

*Alcoholism and Stress:
A Framework for Future Treatment Strategies*

*May 16-19, 2023
Volterra, Italy*



Acknowledgements

We thank each of these organizations for their contribution, without which, this conference would not be possible.

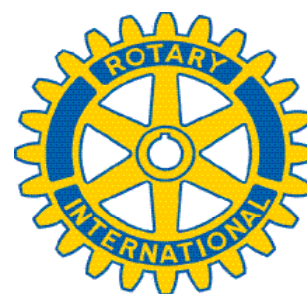
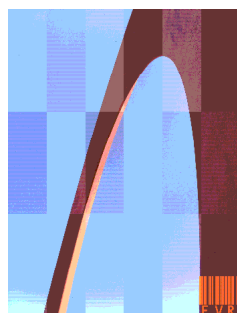


Comune di Volterra



APS
american
physiological
society
physiology.org

abmrf.org
The Foundation
for Alcohol Research



Aims

The aim of this conference is to establish an international concerted effort between basic researchers and clinicians interested in developing preventative strategies and pharmacotherapeutic remedies for stress- and alcohol-related biomedical phenomena. The overall goal is to target research efforts to develop new and innovative treatment strategies.



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Welcome Message

Dear Friends and Colleagues,

Welcome to Volterra, my beautiful hometown!

It is my pleasure to welcome you to the fifth presentation of the international conference: “Alcoholism and Stress: A Framework for Future Treatment Strategies”. Each of the four previous conferences (2008, 2011, 2014, and 2017) were quite successful, and each time the conference has gotten bigger with more interesting and cutting edge science. This fifth edition of the conference is the biggest yet, and the most anticipated with keynote speakers, presenters, and attendees from all over the world. This conference has really been a big project for all involved, and thanks to your participation, I feel like we have fulfilled the primary purpose of establishing an international effort between both basic researchers and clinicians to develop preventive strategies and pharmacotherapeutic remedies for alcohol and anxiety-related disorders.



I am honored and excited to host the world’s preeminent scientists in alcoholism and stress research to present and share their latest findings through plenary lectures, symposia, posters, and roundtable discussions, knowing that at the end of the day everybody can relax in the lovely streets of my ancient walled hometown sipping some Chianti and eating wonderful traditional Tuscan foods. Don’t forget to try the gelato, visit a museum or two and the “Anima Di Volterra” exhibition!

This conference would not have been possible without the help of many organizations including the Fondazione della Cassa di Risparmio di Volterra. In particular, we would not be here without our partnership with the University of Camerino, the patronage of Comune di Volterra, and the support of both the National Institute on Alcohol Abuse and Alcoholism and the European Foundation for Alcohol Research that made available travel awards for young investigators. I would like to thank each of these organizations for their help and generosity. I would also like to offer my immense gratitude to all the staff members, Program Committee, and to all our generous sponsors, without whom this meeting would not be possible.

Over the years, I have come to understand that it doesn’t matter how hard we try to make the conference perfect, we know there will be some sort of technical or scheduling problem, but we have tried to prepare for all eventualities, so please bear with us if something does occur and tell us so we can fix it. My team and I put our hearts into organizing the meeting, and we would like to thank you for your participation and we hope you enjoy the amazing scientific progress made in the alcohol and stress fields since the last edition of the meeting in 2017. I would also like to recommend for you to take some time to enjoy the wonderful setting for this meeting. Volterra is in the heart of the Tuscan countryside, and you are surrounded by some of the most amazing art and culture in the world. We hope you love every moment and every experience you encounter while in Volterra or visiting another nearby town!

At-A-Glance Meeting Schedule

Tuesday, May 16, 2023

8:00 a.m. – 8:10 a.m. Introduction
8:10 a.m. – 9:00 a.m. Plenary Lecture
9:00 a.m. – 10:30 a.m. Symposium I
10:30 a.m. – 11:00 a.m. Coffee Break
11:00 a.m. – 12:30 p.m. Symposium II
12:30 p.m. – 1:30 p.m. Light Refreshments
1:30 p.m. – 3:00 p.m. Symposia III & IV
3:00 p.m. – 4:30 p.m. Symposium V
4:30 p.m. – 5:30 p.m. Poster Session & Snacks

Wednesday, May 17, 2023

8:00 a.m. - 9:00 a.m. Data Blitz
9:00 a.m. – 10:30 a.m. Symposium VI
10:30 a.m. – 11:00 a.m. Coffee Break
11:00 a.m. – 12:30 p.m. .. Clinical Treatments Roundtable
12:30 p.m. – 1:30 p.m. Light Refreshments
1:30 p.m. – 3:00 p.m. Symposia VII & VIII
3:00 p.m. – 4:30 p.m. Symposium IX
4:30 p.m. – 5:30 p.m. Poster Session & Snacks
6:00 p.m. - 6:30 p.m. Sbandieratori Volterra Show

Thursday, May 18, 2023

8:00 a.m. - 9:00 a.m. Plenary Lecture
9:00 a.m. – 10:30 a.m. Symposium X
10:30 a.m. – 11:00 a.m. Coffee Break
11:00 a.m. – 12:30 p.m. Young Investigators
12:30 p.m. – 1:30 p.m. Light Refreshments
1:30 p.m. – 3:00 p.m. Symposia XI & XII
3:00 p.m. – 4:30 p.m. Symposium XIII
4:30 p.m. – 5:30 p.m. Poster Session & Snacks

Friday, May 19, 2023

8:00 a.m. - 9:30 a.m. Symposium XIV
9:30 a.m. – 11:00 a.m. Symposium XV
11:00 a.m. – 11:30 a.m. Coffee Break
11:30 p.m. – 1:00 p.m. Symposium XVI
1:00 p.m. – 2:00 p.m. Light Refreshments
2:00 p.m. – 3:30 p.m. Symposium XVII
3:30 p.m. – 5:00 p.m. Symposium XVIII
6:30 p.m. -10:00 p.m. Closing Banquet



