PANS
Pan American Neuroendocrine Society

Dear PANS Community,

As we are approaching the summer months in the Northern hemisphere and the winter ones in the Southern hemisphere, we are reminded not of our differences, but of what unites us in this community of science focused on neuroendocrinology. Because this field has expanded so much in many different areas, many of you will head off to favorite meetings that can now resume in person sessions. Some of these excellent meetings will happen next month in Scotland including the Regulatory Peptides meeting in Stirling or the Kisspeptin and ICN meetings in Glasgow. For those of you who are going, we wish you safe travels (and that you find your suitcase…) and for those of you who are planning to keep the fort, we hope you can enjoy our upcoming online activities planned for PANS members and friends outlined in this newsletter with details on the PANS website (paneuroendo.com).

- PANS Social Event (https://paneuroendo.com/event/pans-social-event-at-icn/) on Saturday, August 6th at ICN.
- visit posters presented by our PANS travel awardees (see pages 7-10) at ICN.
- PANS plenary lecture at ICN, given by Dr. Ursula Kaiser on Monday, August 8th entitled “Insights into the development of the neural pathways regulating fertility from studies of central precocious puberty” (https://icn2022.org/plenary-speakers/).
- PANS Trainee Workshop at ICN as well as the upcoming virtual symposium (https://paneuroendo.com/seminars/).

We will be happy to welcome all members to our next PANS meeting planned in South America in the very near future. Keep posted for more information about this on our website and in the next Newsletter. Please help us grow our scientific community of Neuroendocrinology!

- PANS Communications Committee

Kellie Breen Church, Carolina Escobar,
Renata Frazão, Claire-Dominique Walker

Meet the Pans president

Dr. Michael N Lehman

Can you give us an overview of your professional path to date and to becoming President of the Pan American Neuroendocrine Society? I've always been passionate about research, and from the start was interested in basic discovery about how the brain works and what makes us think, feel, behave the way we do. My interests early on focused on two questions I thought were fundamental to neuroscience: what brain circuits are responsible for reproduction, and what is the neural basis for circadian rhythms. I've been fortunate to have collaborators and students who have enabled me to make meaningful contributions to both areas and, in the last 10 years, because of exciting research directions resulting from our discovery of KNDy neurons have focused exclusively on neuroendocrine research. My career has also involved a substantial commitment to leadership in areas very much outside of my own personal interests. I have found that particularly satisfying, and my current role as President of PANS reflects that, personally and professionally. I think that leadership skills and the opportunity to acquire them are not as explicitly presented as they should be in our field and others and hope to make them more accessible with support for leadership training and experience in the coming years.

You have been a very successful scientist with a fruitful career, but is there anything you wish you had done differently or wish you could change about your journey? My only wish is that it had been easier to balance the challenge of being part of a dual-career couple. Many of you know that my wife, Lique Coolen, is also a neuroscientist – she collaborates with me on neuroendocrine studies and also has her own independent, externally funded program in other areas. She is also a talented leader in her own right and has contributed as a Dean for Research, Graduate, and Postdoctoral Studies at multiple institutions. It has been extremely difficult to find universities where we've been equally and independently valued, and she has often been viewed as a trailing spouse. Hopefully, in the future, more universities will be forward-thinking in their approach to recruiting faculty that have partners who are also pursuing careers in research and administration.

You mentored many researchers at every level of their careers – can you tell us about your approach to mentoring trainees and early career scientists? Mentoring is one of the most important ways we can help each other and contribute to the future of our field.

Dr. Mike Lehman,

Brain Health Research Institute, Director

Department of Biological Sciences, Professor

Kent State University, Kent, OH.

It has been very important to me both as a mentor to trainees and early career researchers (ECRs) in my lab and the departments I have chaired, and also as a mentee who has continued to value having mentors even as a senior leader. Good mentoring relationships are built on openness, trust, respect, and a willingness to listen and share. They can obviously be in the context of research but can also involve discussions about other aspects of our careers, including teaching, leadership roles, work-life balance and other issues that impact our professional lives. Each mentoring relationship needs to take its own course, some are short term and others may continue throughout our careers; in addition, good mentorship is not limited to having a single mentor, a network of mentors is often helpful for support in different areas, e.g., research vs teaching. Finally, mentoring can be reciprocal in its benefits: I am currently involved in a project for another national society exploring "reverse mentoring" where the traditional roles are reversed, and the mentor is junior-level person and the mentee a senior researcher or administrator. This type of mentoring relationship provides insights for the senior individual into the perspectives of the trainee or ECR, and an appreciation of generational differences in culture and experience. Reverse mentoring programs are common in the corporate world but not yet in academia or our scientific societies, and I would like to see this type of mentoring explored in our field as well.

