25th International Symposium on Regulatory Peptides

RegPep25

American University

Washington D. C.

June 23-27, 2025

International Regulatory Peptide Society Inc.

June 23 -27, 2025, Washington D. C.

PROGRAM/PROJECT DESCRIPTION

The International Regulatory Peptide Society (IRPS) is non-profit membership organization, and the only international learned society focused on regulatory peptides in systems biology, with goals that include enhancing diversity and opportunities for under-represented groups, promoting best practice in biomedical translational sciences, and providing networking and mentoring opportunities.

The IRPS is legally incorporated both in Maryland, USA as a 501(c)3 nonprofit organization and a registered nonprofit civil association in Mexico City, Mexico, dedicated to education, advancing scientific knowledge and international collaboration in the field of regulatory peptides in systems biology. The IRPS is a coalition of basic and applied scientists and scientist-physicians who are committed to accelerating progress in the understanding of regulatory peptide function in physiology and disease, and the creation of a 'virtual pipeline' that links new basic information from the research sector, new capabilities from the industrial sector, and new approaches to patient treatment from the clinical domain. The Society consists of 148 members of 23 nationalities.

RegPep25 is the official name of the upcoming (25th) biennial International Symposium on Regulatory Peptides organized by the IRPS and to be held in Washington DC, June 23 - 27, 2025 at American University. The scope and purpose of the biennial meeting is described at our website regpep.org along with information about dates, venue, conference proceedings and photo galleries of previous meetings. In this international learned society, there are twenty Distinguished Members (regpep.org) who have pioneered discoveries about regulatory peptides—their mechanisms of actions in systems biology, and their potential for translation to medicine and therapeutic applications. A hybrid pre-RegPep25 event is being held for June 23rd morning: *An eNcounter with Five Generations of Regulatory Peptide Researchers, in celebration of the 50th Anniversary of the RegPep Biennial Conferences*, which consist in plenary talks, round tables with Peptide Pioneers and video clips of IRPS distinguished members who cannot join in person.

The biennial RegPep meeting makes regulatory peptide knowledge and its application a two-way translational street uniting basic, clinical and applied scientists in a common effort to extend the promise of regulatory peptides from current astonishing progress in treatment of diabetes and obesity to treatment for addictive, neurodegenerative, neuropsychiatric, and metabolic disorders, and cancer.

Our World Congress serves as a global platform for leading researchers, experts, and professionals and young investigators, students, to come together, share inspirations and groundbreaking discoveries, and foster innovative solutions that have a profound impact on healthcare and scientific advancements.

International Regulatory Peptide Society Incorporated

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regpep.org

RegPep25, June 23 -27, 2025, Washington D. C.

Program Organizing Committee (POC)
IRPS Executive Committee

Meeting organizers:

Colin Saldanha
Director, Center of Neuroscience and Behavior (CNB)
American University, Washington D. C., USA

Limei Zhang
President of the IRPS

Lee Eiden
Treasurer of the IRPS

Terry Davidson
Past-Director of CNB and RegPep25 Honorary Co-Chair

IRPS Trustees

Gareth Leng (UK/France)
Andrew Gundlach (Australia)
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Program committee members

Tom Cunningham (USA)
Geert deVries (USA)
Árpád Dobolyi (Hungary)
Ki Goosens (USA)
Dave Grattan (New Zealand)
Vito Hernandez (*ex-officio*, Secretary of the IRPS, México)
Marisela Morales (USA)
Bill Wisden (UK)
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Plenary lecturers

Michael Greenberg
Harvard University, USA, **2023 Brain Prize laureate**
Sensory experience-dependent regulation of neuropeptides in learning and memory

Vincent Prevot
Director, Lille Neuroscience & Cognition, INSERM, University of Lille, France
A role for GnRH in the control of cognition··· and more?