Venue

Centro Studi Santa Maria Maddalena

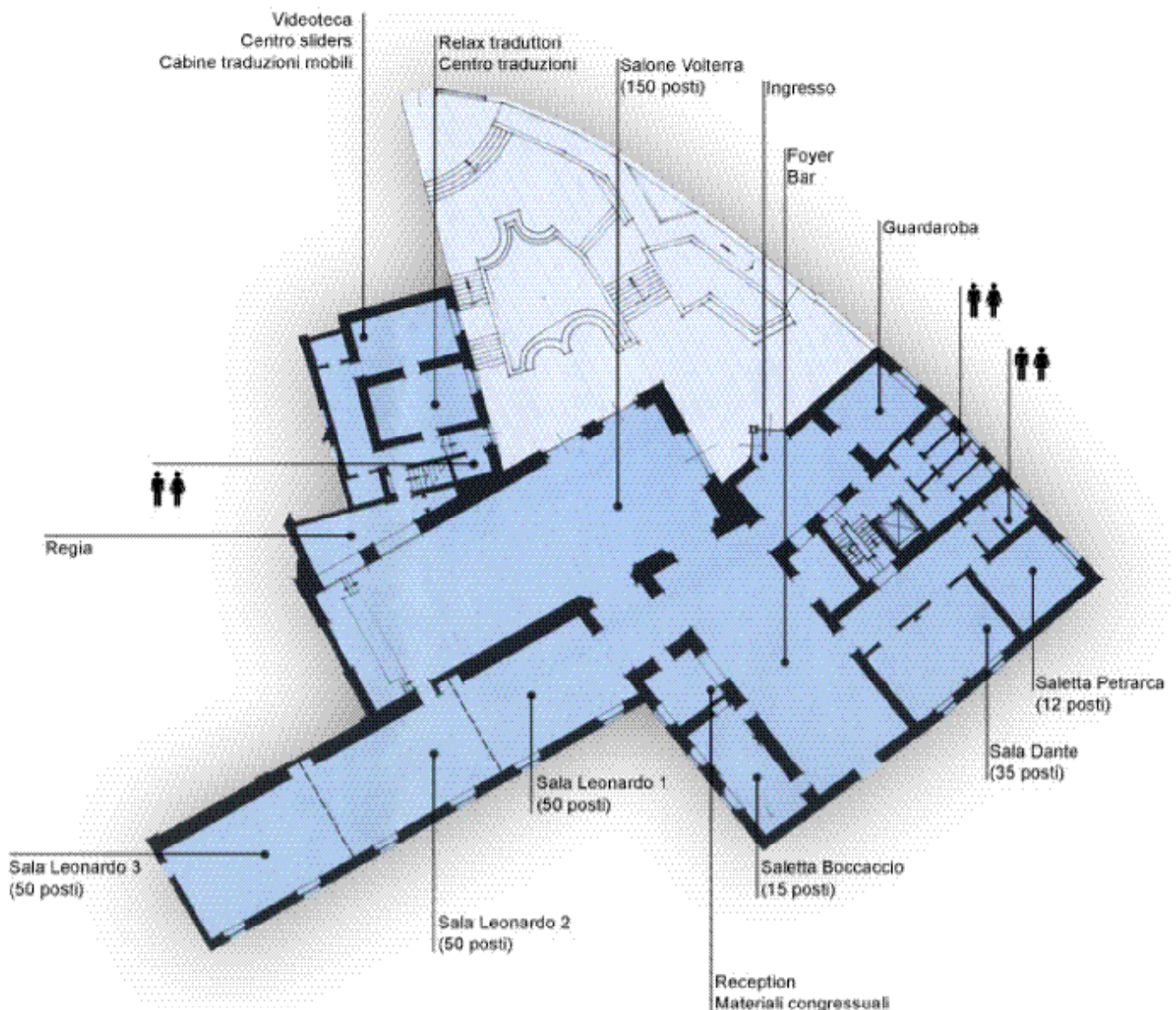
Fondazione Cassa di Risparmio di Volterra
Via Persio Flacco, 2
56048 Volterra (Pisa) Italy

Mobile Phones

As a courtesy to speakers and other delegates, we ask that all mobile phones be switched to silent mode, or switched off before entering sessions.

Wifi

Free wifi is available to all from the Centro Studi.



Liability Disclaimer

The organizers of *Alcoholism and Stress: A Framework for Future Treatment Strategies*, reserve the right to amend any part of the meeting program. The organizers and the Centro Studi will not accept liability for damages of any nature sustained by delegates or accompanying persons, or loss of, or damage to, their personal property as a result of the conference or related events.

General Information

Registration

The Registration Desk is located in the Entrance Hall of the Centro Studi. The registration staff will be on hand to assist you during the meeting.

Symposia

The Symposia Chairs are responsible for having all speakers' presentations on a USB flash drive. Presentations are to be loaded onto the main computer on the morning of your presentation. Audio/visual staff will be available in the Centro Studi to assist you with loading them into the main computer.

Posters

All presenters must be present during their scheduled poster session to answer questions. Posters should be mounted the morning of your presentation and should be left hanging until the end of the day. The organizers are not responsible for any item, including posters, which have been left behind.

Shuttles

Complimentary shuttle service will be provided for the closing dinner, on May 19, to and from Ristorante Molino d'Era from the Piazza Martiri della Libertá at 6:00pm.

Travel Awards

NIH Travel Grant, ABMRF and APS Awardees have already been notified. Contact Mellany Santos, email: mellanys@scripps.edu to arrange reimbursement. She will need your receipts.



Closing Banquet

Please join us for the Closing Banquet at Ristorante Molino D'Era. This event has been planned to enable us to get together on a social basis to meet with old friends, chat with new colleagues, and meet new friends over a lovely traditional Tuscan meal. Shuttles to the restaurant depart at **6:00 p.m.** from the main bus stop at the Piazza Martiri della Libertá.

Date: *Friday, May 19, 2023*
Time: *6:30 p.m. – 10:00 p.m.*
Venue: *Ristorante Molino D'Era
Strada Regionale 439
diramazione, km 6,4
56048 Volterra, Pisa, IT
Ph: 39 0588 33220*
Attire: *Casual*
Cost: *Included with registration**

** If you would like to bring a guest who did not pay to attend the conference, you may purchase an additional dinner ticket for 50 Euros at the Registration Desk at any time during the conference.*



Special Events



Wednesday, May 17, 2023 6:00 in the afternoon until 6:30pm.

The **Medieval Flag Waving Show** by the historic group of Volterra, **Sbandieratori Volterra**. Enjoy this short event in the **Piazza San Giovanni**. It's close to the exit of the Conference at the Centro Studi.
www.sbandieratori.it

Event Sponsored kindly by **Addiction Biology**

Guided Tours Available upon request for the **Art Exhibit** at the **Centro Espositivo**, located next door to the **Centro Studi** where you can see assorted **local artists and their crafts**. The ticket also gives entrance to the **Duomo and Baptistry**, also located in the **Piazza San Giovanni**.

