

Preliminary program
XXXIX Annual Meeting Chilean Society of Physiological Sciences
 October 15-18, 2024, La Serena, CHILE

SCHEDULE

XXXIX ANNUAL MEETING Chilean Society of Physiological Sciences

October 15-18, 2024 / La Serena, Chile

PRELIMINARY PROGRAM

	Tuesday 15	Wednesday 16	Thursday 17	Friday 18	
9:15-10:45	REGISTRO	Symposium 3 Complex interactions in muscle pathology: from cellular pathways to dietary interventions	Symposium 6 Preclinical and clinical views of chronic obstructive pulmonary disease	Symposium 9 Current explorations in the pathophysiology of pregnancy and postpartum: from basic research to clinical implementation	
10:45-11:15		Coffee	Coffee	Coffee	
11:15-12:45		Symposium 4 Young Scientists Symposium: New physiological mechanisms involved in hypoxia-induced responses in health and disease	Symposium 7 Teaching Physiology: from school to university	Symposium 10 Aging and Functional Performance: New Perspectives in the Assessment and Programming of Training in Older People	
12:45-13:30		Plenary Lecture 3 Dr. Gerardo García Rivas - MEXICO Plenary Lecture ALACF: Targeting the mitochondrial Ca ²⁺ uniporter as potential treatment for heart failure	SChCF Members assembly (BOX LUNCH)	Plenary Lecture 6 Dr. Rodrigo Iturriaga - CHILE New non-respiratory functions for the carotid body chemoreceptor in autonomic-related diseases	
13:15-15:00		BREAK		CLOSING CEREMONY AND AWARDS	
		Saludo de Bienvenida (14:45-15:00)	BREAK	BREAK	
15:00-16:30		Symposium 1 Advances in Cardiac Pathophysiology: Insights from Molecular Mechanisms to Clinical Translation	Oral Communications 1	Oral Communications 2	
16:30-17:15		Plenary Lecture 1 Dr. Enrique Brandan - CHILE Advances in Muscular Dystrophies: From Basic Knowledge to Application in Translational Medicine	Plenary Lecture 4 Dr. Pedro Maldonado - CHILE Advances and challenges in artificial intelligence and neurotechnology	Plenary Lecture 5 Dr Francisco Bolaños Jimenez - FRANCIA Epigenetic differences associated with sex determine the metabolic alterations induced in offspring by maternal and paternal obesity	
17:15-17:45		Coffee	Coffee	Coffee	
17:45-19:15		Symposium 2 How diet impacts our brain. A cellular, tissue and body perspective	Symposium 6 Physiological and pathophysiological mechanisms of neurodevelopment	Symposium 8 Pathophysiology of Vascular Function During Pregnancy	
19:15-20:15	Plenary Lecture 2 Dr. Mónica Rubio - CHILE The discovery of a star incubator	Posters Session 1	Posters Session 2		
20:15-22:00	Welcome Cocktail				
21:15-22:00					
			DINNER AND CLOSING PARTY (22:00-02:30)		

PLENARY LECTURES

- 1. Speaker: Dr. Enrique Brandan**, Fundación Ciencia y Vida, Universidad San Sebastián, Santiago, **CHILE**.
Title: Advances in Muscular Dystrophies: From Basic Knowledge to Application in Translational Medicine
Proposed by: Dr. Sonja Buvinic – Dr. Paola Llanos, Universidad de Chile
- 2. Speaker:** Dra. Mónica Rubio, Department of Astronomy, Universidad de Chile. National Award for Exact Sciences 2021
Title: The discovery of a star incubator
Proposed by: Council Chilean Society of Physiological Sciences
- 3. Speaker: Dr. Gerardo García Rivas**, The Institute for Obesity Research, Tecnológico de Monterrey. Centro de Investigación Biomédica, Hospital Zambrano Hellion, TecSalud, San Pedro Garza García, **MÉXICO**.
Title: Plenary Lecture ALACF: Targeting the mitochondrial Ca^{2+} uniporter as potential treatment for heart failure
Proposed by: ALACF - Dra. Sonja Buvinic
- 4. Speaker: Dr. Pedro Maldonado**, Institute of Biomedical Sciences, Faculty of Medicine, Universidad de Chile
Title: Advances and challenges in artificial intelligence and neurotechnology
Proposed by: Dr. Carla Basualto, Universidad de Aysén
- 5. Speaker: Dr Francisco Bolaños Jimenez**, National Institute for Agronomic Research (INRAE), Nantes Université, **FRANCIA**.
Title: EProposed by: Dr. Paola Casanello, P. Universidad Católica de Chile
- 6. Speaker: Dr. Rodrigo Iturriaga**, Institute of Biomedical Sciences, Faculty of Health Sciences, Universidad Autónoma de Chile, **CHILE**.
Title: New non-respiratory functions for the carotid body chemoreceptor in autonomic-related diseases
Proposed by: Dr. Julio Alcayaga, Universidad de Chile

