

PROGRAMA IN EXTENSO

Sunday October 16

17:30-18:00

Welcome Ceremony (Gran Salón Yucatán)

18:00-19:00

Opening Lecture (Gran Salón Yucatán)

Scanning Electron Microscope. A connection between science and art

IQ. Silvia Andrade Silvana, CICY

Chair: Teresa Hernández, CICY

19:00-20:00

Plenary Lecture I (Gran Salón Yucatán)

The Pseudomonas aeruginosa type VI secretion system (T6SS): A bacterial killing machine

Alain Filloux, Nanyang Technological University, Singapur

Chair: Bertha González, Instituto de Fisiología Celular, UNAM

20:00-22:00

Welcome Cocktail, Explanada Centro Internacional de Convenciones

Monday October 17

8:30-10:00

Plenary Symposia I (Gran Salón Yucatán)

The Ever changing nature of scientific research: four stories

Chair: Alicia González Manjarrez, Instituto de Fisiología Celular, UNAM.

Overlapped genes in bacteriophage Fc02 are transcribed in opposite directions and encode similar activities during the lytic and lysogenic phases in Pseudomonas aeruginosa.

Gabriel Guarneros Peña, Cinvestav, Zacatenco.

Divergence of functional transcriptional regulation through the generation of novel hybrid regulators in S. cerevisiae.

Alicia González Manjarrez, Instituto de Fisiología Celular, UNAM.

From oxidative stress MAPK signaling to mitochondrial division

Jesús Aguirre Linares, Instituto de Fisiología Celular, UNAM.

Fungal plant growth stimulating compounds or fungal hormones.

Alfredo Herrera-Estrella, LANGEBIO, Irapuato.

10:00-11:00

Plenary Lecture II (Gran Salón Yucatán)

Communication makes the difference: the constant dialogue between members of the cell is an essential element for plant development

Patricia León Mejía, Instituto de Biotecnología, UNAM

Chair: Felipe Vázquez Flota, CICY

11:00-11:30

Coffee Break

11:30-13:00

**Simultaneous oral Sessions 1, 2, 3 (Salones Yucatán 1, 2, 3)
to be announced**

13:00-14:30

Lunch

14:30-16:15

Simultaneous Symposia (Salones Yucatán 1, 2, 3)

1. Molecular biology of fungi and their interactions

Chair: Meritxell Riquelme, CICESE

Fungal holobionts: hidden relationships with ecological consequences.

Laila Partida Martínez, Cinvestav, Irapuato

Exploring the kosmotropy limits in fungi: Aspergillus sydowii as a model of kosmotolerant

Ramón Batista García, Universidad Autónoma del Estado de Morelos.

Exploring natural products from mexican biodiversity

Mario Alberto Figueroa Saldívar, Facultad de Química, UNAM.

Fungal models: can they be the basis of the growth canons of the great fungal diversity?

Meritxell Riquelme Pérez, CICESE.

2. System Neuroscience

Chair: Hugo Merchant Nancy, Instituto de Neurobiología, UNAM.

Neural interactions mediating cognitive control in primate prefrontal networks

Matthew V. Chafee, Department of Neuroscience, University of Minnesota.

Neural representations and circuits underlying spatial reorientation

Isabel A. Muzzio, Department of Biology, University of Texas at San Antonio, USA

Cortico-striatal circuits for bilaterally coordinated movements

Pavel Rueda Orozco, Instituto de Neurobiología, UNAM.

Brain dynamics in the primate audiomotor circuit during isochronous beat perception and entrainment

Hugo Merchant, Instituto de Neurobiología UNAM.

3. Symposium on physical-chemistry, structure and design of proteins

In memoriam: Alfredo Torres Larios and Barbarín Arreguín Lozano

Chair: Víctor Loyola Vargas, CICY.

A structural study of an IgE-profilin complex reveals allergen recognition and cross-reactivity information

Adela Rodríguez Romero, Instituto de Química, UNAM.

Specificity in promiscuous enzymes: The aminoaldehyde dehydrogenases case

Rosario Muñoz Clares, Facultad de Química, UNAM.