These **Free Tickets** are sponsored by the **Fondazione Cassa di Risparmio di Volterra** and are available with **digital download** at **<https://www.animadivolterra.it/>**



**FONDAZIONE
CASSA DI RISPARMIO
DI VOLTERRA**

Program

Tuesday, May 16, 2023

- 8:00 a.m. – 8:10 a.m. **Opening Remarks** *Salone Volterra*
Marisa Roberto, Ph.D., The Scripps Research Institute
- 8:10 a.m. – 9:00 a.m. **Plenary Lecture** *Salone Volterra*
PL1 **Alcohol Use Disorder and Allostasis: The Gain in the Brain is in the Emotional Pain**
George F. Koob, Ph.D., National Institute on Alcohol Abuse and Alcoholism
- 9:00 a.m. – 10:30 a.m. **Symposium I** *Salone Volterra*
**Cannabinoids at the Intersection of Stress and Reward: Larry Parsons Memorial
This Symposium is dedicated to the Memory of Loren H. Parsons, Ph.D. – Larry
Chair: Matthew Hill, Ph.D., Hotchkiss Brain Institute, University of Calgary**
- S3 Endocannabinoid Regulation of CRF Neurons Governs Activation of the Stress
Response
Matthew N. Hill, Ph.D., Hotchkiss Brain Institute, University of Calgary
- S4 The endocannabinoid system as a biomaker of resilience to substance use development
following trauma exposure
Leah Mayo, Ph.D., Linköping University, Sweden
- S5 A Role for Diacylglycerol Lipase-alpha in the Regulation of Alcohol Consumption
Sachin Patel, Ph.D., Northwestern University
- S6 Ethanol Dependence-Induced Cortical Circuit Dysregulation During Decision-Making
Christina Gremel, Ph.D., University of California, San Diego
- 10:30 a.m. – 11:00 a.m. **Coffee Break** *Foyer Bar*
- 11:00 a.m. – 12:30 p.m. **Symposium II** *Salone Volterra*
**Alcohol Use Disorder and Comorbid Neuropsychiatric Conditions: Preclinical Studies of
Models and Mechanisms**
Co-Chairs: Igor Spigelman, Ph.D., University of California, Los Angeles
Jeff Weiner, Ph.D., Wake Forest University
Discussant: David Rossi, Ph.D., Washington State University
- S7 Heterogeneity in Stress Effects on Fear Learning, Ethanol Consumption and Anxiety
Igor Spigelman, Ph.D., University of California, Los Angeles
- S8 The Role of Central Amygdala Outputs in Traumatic Stress-Induced Escalation of Alco-
hol Drinking
Marcus Weera, Ph.D., LSU Health Sciences Center
- S9 Amygdala Reward Neurons Form and Store Fear Extinction Memory
Junghyup Suh, Ph.D., Harvard Medical School
- S10 Role of an Insula-Amygdala Circuit on Alcohol Binge Drinking in Mice
Anna Beyeler, Ph.D., INSERM, University of Bordeaux, France
- 12:30 p.m. – 1:30 p.m. **Light Refreshments** *Foyer Bar*





1:30 p.m. – 3:00 p.m.

Symposium III

Salone Volterra

Proinflammatory neuroimmune signaling, extracellular vesicles and anti-inflammatory neuroactive steroids in stress and alcohol

Chair: Fulton T. Crews, Ph.D., University of North Carolina at Chapel Hill

Discussant: Consuelo Guerri, Ph.D., Centro de Investigacion Principe Felipe

- S11 Adipose-derived stem cell extracellular vesicles ameliorate the neuroinflammation induced by binge drinking in adolescence.
Maria Pascual, Ph.D., Universidad de Valencia, Spain
- S12 Ethanol, Extracellular Vesicles, Toll-like Receptor 7 and Interferon Signaling: A Possible Role in Alcohol-Related Stress Responses
Leon Coleman, Ph.D., University of North Carolina at Chapel Hill
- S13 The Endogenous Neurosteroid (3 α ,5 α)3-hydroxypregnan-20-one (3 α ,5 α -THP) Inhibits Pro-Inflammatory Toll-Like Receptor (TLR) 2, 4 and 7 Signaling in Immune Cells and Brain
Leslie Morrow, Ph.D., University of North Carolina at Chapel Hill
- S14 Identifications of exosomal cargo molecules involved in microglia induced proopiomelanocortin neuronal death in the hypothalamus in a rat model of fetal alcohol spectrum disorders
Dipak Sarkar, Ph.D., Rutgers University
- S15 Alcohol, glucocorticoids, and inflammation in the developing brain.
Terrence Deak, Ph.D., Binghamton University

1:30 p.m. – 3:00 p.m.

Symposium IV

Sala Panoramica

New Approaches for the Identification of Alcohol Targets

Co-Chairs: Michael Miles, Ph.D., Virginia Commonwealth University

Dorit Ron, Ph.D., University of California, San Francisco

Discussant: Howard Becker, Ph.D., Medical University of South Carolina

- S16 Unveiling the Consequences of Adolescent Alcohol Exposure on Prefrontal Cortex Maturation
Sophie Laguesse, Ph.D., University of Liege, Belgium
- S17 Network-Based Therapies: A Genomic Approach to Identify Medications for Alcohol Use Disorder
Laura Ferguson, University of Texas at Austin
- S18 Role of Prefrontal Cortex Gsk3b as a New Therapeutic Target for Alcohol Use Disorder
Michael Miles, Ph.D., Virginia Commonwealth University

- S19 Alcohol Inhibits Glycolysis in the Nucleus Accumbens of Mice Through mTORC1-Dependent Repression of Translation
Dorit Ron, Ph.D., University of California, San Francisco

3:00 p.m. – 4:30 p.m.

Symposium V

Salone Volterra

Impact of chronic alcohol exposure and stress on behavior flexibility
Chair: L. Judson Chandler, Ph.D., Medical University of South Carolina

- S20 Adolescent Intermittent Ethanol Exposure Alters Passive and Active Avoidance Behaviors in Adulthood
L. Judson Chandler, Ph.D., Medical University of South Carolina
- S21 Impaired Regulation of Orbitofrontal Cortex Activity in Alcohol-Dependence
John Woodward, Ph.D., Medical University of South Carolina
- S22 Effect of adolescent stress exposure on monoaminergic transmission in subcortical areas and compulsive behaviors
Gavin Vaughn, Ph.D., Binghamton University
- S23 Impact of Chronic Alcohol and Stress on Prefrontal Cortex Function and Control of Behavior
David Moorman, Ph.D., University of Massachusetts Amherst

4:30 p.m. – 5:30 p.m.