Dayu Lin
New York University, USA
The neural mechanisms underlying the rise and fall of maternal aggression

Gina Yosten (American Physiological Society sponsored lecturer)
St Louis University
Spatial Molecular Imaging of Human Tissues: Implications for Peptide Function in Human Disease

Scott Kanoski
University of Southern California, USA
Peptide control of energy balance

Colin Saldanha
Host Institution sponsored lecture for RegPep25
Director, Center for Neuroscience and Behavior, American University

A day in the life: Peptides and the integration of biological function

Dick Swaab
The Netherland Institute of Neuroscience

Dead brains tell lively stories
(about progress from postmortem work)

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RegPep25 special event I:

Five Generations of Research Celebrating 50 years of RegPep

June 23rd, 2025 (an hybrid event)

- **Pre-confirmed in-person panelists:**
- **Greti Aguilera*, Ruud Buijs, Luis deLecea, Patricia Joseph-Bravo, Willis Samson, Dick Swaab**
- **(*Moderator)**

RegPep25 special event II:

RegPep25 special event II:
50th Anniversary Keynote Symposia

featuring six eminent speakers exploring topics with historical resonance and broader scopes

Confirmed Speakers:

- William Wisden, Imperial College, London, UK
  The impact of molecular neurobiology on modern neuroendocrinology
- Luis de Lecea, Stanford School of Medicine, USA
  Neuropeptides and control of behavioral states
- Nora Volkow, NIDA, NIH, USA
  Harnessing GLP-1 agonists to understand and treat Addictions
- Sung Han, Salk Institute, USA
  Peptidergic transmission in neural circuit function through presynaptic neuropeptide sensors and silencers
- Susan Wray, NIH, USA
  LHRH Secretion: Why So many modulators?
- David Grattan, Otago University, New Zealand
  What Prolactin teaches us about the evolution of peptide physiology

RegPep25 special event III:

Peer Review and Scientific Publication: an Honest Discussion

Panelists include current and past EICs of JNE and other society- operated journals

RegPep25, June 23 -27, 2025, Washington D. C.

List of current confirmed speakers, panelists and chairs (alphabetic order)

1. **Irina Agoulnik**, University of So uth Florida Morsani College of Medicine, Florida, USA. INSL3 and its receptor RXFP2
2. **Greti Aguilera,** NIH Emeritus, USA**.** TBC
3. **Lukas Anneser.** Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland. There are other fish in the sea: Social density encoding by the neuropeptide PTH2.
4. **Arun Anantharaman,** University of Toledo, Ohio. USA. Mechanisms for PACAP-induced depolarization leading to chromaffin cell secretion
5. **Lukas Anneser**, Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland. There are other fish in the sea: Social density encoding by the neuropeptide Pth2
6. **Aimin Bao**, Zhejiang University, Hangzhou, China. The role of oxytocin in bipolar disorder: from animal model to postmortem human brain study
7. **Jessica Barson,** Department of Neurobiology and Anatomy, College of Medicine Drexel University. **Philadelphia, Pennsylvania, USA**. Pituitary adenylate cyclase-activating polypeptide (PACAP) in the paraventricular nucleus of the thalamus: Relationship with ethanol drinking and dependence
8. **Denise Belsham,** Temerty Faculty of Medicine, University of Toronto, Canada. NPY - inflammation and miRNAs.
9. **Ross Bathgate**, Florey Institute, University of Melbourne, Victoria, Australia. Therapeutic targeting of the relaxin receptor, RXFP1
10. **Anna Blasiak,** Jagiellonian University, Krakow, Poland. Interplay of relaxin-3 and oxytocin systems in shaping ventral hippocampus neuronal activity - possible involvement in anxiety control in rat and human
11. **Ruud Buijs,** UNAM, México. Vasopressin as neurotransmitter of the biological clock signals the rest period in physiology and activity

12. **Sara Calafate**, VIB Center for Brain & Disease Research, Leuven. Belgium. Early alterations in the MCH system link aberrant neuronal activity and sleep disturbances in a mouse model of Alzheimer's disease
13. **Yarimar Carrasquillo,** NCCIH, NIH, USA. Neuropeptides contributing to pain processing in the parabrachioamygdaloid pathway
14. **Jean-Louis Charli,** Institute of Biotechnology, UNAM, Mexico**.** The TRH degrading ectopeptidase and energy homeostasis.
15. **Zhou-Feng Chen,** ShenZhen Bay Laboratory, China**.** Neuropeptide coding of Itch, pain and touch
16. **Xiaoke Chen**, Stanford University, Stanford, California. USA. Descending peptidergic control of chronic mechanical pain
17. **Tom Cunningham**, UNTHSC. USA. Sex Differences in Vasopressin in an animal model of hyponatremia
18. **Joanna Dabrowska**, Rosalind Franklin University of Medicine and Science, North Chicago, IL, USA. The roles of vasopressin and oxytocin in the integration of interoceptive signals and fear memory formation in the extended amygdala.
19. **Annette de Kloet**, Georgia State University, USA. Central Angiotensin pathways and Neuroendocrine function
20. **Luis de Lecea,** Stanford University, USA**.** TBC
21. **Geert de Vries,** Georgia State University**,** USA, TBC
22. **Eugene Dimitrov**, Chicago Medical School, Rosalind Franklin University, North Chicago, IL. USA. NPY signaling in the medial prefrontal cortex (PFC) modulates sex differences in behavioral responses to mild stress
23. **Arpad Dobolyi,** Eotvos Lorand University, Budapest, Hungary. Amylin in affiliative social behaviors
24. **Lee E. Eiden.** NIMH, NIH. Chair
25. **Lucila K. Elias,** Faculty of Medicine, Universidade de São Paulo, Ribeirão Preto, São Paulo. Brazil. Neuroendocrine regulation of energy homeostasis
26. **Dora Fanni,** Semmelweis University, Hungary. SN-seq of the Human Arcuate Nucleus: Insights into PTH2 and Other Neuropeptide Regulation.
27. **Francesco Ferraguti**, Medical University of Innsbruck, Innsbruck. Austria. TBA

