**Monday, May 27**

8:00 AM-4:30 PM  Registration

4:30-5:30 PM  Opening Ceremony

5:30-6:30 PM  **Plenary Speaker**- Marty Frank, Ph.D.; USA  
*Title: Physiology Without Borders*

6:30-8:00 PM  Welcome Reception

**Tuesday, May 28**

8:30-9:30 AM  **Plenary Speaker**- Jack Feldman, Ph.D.; University of California, Los Angeles, USA  
*Title: Neural control of breathing*

9:30-9:45 AM  Coffee Break

9:45-11:45 AM  **Symposium:** Novel Mechanisms of Cardiac Failure  
*Chair: Jason Gardner, Ph.D.; Louisiana State University, USA*

Speaker 1: Lisandra de Castro Bras, Ph.D.; East Carolina University, USA  
*Title: ECM-derived peptide binds to cardiac fibroblasts to guide scar formation post-MI*

Speaker 2: Jason Gardner, Ph.D.; Louisiana State University, USA  
*Title: Lysyl oxidase activity promotes cardiac dysfunction and adverse remodeling*

Speaker 3: Sarah Lindsey, Ph.D.; Tulane University, USA  
*Title: Cardioprotection Induced by Membrane-Initiated Estrogen Signaling*

Speaker 4: John Calvert, Ph.D.; Emory University, USA  
*Title: DJ-1 Protects the Failing Heart by Opposing Glycative Stress*

Speaker 5: Loren Wold, Ph.D.; Ohio State University, USA  
*Title: Environmental triggers of cardiac dysfunction*

9:45-11:45 AM  **Symposium:** From Physiology to Pathology: New Horizons in Obesity-linked Insulin Resistance  
*Chair: Amira Klip, Ph.D.; University of Toronto, Canada*

Speaker 1: Enrique Jaimovich, Ph.D.; Universidad de Chile, Chile  
*Title: Reactive oxygen species and the NADPH Oxidase NOX2: critical input on muscle metabolism*

Speaker 2: Assaf Rudich, M.D., Ph.D.; Ben Gurion University, Israel  
*Title: Autophagy and its dysregulation in obesity in fat cells and macrophages: From cell physiology to clinical impact.*

Speaker 3: Debbie Thurmond, Ph.D.; City of Hope Diabetes and Metabolism Research Institute, USA  
*Title: Pancreatic beta cell synchrony and adaptation: a continuum from a single meal to obesity*

Speaker 4: Tiffany Horng, Ph.D.; School of Public Health- Harvard University, USA  
*Title: Macrophages and metabolism*

9:45-11:45 AM  **IASH Symposium:** Intracellular Angiotensin Forming Mechanisms in Heart and Renal Disease: Myth or Reality?  
*Chair: Jasmina Varagic, M.D., Ph.D.; The Hypertension and Vascular Research Center, USA*
Speaker 1: Carlos Ferrario, M.D.; Wake Forest University, USA
Title: The Chymase/Angiotensin-(1-12) axis in cardiovascular and renal pathophysiology.

Speaker 2: Bina Joe, Ph.D.; University of Toledo, USA
Title: Beyond the host renin-angiotensin system: Salt-responsive microbiota and metabolites as new factors regulating hypertension.

Speaker 3: Gabriel Navar, Ph.D.; Tulane University, USA
Title: The Intratubular Renin-Angiotensin System in Hypertension and Diabetes

Speaker 4: Minolfa Prieto, M.D., Ph.D.; Tulane University, USA
Title: Recent Advances in The Biology Of The RAS In The Distal Nephron In Hypertension.

9:45-11:45 AM  
Symposium: The many levels of brain connectivity  
Chair: Pedro A Valdes-Sosa, M.D.; Centro de Neurociencias de Cuba

Speaker 1: TBD
Title: TBD

Speaker 2: TBD
Title: TBD

Speaker 3: TBD
Title: TBD

Speaker 4: TBD
Title: TBD

9:45-11:45 AM  
Symposium: Evolution and Development of Breathing Circuits in Mammals  
Chair: Jack Feldman, Ph.D.; University of California, Los Angeles, USA

Speaker 1: William Milsom, Ph.D.; University of British Columbia, Canada
Title: Evolutionary trends in central respiratory rhythm generation

Speaker 2: Gilles Fortin; Ph.D.; Neuroscience Paris-Saclay Institute, France
Title: Developmental program for the breathing central pattern generator