Poster Session & Snacks

Sala Dante

- P93 The histone methyltransferase G9a regulates stress-potentiated ethanol drinking.
Ethan M. Anderson, Ph.D., Medical University of South Carolina
- P94 Recruitment of neuronal ensembles linked to compulsive ethanol seeking in rats with a history of negative reinforcement by ethanol
Hermina Nedeleescu, Ph.D., The Scripps Research Institute
- P95 Intermittent social isolation during adolescence increases EtOH preference in males and females and alters irritability-like behaviors and synaptic transmission in the CeA of adult males.
Valentina Vozella, Ph.D., The Scripps Research Institute
- P96 Bodily confusion: The differentiation between emotional and physiological states in student alcohol users
Aleksandra Herman, Ph.D., Nencki Institute of Experimental Biology, Poland
- P97 A common mechanism for excessive drug seeking and impaired behavioral flexibility in alcoholism
Marcus Meinhardt, Ph.D., University of Heidelberg, Germany
- P98 Intranasal oxytocin on alcohol withdrawal, craving and relapse: A double-blind RCT
Katrine Melby, M.D., Ph.D., St. Olav University Hospital, Norway
- P99 Graded regional cerebellar volume deficits in adolescents and adults with Fetal Alcohol Effect (FAE) and Fetal Alcohol Syndrome (FAS)
Edward Riley, Ph.D., San Diego State University
- P100 Prenatal alcohol and/or cannabinoid exposure in mice leads to sex-specific motor impairments and ethanol self-administration in adult offspring.
Sara Rouzer, Ph.D., Texas A&M, College of Medicine
- P101 Resilience in alcohol use disorder: associations with negative emotionality, personality, and disorder severity
Melanie Schwandt, Ph.D., National Institutes of Health
- P102 The role of Central Amygdala Neurotensin Neurons in Ethanol-Associated and Pain Behaviors
Graydon Buchanan Gereau, Ph.D., UNC School of Medicine
- P103 Sex differences in kappa opioid receptor control over monoaminergic transmission along the NAc shell rostral-caudal axis
Gavin Vaughan, Ph.D., Binghamton University
- P104 Generalized habitual tendencies in alcohol dependent rats
Francesco Giannone, Ph.D., Central Institute of Mental Health, Germany
- P105 A role for interleukin-33 in the neuroimmunophysiology of excessive alcohol intake
Regina Mangieri, Ph.D., University of Texas at Austin



- P106 Corticolimbic circuitry and the role of endocannabinoids in adaptive stress coping behavior and implications for subsequent alcohol drinking
Laura Ornelas, Ph.D., University of North Carolina at Chapel Hill
- P107 PPAR α /CB1 Receptor Dual Ligands as a Novel Therapy for Alcohol Use Disorder: Evaluation in Preclinical Rat Models
Fernando Rodriguez de Fonseca, Ph.D., Instituto IBIMA de Málaga, Spain
- P108 Ethanol effects on dopaminergic signaling in the dorsal striatum: interactions with acetylcholine
Armando Salinas, Ph.D., Louisiana State University Health Sciences Center
- P109 Chemogenetic inhibition of the orbitofrontal cortex decreases compulsive alcohol self-administration in rats
Li Xu, Ph.D., Linköping University, Sweden
- P110 Alcohol and orexin effects on VTA-CeA circuitry and anxiety-like behavior in rats
Elizabeth Avegno, Ph.D., Louisiana State University Health Sciences Center

Wednesday, May 17, 2023

8:00 a.m. - 9:00 a.m.

Data Blitz

Salone Volterra

Co-Chairs: Sara Jo Nixon, Ph.D., University of Florida

Giancarlo Colombo, Ph.D., University of Camerino, Italy

- D24 Anatomical, Functional, and Transcriptional Organization of Cortical Circuits Mediating Compulsive Drinking
Cody Siciliano, Ph.D., Vanderbilt University

- D25 Amygdala-cortical circuit determinants of social isolation-induced alcohol consumption
Reesha Patel, Ph.D., Salk Institute
- D26 Positive Allosteric Modulation of GABAB Receptors Restores Altered GABA-Signaling in Central Amygdala Associated with Pathological Alcohol Choice
Eric Augier, Ph.D., Linköping University, Sweden
- D27 VIP treatment for the prefrontal cortex: drinking-induced adaptations to disinhibitory interneurons
Max Joffe, Ph.D., University of Pittsburgh
- D28 Sex Differences: Alcohol and Related Behaviors
Zoe McElligott, Ph.D., University of North Carolina at Chapel Hill
- D29 Activation of GABAB receptors in central amygdala attenuates activity of PKC δ +neurons and suppresses punishment-resistant alcohol self-administration in rats
Esi Domi, Ph.D., University of Camerino, Italy

9:00 a.m. – 10:30 a.m.

Symposium VI

Salone Volterra

Alcohol-Related Stress and Neuroimmune Mechanisms: Translational Convergence of Epigenetics and Cell-Type Specificity

Chair: Dayne Mayfield, Ph.D., University of Texas at Austin

Discussant: Wolfgang Sommer, Ph.D., Central Institute of Mental Health, Mannheim

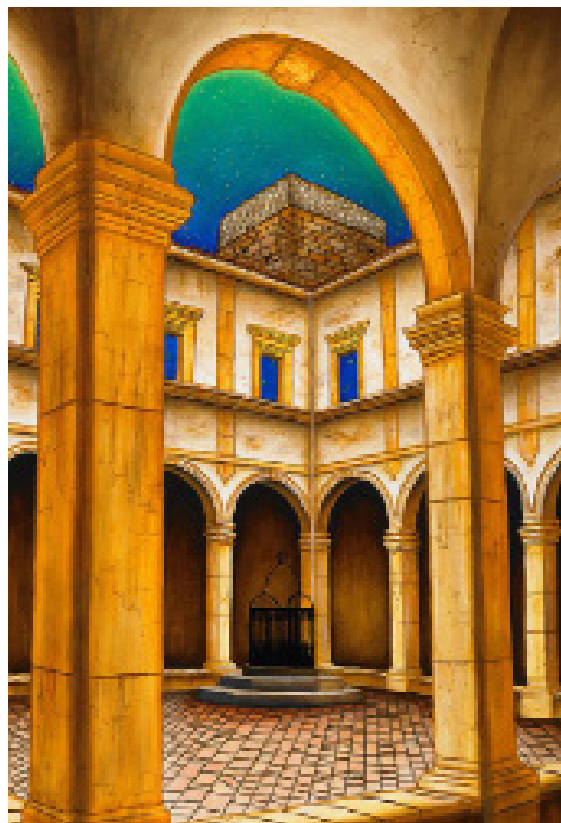
- S30 Alterations in the proteome of extracellular vesicles secreted by neural stem cells as a means for intercellular transfer of stress signals following developmental ethanol exposure
Rajesh Miranda, Ph.D., Texas A&M College of Medicine
- S31 Role of the epigenetic enzyme EZH2 in compulsive alcohol intake
Estelle Barbier, Ph.D., Linköping University
- S32 Dysregulation of the histone demethylase KDM6B in alcohol dependence is associated with epigenetic regulation of inflammatory signaling pathways
Claes Wahlestedt, M.D., Ph.D., University of Miami Health System
- S33 Single cell transcriptome profiling of human and mouse brain reveals enrichment of alcohol-related immune genes in astrocytes and microglia
Nihal Salem., Ph.D., University of Texas at Austin
- S34 Convergent Evidence in Alcohol-Dependent Humans and Rats of Progressive Microstructural Damage, Altered Extracellular Space Geometry and Dopamine Diffusion in Early Abstinence
Silvia DeSantis, Ph.D., Instituto Neurociencias Alicante, Spain

10:30 a.m. – 11:00 a.m.

Coffee Break

Foyer Bar





11:00 a.m. – 12:30 p.m.