Polymerases & DNA replication: A tale of bacteria, phages and organelles

Luis Gabriel Briebe de Castro, LANGEBIO, Irapuato.

How are plant peptide hormones perceived by the cells and what determines their signaling specificity?

Pedro Jiménez Sandoval, Department of Plant Molecular Biology, University of Lausanne, Switzerland.

16:15-16:45

Coffee Break

16:45-17:45

Plenary Lecture III (Gran Salón Yucatán)

Quorum sensing beyond the signaling molecules

Mayra de la Torre. Laboratorio de Fisiología Celular y Bioprocesos, CIAD Hidalgo

Chair: Teresa Hernández, CICY

17:45-18:15

Flash Talks for poster advertising (Gran Salón Yucatán)

18:15-20:15

Poster Session 1

Will be held in Hotel Holiday Inn (El Gran Salón and Foyer)

18:15-19:15

Having coffee with....(Salón Celestún)

Paty León, Mayra de la Torre, Alicia González, Alain Filloux

Tuesday October 18

8:30-10:00

Plenary Symposia II (Gran Salón Yucatán)

Fluorescence Nanoscopy

Chair: Adan Guerrero, Instituto de Biotecnología, UNAM

Opening: Beyond the limit - fundamentals of super-resolution microscopy.

Diego L. Delgado Álvarez, CICESE, Baja California.

Super-resolution imaging reveals the structure disruption of Chromosome Territories 9 and 22 associated with treatment resistance in Chronic Myeloid Leukemia.

Eunice Fabian Morales, Instituto Nacional de Cancerología.

Super resolution microscopy reveals dynamic changes in the mouse sperm midpiece.

Mariano Gabriel Buffone, Instituto de Biología y Medicina Experimental, Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina.

Nano-deconvolution, opening a new era of fluorescence microscopy.

Adán O. Guerrero Cárdenas, Laboratorio Nacional de Microscopía Avanzada, Instituto de Biotecnología, UNAM.

10:00-11:00

Plenary Lecture IV (Gran Salón Yucatán)

Protein Kinase C Unbalanced: Deregulated Signaling in Disease

Alexandra Newton, University of California San Diego.

Chair: Agustín Guerrero, Cinvestav, Zacatenco.

11:00-11:30

Coffee break

11:30-13:00

**Simultaneous oral Sessions 1, 2, 3 (Salones Yucatán 1, 2, 3)
to be announced**

Technical Conferences (Salón Mérida)

11:30-12:00

Cell culture 3D

Laura López Bañuelos, UNIPARTS

12:00-12:30

Transcriptome profile of Aedes aegypti in midgut and salivary glands post DENV-2 infection
Katherine Laiton-Donato. Centro de Investigación en Salud para el Trópico. MGI - QUÍMICA
VALANER

12:30-13:00

Curso para Mentorías STEM
Mina Köningsberg, UAM Iztapalapa.

13:00-13:15

Group photo

13:15-14:30

Lunch

14:30-16:15

Simultaneous Symposia (Salones Yucatán 1, 2, 3)

4. Bioenergetics and Biomembranes

In Memoriam: Heliodoro Celis Sandoval

Chair: Emma Berta Gutiérrez Cirlos Madrid, FES Iztacala, UNAM.

All roads lead to mitochondria: mitophagy and stress in Saccharomyces cerevisiae

Soledad Funes Argüello, Instituto de Fisiología Celular, UNAM.

The bioenergetic machinery of Euglena gracilis

Héctor Vicente Miranda Astudillo, Instituto de Investigaciones Biomédicas, UNAM.

Bacillus subtilis and its respiratory chain: it breaths too

Emma Berta Gutiérrez Cirlos Madrid, FES Iztacala, UNAM.

5. Plant development and specialized metabolism

Chair: Felipe Augusto Vázquez Flota, CICY

Grow or fight: a phospho-switch prioritises ABCG36/PEN3/PDR8-mediated transport toward defence

Markus Geisler, University of Fribourg, Suiza.