SYMPOSIA

1. Title of the Symposium: "**Advances in Cardiac Pathophysiology: Insights from Molecular Mechanisms to Clinical Translation**"

Organizer: Dr. Ivonne Olmedo, Universidad de Chile

Scientific talks:

– **Dr. Zully Pedrozo**, Universidad de Chile, CHILE

Influence of microgravity and prolonged rest on cardiovascular function

– **Dr. Ivonne Olmedo**, Universidad de Chile, CHILE

Unveiling Miro1: A Key Player in Cardiac Disease

– **Dr. Manuel Estrada**, Universidad de Chile, CHILE

Metabolic Reprogramming and Intracellular Signaling in Testosterone-Induced Cardiac Hypertrophy

– **Dr. Abraham Gajardo**, Universidad de Chile, CHILE

Translating Cardiac Ischemia-Reperfusion Research: From Laboratory Discoveries to Clinical Practice

2. Title of the Symposium: "**How diet impacts our brain. A cellular, tissue and body perspective**"

Organizer: Dr. Eugenia Morselli, Universidad San Sebastián

Scientific talks:

– **Dr. Patricia Burgos**, Universidad San Sebastián, CHILE

Immunoproteasome Upregulation in Obesity-Linked Hypothalamic Dysfunction: Mechanisms and Therapeutic Potential

– **Dr. Eugenia Morselli**, Universidad San Sebastián, CHILE

HFD Enhances Hypothalamic Mitophagy by Increasing PINK1: Impact on Metabolic Homeostasis and Body Weight

– **Dr. Bredford Kerr**, Universidad San Sebastián, CHILE

HFD feeding induces hypothalamic epigenetic changes associated with the expression of neuronal synaptic plasticity-related genes

– **Dr. Claudio Perez**, Pontificia Universidad Católica de Chile, CHILE

How the food environment alters our behavior: Insights into brain function in response to cafeteria diet and uncertain food Access

3. Title of the Symposium: " **Complex interactions in muscle pathology: from cellular pathways to dietary interventions**"

Organizer: MUSCLE research group: Dr. Denisse Valladares, Universidad de O´Higgins & Dr. Paola Llanos, Universidad de Chile

Scientific talks:

- **Dr. Claudio Cabello**, Universidad Andrés Bello, CHILE

Functionality of Satellite Cells in Sarcopenia Secondary to Cholestatic Liver Diseases

- **Dr. Andrea del Campo**, Pontificia Universidad Católica de Chile, CHILE

Mitochondrial Adaptation Mechanisms as a Common Feature in the Development of Primary and Secondary Sarcopenia

- **Dr. Paola Llanos**, Universidad de Chile, CHILE

Activation of the ROS/TXNIP/NLRP3 Pathway Disrupts Insulin-Dependent Glucose Uptake in Skeletal Muscle During Insulin Resistance

- **Dr. Matías Monsalve**, Universidad Andrés Bello, CHILE

No Whey: High Protein Dairy Products and Resistance Exercises to Improve the Microbiota and Muscle Function of Older People

4. Title of the Symposium: " **Young Scientists Symposium: New physiological mechanisms involved in hypoxia-induced responses in health and disease** "

Organizer: Dr. Rodrigo Iturriaga, Universidad Autónoma

Scientific talks:

- **Dr. Sebastián Castillo-Galán**, Universidad Los Andes, CHILE

New pharmacological technologies and a-cellular therapies in In vivo models that present Hypoxic Pulmonary Hypertension

- **Dr. Claudia Lucero**, Universidad Autónoma, CHILE

Role of connexin 43 hemichannels in the development of heart failure

- **Dr. David C. Andrade**, Universidad de Antofagasta, CHILE

Effects of parasympathetic modulation on physical effort during hypobaric hypoxia in rats

- **Dr.c Valeria Páez Ramírez**, Pontificia Universidad Católica de Chile, CHILE

Prediction of cardiorespiratory performance and baroreflex sensitivity during exposure to acute hypobaric hypoxia

5. Title of the Symposium: "**Physiological and pathophysiological mechanisms of neurodevelopment**"

Organizer: Dr. Marcelo González-Ortiz, Universidad de Concepción y Dr. Patricio Castro, Universidad de Concepción

Scientific talks:

- **Dr. Marcelo González**, Universidad de Concepción, CHILE

Allostatic overload during pregnancy and the effects on neurodevelopment: what can we learn from pandemic experience?