Speaker 3: Jean-Francois Brunet; Ph.D.; Colege de France, France
Title: Breathing and the somato-visceral duality

Speaker 4: Luciane H. Gargaglioni; Ph.D.; São Paolo State University, Brazil
Title: Catecholaminergic neurons and breathing control during development

11:45-2:45 PM  
Poster Session / Lunch

2:45-4:45 PM  
Symposium: Neuroplasticity: From Motor Neurons to Muscle  
Chair: Gary Sieck, Ph.D.; Mayo Clinic, Minnesota, USA

Speaker 1: Gary Sieck, Ph.D.; Mayo Clinic, USA
Title: Phrenic Motor Neuron Plasticity: From SCI to Aging

Speaker 2: Brigitte van Zundert, Ph.D.; Andres Bello University, Santiago, Chile
Title: Astrocyte-MN interactions in multiple models of ALS.

Speaker 3: Joline Brandenburg, M.D.; Mayo Clinic, USA
Title: Developmental Neuroplasticity in Cerebral Palsy

Speaker 4: Ricardo Tapia, M.D., Ph.D.; Universidad Nacional Autónoma de México
Title: Excitatory and Inhibitory Neuronal Circuits in the Spinal Cord and Their Role in the Control of Motor Neuron Function and Degeneration

2:45-4:45 PM  
Symposium: Regulation of the cellular pH  
Chair: John Orlowski, Ph.D.; McGill University, Canada

Speaker 1: Seth Alper, M.D., Ph.D.; Harvard Medical School, USA
Title: Anion Exchanger Regulation of Urinary and Systemic pH
Speaker 2: Adriana Girardi, Ph.D.; University of Sao Paulo Medical School, Brazil
Title: Role of Myosin Motor Proteins in Mediating NHE3 Regulation in the Renal Proximal Tubule
Speaker 3: Yamuna Krishnan, Ph.D; University of Chicago, USA
Title: A pH-correlatable fluorescent reporter for lysosomal calcium
Speaker 4: John Orlowski, Ph.D., McGill University, USA
Title: Endomembrane pH Dysregulation and Neurodevelopmental Disorders

2:45-4:45 PM Symposium: Cerebrospinal Fluid Analysis in Neuroimmunological Diseases
Chair: Alberto Dorta Contreras, Ph.D.; Universidad de Ciencias Médicas de La Habana Cuba
Speaker 1: Lourdes Lorigados Pedré, Ph.D.; CIREN, Cuba
Title: Neuroimmunology and Epilepsy
Speaker 2: Hansotto Reiber; Ph.D.; Brazil, Germany
Title: CSF Analysis in neuroimmunological diseases
Speaker 3: Alberto Juan Dorta Contreras, Ph.D.; Universidad de Ciencias Médicas de La Habana Cuba
Title: Neuroimmunological patterns in neuroinfectious diseases
Speaker 4: Jairo Lumpuy Castillo, M.D.; LABCEL-ICBP Victoria de Girón. Cuba
Title: Intrathecal synthesis of complement pathway components in neurological disorders
Speaker 5: Luiggi Martini Robles, Ph.D.; Ecuador
Title: Cerebrospinal fluid analysis in Angiostrongylus cantonensis meningoencephalitis

2:45-4:45 PM Symposium: Interplayers in Energy homeostasis
Chair: Lucila Elias, Ph.D.; University of São Paulo, São Paulo, Brazil & Carol Elias, Ph.D.; University of Michigan, USA
Speaker 1: Carol Elias, Ph.D.; University of Michigan, USA
Title: Role of PI3k linking metabolism and neuroendocrine responses
Speaker 2: Marcio Torsoni, Ph.D.; University of Campinas, Sao Paulo, Brazil
Title: Modulation of AGRP/POMC neuropeptides expression and food intake by activation of nicotinic acetylcholine receptor in the hypothalamus.
Speaker 3: Yanaira Alonso-Caraballo, Ph.D. Student; University of Michigan, USA
Title: Effects of the ovarian cycle on brain reward systems and craving.

