



IV

International Meeting of the Mexican Society of Urogenital Sciences, A.C.

University of Guadalajara
NORTHERN UNIVERSITY CENTER

Hybrid Format

September 26-28, 2024. Colotlán, Jalisco, Mexico.



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U N I V E R S I T A R I O
D E L N O R T E

**IV CONGRESO INTERNACIONAL DE LA SOCIEDAD
MEXICANA DE CIENCIAS UROGENITALES, A.C.**
Formato Híbrido, del 26 al 28 de Septiembre 2024
Colotlán, Jalisco.

OBJECTIVE

The purpose of this meeting is to share preclinical, clinical and technological knowledge with undergraduate and graduate students in the field of urogenital sciences, as well as to gather and open an interactive forum for discussion between basic and clinical science scientists.



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MEXICAN SOCIETY OF UROGENITAL SCIENCES, A.C.

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Margot S. Damaser

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José Manuel Viveros Elías

Integral Urology. B. C. S., Mexico

Yingchun Zhang

University of Miami, Florida, United States

Vitor Samuel Leite Fernandes

Complutense University of Madrid, Spain



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Jorge Daniel Ceballos Macías

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ACADEMIC BODIES

Academic Body Psychoneuroimmunology (UDG-CA-1027).
University of Guadalajara

Academic Body of Physiology of the Pelvic Area (UATLX-
CA-226). Autonomous University of Tlaxcala

Academic Body of Biology of Animal Reproduction
(CABRA-UAM-I-CA-136). Division of Biological and Health
Sciences, Metropolitan Autonomous University-Iztapalapa.



SPEAKERS

Luis Manuel Álvarez Tovar

Dr. Valentín Gómez Farías-ISSSTE Regional Hospital, Guadalajara, Mexico

Marcela Arteaga Silva

Universidad Autónoma Metropolitana-Iztapalapa, CDMX, Mexico

Jesús Héctor Cantú Elizondo

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Martín Donnet Oloarte Flores

Universidad Autónoma de Tlaxcala, Tlaxcala, Mexico

César F. Pastelín Rojas

Meritorious Autonomous University of Puebla, Puebla, Mexico

Marcela Peña Rodríguez

University Center of Health Sciences, UDG, Guadalajara, Mexico

Sonia Guadalupe Pérez Aguirre

Universidad Autónoma Metropolitana-Iztapalapa, CDMX, Mexico

Mauricio Rodríguez Dorantes

National Institute of Genomic Medicine, Mexico City, Mexico

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Houston Methodist Research Institute, Houston, TX, USA

Rosa María Vigueras Villaseñor

National Institute of Pediatrics, Mexico City

José Manuel Viveros Elías

Integral Urology. Baja California Sur, Mexico

Yingchun Zhang

University of Miami, Miami, FL, USA



PRE-MEETING COURSES

MECHANISMS AND REGULATION OF CANCER IN PELVIC ORGANS: OVARIAN, TESTICLE AND PROSTATE

Objective: To transmit knowledge regarding tumor progression and the mechanisms of cancer regulation in some pelvic organs such as the ovarian, testicle and prostate, as well as some markers for its detection.

Monday, August 19 from 4:00 p.m. to 6:30 p.m. Tuesday, August 20 from 10:00 a.m. to 2:15 p.m.

Organizers

Marcela Arteaga-Silva, PhD and Mauricio Rodríguez-Dorante, MD, PhD

USING CYSTOMETRIC TESTS TO ASSESS URINARY PHYSIOLOGY IN ANIMAL MODELS

Objective: To provide a better understanding of the principles, methods, and resolution of complications during the application of cystometric tests to design, conduct, and analyze studies related to bladder function and urination in rodents.

Friday, September 13 from 10:00 a.m. to 5:00 p.m.