Clinical Treatments Roundtable

Chair: Barbara J. Mason, Ph.D., The Scripps Research Institute

Salone Volterra

- R35 New insights on the link between stress and alcohol craving in real-life situations: Implications for medication development
Robert Miranda, Ph.D., Brown University
- R35 Reduction in World Health Organization drinking risk levels and associated reductions in stress in an alcohol clinical trial
Katie Witkiewitz, Ph.D., University of New Mexico
- R35 Prosocial compounds for treating alcohol and other substance use disorders
Michael Bowen, Ph.D., University of Sydney and Kinaxis Therapeutics, Australia
- R35 Ketamine assisted therapy in the treatment of alcohol use disorder
Celia Morgan, Ph.D., University of Exeter and Awakn Life Sciences, Exeter, UK
- R35 A randomized, controlled trial of deep brain stimulation in treatment-resistant patients with alcohol use disorder
Karl Mann, Ph.D., Central Institute of Mental Health, Mannheim, Germany
- R35 Targeting the gut-microbioma-brain axis in subjects with alcoholic hepatic encephalopathy and other neurodegenerative disorders
Emilio Merlo Pich, M.D., Alfasigma, Zürich, Switzerland

12:30 p.m. – 1:30 p.m.

Light Refreshments

Foyer Bar

1:30 p.m. – 3:00 p.m.

Symposium VII

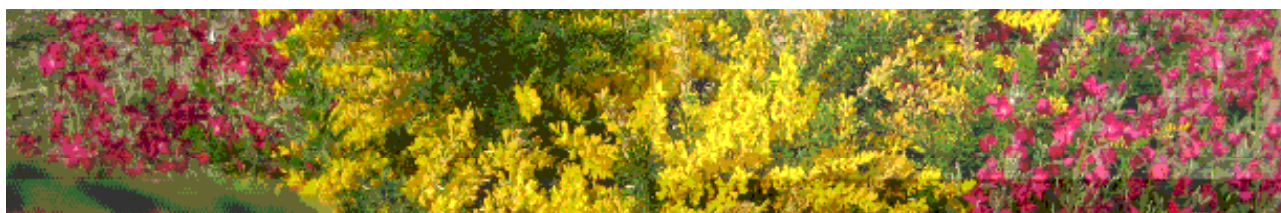
Circuitry & Chemistry of Alcohol-Seeking: Interface with Stressors

Chair: Andrew Lawrence, Ph.D., Florey Institute of Neuroscience and Mental Health

Discussant: Koji Teshima, Ph.D., Mitsubishi Tanabe Pharma Corporation

Salone Volterra

- S36 The Edinger-Westphal nucleus: sex differences in midbrain neuropeptide control of binge drinking
Leigh Walker, Ph.D., Florey Institute of Neuroscience and Mental Health
- S37 Impact of stress exposure on alcohol interoceptive effects: mechanisms and considerations for alcohol drinking
Joyce Besheer, Ph.D., UNC School of Medicine
- S38 Genetically Selected Marchigian Sardinian Alcohol Preferring (msP) Rats to Study Excessive Alcohol Drinking Associated with Innate Stress Hypersensitivity: The Role of



- the Nociceptin/Orphanin FQ NOP Receptor System
Roberto Ciccocioppo, Ph.D., University of Camerino, Italy
- S39 Oxytocin Reduces Stress-Induced Alcohol Relapse-Like Behavior in a Mouse Model of AUD-PTSD Comorbidity
Howard Becker, Ph.D., Medical University of South Carolina

1:30 p.m. – 3:00 p.m.

Symposium VIII

Sala Panoramica

The Insula: A Key Contributor at the Intersection of Alcohol and Stress Responses

Chair: Vijay A. Ramchandani, Ph.D., National Institute on Alcohol Abuse and Alcoholism

Co-Chair: Woody Hopf, Ph.D., Indiana University School of Medicine

- S40 Anterior insular cortex firing links initial, sustained, and lick-related encoding during aversion-resistant alcohol consumption
Woody Hopf, Ph.D., Indiana University School of Medicine, presented by Wolfgang Sommer
- S41 Sexually dimorphic role for insular cortex perineuronal nets in aversion-resistant alcohol consumption
Amy Lasek, Ph.D., Virginia Commonwealth University
- S42 An Insular-BNST Circuit Regulates Negative Affect Associated with Stress and Alcohol Abstinence
Samuel W. Centanni, Ph.D., Vanderbilt University
- S43 Binge/heavy and Chronic Alcohol-related Plasticity in Insula Circuits and Relationship to Stress, Pain, Craving and Alcohol Use Outcomes
Rajita Sinha, Ph.D., Yale University School of Medicine

3:00 p.m. – 4:30 p.m.

Symposium IX

Salone Volterra

Molecular actions of stress and alcohol on ion channels

Chair: Paul Slesinger, Ph.D., Icahn School of Medicine at Mount Sinai

- S44 Neurosteroid-alcohol interactions on brain artery function via potassium channels of the BK type
Alejandro Dopico, Ph.D. The University of Tennessee Health Science Center
- S45 Glycine Receptors are Potentiated by Ethanol and Activation of D1 Receptors in the Nucleus Accumbens
Luis Aguayo, Ph.D., University of Concepcion
- S46 Structure-Based Discovery of an Alcohol-Like Activator (GiGA1) of GIRK Channels
Paul Slesinger, Ph.D., Icahn School of Medicine at Mount Sinai
- S47 Structure-Function Studies of Alcohol-Sensitive Ligand-Gated Ion Channels from the Periphery
Rebecca Howard, Ph.D., Stockholm University, Sweden

4:30 p.m. – 5:30 p.m.

Poster Session & Snacks

Sala Dante

- P111 Longitudinal assessment of the effects of cannabidiol over the different stages of addiction in rat models of alcohol use disorder
Michelle Doyle, Ph.D., University of California, San Diego
- P112 Characterizing race differences in emotional face processing and interpersonal distress among individuals with alcohol use disorders
Christian Garcia, Ph.D., University of Florida
- P113 Sex-specific regulation of binge drinking induced social and arousal behaviors by subcortical serotonin 5HT_{2c} receptor-containing neurons
Meghan Flanigan, Ph.D., University of North Carolina, School of Medicine
- P114 Sex differences in plasma fractalkine (CX3CL1) levels in rats exposed to early stress and alcohol
Francisco Javier Pavón Morón, Ph.D., Instituto IBIMA de Málaga, Spain
- P115 Blockade of corticotropin-releasing factor-1 receptors in the infralimbic cortex prevents