The integrate use of metabolomics and transcriptomics as a strategy to identify phytochemicals compounds to use in control pest. The case of Cassia fistula and the ambrosia beetles
Enrique Ibarra Laclette, Red de Estudios Moleculares Avanzados, INECOL.

NTT connects two plant hormonal pathways
Nayelli Marsh, Cinvestav, Irapuato.

6. Virus as experimental molecular tools
Chair: Luis Vaca Domínguez, Instituto de Fisiología Celular, UNAM.

Use of virus in experimental gene therapy
Jose Segovia, Cinvestav, Zacatenco.

The viruses we use for optogenetic manipulations
Fatuel Tecuapetla, Instituto de Fisiología Celular, UNAM.

Baculovirus display: a novel method for vaccine production
Luis Vaca, Instituto de Fisiología Celular, UNAM.

16:15-16:45
Coffee break

16:45-17:45
Plenary Lecture V (Gran Salón Yucatán)
PABMB Plenary Lecture
Cryo-EM analysis of inositol triphosphate receptor calcium channels
Erkan Karakas, Vanderbilt School of Medicine, USA.
Chair: Agustín Guerrero, Cinvestav, Zacatenco.

17:45-18:15
Flash Talks for poster advertisings (Gran Salón Yucatán)

18:15-20:15
Poster Session II
Will be held in Hotel Holiday Inn (El Gran Salón and Foyer)

18:15-19:15
Having coffee with ... (Salón Celestún)
Adán Guerrero, Erkan Karakas, Julio Morán, Magdalena Plebanski

20:00-21:00
Business session (Salón Mérida)

Wednesday October 19

8:30-10:00

Plenary Symposia III (Gran Salón Yucatán)

Novel Research in Gene Regulation

Chair: Enrique Castaño de la Serna, CICY.

The talk could have a heading nuclear phosphoinositides - new players in regulation of gene expression

Pavel Hozak, Institute of Molecular Genetics, Academy of Sciences of the Czech Republic.

SWI/SNF Chromatin Remodeling Enzymes in Melanocytes and Melanoma

Ivana de la Serna, Department of Cell and Cancer Biology, University of Toledo, USA.

Fibrillar and non coding RNA in gene architecture and regulation

Enrique Castaño, CICY.

10:00 – 11:00

Plenary Lecture VI (Gran Salón Yucatán)

In memoriam: Ricardo Tapia Ibarguengoytia

Exploring the cellular mechanisms of epilepsy: from neurochemistry to electrophysiology and back

J. Fernando Peña Ortega, Instituto de Neurobiología, UNAM.

Chair: Lourdes Massieu, Instituto de Fisiología Celular, UNAM.

11:00 – 11:30

Coffee break

11:30 – 13:00

**Simultaneous oral Sessions 1, 2, 3 (Salones Yucatán 1, 2, 3,)
to be announced**

Technical Conferences (Salón Mérida)

11:30-12:00

Let's establish a new protein purification in one day, from scratch

Carlos E. Bravo, Field Applications Specialist. BIORAD

12:00-12:30

Solutions for 3D Cell Cultures.

Alfredo Javier Hernandez Juarez. Corning Life Sciences

12:30-13:00

IFC CANALOPATIAS

13:00 – 14:30

Lunch

14:30 – 16:15

Simultaneous Symposia (Salones Yucatán 1, 2, 3)

7. Oxidative stress by xenobiotics: toxicity and treatments

Chair: José Víctor Calderón Salinas, Cinvestav, Zacatenco.

Oxidative stress in lead poisoning, chemotherapy and radiotherapy

José Víctor Calderón Salinas, Cinvestav, Zacatenco.

Cysteine metabolism and transport in arsenic exposure.

María E. Gonsebatt, Instituto de Investigaciones Biomédicas, UNAM

Oxidative stress as an inducer of bacterial "persistence" in the origin of mutations resistant to antibiotic.

Rafael Camacho Carranza, Instituto de Investigaciones Biomédicas, UNAM

8. Molecular aspects of bacterial ecology

Chair: Rodolfo García Contreras, Facultad de Medicina, UNAM

Regulation of bacterial virulence by saturated fatty acids

Israel Castillo Juárez, Colegio de Postgraduados.