Meet the Pans president

Dr. Michael N Lehman

You are the new PANS president – what direction will the society take in the next few years, in particular in terms of supporting career and professional development? Our society is at an exciting junction, and we have a number of new directions and potential initiatives ahead of us. Creating programming for trainees and ECRs to support career and professional development is no question a primary goal, and I am exceptionally pleased that we have a vibrant and committed PANS Trainee/Early Career Researcher committee working on this. The types of activities that I envision (some of which are currently being planned by the committee) include webinars on career development topics, a mentor-mentee matching program, increased opportunities for trainee/ECR members to present their research both in webinars and at our in-person meetings, and support for research exchange visits between labs across borders. I would also like to see increased representation of our trainees and ECRs on our Executive Council and committees consistent with the goal of providing training and experience in service and leadership.

What advice would you give neuroendocrine trainees in deciding on their next few steps? Select a training experience and supervisor based on your personal career goals and what will serve you best in the future as additional transferable skills and experiences. Selection of a lab should be based on more than just the reputation of the PI – potential supervisors should be engaged and supportive of your short and long-term career development. For postdocs, that includes supporting your transition to independence, and making sure that you have a project you can take with you when you leave their lab. And I strongly encourage everyone (and not just trainees) consider using an Individual Development Plan (e.g., see https://myidp.sciencecareers.org) or similar instrument to help inform their decision-making about their career. Consider long-term goals - what will make you most happy as a career? And, of course, don't disregard the importance of personal relationships, family, and/or other passions outside of science in making decisions about your career.

What are you views on the future of the neuroendocrine research field? What challenges or opportunities lie ahead, in your opinion? I think science is more of a team sport that ever before, and for us to truly take advantage of the multitude of advanced tools, large-scale data analyses, and modelling approaches to understanding neuroendocrine systems, we will need to fully embrace open science and transparency in our individual research programs and be willing to share and collaborate in meaningful ways. This will particularly be a challenge for the next generation of neuroendocrine researchers, trainees and ECRs, where institutions will need to change their way of evaluating the careers of scientists for jobs and promotions. At the same time, I remain inspired by the passion for discovery I continue to see in junior-level neuroendocrine researchers as well as those in more established roles - there is no question that our understanding of the complexity of neuroendocrine systems, at molecular, cellular, systems, and behavioral levels, will continue to grow, as will the translation of that knowledge to advancing human health and treating disease. I am optimistic and bullish about the future of neuroendocrinology!

This interview was given to Dr. Richard Piet (Kent State University) as an activity of the *Pans Career Development Committee.*

"The discovery of gonadotropin-releasing hormone changed the shape of neuroendocrinology and has led to new treatments emerged for infertility and a host of reproductive orders. In bringing together investigators across research interests and disciplines, the reviews in this special issue offer new ways to see this field of research and its unresolved questions. We hope it inspires remarkable scientific progress for the next 50 years!"

– Michael Lehman, Guest Editor

Journal of Neuroendocrinology is celebrating this milestone with a Special Issue focused on GnRH. The Special Issue features 17 state-of-the-art reviews and is guest edited by Dr Michael Lehman, supported by an editorial team.

Read the Special Issue

All articles are free to read for two months and six articles are open access.