Organizers

Manuel Medina-Aguiñaga, MD, PhD and Alvaro Munoz, PhD



SCIENTIFIC PROGRAM

THURSDAY, SEPTEMBER 26th

Auditorium 1, Academic Services Port, CUNorte

- 08:30 h Attendee registration
- 09:00 h Opening ceremony
- 10:00 a.m. **Keynote Lecture: Establishment of the Follicular Reserve in the Fetal Ovary.**
Horacio Merchant Larios.
Moderated by Rocío Brenda Anguiano Serrano (via Zoom)
- 11:00 a.m. **Short Oral Presentations 1: Research on Urogenital Function.**
Moderated by José Luis Palacios Galicia

11:00-11:10	Daniel Medina Aguiñaga	A Novel model to examine the impact of epidural stimulation on urinary and cardiovascular dynamics in Spinal cord injury Rats
11:10-11:20	Gustavo A. Robles-Mares	Whole-body vibration as an alternative to intense exercise improves motor and urinary functions in male rats with semichronic spinal cord injury.
11:20-11:30	Denisse Calderón-Vallejo	Evaluation of bladder structure and function in rats with spinal cord injury treated with GnRH.
11:30-11:40	Alan Nava Ortiz	Automation of a Micturition Recording System in Laboratory Rats
11:40-11:50	Herminia Chávez-Arellano	Impact of an enriched environment on the recovery of sensorimotor and voiding functions in a female rat model with spinal cord injury.
11:50-12:00	Irma Hernández Jasso	Study of renal structure in rats with spinal cord injury treated with GnRH.

- 12:00 p.m. **Coffee break**
- 12:30 p.m. **Symposium Nervous Control of Urination: Learning in Animal Models.**
Organized and moderated by Yolanda Cruz Gómez.
- Neuroanatomy of the urogenital tract in dogs. César F. Pastelín Rojas
 - Neuroanatomy of the urogenital tract in pigs. Daniel Medina Aguiñaga
 - Spinal pathways that control rat urination behavior. Martín Donnet Oloarte Flores
 - The neuromuscular circuit of the urethral striated sphincter in rats. Yolanda Cruz Gómez
- 2:30 p.m. **Official photo and lunch at the CUNorte dining room**
- 4:30 p.m. **Chronic Pelvic Pain Management-Precision Diagnosis/Phenotyping & Personalized Treatment.**
Yingchun Zhang
Moderated by Alvaro Munoz



5:30 p.m. **Short Oral Presentations 2: Research on Urogenital Function.**

Moderated by Albertina Cortés Sol

17:30-17:40	Aarón Pérez Gutiérrez	Behavioral and neuroanatomical correlates of diabetes mellitus-induced urogenital dysfunctions in male rats
17:40-17:50	María de los Ángeles González Colorado	Sexual behavior and expression of c-Fos in the hypothalamic ventromedial nucleus in hysterectomized rats
17:50-18:00	Marian Mera-Cazares	Interaction of thyroid hormones-neurotrophins in prostate cancer cell lines.
18:00-18:10	Michelle Quintero García	Effect of iodine on dorsal root ganglion axonogenesis and its involvement in prostate pathologies.
18:10-18:20	Emely V. Muñoz Ramírez	Systemic inhibition of P2X3 receptors generates cystometric and electromyographic changes that can be correlated with stereotyped urination behavior in female rats.
18:20-18:30	Nicholas Dias	Development of A High Density Surface EMG Device for Pelvic Floor Muscle Overactivity Mapping