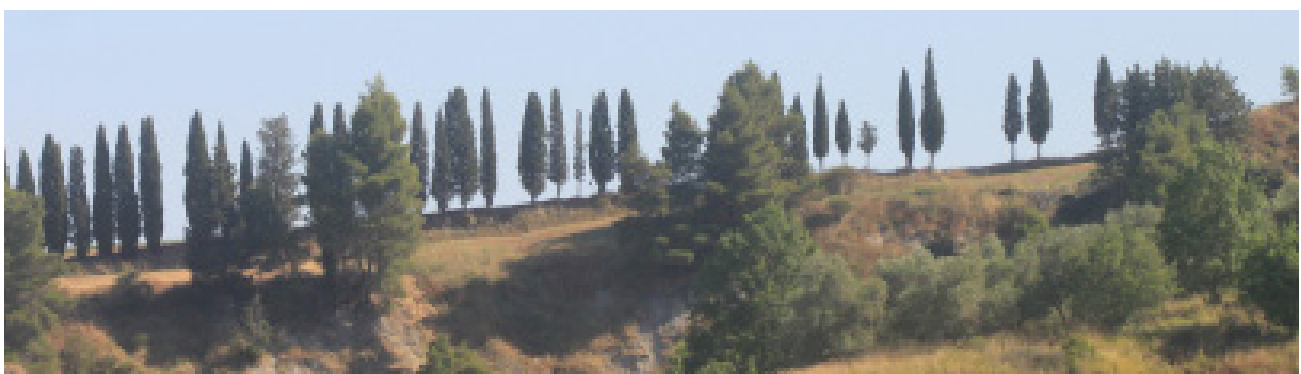
- stress-induced reinstatement of alcohol seeking in male Wistar rats: Evidence of interaction between CRF1 and orexin receptor signaling
Francisco Flores, Ph.D., The Scripps Research Institute
- P116 Alcohol dependence interactions with sex-specific stress-related neuropeptide and alcohol CeA synaptic effects
Dean Kirson, Ph.D., The University of Tennessee Health Science Center
- P117 KCNK13 potassium channels are a novel target for alcohol and mediate the activation of ventral tegmental area neurons
Mark Brodie, Ph.D., University of Illinois at Chicago
- P118 Maternal separation stress increases alcohol intake in the adulthood
Natalia Bertagna, Ph.D., Universidade Federal de São Paulo
- P119 Dysregulation of endocannabinoid signaling is linked to PTSD-like traits in msP rats
Anna Maria Borruto, Ph.D., University of Camerino, Italy
- P120 Neurophysiological correlates of sub-dimensions of alcohol use disorder in rodents
Ana Domi, Ph.D., University of Gothenburg, Sweden
- P121 Altered kynurenine pathway in abstinent patients diagnosed with alcohol use disorders and psychiatric comorbidity
Maria Flores Lopez, Ph.D., UGC Salud Mental. Grupo Neuropsicofarmacología
- P122 Adaptation of the hippocampal and cerebellar GABAAR system to chronic alcohol exposure, and possible interactions with nicotine and CBD.
Nadia McLean, Ph.D., Washington State University
- P123 Family matters: the impact of family history of alcoholism on pain relief from alcohol consumption
Victor Schneider, Ph.D., University of Florida
- P124 The role of central amygdala astrocytes in ethanol dependence
L. Judson Chandler, Ph.D., Medical University of South Carolina
- P125 Acute stress and alcohol exposure during adolescence result in an altered expression of signaling systems associated with emotional behaviors and an adult anxious phenotype
Antonia Serrano, Ph.D., Instituto IBIMA de Málaga, Spain
- P126 Reducing Effect of the Novel Positive Allosteric Modulator of the GABAB Receptor, KK-92A, on Multiple Alcohol-Related Behaviors in Alcohol-Preferring Rats
Giancarlo Colombo, Ph.D., University of Camerino, Italy



- P127 The Small G-Protein Rac1 Promotes Neuroadaptations that Underlie Alcohol Use Disorder
Zach Hoisington, Ph.D., University of California, San Francisco

Thursday, May 18, 2023

- 8:00 a.m. - 9:00 a.m. **Plenary Lecture** *Salone Volterra*
PL2 A Gut (Microbiome) Feeling About Stress and Addiction
John Cryan, Ph.D., University College, Cork, Ireland
- 9:00 a.m. – 10:30 a.m. **Symposium X** *Salone Volterra*
Alcohol and Stress-Related Alterations in Cortico-Basal Ganglia Circuitry and Associated Behaviors: From Mouse to Humans
Chair: Kathleen Grant, Ph.D., Oregon Health and Science University
Discussant: Laura Corbit, Ph.D., University of Toronto, Canada
- S48 Corticostriatal function and risky drinking behavior in humans
Elizabeth Goldfarb, Ph.D., Yale School of Medicine
- S49 Sex Differences in Bias Towards Sensory-Motor Action Patterns Due to Altered Synaptic Transmission in Cortico-Basal Ganglia Circuits in Chronic Alcohol Drinking Monkeys
Verginia C. Cuzon Carlson, Ph.D., Oregon Health and Science University
- S50 Ethanol-Seeking Under Punishment
Andrew Holmes, Ph.D., National Institutes of Health
- S51 Ethanol effects on sensorimotor circuits: To the striatum and beyond
David Lovinger, Ph.D., National Institutes of Health
- 10:30 a.m. – 11:00 a.m. **Coffee Break** *Foyer Bar*
- 11:00 a.m. – 12:30 p.m. **Young Investigator Symposium** *Salone Volterra*
Co-Chairs: Fulton T. Crews, Ph.D., University of North Carolina at Chapel Hill
Antonio Noronha, Ph.D., National Institute on Alcohol Abuse and Alcoholism
- Y52 Neuroimmune and Epigenetic Mechanisms Regulate Adolescent Binge Alcohol-Induced Loss of Basal Forebrain Cholinergic Neurons
Ryan Vetreno, Ph.D., University of North Carolina at Chapel Hill: 2020 Awardee
- Y53 Interleukin-1 Signaling and Alcohol-Induced Cortical Dysfunction
Florence P. Varodayan, Ph.D., Binghamton University: 2020 Awardee
- Y54 Astrocyte Regulation of Stress- and Ethanol Dependence-Induced Changes in Reward Seeking
Jacqueline M. Barker, Ph.D., Drexel University College of Medicine: 2020 Awardee
- Y55 Defining the Transcriptional Landscape for Alcohol Use Disorder
Sean P. Farris, Ph.D., University of Pittsburgh: 2020 Awardee
- Y56 Dysregulation of the Prefrontal Cortical Phosphoproteome During Alcohol Withdrawal
Luis A. Natividad, Ph.D., The University of Texas at Austin: 2020 Awardee
- Y57 Hydrocortisone alters the formation of alcohol-related episodic memories and later drinking





Y58 Elizabeth Goldfarb, Ph.D., Yale School of Medicine: 2023 Awardee
Binge alcohol consumption dampens somatostatin peptide release and signaling in cortical microcircuits in mice
Nikki Crowley, Ph.D., Penn State University: 2023 Awardee

12:30 p.m. – 1:30 p.m.

Light Refreshments

Foyer Bar

1:30 p.m. – 3:00 p.m.