Meet the PI

Limei Zhang MD/PhD
National Autonomous Univ of México
Full Professor of Physiology

What got you into science? I think I was born with strong curiosity to the physical world than most of my peers, and inclination to science although during my primary and secondary school times I did not have many opportunities to develop my strong inclination toward knowledge discoveries - it was the time of the Cultural Revolution and threats for atomic war in China so I did a lot of physical works in school, digging under- ground shelters as well as working in agricultural fields and industries from which I learned a lot of skills, especially, skills of endurance and diligence. I traveled crossing the oceans to study in the UNAM, México, in 1979, due to a scholarship awarded by Chinese Government. My first personal introduction to brain science happened during my 3rd year of Med School when I met Dr. Dionisio Nieto-Gómez, a Spanish Republicano, bio-psychiatric scholar, who left Spain after the Civil War arriving in Mexico in 1940 and became one of the founding fathers of the biomedical research in Mexico and a world opinion leader for psychiatric research based on neuroanatomy and neurobiology. Dr. Nieto was particularly interested in the psychiatry in China, so he approached me knowing I was going back to China for vacation in 1983. We had several warm and in-depth conversations, and he showed me the psychiatric ward of the National Institute of Neurology. I was so touched that I was warmly treated as a peer, by such an interesting personality... I consider him as my first mentor in neurobiology.

What is your greatest lab skill? Anatomical analysis... and my logic and associative thinking I would say.

What aspects of research and being a scientist most interest you? As I mentioned above, I am a curious person with strong logics and skeptical thinking. So being a scientist and doing research have been the best activities I could ever imagine doing to better express myself. I wish to quote Royal Society's motto '*Nullius in verba*' to answer this question.

Any advice for trainees and junior investigators? I would say that to study your own problem with independent thinking and patience, seriousness, and diligence, but always try to make your sight sharper by non-stop observation and be open to learning from all kind of experiences, especially from our maestros, as Newton said "*carried on the shoulders of giants*". Also, I would like to address the young female scientists that for me being a mother of 3 children is the most valuable thing I have achieved in my life. Everyone has her own pace for career development, but if you are serious, *you are a real piece of marble, some great masters will find you and help you to make a great piece of art*.

An important research question you would like to see answered in the next 10 years and why? Uncovering neuropeptides' role in brain function: from synaptic structure to oscillations and behavior**.**

What person has most influenced you as a scientist? Professor Peter Somogyi of University of Oxford.

If you could collaborate with any scientist, living or dead, who would it be and why? I wish I could return 40 years and join Professor Peter Somogyi's lab as his DPhil student. I met Peter during my first sabbatical year, when I was already in my early 40s, being a wife of a busy theoretical physicist, a mother caring three small children and a full-time med-school educator. I did not know him, only knew he was the director of an MRC Unit in Oxford where I should follow my husband to spent my upcoming sabbatical year. I wrote to him with an urgent request for an invitation letter to meet a deadline for a fellowship and I got a fax from him within 24 hrs - that was how this lifelong friendship started. Peter took me under his wing and taught me transmission electron microscopy, from sample preparation to the examination and analysis/interpretations, even I had my housewife and mother of 3 small children's duties, he always had time for me and treated as someone who had always valid things to say, and he listened and always found the things I need to improve my experimental progress. He allowed his administrative acumen and his wide range of resources to improve my ability to generate creative projects and to carry them out and has been always available for any discussion - we have more than 1000 emails on experimental and academic topic during the last 20 years, although I only officially pass some 2.5 years working with him. I wish this experience could be repeated. Peter is not only a world class scientist and a man of renascence, he also is a mentor, in the sense that he loves to find people who are talented and genuine, and he is always delighted to develop virtues of them by providing education, opportunities and pathways for further realization.

Where in the world would you like to have a future research conference? Why? Stirling, in Scotland - actually, we are having our upcoming August 2022 conference there (**Regpep24)** an ancient city with rich history and stunning landscape, and a modern University Campus with its own accommodations with modest costs - it is just the perfect location for an intimate, frank, and in-depth scientific discussions for a friendly small society meeting, with interactional delegates of "five" generations to sit on the same dining table… visit www.regpep.org/ for details.

PhD & Postdoc Perspectives…

Dr. Eulalia Coutinho

Scientist at Crinetics Pharmaceuticals

Can you please walk us through your journey as a scientist, first in academia and now in the private sector? My curiosity and naiveté led me to move to Japan at 21 where I completed my PhD studying the role of ventromedial hypothalamus (VMH)-specific SF-1 neurons in the regulation of glucose metabolism and energy homeostasis. After my PhD, I moved to the University of Otago, New Zealand to study the role of metabolic agouti-related peptide (AgRP) neurons in the regulation of fertility. After a 3-year postdoc in NZ, I decided to move to the University of California San Diego (UCSD) to not only further pursue my interests in the regulation of fertility and learn new skills but also to explore opportunities for career development. At UCSD, I attended multiple workshops, from grant writing to careers outside academia. The latter was really eye-opening and made me realize that a career in industry was more suited to my interests. Last November, I started as a scientist in the Discovery group at Crinetics Pharmaceuticals and now work on rodent disease models to assess potency and efficacy of potential compounds for the treatment of endocrine diseases.