2:45-4:45 PM Workshop: Education Workshop: “Evaluating and sharing best practices in physiology education”
Chair: Dee Silverthorn, Ph.D.; Dell Medical School, The University of Texas at Austin, USA
Co-Presenter: Robert Carroll, Ph.D.; Brody School of Medicine, East Carolina University, USA

4:45-5:00 PM Coffee Break
5:00-6:00 PM Keynote: Identification of a Shared Receptor for Pain and Hunger
Speaker: Willis Samson, Ph.D.; St. Louis University School of Medicine; USA

5:00-6:00 PM Keynote: The endothelial microvasculature as an active conduit for glucose and insulin to tissues
Speaker: Amira Klip, Ph.D.; University of Toronto, Canada

5:00-6:00 PM Keynote: Large-scale information channeling in the human brain
Speaker: Mitchell Joseph Valdés-Sosa, Ph.D.; Cuban Neuroscience Center, Cuba
Wednesday, May 29

8:30-9:30 AM  
**Plenary Speaker** - Carlos Ferrario, M.D.; Wake Forrest University, USA  
**Title:** Chymase, the forgotten critical angiotensin II forming enzyme in cardiovascular tissues

9:30-9:45 AM  
Coffee Break

9:45-11:45 AM  
**Symposium:** Neonatal Lung Disease: Understanding Where it All Begins  
**Chair:** Y.S. Prakash, M.D., Ph.D.; Mayo Clinic, USA  
**Speaker 1:** Rodney Britt, Jr., Ph.D.; The Ohio State University, USA  
**Title:** Role of Airway Smooth Muscle in Neonatal Airway Disease  
**Speaker 2:** Peter MacFarlane, Ph.D.; Case Western University, USA  
**Title:** Continuous Positive Airway Pressure and Neonatal Airway Remodeling: Role of Hyaluronans  
**Speaker 3:** Conrado Llapur, M.D.; Universidad Nacional de Tucuman, Argentina  
**Title:** Airways in Bronchopulmonary Dysplasia  
**Speaker 4:** Jose Castro-Rodriguez, M.D., Ph.D.; Pontifical Catholic University of Chile  
**Title:** Airway remodeling in recurrent wheeze and asthma of children

9:45-11:45 AM  
**Symposium:** Generation of motor rhythms: Breathe, Locomote and Chew  
**Chair:** Jack Feldman, Ph.D.; University of California, Los Angeles, USA  
**Speaker 1:** Abdel El Manira, Ph.D.; Karolinska Institute, Sweden  
**Title:** Functional diversity of interneurons and their circuit assembly in adult zebrafish  
**Speaker 2:** Christopher Del Negro, Ph.D.; College of William and Mary, USA  
**Title:** Cellular and ion channel mechanisms of inspiratory breathing movements  
**Speaker 3:** Ole Kiehn, M.D.; University of Copenhagen, Denmark  
**Title:** Brainstem control of movement  
**Speaker 4:** Arlette Kolta, Ph.D.; Université de Montreal, Canada  
**Title:** Astrocyte-dependent rhythmogenesis and sensorimotor integration in trigeminal circuits responsible for mastication

9:45-11:45 AM  
**Symposium:** Mechanisms of Water Reabsorption in the Kidney: Implications for Nephrogenic Diabetes Insipidus and Chronic Kidney Disease  
**Chair:** Jeff Sands, M.D.; Emory University, USA  
**Speaker 1:** Jeff Sands, M.D.; Emory University, USA  
**Title:** Novel therapies for nephrogenic diabetes insipidus  
**Speaker 2:** Vicki Hertzberg, Ph.D.; Emory University, USA  
**Title:** Role of heat exposure and dehydration in kidney disease in farm workers  
**Speaker 3:** Richard Johnson, M.D.; University of Colorado, Denver, USA  
**Title:** A Novel Role for Vasopressin in Metabolic Diseases: A Link with Obesity and Diabetes  
**Speaker 4:** Laura-Gabriela Sánchez-Lozada, Ph.D.; Instituto Nacional de Cardiología, Mexico  
**Title:** Rehydration with Soft Drink-like Beverages Exacerbates Dehydration and Worsens Dehydration-associated Renal Injury

9:45-11:45 AM  
**Symposium:** The physiology of the host-pathogen interface  
**Chair:** Sergio Grinstein, Ph.D.; University of Toronto, Canada  
**Speaker 1:** Norma Andrews, Ph.D.; University of Maryland, USA  
**Title:** Lysosomal fusion in response to Trypanosoma invasion
Speaker 2: Carlos Rosales, Ph.D.; Universidad Autonoma de Mexico
Title: Human neutrophils deploy NET against Entamoeba histolytica

Speaker 3: Dario Zamboni, Ph.D.; University of Sao Paulo, Brazil
Title: Inflammatory response to Legionella infection

Speaker 4: Samantha Gruenheid, Ph.D.; McGill University, Canada
Title: New links between intestinal infection, mitochondrial antigen presentation and Parkinson’s Disease