**Symposium XI
Epigenetic Mechanisms of Alcohol Use Disorders**

Salone Volterra

Chair: Subhash C. Pandey, Ph.D., University of Illinois at Chicago

S59 Whole-Genome Approaches Identify Novel Epigenetic Networks in the Amygdala During Alcohol Dependence

Subhash C. Pandey, Ph.D., University of Illinois at Chicago

S60 Profiling Neuronal Epigenomes in a Mouse Model of Alcohol Dependence

Igor Spigelman, Ph.D., University of California, Los Angeles

S61 Cross-Sectional and Longitudinal Genome-Wide DNA Methylation Analysis of the Nonhuman Primate Brain: Insights on Causation

Rita Cervera Juanes, Ph.D., Oregon Health and Science University

S62 Effects of HDAC Inhibitors and HDAC Activators on Ethanol Intake in Rats

Mickael Naassila, Ph.D., Université de Picardie Jules Verne, France

1:30 p.m. – 3:00 p.m.

**Symposium XII
Translational Studies on Alcohol Use in Adolescence: Sleep, Neuroimaging, Drinking and Stress**

Sala Panoramica

Co-Chairs: Cindy L. Ehlers, Ph.D., The Scripps Research Institute

Edith V. Sullivan, Ph.D., Stanford University School of Medicine

Discussant: David Gilder, Ph.D., The Scripps Research Institute

S63 Consequences of Adolescent Drinking on Cortical and Cerebellar Structure

Adolf Pfefferbaum, M.D., Stanford University

- S64 Functional and Structural MRI to Examine Brain Mechanisms for Impulsive Action and Decision Making in Young Adult Binge Drinkers
Theodora Duka, Ph.D., University of Sussex, United Kingdom
- S65 Relations between Sleep and Alcohol Use during Adolescence
Ian Colrain, Ph.D., MRIGlobal
- S66 Neurophysiological Synchrony and Sleep are Both Disrupted in Young Adult Humans and Rats with a History of Adolescent Alcohol Exposure: Neurochemical Mechanisms
Cindy L. Ehlers, Ph.D., The Scripps Research Institute

3:00 p.m. – 4:30 p.m.

Symposium XIII: Sponsored by APS, physiology.org

Salone Volterra

Neuroendocrine Mechanisms of Stress and Alcohol Use Disorder

Chair: Scott Edwards, Ph.D., Louisiana State University Health Sciences Center

Discussant: Patricia Molina, Ph.D., Louisiana State University Health Sciences Center

- S67 Glucocorticoid Regulation of Alcohol Use Disorder-Related Behaviors
Scott Edwards, Ph.D., Louisiana State University Health Sciences Center
- S68 Role of the amygdala oxytocin system in a rat model of alcohol dependence
Brendan Tunstall, Ph.D., University of Tennessee Health Science Center
- S69 Converging Evidence from Rodent and Human Studies on the Role of Spironolactone as a Potential Pharmacotherapy for Alcohol Use Disorder
Mehdi Farokhnia, M.D., National Institutes of Health
- S70 Post-traumatic Stress and Alcohol Use Disorder: Implications of Sex Differences, Central Amygdala Neuropeptide Systems and Other Potential Therapeutic Targets
Bryan Cruz, Ph.D., The Scripps Research Institute

4:30 p.m. – 5:30 p.m.

Poster Session & Snacks

Sala Dante

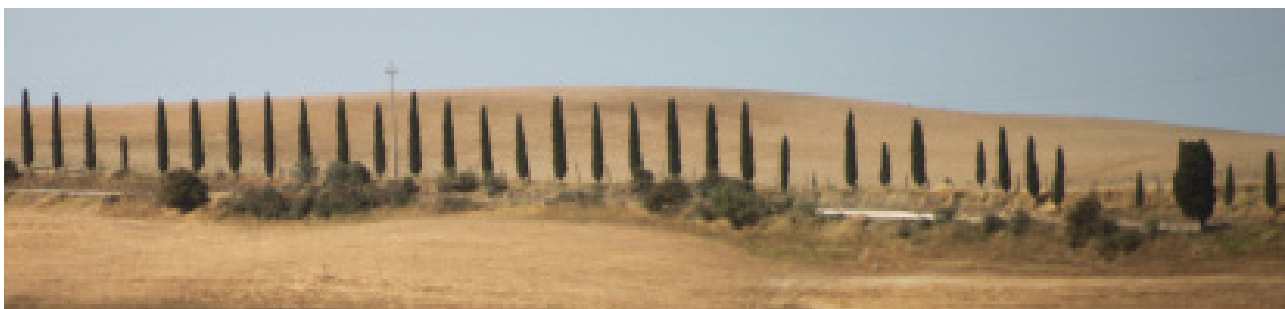
- P128 Progesterone protects against ethanol-induced cerebral artery constriction
Kelsey North, Ph.D., University of Tennessee Health Science Center
- P129 NOP receptor antagonism reduces the firing activity of ventral tegmental area dopaminergic neurons through GABAB mediated mechanisms
Michele Petrella, Ph.D., University of Camerino, Italy
- P130 Investigation of the effects of binge-like ethanol drinking on glutamatergic transmission and excitability of D1R+MSNs in the shell of the nucleus accumbens from male and female mice
Heather Aziz, Ph.D., The University of Texas at Austin
- P131 Effects of a PDE10A inhibitor and pde10a2 deficiency on voluntary alcohol intake in mice
Luisa Bertotto, Ph.D., The Scripps Research Institute
- P132 Impact of chronic ethanol exposure on inhibitory modulation of CRF1-expressing neurons in the mouse ventral bed nucleus of the stria terminalis
Paula Bianchi, Ph.D., The Scripps Research Institute
- P133 Blockade of orexin receptors in the infralimbic cortex prevents stress-induced reinstatement of alcohol-seeking behavior in rats with a history of alcohol dependence
Jessica Illenberg, Ph.D., The Scripps Research Institute
- P134 Alcohol intake, affective state, and pain sensitivity in male and female CRF1-cre transgenic rats.
Sema Quadir, Ph.D., University of North Carolina School of Medicine
- P135 Investigating the role of CRF neurons in the lateral septum
Heyam Saleh, Ph.D. Student, Medical University of South Carolina
- P136 Environmental enrichment during pregnancy: improvement on disruption of maternal behavior and offspring development deficits by ethanol in mice
Priscila Marianno, Ph.D., Universidade de São Paulo
- P137 Environmental enrichment: BDNF epigenetics and voluntary ethanol consumption associated to chronic unpredictable stress
Gabriel Costa, Ph.D., McGill University Medical School, Canada
- P138 Dependence-related escalation of alcohol drinking attenuation by exercise and the role of BDNF-TrkB receptor signaling in prefrontal cortex in C57BL/6J mice
Christina Lebonville, Ph.D., Medical University of South Carolina
- P139 Can bacterial products reach the brain after alcohol binge drinking?
Laura Orío, Ph.D., Universidad Complutense de Madrid, Spain