Plasmid dynamics: from single-cells to microbial communities

Rafael Peña Miller, Centro de Ciencias Genómicas, UNAM.

Plant-bacterial interactions at the root, fostering good relationships by metacommunity lessons

Luis David Alcaraz Peraza, Facultad de Ciencias, UNAM.

Public good exploitation in Pseudomonas aeruginosa

Rodolfo García Contreras, Facultad de Medicina, UNAM.

9. Betaglycan, a multi-purpose and versatile growth factor co-receptor
Chair: Fernando López Casillas, Instituto de Fisiología Celular, UNAM.

From betaglycan to TGFBR3L: Deciphering mechanisms of inhibin action

Daniel J Bernard, Department of Pharmacology and Therapeutics, McGill University, Montreal, Quebec, Canada.

Sensitization of cells to TGF-beta by the co-receptor betaglycan: structure and mechanism

Andrew P Hinck, Department of Structural Biology, University of Pittsburgh, USA.

Lessons from the betaglycan null zebrafish

Fernando López-Casillas, Instituto de Fisiología Celular, UNAM.

16:15 – 16:45

Coffee break

16:45 – 17:45

Plenary Lecture VII (Gran Salón Yucatán)

Uncovering the transcriptional nuances of the chaperone-usher fimbrial operon repertoire of an attaching and effacing bacterial pathogen

José Luis Puente García, Instituto de Biotecnología, UNAM

Chair: Bertha González, Instituto de Fisiología Celular, UNAM

17:45 – 18:15

Flash Talks for poster advertisings (Gran Salón Yucatán)

18:15 – 20:15

Poster Session III

Will be held in Hotel Holiday Inn (El Gran Salón and Foyer)

18:15-19:15

Having coffee with...(Salón Celestún)

Ivana de la Serna, Fernando Peña Ortega, José Luis Puente, Selene Fernández

Thursday October 20

8:30-10:00

Symposia Hispano - Mexicano (Gran Salón Yucatán)

Emergency vaccines and new therapies

Chair: Agustín Guerrero, Cinvestav, Zacatenco.

Vaccine candidates against coronavirus variants: the role of the Biochemists.

Beatriz Xoconostle, Cinvestav, Zacatenco.

Interfering the SARS-CoV-2/ACE2 interaction and biophysical characterization of viral spike variants

Jerónimo Bravo Sicilia, Instituto de Investigaciones de Valencia, España.

Responding to a pandemic with vaccines: Mexico and the world

Laura Alicia Palomares Aguilera, Instituto de Biotecnología, UNAM.

New frontiers in vaccines and nanotechnology

Magdalena Plebanski, RMIT University, Melbourne, Victoria, Australia.

10:00-11:00

Plenary Lecture VIII (Gran Salón Yucatán)

Reactive oxygen species: signaling molecules in neuronal death and development

Julio Morán Andrade, Instituto de Fisiología Celular, UNAM.

Chair: Lourdes Girard, Centro de Ciencias Genómicas, UNAM.

11:00-11:30

Coffee break

11:30-12:30

Plenary Lecture IX (Gran Salón Yucatán)

Long non-coding RNAs as evolutionarily fluid chromatin weavers

Selene L. Fernández-Valverde, LANGEBIO, Irapuato.

Chair: Teresa Hernández, CICY.

12:30-13:00

Group photo

13:00 – 14:30

Lunch



XXXIII National SMB Meeting



14:30-16:30

Poster Session IV

Will be held in Hotel Holiday Inn (El Gran Salón and Foyer)

17:00-18:00

Closing Lecture (Gran Salón Yucatán)

The James Webb telescope

Julieta Fierro Gossman, Instituto de Astronomía, UNAM.

Chair: Lourdes Girard, Centro de Ciencias Genómicas, UNAM.

18:00 - 18:30

Final announcements and closing ceremony (Gran Salón Yucatán)

21:00-24:30

Farewell dinner (Quinta Montes Molina)