- ✓ The Bharat Biotech BBV152 COVAXIN vaccine
- ✓ The Covovax (NVX-CoV2373) vaccine
- ✓ The Nuvaxovid (NVX-CoV2373) vaccine



2. Masks must be worn at all times during the Event in all ASN 2022 meeting rooms and official social functions. Masks can only be removed when you are eating, drinking or taking medication. Failure to comply with the masking requirement may result in removal from the Event with no refunds.
3. The meeting organizers and the Planning Committee will in their best effort, provide a safe environment to meet; however, by registering and choosing to attend ASN 2022 in person, you understand there is a risk of contracting Covid-19 even with all the safety measures in place. It is expected that all participants will follow the measures to help reduce the risk.

OFFICIAL LANGUAGE

The official language of the ASN 2022 Meeting is English. All sessions will be conducted in English.

EXHIBITS & POSTER HALL - HOURS

Location: Roanoke Ballroom C-H

Sunday, April 10	5:00pm – 7:00pm (Welcome Reception)
Monday, April 11	9:30am – 5:00pm
	5:00pm – 6:00pm (Poster Reception)
	Supported by:  
Tuesday, April 12	8:30am – 3:30pm
Wednesday, April 13	8:30am – 1:00pm

LOST PROPERTY

Please report any lost or unattended items immediately to the ASN 2022 Registration Desk. Should you lose anything while at the ASN 2022 Annual Meeting, please enquire at the Registration Desk where any recovered lost property will be held. At the end of the conference, all unclaimed lost and found items will be given to The Hotel Roanoke & Conference Center.

PARKING

Valet Overnight Parking - \$21.00 per night

Self-Parking - \$15.00 per night

Day Rates:

Valet daily rate is \$15.00

Self-parking daily rate is \$10.00

PHOTOGRAPHER

An official photographer will be present during the Meeting. By registering for the ASN 2022 Annual Meeting, you agree to have your picture taken. Photography may be used for marketing purposes for future ASN Meetings and Events.

REFRESHMENT BREAKS & LUNCHESES

Location: Exhibits & Poster Hall – Roanoke Ballroom C-H

Dates: April 11 – 14

AM Refreshment Breaks	9:30am - 10:00am
Lunch Breaks	12:00pm - 1:00pm
PM Refreshment Breaks	3:00pm - 3:30pm

REGISTRATION DESK HOURS

Location: North Entry Foyer

Sunday, April 10th	3:00pm – 7:00pm
Monday, April 11th	7:00am – 7:00pm
Tuesday April 12th	8:00am – 6:00pm
Wednesday, April 13th	8:00am – 6:00pm
Thursday, April 14th	8:00am – 7:30pm

WIFI

Network SSID: ASN2022


Password: Cyto2022

Wifi supported by:



DISCLAIMER

All reasonable endeavors will be made to hold the ASN 2022 Annual Meeting and to present the program as scheduled under circumstances which assure the comfort and safety of the Meeting Participants. However, the American Society for Neurochemistry and its branches, and their respective directors, officers, employees, representatives or agents, shall not be liable in any manner whatsoever to any person as a result of the cancellation of the Meeting or any of the arrangements, programs or events connected therewith; nor shall any of the foregoing entities or persons be liable in any manner whatsoever for any loss, injury, damage or inconvenience which may be suffered by any person while travelling to or from, or during such person's presence in, USA in connection with the Meeting. Participants are advised to consider procuring their own insurance against any such occurrences.



LEXINGTON CONVENTION CENTER

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March 18-22, 2023

Host Venue:
Hyatt Regency Lexington



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