- **Professor Laura Borodinsky**, University of California, Davis, USA

Mechanisms of folate action during neural tube formation

- **Dr. Patricio Castro**, Universidad de Concepción, CHILE

Paracrine purinergic & glutamatergic signalling in neural tube formation. Anti-epileptic drugs (AEDs)

- **Dr. Karina Bravo**, Carver College of Medicine, USA

Neurodevelopment of the serotonergic system and central respiratory chemoreception: expanded approaches in health and disease

6. Title of the Symposium: "**Preclinical and clinical views of chronic obstructive pulmonary disease**"

Organizer: Dr. Mauricio Henríquez Luna, Universidad de Chile

Scientific talks:

- **Dr. Andrea Méndez**, Universidad de Las Américas, CHILE

Lung damage and pulmonary hypertension in a cigarette smoke-induced COPD model: different perspectives of a disease

- **Dr. Diego Rojas**, Universidad Autónoma, CHILE

Role of the Pneumocystis fungus in the severity of elastase-induced COPD in animal models

- **Dr. Luis Peñailillo**, Universidad Andrés Bello, CHILE

COPD and skeletal muscle in animal models

- **Dr. Laura Mendoza**, Universidad de Chile, CHILE

Impact of physical activity in patients with COPD

7. Title of the Symposium: "**Teaching Physiology: from school to university**"

Organizer: Dr. Loreto Véiz, P. Universidad Católica de Chile & Dr. Victoria Velarde, Universidad de Valparaíso.

Scientific talks:

- **Dr. Victoria Velarde**, Universidad de Valparaíso, CHILE

What do high school students know about the urinary system?

- **Dr. Carolina Álvarez Aguilera – Dra. Loreto Véliz García**, Universidad Católica de Chile, CHILE

Innovations and adaptations for inclusive teaching in an introductory Biology course

- **Dr. Manuel Arias-Calderón**, Universidad Andrés Bello, CHILE

Near-peer teaching in Physiology: Benefits for students and assistants

- **Dr. Víctor Moya – Dr. Alexis González**, Universidad Católica de Valparaíso, CHILE

Strengthening scientific research skills within the Laboratory of Human Physiology and Systems Physiology: Implementation of a Project and Evaluation of its Perception in Students of the Faculty of Sciences of the Pontificia Universidad Católica de Valparaíso

8. Title of the Symposium: "**Pathophysiology of Vascular Function During Pregnancy**"

Organizer: Dr. Ramón Lorca, University of Colorado Anschutz Medical Campus, USA y Dr. Bernardo Krause, Universidad de O'Higgins.

Scientific talks:

- **Dr. Tamara Sáez**, Universidad de Valparaíso, CHILE

Hypercholesterolemia in Pregnancy: Impact on Maternal Vascular Function and Postpartum Health

- **Dr. Claudio García**, Universidad de Santiago, CHILE

Study of the Biomechanics of Arteries Affected by Fetal Growth Restriction: Experimental Analysis and Numerical Simulation

- **Dr. Bernardo J. Krause**, Universidad de O'Higgins, CHILE

Epigenetic-based Interventions against Fetal Vascular Dysfunction Resulting from Chronic Hypoxia

- **Dr. Ramón A. Lorca**, University of Colorado Anschutz Medical Campus, USA

Regulating Uterine Blood Flow with Optogenetics: Novel Models for Modulating Fetal Growth

9. Title of the Symposium: **"Current explorations in the pathophysiology of pregnancy and postpartum: from basic research to clinical implementation"**

Organizer: Dr. Andrea Leiva, Universidad San Sebastián

Scientific talks:

- **Dr. María José Yáñez**, Universidad San Sebastián-Sede Santiago, CHILE
Dynamics of cholesterol and organelle dysfunction in the syncytiotrophoblast: perspectives in placental biology
- **Dr. Claudette Cantin**, Universidad San Sebastián-Sede Puerto Montt, CHILE
Placental transport and materno-fetal communication: the role of lipoproteins and exosomes in maternal hypercholesterolemia and preeclampsia
- **Dr. Delia Chiarello**, Universidad San Sebastián-Sede Santiago, CHILE
Focusing on the maternal exposome to analyze the impact of ubiquitous contaminants in pregnancy and nutritional interventions during gestation
- **Dr. Susana Contreras**, Universidad San Sebastián-Sede Santiago, CHILE
Exploring the impact of pregnancy on lactation and postpartum, analyzing its consequences

10. Title of the Symposium: **"Aging and Functional Performance: New Perspectives in the Assessment and Programming of Training in Older People"**

Organizer: Dr. Emilio Jofré Saldía, Universidad de Santiago

Scientific talks:

- **Mg. Ignacio Orizola Cáceres**, Clínica MEDS, CHILE
Sarcopenia in the Self-Employed Elderly
- **Dr. Álvaro Huerta Ojeda**, Universidad de Las Américas, CHILE
Reliability of the GDLAM Test and Creation of a National Qualitative Scale
- **Dr. Cristian Cofré Bolados**, Universidad de Santiago, CHILE
Submaximal Ergospirometry Parameters in Non-Frail Elderly
- **Dr. Emilio Jofré Saldía**, Universidad de Santiago, CHILE
Low-Effort Strength Training and Functional Performance in Community-Dwelling Older Women.