What were the main reasons that motivated you to take an industry job? During my postdoctoral fellowship, I realized that I wanted my research to be translational and lead to therapies that can potentially help patients. Another motivating reason was the ability to stay in San Diego and not have to move again, which would probably have been the case if I pursued an academic career.

What was your experience like, transitioning from being a postdoctoral fellow to your current position? Prior to starting my current position, I completed a certificate course in translational science which covered concepts related to drug discovery. In addition, I had spoken to several industry professionals about their jobs and so, had a good understanding of the expectations of an industry scientist position. Both of these made the transition easier because I had an understanding about the drug discovery process and the scientist role.

What are some of the challenges you have encountered during this transition? What has been most rewarding? The main differences between academia and industry are the pace and priorities. In academia, there is the need and the time to dive deep into the mechanisms underlying an effect or symptom. However, in industry, the priority is to show efficacy and safety. The most rewarding part of my job is the opportunity to contribute to early-stage drug discovery, from researching new targets to first proof of concept studies. Knowing that some of my work will lead to therapies in the future is very fulfilling.

What advice would you give PANS trainees who are planning their next professional move? If you would like to pursue a career in industry directly after completing your PhD, start networking with industry professionals and building your LinkedIn profile in the last 1-2 years of your PhD. Outside the lab, you can get involved with university organizations or local biotech networks. For example, I got involved in the UCSD Postdoc association and volunteered to be the chair of the exposure to industry program. This forced me to go outside my comfort zone and reach out to industry professionals and companies, thus helping to build my LinkedIn network. Networking is key to finding a job in industry! It is never too early to reach out to people and ask them about their experience and their advice. Find out about the different positions in industry and which one might be best suited for you. Connect with people in those positions to learn about their job and get tips about applying to those roles. Industry jobs prefer resumes, so make it concise while clearly highlighting skills that are required for a job. LinkedIn is a great resource for job seekers, so work on your profile and build your network.

Lastly, apply for jobs you are interested in even if you don't meet all the requirements. If you are a good fit for the team, they will hire you and train you. Good luck to you all and feel free to reach out to me on LinkedIn (Linkedin.com/in/eulalia-c) if you have any questions

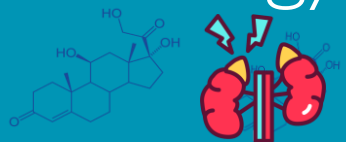
This interview was given to Dr. Richard Piet (Kent State University) as an activity of the *Pans Career Development Committee.*

Save the date: July 20th, 2022 – **12:00 PM (EDT)**

PANS Trainee Virtual Symposium 2022

PANS
Pan American Neuroendocrine Society

Neuroendocrinology of Stress



Contribution of neuropeptide S (NPS) to cued fear extinction and stress response in virgin and lactating females

Dr. Marianela Masis Calvo
Assistant Professor
Universidad de Costa Rica

Deciphering the role of GABAergic neurons in mediating the effects of stress on the reproductive axis and thermoregulation

Dr. Sidney Pereira
Postdoctoral Research Fellow
Harvard Medical School

Cellular allostatic mechanisms following stress regulate mitochondrial bioenergetics

Nickole Kanyuch
MD/PhD graduate student
University of Maryland (Baltimore)

Join us for our first PANS Trainee Symposium!