9:45-11:45 AM  Symposium: Cardiac regeneration: hope without borders  
Chair: Alberto José Crottogini, M.D., Ph.D.; Favaloro University, Argentina  
Partially Financed by IUPS

Speaker 1: José Krieger, M.D., Ph.D.; São Paulo Federal University, Brazil
Topic: Challenges to mend a broken heart

Speaker 2: Maurizio Capogrossi, M.D.; Johns Hopkins Bayview Medical Center, USA
Topic: Cardiac mesenchymal cells and heart repair

Speaker 3: Santiago Miriuka, M.D., Ph.D.; FLENI, Buenos Aires, Argentina
Topic: Modulation of cell proliferation in iPSC-derived cardiomyocytes

Speaker 4: Paola Locatelli M.D., Ph.D.; Favaloro University, Buenos Aires, Argentina
Topic: Targeting the cardiomyocyte cell cycle for myocardial regeneration

11:45-2:45 PM  Poster Session / Lunch

2:45-4:45 PM  Symposium: Respiratory control in health and disease: from neurons to glia and beyond  
Chair: Rodrigo Del Rio, Ph.D.; Pontificia Universidad Catolica De Chile

Speaker 1: Ana Takakura, Ph.D.; Universidade de Sao Paulo, Brazil
Title: Prebotzinger complex neurons and Parkinson’s disease

Speaker 2: Daniel Mulkay, Ph.D.; University of Connecticut, USA
Title: Disordered breathing and mortality in Dravet syndrome

Speaker 3: Alexander Gourine, Ph.D.; University College London, UK
Title: Control of brainstem respiratory circuit activity by astrocytes

2:45-4:45 PM  Symposium: Melatonin, from basics concepts to clinical application  
Chair: Jose Cipolla-Neto, M.D., Ph.D.; University of São Paulo, Brazil

Speaker 1: Jose Cipolla-Neto, M.D., Ph.D.; University of São Paulo, Brazil
Title: Melatonin, The Basics

Speaker 2: Russel Reiter, Ph.D.; UT Health Center at San Antonio, USA
Title: Melatonin as a Guardian of Mitochondrial Redox Homeostasis

Speaker 3: Dario Acuna Castroviejo, M.D., Ph.D.; University of Granada, Spain
Title: Melatonin, clock genes, and aging

Speaker 4: Ovidiu C. Baltatu, M.D., Ph.D.; Anhembi Morumbi University., Brazil
Title: The Heart in the Rhythm of the Night

Speaker 5: David Blask, M.D., Ph.D.; Tulane University School of Medicine, USA
Title: Role of Melatonin, Circadian Timing and Light in Cancer

2:45-4:45 PM  Symposium: Exercise training and cardiovascular autonomic function: friend or foe?  
Chair: Harold Schultz; Ph.D.; University of Nebraska College of Medicine

Speaker 1: Rodrigo Del Rio, Ph.D.; Pontificia Universidad, Chile
Title: How good is exercise training in heart failure?

Speaker 2: Andrei Krassioukov, M.D., Ph.D.; University of British Columbia, Canada
Title: Autonomic dysreflexia following spinal cord injury: the good, the bad and the ugly
Speaker 3: Annie Ginty, Ph.D.; Baylor University, USA  
Title: Cardiovascular and autonomic reactivity to psychological stress: Neurophysiological substrates and links to cardiovascular disease

Speaker 4: Lauro Vianna, Ph.D.; University of Brasilia, Brazil  
Title: Neurotransmission during exercise in humans: new Insights into autonomic reflexes

2:45-4:45 PM **Symposium: Teaching Physiology: The challenge of motivating students**  
**Chair:** Alicia Mattiazzi, M.D.; National University of La Plata, La Plata, Argentina  
*Partially Financed by IUPS*

Speaker 1: Claudia Caldiz, Ph.D.; Centro de Investigaciones cardiovasculares, Argentina  
Title: Let’s make the most of the study of physiology

Speaker 2: Robert Carrol, Ph.D.; East Carolina University, USA  
Title: Approaches to Encourage Students to Study Physiology

Speaker 3: Matilde Said, Ph.D.; Centro de Investigaciones cardiovasculares, Argentina  
Title: Encouraging experimental teaching of science as a way of improving scientific education in Physiology

Speaker 4: Paulo Fernando Guedes Pereira, Ph.D.; Cidade Universitária, Brazil  
Title: Motivating future teachers to teach physiology

Speaker 5: Maria Agustina Silvestri, Ph.D.; Cátedra de Fisiología, Argentina  
Title: Why I was excited when studying human physiology?