- P140 The effects of moderate prenatal alcohol exposure on interactions between anxiety-like behavior, ethanol intake, and nociception across development
Sarah Winchester, Ph.D., Binghamton University
- P141 Effects of prenatal alcohol exposure on GABAergic transmission in posterior parietal cortex
Valentina Licheri, Ph.D., University of New Mexico School of Medicine
- P142 Role for BDNF and Oleoylethanolamide (OEA) in cognitive impairment associated with alcohol use disorders in humans and preclinical models
Nerena Requena, Ph.D., Instituto IBIMA de Málaga, Spain
- P143 Mechanism-based mathematical modeling of ethanol and acamprosate effects on the stress circuit chemistry and the functional dynamics of the HPA axis.
Vladana Vukojevic, Ph.D., Karolinska Institutet
- P144 Behavioral impact of optogenetic stimulation of the ventral subiculum to nucleus accumbens shell or basolateral amygdala to the nucleus accumbens core on the Maladaptive Alcohol Self-Administration Task
Hannah Carlson, Ph.D. Student, Wake Forest University Health Sciences
- P145 In vivo imaging of brain cortisol regulation in alcohol use disorder
Terril Verplaetse, Ph.D., Yale School of Medicine

Friday, May 19, 2023

- 8:00 a.m. - 9:30 a.m. **Symposium XIV** *Salone Volterra*
Bottoms Up! Lower-Order Brain Circuits in Maladaptive Plasticity Associated with Alcohol and Stress
Chair: Melissa Herman, Ph.D., University of North Carolina at Chapel Hill
- S71 Alcohol modulates amygdala network states governing valence processing
Jamie Maguire, Ph.D., Tufts University School of Medicine
- S72 The PVN under the Influence
Christopher Dayas, Ph.D., University of Newcastle, Australia
- S73 Brainstem circuitry in alcohol-induced plasticity and drinking behavior
Melissa Herman, Ph.D., University of North Carolina at Chapel Hill
- S74 Olfactory bulb astrocytes control social transmission of stress and its cognitive consequences
Paula Gomez-Sotres, INSERM, Bordeaux, France
- 9:30 a.m. – 11:00 a.m. **Symposium XV** *Salone Volterra*
Sex-Dependent Pathways in Stress and Alcohol-Related Outcomes
Co-Chairs: Rebecca Shansky, Ph.D., Northeastern University
Heather Richardson, Ph.D., University of Massachusetts, Amherst
Discussant: Heather Richardson, Ph.D., University of Massachusetts, Amherst
- S75 Sex-Dependent Plasticity in a Thalamo-Limbic Circuit for Binge Drinking
Kristen Pleil, Ph.D. Cornell University
- S76 Deciphering Sex-Dependent Alcohol Addiction-Associated Gene Regulation Changes
Rainer Spanagel, Ph.D., Central Institute of Mental Health, Mannheim, Germany
- S77 Sex Differences in Stress-Induced Prefrontal Circuit Plasticity
Rebecca Shansky, Ph.D., Northeastern University
- S78 Sex Differences in The Potentiation of Cue-Induced Alcohol Seeking by Stress
Mary Torregrossa, Ph.D., University of Pittsburgh
- 11:00 a.m. – 11:30 a.m. **Coffee Break** *Foyer Bar*
- 11:30 a.m. – 1:00 p.m. **Symposium XVI** *Salone Volterra*
Intersectional Neurobiology of Addiction, Pain & Negative Affect
Chair: Nicholas Gilpin, Ph.D., LSU Health Sciences Center
- S79 Oxycodone self-administration potentiates transmission at glutamatergic ventral pallidal to habenula synapses
Meaghan Creed, Ph.D., Washington University
- S80 Pain promotes anxiety-related behaviors, opioid misuse and alcohol relapse: Involve ment of a dynorphinergic projection from central amygdala to nucleus accumbens
Lucia Hipolito, Ph.D., University of Valencia, Spain
- S81 Adolescent alcohol exposure leads to lasting hyperalgesia via amygdala circuit changes
Nicholas Gilpin, Ph.D., LSU Health Sciences Center
- S82 Examining BNST dopamine in models of pain and alcohol use disorder
Thomas Kash, Ph.D., University of North Carolina at Chapel Hill
- 1:00 p.m. – 2:00 p.m. **Light Refreshments** *Foyer Bar*





2:00 p.m. – 3:30 p.m.

Symposium XVII

Salone Volterra

Lo Sforzo: Stress Peptide Neurocircuitry Contributions to Affective Behavior

Co-Chairs: *William Giardino, Ph.D., Stanford University School of Medicine*

Lara S. Hwa, Ph.D., University of North Carolina School of Medicine

- S83 Extended Amygdala Neuropeptide Circuit Mechanisms Driving Emotional Arousal and Alcohol Addiction
William Giardino, Ph.D., Stanford University School of Medicine
- S84 Behavioral disturbances of emotionality and alcohol drinking as a result of social hierarchy
Lara S. Hwa, Ph.D., University of North Carolina School of Medicine
- S85 The Role of Microglia in The Sculpting of Developing Stress Circuits by Early-Life Adversity
Jessica Bolton, Ph.D., Georgia State University
- S86 Differential control of alcohol consumption by neuronal subpopulations of the mouse parasubthalamic nucleus
Jeffery Dunning, Ph.D., The Scripps Research Institute
- S87 Dorsal Raphe glutamatergic inputs to VTA and cocaine-seeking behavior
Marisela Morales, Ph.D., National Institutes of Health

3:30 p.m. – 5:00 p.m.

Symposium XVIII

Salone Volterra

Targeting Stress Mechanisms and Negative Reinforcement to Treat Alcohol Use Disorder

Co-Chairs: *Hongwu Li, Ph.D., University of Camerino, Italy*

Roberto Ciccocioppo, Ph.D., University of Camerino, Italy

Discussant: *Angela Ozburn, Ph.D., Oregon Health & Science University*

- S88 Bidirectional relationship between alcohol exposure and sensitivity to social stress
Jesse Schank, Ph.D., University of Georgia
- S89 Neural Circuit from Ventral Tegmental Area to Amygdala Mediates Approach-Avoidance Behavior and its Regulation by Stress
Ming-Hu Han, Ph.D., Icahn School of Medicine at Mount Sinai
- S90 Comorbid Anxiety and Heightened Stress Response are Associated with Excessive Alcohol Intake in Male and Female Genetically Selected Marchigian Sardinian Alcohol Preferring Rats
Nazzareno Cannella, Ph.D., University of Camerino, Italy
- S91 Towards Personalized Treatments for Alcohol Use Disorder: a Focus on $\alpha 1$ -blockade
Carolina Haass-Koffler, Pharm.D., Brown University
- S92 Reward Representation in mPFC Neuronal Networks and Effects of Heavy Alcohol Exposure
Wolfgang Sommer, Ph.D., Central Institute of Mental Health, Mannheim

6:30 p.m. – 10:00 p.m.

Closing Dinner

Ristorante Molino D'Era

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