Invited chair: Dr. Travis Hodges *Mount Holyoke College (USA)*

For questions, please contact:

- Dr. Marc Tetel – email: mtetel@wellesley.edu
- Dr. Mauro Silva – email: msilva35@bwh.harvard.edu

Zoom link: https://us06web.zoom.us/j/86230000761

PANS Travel Awardees present at ICN

Alejandra Abeledo Machado
PhD student, IBYME-CONICET Buenos Aires, Argentina

Poster session 1
#187

Most prolactinomas are effectively treated with dopamine D2 receptors (D2R) agonists. Nevertheless, a subset (~20%) became resistant to the treatment and require extirpation. The molecular mechanisms underlying the escape from dopamine inhibition may include alterations in D2R signalling. In HEK293T cells it was demonstrated that bradykinin B2 receptor (B2R) can heteromerize with D2R, abolishing G_i signalling of D2R. Since it was reported that B2R is highly expressed in human prolactinomas, as part of my PhD thesis, I study the impact of B2R activation on prolactin secretion and whether the D2R-B2R heterodimerization is increased in prolactinoma, disturbing D2R intracellular signalling and promoting resistance to D2R agonists in patients with prolactinomas resistant to the dopamine therapy.

Julia Kathryn Sunstrum
PhD student, University of Western Ontario, Canada

Poster session 2
#268

While the function and structure of paraventricular nucleus (PVN) neurons have been extensively studied in rodents, studies in primates remain scarce. It is possible that the diurnal activity cycle and complex social lives of primates have exposed them to different stressors, and PVN neurons have evolved new features under evolutionary pressures. Using patch clamp electrophysiology in acute brain slices, combined with post-hoc morphology reconstruction, immunohistochemistry and unsupervised clustering analyses, we characterized marmoset PVN neurons and compared them to their mouse counterparts.

Naira da Silva Mansano
PhD student, University of Sao Paulo, Brazil

Poster #234

Kisspeptin neurons are part of an intricate brain circuit that includes NPY/AgRP and POMC neurons of the arcuate nucleus of the hypothalamus (ARH). To determine if disturbance in energy balance can affect reproductive axis by modulating kisspeptin neurons activity, we recorded the GABAergic currents in $ARH^{Kisspeptin}$ neurons of control and fasted animals. Surprisingly, fasting led to a decrease in GABAergic transmission to $ARH^{Kisspeptin}$ cells in female mice, an effect that was not observed in male mice. Therefore, lower GABAergic transmission to $ARH^{Kisspeptin}$ neurons may contribute to the suppression of the luteinizing hormone surge when energy status is not favorable for reproduction.

PANS Travel Awardees present at ICN

Cristina Silva Varela
PhD student, Universidad San Sebastián, Chile

Poster session 2
#280

Obesity is a global health problem and its prevalence nearly tripled in the last 40 years, suggesting the contribution of changes in dietary and physical activity patterns. These environmental cues can be integrated by epigenetic modifications. Mecp2 is an epigenetic reader that regulates hypothalamic gene expression through the binding to methylated DNA and control of miRNA processing to maintain energy homeostasis. However, the mechanisms and the impact on epigenetic-commanded processes have not been fully elucidated. Our results show that Mecp2 absence disrupts bodyweight balance by reducing energy expenditure and increasing adiposity. Furthermore, the lacking of Mecp2 alters the expression of miRNAs potentially related to the regulation of genes commanding feeding behavior and energy expenditure. This suggests that Mecp2 in the hypothalamus acts as a molecular bridge between environmental factors and our genome for adequate energy homeostasis.

Emma McIlwraith
PhD student, University of Toronto, Canada

Poster session 3
#265

MicroRNAs (miRNAs) are small noncoding RNA that post-transcriptionally regulate messenger RNA with clinical potential. Our laboratory has previously shown that hypothalamic miRNAs are disrupted by the saturated fatty acid palmitate but we wanted to investigate the role of secreted miRNAs in feeding neuron communication. My project aimed to identify miRNAs secreted within hypothalamic exosomes that are disrupted by palmitate and thereby affect other hypothalamic neurons. We isolated exosomes from the NPY/AgRP-expressing mHypoE-46 neurons and quantified them using nanoparticle tracking analysis. We also isolated exosomal RNA following palmitate treatment and ran a miRNA array that identified 40 miRNAs that were altered by palmitate. We have been following up on these miRNAs to establish whether they are involved in intercellular communication between hypothalamic neurons to control energy homeostasis. I am so excited to visit Glasgow and discuss this work at ICN 2022! Thank you so much to PANS for the travel award, which is truly helping make the journey possible.