2:45-4:45 PM **Workshop: Publication Workshop: “How to publish your research”**  
**Chair:** Kim Barrett, Ph.D.; University of California, San Diego; USA

Speaker 1: Mike Tipton, Ph.D.; University of Portsmouth; UK  
Title: What to think about before you write – linking from hypothesis to experimental design to telling a good story

Speaker 2: Kim Barrett, Ph.D.; University of California, San Diego; USA  
Title: Best practices for structuring your manuscript and displaying your data

Speaker 3: Christina Bennett, Ph.D.; American Physiological Society, USA  
Title: How to avoid ethical minefields when publishing your work

Speaker 4: Bill Yates, Ph.D.; University of Pittsburgh; USA  
Title: Special considerations for conducting and reporting on animal studies in physiological journals

Editors’ panel moderated by Kim Barrett:  
Mike Tipton, Ph.D.; University of Portsmouth; UK  
Bill Yates, Ph.D.; University of Pittsburgh; USA  
Irv Zucker, Ph.D.; University of Nebraska; USA  
Sue Bodine, Ph.D.; University of Iowa; USA  
Gary Sieck, Ph.D.; Mayo Clinic; USA

4:45-5:00 PM **Coffee Break**

5:00-6:00 PM **Keynote: Alcohol Interaction with HIV Disease: Translational Approach to Understanding Mechanism & Comorbidities**  
**Speaker:** Patricia Molina, M.D., Ph.D.; Louisiana State University, USA

5:00-6:00 PM **Keynote: Cardiac failures associated to diabetes and obesity**  
**Speaker:** Óscar Lorenzo González, Ph.D.; Universidad Autónoma de Madrid, Spain

5:00-6:00 PM **Keynote: Pleiotropism of the renin-angiotensin system: what doesn’t it do?**  
**Speaker:** Robert Speth, Ph.D.; Nova Southeastern University, USA

5:00-6:00 PM **Keynote: Physiological basis of oxygen sensing**  
**Speaker:** Nanduri Prabhakar, Ph.D.; The University of Chicago, USA
Plenary Speaker: Sergio Lavandero, University of Chile
Title: Cell signaling in cardiovascular disease

Coffee Break

Symposium: Neuroinflammation and autonomic dysfunction in cardio-respiratory diseases
Chair: Harold Schultz, Ph.D.; University of Nebraska College of Medicine, USA
Speaker 1: Talita Silva, Ph.D., University of Sao Paulo, Brazil
Title: Hypoxia-induced inflammatory markers are modulated by minocycline in central autonomic brain nuclei
Speaker 2: Martin Gerbert Frasch, M.D., Ph.D.; University of Washington, USA
Title: Vagus nerve and neuroinflammation: insights from the pregnant sheep model
Speaker 3: Hanjun Wang, M.D.; University of Nebraska Medical Center, USA
Title: Neural Inflammation and Cardiac Spinal Afferent Sensitization in Post-Myocardial Infarction Rats
Speaker 4: Harold Schultz, Ph.D.; University of Nebraska College of Medicine
Title: Inflammation and Carotid Body Function in Heart Failure

Symposium: Neuroplasticity: From Motor Neurons to Muscle-Neuromuscular Plasticity
Chair: Carlos Mantilla, M.D., Ph.D.; Mayo Clinic, USA
Speaker 1: Carlos Mantilla, M.D., Ph.D.; Mayo Clinic, USA
Title: Lipid raft dynamics at type-identified axon terminals of neuromuscular junctions
Speaker 2: Teresa Pitts, Ph.D.; University of Louisville, USA
Title: Plasticity of the muscles controlling swallow and cough
Speaker 3: Richard Robitaille, Ph.D.; University of Montreal, Canada
Title: Schwann cell interactions with neuromuscular junctions: adaptable and multi-tasking
Speaker 4: Matthew Fogarty, Ph.D.; Mayo Clinic, USA
Title: Stimulus-dependent alterations of neuromuscular transmission in aging