28. **Tatiana Fiordelisio**, UNAM, México. The evolution of the pituitary gland
29. **John Furness***,* Florey Institute, University of Melbourne, Victoria. Australia. RXFP4 and INSL4, physiological roles and therapeutic implications
30. **Zhihua Gao**, Zhejiang University, Hangzhou. China. The role of oxytocin in emotional control
31. **María A. García-Robles,** Universidad de Concepción, Concepción, Chile. Neurobiology of glia-neuron interactions in the hypothalamus: diets: feeding behavior and neurogenesis.
32. **Mario Gil**, Institute of Neuroscience, Uni. Texas, UTRGV, USA. Sexual behavior and neuropeptide receptors
33. **Andrea Godino,** University of Córdoba, Argentina. Early life programming of osmoregulatory responses with an emphasis on vasopressin-angiotensin system
34. **Sarah Gray,** Division of Medical Sciences, University of Northern British Columbia, Canada. PACAP in peripheral ganglia and role in the regulation of metabolism
35. **Greenberg, Michael.** Harvard University, USA. Sensory experience-dependent regulation of neuropeptides in learning and memory
36. **Norbert Hajos**, Indiana University Bloomington, IN, USA. VIP-containing midbrain input to central amygdala controls contextual fear memory formation
37. **Hala Harony-Nicolas**. Icahn School of Medicine at Mount Sinai, New York City, USA. Brain circuits of social behavior with a focus on social recognition memory and the role of oxytocin on neuronal activity and behavior
38. **Sung Han**, Salk Institute, La Jolla, California, USA. Revealing the role of peptidergic transmission in neural circuit function through presynaptic neuropeptide sensors and silencers
39. **Vito Hernandez**, National Autonomous University of Mexico, UNAM, Mexico. ACE2 expression in rat brain: Implications for COVID-19 associated neurological manifestations.
40. **Hiroe Hu,** Experimental Therapeputics and Pathophysiology Branch, National Institute of Mental Health, NIH, Bethesda, Maryland, USAArginine vasopressin and mood disorders

41. **Sunny Jiang,** NIMH-IRP, NIH, USA. PACAP-dependent IEG induction in endocrine and behavioral stress responses-implications for neuropeptide-specific information transmission at CNS synapses.
42. **Patricia Joseph-Bravo,** Institute of Biotechnology, UNAM, Cuernavaca, Mexico. TRH and the thyroid axis are regulated by energy demands as mild food restriction, cold, exercise, and stress, in a sex dependent manner.
43. **Scott Kanoski,** University of Southern California, CA, USA. Peptide control of energy balance.
44. **Martin J. Kelly**, Oregon Health & Science University, Portland, Oregon, USA. Neurokinin B and dynorphin drive synchronization of arcuate kisspeptin neurons and pulse generator activity
45. **Eric G. Krause**, Georgia State University, USA. The integration of interoceptive signals and behavioral responses via oxytocin receptors.
46. **Marc Landry**, University of Bordeaux, IMN, CNRS UMR 5293, Bordeaux, France. Analgesic effects of RXFP3 signaling in mouse models of chronic pain.
47. **Eric Lazartigues**, Louisiana State University Health Science Center, LA, USA. miRNA targeting for the renin-angiotensin system.
48. **Michael Lehman**, Kent State University, Ohio. USA. KNDy neurons of the hypothalamus: an update of their roles in health and disease
49. **Mary Lee**, Veteran's Administration, Washington D.C. USA. Oxytocin as a potential treatment for substance use disorders: translational evidence.
50. **Andras Leko**, Semmelweis University, Budapest, Hungary; National Institute on Drug Abuse, Baltimore, MD, USA. Sexually dimorphic effects of GHSR in diet-induced obesity.
51. **Dayu Lin.** NYU, USA. Expanding understanding of hypothalamic peptides in the control of social interaction.
52. **Jing Lu**, Zhejiang University, Hangzhou. USA. Hypocretin-1/hypocretin receptor 1 regulates neuroplasticity and cognitive function through hippocampal lactate homeostasis in depressed model.
53. **Sushil Mahata,** Department of Medicine, University of California San Diego, La Jolla, California, USA, USA. Cognitive functions for chromogranin-derived peptides