Francisco Díaz
PhD Student in Physiology, Pontificia Universidad Católica de Chile

Poster session 1
288

Role of mitophagy in the hypothalamus in response to metabolic changes.
Our research is focused on understanding the role of hypothalamic mitochondrial recycling in neurons, through the process of mitophagy, during metabolic transitions. The medio-basal hypothalamus regulates several processes involved in the transition from fasting to feeding, to maintain energy homeostasis. Most of the energy generated during these processes is synthetized by mitochondria, which is highly active in response to metabolic transition. This increased workload causes damage to the mitochondria which then needs to be removed to maintain cellular homeostasis. The process of mitochondrial recycling is mediated by autophagy, an evolutionary conserved process that allows the cell to degrade and recycle damaged cell structures, such as mitochondria. Even if a role for hypothalamic autophagy in the regulation of energy homeostasis has previously been demonstrated, the specific involvement of mitophagy in metabolic transition and metabolic homeostasis has not been determined.

PANS Travel Awardees present at ICN

Jennifer Jaime
PhD student, University of Michigan, USA

Poster session 2
#66

My project is studying how the intrinsic properties of gonadotropin-releasing hormone (GnRH) neurons change throughout development and how these properties are altered with challenges such as prenatal androgenization (PNA). We use the PNA mouse model, which recapitulates many of the neuroendocrine phenotypes that are observed in women diagnosed with polycystic ovary syndrome (PCOS), to study how the excitability and action potential properties of GnRH neurons are altered with age and PNA. We have found that development, but not PNA treatment, is the main driver of changes to the passive properties of GnRH neurons and changes to action potential properties.

Rodrigo Carrasco
Postdoc, University of Western Ontario, Canada

Poster session 1
#110

"Biodistribution of nerve growth factor (NGF) using positron emission tomography/computed tomography (PET/CT) in llamas".
Nerve growth factor (NGF) is a seminal protein that triggers an LH surge and ovulation in camelids. The precise site and mechanism of action of NGF remain unknown, but it appears to act at the hypothalamic level. In our study, we investigated the use of positron emission tomography (PET) imaging to evaluate the dynamics of NGF in South American Camelids. To this end, we purified, conjugated, radiolabelled, and characterized the bioactivity and stability of radiolabelled NGF for its use in PET imaging. Finally, we evaluated the biodistribution and brain uptake of NGF using the llama as an experimental model. This study provides a novel approach for evaluating tissue uptake of proteins and peptides involved in neuroendocrine function.

Rajae Talbi
Postdoc, Harvard medical School, USA

Poster session 2
#269

Kiss1 neurons have recently emerged as novel metabolic regulators, through yet unknown mechanism. In the control of energy balance, activation of the melanocortin receptor 4 (Mc4r) promote satiety and increase energy expenditure (EE). In this study, I characterized the role of Kiss1 neurons in the metabolic action of the melanocortin system. Using RNAscope, I identified the expression of Mc4r on Kiss1 neurons. I generated a conditional mouse model with a specific deletion of Mc4r from Kiss1 neurons (Kiss1cre:Mc4rfl/fl mice), and found that males developed obesity due to a reduced EE that correlated with significantly lower expression of the uncoupling protein 1 (Ucp1) gene in the interscapular pad of the brown adipose tissue (BAT), suggesting impaired BAT thermogenesis in KO mice. A series of viral anterograde and retrograde tracing revealed that ARC Kiss1 neurons regulate BAT activation through a pathway that involves the dorsomedial hypothalamus (DMH) and raphe pallidus nucleus (RPa), through actions on leptin receptor expressing neurons. These data document the involvement of Kiss1 neurons in the metabolic action of melanocortins and offer novel insight into the neurocircuitry underlying the melanocortin control of energy expenditure, which have been ill-defined compared to their role in food intake.

PANS Travel Awardees present at ICN

Poster session 1
38

Noelia di Giorgio

Research scientist, Institut of Biology and Experimental Medicine, Argentina

Kisspeptin and GABA are expressed in various peripheral organs/tissues critical to reproduction and metabolic control. Moreover, kisspeptin neurons co-express GABAB receptors (GABABR) and GABA controls the expression and secretion of kisspeptin. The general aim of our research is to study the role of GABABR in the regulation of neural and peripheral kisspeptin systems, greatly unexplored to date. For this purpose, we developed a unique mouse strain lacking GABABR exclusively from kisspeptin cells/neurons (*Kiss1*-GABAB1KO) to evaluate the impact on metabolism and reproduction. Our hypothesis is that lack of GABABR in *Kiss1* neurons/cells alters the regulation of reproduction, glucose homeostasis and metabolism. We demonstrated a clear impact on glucose homeostasis in *Kiss1*-GABAB1KO males that worsened with age.