IASH Symposium: Novel Thoughts Open New Windows into the Function of the Intrarenal RAAS in Cardiovascular Diseases
Chair: Minolfa Prieto, M.D., Ph.D. & L. Gabriel Navar, Ph.D.; Tulane University, USA
Speaker 1: L. Gabriel Navar, Ph.D.; Tulane University, USA
Title: Augmentation of intrarenal angiotensinogen in hypertension and diabetes
Speaker 2: Minolfa C. Prieto, M.D., Ph.D.; Tulane University, USA
Title: Impact of the interactions of renin, prorenin receptor, and soluble prorenin receptor in cardiovascular diseases
Speaker 3: Romer Gonzalez-Villalobos, M.D., Ph.D.; Janssen Research and Development, USA
Title: Recent advances in the biology of renal ACE
Speaker 4: Dulce E. Casarini, Ph.D.; Federal University of Sao Paulo, Sao Paulo-Brazil
Title: Association between 90 kDa N-domain ACE isoform and the presence of arterial hypertension

Symposium: Biomarkers for Early Diagnosis of asymptomatic cerebral small vessel disease (CSVD) in High Risk Patients
Chair: Alina Gonzalez-Quevedo, M.D., Ph.D.; Instituto de Neurología y Neurocirugía; Cuba
Speaker 1: Svetlana Dambinova, Ph.D.; DeKalb Medical Center; USA
Title: Molecular Biomarkers: Concept in traumatic and ischemic brain injury
Speaker 2: Alina Gonzalez-Quevedo, M.D., Ph.D.; Instituto de Neurología y Neurocirugía; Cuba
Title: Circulating biomarkers of brain damage for the detection of subclinical CSVD in patients with arterial hypertension

Speaker 3: Zenaida Hernandez, Ph.D.; Cuba

Title: Brain MRI findings for CSVD in asymptomatic individuals with vascular risk factors

9:45-11:45 AM

Symposium: Perinatal environment and developmental programming: Insights into the origins and mechanisms of cardio-respiratory disorders throughout life

Chairs: Luciane Gargaglioni, Ph.D.; São Paulo State University, Brazil & Richard Kinkead, Ph.D.; Laval University, Canada

Speaker 1: Marco Bataglia, Ph.D.; CAMH, Canada

Title: Impact of early adversities on respiratory homeostasis: translational approaches

Speaker 2: Tracy Baker, Ph.D.; University of Wisconsin, USA

Title: Epigenetic reprogramming of fetal microglia by gestational intermittent hypoxia impairs respiratory neuromotor control in adult offspring.

Speaker 3: Luciane H Gargaglioli, Ph.D.; São Paulo State University, Brazil

Title: The short, medium and long-term effects of pharmacological in utero interventions in the cardiorespiratory control system.

Speaker 4: Adrienne Huxtable, Ph.D.; University of Oregon, USA

Title: The lasting consequences of early life events on respiratory control.

Speaker 5: Richard Kinkead, Ph.D.; Laval University, Canada

Title: The sex-specific effects of neonatal stress on respiratory manifestations of panic disorder in rats.

11:45-2:45 PM

Poster Session/Lunch

2:45-4:45 PM

Symposium: Glial cells function and neuroinflammation in the healthy and diseased nervous system

Chair: Rommy von Bernhardi, M.D., Ph.D.; Pontificia Universidad Catolica de Chile

Speaker 1: Silvia Lima Costa, Ph.D.: Universidade Federal da Bahia, Brazil

Title: Neuroprotective and anti-neuroinflammatory related effects of the phytoestrogen agathisflavone

Speaker 2: David Loane, Ph.D.; University of Maryland, USA

Title: Redox regulation of post-traumatic neuroinflammation: mechanisms and therapeutic opportunities

Speaker 3: Silvia Olivera, Ph.D.; Clemente Estable Institution of Biological Research, Uruguay

Title: Astrocytes with an inflammatory secretome: implications for glutaric acidemia type I and other neurometabolic diseases

Speaker 4: Rommy von Bernhardi, M.D., Ph.D.; Pontificia Universidad Catolica de Chile

Title: Scavenger receptor-A in Alzheimer’s disease: age-associated changes and glial cell dysfunction.

2:45-4:45 PM

Symposium: Renin-angiotensin system: new paradigms

Chair: Maria Campagnole-Santos, Ph.D.; Universidade Federal de Minas Gerais, Brazil

Speaker 1: Robson Santos, Ph.D.; Universidade Federal de Minas Gerais, Brazil

Title: Alamandine: a new counteregulatory peptide of the RAS?