54. **Juan Marugan,** National Institutes of Health, Rockville, MD, USA. Early Translation Branch, National Center for Advancing Translational Sciences. TBA
55. **Paul J. Marvar**, George Washington University, Washington DC, USA. The Brain Angiotensin System: Connecting Cognition, Stress, and Cardiovascular Disease**.**
56. **Robert Millar**, University of Pretoria, South Africa. Rescue of function of mutant peptide GPCRs in the HPG axis with small molecules: a more viable therapy than gene editing
57. **Francisco E. Olucha-Bordonau**, UP Medicina, Universitat Jaume I, Castellón and isciii-CIBERsam, Spain. Connectivity of relaxin-3 projections related to cognitive and emotional processes.
58. **Luis Paiva**, Pontificia Universidad Catolica de Chile, Santiago. The Nerve Growth Factor (NGF) as a Modulator of Reproductive and Neuroendocrine Peptides.
59. **Vincent Prevot,** University of Lille, INSERM, France. A role for GnRH in the control of cognition… and more?
60. **Gina Puska**, University of Veterinary Medicine Budapest, Budapest, Hungary. PTH2 (TIP39) as a maternal neuropeptide
61. **Colin Saldanha.** Center for Neuroscience and Behavior, American University. A day in the life: Peptides and the integration of biological function
62. **Willis Samson**. St. Louis University, USA. EIC-Peer review panel
63. **Jason Rihel**, University College of London, UK. Zebrafish as a model system to study role of galanin in regulating sleep homeostasis.
64. **Claudia Schmuckermair**, Medical University of Innsbruck, Innsbruck. Austria. Control of salience detection by VIP-containing insular interneurons: implications for anxiety in Autism Spectrum Disorders
65. **Javier Stern**, Georgia State University. Microglia contribute to altered vasopressin-mediated neurovascular coupling in the hypothalamus of heart failure rats
66. **Dick Swaab.** Netherlands Institute of Neuroscience, The Netherlands. Dead brains tell lively stories
67. **Hugo Tejeda**, NIMH-IRP, NIH. USA. Prefrontal cortical neuropeptidergic control of threat processing and circuit function
68. **Kyoko Tossell**, Imperial College London. U.K. Role of prefrontal cortex somatostatin neurons directing top down control of sleep preparatory behaviour and sleep

69. **Ted B. Usdin**, National Institute of Mental Health, NIH, Bethesda, USA. Discovery and initial characterization of the PTH2 (TIP39) neuropeptide system
70. **Leandro F Vendruscolo**, National Institute on Drug Abuse, Baltimore, Maryland. USA. Sex differences in the role of neuropeptides on opioid addiction-like behaviors
71. **Bill Wisden,** Imperial College, UK. The impact of molecular neurobiology in modern neuroendocrinology
72. **Susan Wray**, NIH/NINDS, Bethesda, Maryland, USA. Regulation of GnRH neuronal activity – why so many modulators?
73. **Lei Xiao.** Fudan University, Shanghai, China. Diversity and complexity of the hypothalamic oxytocin system in neurons, circuits and functions
74. **Wen Xu,** NIMH-IRP, Bethesda, Maryland. USA. Family B1 GPCR signaling pathways for stimulus-secretion-synthesis
75. **Gina Yosten.** St. Louis University. Physiological and pharmacological deorphanization of peptide ligands and their receptors
76. **Mario Zetter**, La Salle University, Mexico. Morphological signatures of hypothalamic peptidergic neuronal migration and neurogenesis in adulthood: molecular mechanisms and functional implications
77. **Limei Zhang**, Department of Physiology, UNAM, México. Distinct peptidergic synaptic features in subcortical structure