Christina Saenz de Miera

Research scientist, University of Michigan, USA

Poster session 1
#206

My current research aims at characterizing the pathways by which the adipocyte-derived hormone leptin regulates reproduction. The work I will present at ICN investigates the role of glutamate signaling in this network, using transgenic mouse models and viral vectors. The ventral premammillary nucleus (PMv) of the hypothalamus is a glutamatergic nucleus rich in leptin responsive neurons (LepR) essential for the metabolic control of reproduction. Remote activation of LepR neurons in the PMv using chemogenetics led to acute increases in LH release in adult female mice. Deletion of the glutamate transporter in LepR PMv neurons disrupted puberty and reproduction in females. Contrary to previous observations, we show that glutamatergic signaling is required for leptin action in pubertal development and reproductive function.

Save the date: September 30th, 2022 – 12:00 PM (EDT)

NeuroEndo
ANILLO DE INTEGRACIÓN NEUROENDOCRINA DEL APETITO Y EL METABOLISMO

PANS
Pan American Neuroendocrine Society

Virtual Symposium 2022

Neuroendocrine regulation of food intake and energy expenditure: an integrated view of obesity and lipodystrophy

Featured Speakers

Methyl CpG Binding Protein-2 (Mecp2): An epigenetic regulator of energy homeostasis

PhD. Bredford Kerr
Associate Professor
Universidad San Sebastián

¿Why are we hypertensives? Role of adrenal hormones in blood pressure regulation in the XXI century

Dr. René Baudrand,
Associate Professor
Pontificia Universidad Católica de Chile

Regulation of food intake inn an obesogenic environment by GLP1

PhD. Claudio Pérez-Leighton
Assistant Professor
Pontificia Universidad Católica de Chile

Lipodystrophy in Agpat2 deficient mice is due to the early degeneration of adipose tissue associated with lipotoxicity and mitochondrial dysfunction

Dr. Víctor Cortés
Associate Professor
Pontificia Universidad Católica de Chile

For more information www.neuroendo.cl

The PANS Trainee Workshop is completely full!
Special thanks to the International Neuroendocrine Federation and Stoelting Inc. for their generous sponsorship of this event.
See you in Glasgow!

PANS Trainee Workshop

Topics	*Speakers*
Transgenic models	Vincent Prevot (France)
Electrophysiology	Richard Piet (USA)
Optogenetics	Mauro Silva (USA)
Single cell RNA-seq	Sreekala Nampoothiri (France)
PET imaging	Rodrigo Carrasco (Canada)
in vivo Calcium imaging	Aleisha Moore (USA)
Human iPSC-derived neurons	Denise Belsham (Canada)
in situ Hybridization	Victor Navarro (USA)
Epigenetics and miRNAs	Bredford Kerr (Chile)
Open science/ good publishing	Michael Lehman (USA)
Getting job ready	Deborah Kurrasch (Canada)
EDI and recognizing bias	Marina Fernandez (Argentina)

Networking excursion to Aberfoyle and Stirling Castle

Application on the ICN2022 website – due May 11, 2022

Neuroendocrine Techniques at the Cutting Edge

August 11-13, 2022

University of Glasgow
School of Veterinary Medicine

PANS Pan American Neuroendocrine Society

International Neuroendocrine Federation

PANS thanks Stoelting and the International Neuroendocrine Federation for their generous support.

Stoelting SINCE 1886

Dear PANS Community,
We want to hear from you. The PANS newsletter is one effort to connect and grow PANS collaborations. Please help us showcase you, whether PI or trainees, your work and ideas. Want to post an event on the PANS website or advertise an open position? Let us know.
Email us at kbchurch@ucsd.edu or follow us @paneuroendo on Twitter.

PANS Communications Committee
Kellie Breen Church, *University of California, San Diego*
Carolina Escobar, *National Autonomous University, Mexico*
Renata Frazão, *University of Sao Paulo, Brazil*
Claire-Dominique Walker, *McGill University*