Speaker 2: Michael Bader, Ph.D.; Max Delbruck Center For Molecular Medicine, Germany

Title: Transgenic animal models reveal the functions of the alternative renin-angiotensin system

Speaker 3: Natalia Aleina, Ph.D; Max Delbruck Center for Molecular Medicine, Germany

Title: The multiple faces of ACE2: from renin-angiotensin system to serotonin metabolism and skin tanning
2:45-4:45 PM

**Symposium: Role of neuropeptides in stress, anxiety and other mental disorders**  
**Chair:** Yordanka Cuza, MD, PhD  
ICBP “Victoria de Girón”, Habana, Cuba

Speaker 1: Lee Eiden, Ph.D.; National Institute of Health; USA  
Title: The role of the neuropeptide PACAP in anxiogenic, depressive, and addiction-relapse effects of acute and chronic stress

Speaker 2: Miguel Perez de las Moras, M.D., Ph.D.; Universidad Nacional Autónoma de México  
Title: Oxytocin-monoamine-interactions within amygdala. Their role in the modulation of anxiety

Speaker 3: Kjell Fuxe, M.D.; Karolinska Institutet, Sweden  
Title: Peptide-Monoamine integration through allosteric receptor-receptor interactions in heteroreceptor complexes. Focus on NTS1-D2R and GalR-5-HT1AR receptor-receptor interactions and their relevance for mental disorders

Speaker 4: Dasiel Borroto, Ph.D.; Karolinska Institutet; Sweden  
Title: Evidence for the existence of oxytocin heteroreceptor complexes in the amygdala of the rat brain and their role in social interactions and anxiety-like behavior

Speaker 5: Yordanks Cuza, Ph.D; ICBP Victoria de Girón, Cuba  
Title: General remarks

2:45-4:45 PM

**Symposium: Modulation and Plasticity of Breathing**  
**Chair:** Jack Feldman, Ph.D., University of California, Los Angeles, USA

Speaker 1: Nanduri Prabhakar, Ph.D.; University of Chicago, USA  
Title: Sensory plasticity of the carotid body

Speaker 2: Gordon Mitchell, Ph.D.; University of Florida, USA  
Title: Cellular mechanisms of intermittent hypoxia-induced phrenic motor plasticity

Speaker 3: Consuelo Morgado, Ph.D.; Universidad Veracruzana, Mexico  
Title: Peptidergic modulation of inspiratory burst duration

Speaker 4: Thiago Moreira, Ph.D.; University of São Paolo, Brazil  
Title: Selective Depletion of Astrocytes Derived From a Phox2b-Progenitor Domain Reduces Breathing in Conscious Mice

2:45-4:45 PM

**Workshop: Networking: Promoting Collaboration Across Borders**  
**Chair:** Gary Sieck, Ph.D.; Mayo Clinic, USA

4:45-5:00 PM

**Coffee Break**

5:00-6:00 PM

**Keynote:** Host defense mechanisms against invading microorganisms  
**Speaker:** Sergio Grinstein, Ph.D.; University of Toronto, Canada

5:00-6:00 PM

**Keynote:** Physiological basis of biodiversity in vertebrates  
**Speaker:** William Milsom, Ph.D.; University of British Columbia Vancouver, Canada

5:00-6:00 PM

**Keynote:** Forming partnerships between basic science and clinical practice  
**Speaker:** Rienzi Diaz, M.D. / Gary Sieck, Ph.D.; University of Valparaiso, Chile / Mayo Clinic

5:00-6:00 PM

**Keynote:** Retina as a surrogate marker of cerebral small vessel disease  
**Speaker:** Valia Rodriguez-Rodriguez, ; Aston University, Birmingham, England

**Friday, May 31**

8:30-9:30 AM

**Plenary Speaker:** Hansotto Reiber, Ph.D.; University of Sao Paulo, Brazil
Title: The polyspecific Immune response and the immunological connectivity in chronic diseases

9:30-9:45 AM  
**Coffee Break**

9:45-11:45 AM  
**Symposium: Innovations in Physiology Education**  
**Chair:** Patricia Halpin, Ph.D.; University of New Hampshire at Manchester, USA

- **Speaker 1:** Agustín Vicedo, M.D., Ph.D.; Universidad Médica de la Habana, Cuba  
  **Title:** Teaching the Physiological Sciences: Old Debts and New Challenges

- **Speaker 2:** Camilo Lellis-Santos, Ph.D.; Universidade Federal São Paulo, Brazil  
  **Title:** Using Role-Playing for Personalized Learning in Physiology Classrooms

- **Speaker 3:** Chaya Gopalan, Ph.D.; Southern Illinois University, USA  
  **Title:** Using the Flipped Classroom Technique in Teaching Physiology

- **Speaker 4:** Maria José Alves da Rocha, Ph.D.; University of São Paulo, Brazil  
  **Title:** Using clinical cases and peer instruction to increase the responsibility of the students in their teaching process.