6:30 p.m. **Welcome toast. Sofia Party Hall, Colotlán.**



FRIDAY, SEPTEMBER 27th

Auditorium 1, Academic Services Port, CUNorte

- 09:00 h Attendee registration
- 09:00 h Implementation of non-directed and directed metabolomics in urogenital sciences: horizons for clinical application.
Yamilé López Hernández
Moderated by Rocío Brenda Anguiano Serrano (via Zoom)
- 10:00 a.m. Innovations in Wireless Catheter-Free Monitoring of Bladder Function.
Margot S. Damaser
Moderated by Yolanda Cruz Gomez
- 11:00 a.m. Symposium The Society for Pelvic Research.
Organized and moderated by Maryrose Sullivan.
Translated by Daniel Medina and Alvaro Munoz
- Molecular and Functional Characterization of α -Synuclein in Bladders from a Mouse Model of Parkinson's Disease. Vivian Cristofaro
 - Targeted depletion of Fidgetin-like 2 (FL2) promotes cavernous nerve regeneration and improves erectile function outcomes in a rat model of radical prostatectomy. Kelvin Davies
 - Cellular and molecular basis for smooth muscle function in the lower urogenital system. Michael E. DiSanto
- 12:00 p.m. Coffee break
- 12:30 p.m. Symposium Infertility and epididymal sperm maturation: their alterations by heavy metals.
Organized and moderated by Marcela Arteaga Silva
- Current status of infertility and involvement of heavy metals. Marcela Arteaga Silva.
 - Spermatogenesis and alterations due to heavy metals. Joel Hernandez Rodriguez
 - Epididymal sperm maturation and alterations due to heavy metals. Sergio Marín de Jesús.
 - Mechanisms of heavy metal toxicity in reproductive organs. Sonia Guadalupe Pérez Aguirre
- 2:30 p.m. Lunch at the CUNorte dining room
- 4:30 p.m. Role of the gut microbiome in hormonal imbalance in women with polycystic ovary syndrome.



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Marcela Peña Rodríguez.

Moderated by Cesar F. Pastelín Rojas

5:30 p.m. **SMCU Member Business Session**

6:30 p.m. **Poster session and cultural event.**

Casa Hidalgo Cultural Center, Colotlán Centro.

Recovery fee \$100 (one hundred pesos) per person

SATURDAY, SEPTEMBER 28th

Auditorium 1, Academic Services Port, CUNorte

09:00 h Attendee registration

09:00 h Understanding neural control of lower urinary tract function: Early neuroimaging observations on spinal cord dynamics in healthy men and women.

Betsy H. Salazar.

Moderated by Daniel Medina-Aguñaga

10:00 a.m. Short Oral Presentations 3: Research on Urogenital Function.

Moderated by Jorge Arellano-Hernández

10:00-10:10	José Israel Nava Galicia	Effect of Recording Electrode Length on Electromyography of the External Sphincter of the Male Rat Urethra
10:10-10:20	María Isabel Pérez-Cuapio	Effect of gonadectomy and aging on the external sphincter of the urethra and the Levator Ani muscle in male rats
10:20-10:30	José Francisco Pérez Romero	Cholinergic innervation of the urogenital tract of infant and juvenile rats
10:30-10:40	Leslie M. Ramirez Hernandez	Characterization of Defecation in Female Rat and Effect of Spinal Injury
10:40-10:50	Ramón Eduardo Cortina	Preliminary study of different types of electrical stimuli applied to the peripheral nerves for the treatment of urinary incontinence in the rat
10:50-11:00	Mustafa Almosawi	The Effect of Early spinal cord Epidural Stimulation (scES) on Bowel Function in Mini Pigs with Spinal Cord Injury (SCI)

11:00 a.m. Neuromodulation of TUI and urinary incontinence

Gilberto Domínguez González

Moderated by Rocío Brenda Anguiano Serrano

12:00 p.m. Coffee break

12:30 p.m. Dr. Carlos Pérez Martínez Symposium



Neuromodulation of the lower urinary tract.



Organized and moderated by Jose M. Viveros-Elias

- Introduction and presentation
Jose Manuel Viveros-Elias
- Tibial nerve stimulation in the management of refractory idiopathic overactive bladder
Luis Manuel Alvarez Tovar
- Sacral neuromodulation in the management of refractory idiopathic overactive bladder
Grisel Hernandez-Martinez
- Sacral neuromodulation in the management of non-obstructive urinary retention
Jesus H Cantu-Elizondo

2:30 p.m. **Lunch at the CUNorte dining room**

4:30 p.m. Expression and function of bitter taste receptors in the urogenital system.
Vitor S. Fernandes
Moderated by Álvaro Muñoz

5:30 p.m. Closing ceremony and final message.
SMCU Board of Directors, 2022-2024
SMCU Board of Directors, 2024-2026

6:30 p.m. Farewell dinner. Sofia Party Hall, Colotlán.