9:45-11:45 AM  
**Symposium: Glucocorticoid regulation of immune, circadian, stress & alcohol signaling in the brain**  
**Chair:** Nicholas Gilpin, Ph.D.; LSU Health Sciences Center, USA

- **Speaker 1:** Scott Edwards, Ph.D.; LSU Health Sciences Center, USA  
  **Title:** Glucocorticoid receptor regulation of alcohol dependence-related behaviors

- **Speaker 2:** Carolina Munhoz, Ph.D.; University of Sao Paulo, Brazil  
  **Title:** The Pro-inflammatory Effects of Glucocorticoids in the Brain

- **Speaker 3:** Ilia Karatsoreos, Ph.D.; Washington State University, USA  
  **Title:** Stress and circadian rhythm effects in health & disease

- **Speaker 4:** Nuria Daviu, Ph.D.; University of Calgary, Canada  
  **Title:** Social transmission and buffering of stress

9:45-11:45 AM  
**Symposium: Evaluating Neuroepidemiology throughout Neuroinflammation**  
**Chair:** Alberto Dorta Contreras, Ph.D.; Universidad de Ciencias Médicas de La Habana, Cuba

- **Speaker 1:** José Alejandro Rodríguez Pérez.; LABCEL, CUBA  
  **Title:** Impact of rubella vaccine in Cuban women for the MRZ reaction in multiple sclerosis patients

- **Speaker 2:** William Castillo-González, M.D.; LABCEL CUBA  
  **Title:** Rubella, Measles and Mumps Antibody index in vaccinated patients with a neuroinflammation process

- **Speaker 3:** Eneida Barrios-Lamoth, Ph.D.; LABCEL CUBA  
  **Title:** Antibody index of cytomegalovirus, herpes zoster and herpes simplex in pediatric patients

- **Speaker 4:** Mileydis Cruz, Ph.D.; LABCEL CUBA  
  **Title:** ChildToxoplasma antibody index in neuroinflammation process

- **Speaker 5:** Hansotto Reiber, Ph.D.; Germany-Brazil  
  **Title:** Polyspecific immune reaction in neuroinflammation process

9:45-11:45 AM  
**Symposium: Body Sodium Balance Regulation: mechanisms and neuromodulatory systems participation.**  
**Chair:** Laura Marta Vivas, Ph.D.; Universidad Nacional de Córdoba, Argentina

- **Speaker 1:** Michal McKinley, Ph.D.; University of Melbourne, Australia  
  **Title:** Hormonal actions on the brain to regulate salt intake during stress or sodium depletion.
Speaker 2: Silvia Ruginsk, Ph.D.; Federal University of Alfenas, Brazil
Title: Hydrogen sulphide modulates homeostatic responses triggered by high sodium consumption.

Speaker 3: Ximena Caeiro, Ph.D.; Universidad Nacional de Cordoba, Argentina
Title: Sex differences in body fluid homeostasis: Sex chromosome complement involvement in angiotensinergic and vasopressinergic sexual dimorphisms.

Speaker 4: Andrea Godino, Ph.D.; Universidad Nacional de Cordoba, Argentina
Title: Participation of TRPV1 osmosensitive channel in the control of sodium appetite.

9:45-10:45 AM  **Keynote:** Anthropometric and body composition markers in involutive bone degeneration  
**Speaker:** Consuelo Prado Martínez, Ph.D.; Universidad Autónoma de Madrid, Spain

9:45-11:45 AM  **Symposium:** Cancer and therapeutic vaccines  
**Chair:** Danay Saavedra, Ph.D.; Centro de Inmunología Molecular (CIM).Cuba

Speaker 1: Danay Saavedra, Ph.D.; Centro de Inmunología Molecular (CIM).Cuba  
**Title:** CIMAvax-EFG

Speaker 2: Zaima Mazorra, Ph.D.; Centro de Inmunología Molecular (CIM).Cuba  
**Title:** Vaccine effect of Ninotuzumab

Speaker 3: Rydell Álvarez; Centro de Inmunología Molecular (CIM).Cuba  
**Title:** Role of VSSP over the suppressor myeloid cells

11:45-1:00 PM  **Closing Ceremony**

1:00-3:00 PM  **Farewell Lunch**