

**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, Centro de Investigación Científica de Yucatán.

Chair: Teresa Hernández, Centro de Investigación Científica de Yucatán.

**19:00-20:00**

**Plenary Lecture I (Gran Salón Yucatán)**

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

Alain Filloux, Singapore Centre for Environmental Life Sciences Engineering, Nanyang Technological University

Chair: Bertha González, Instituto de Fisiología Celular, UNAM.

**20:00-22:00**

**Welcome Cocktail, Explanada Centro Internacional de Convenciones**

*Oral sessions will be held in Fiesta Americana Hotel*

*Posters will be exhibited in Hotel Holiday Inn (El Gran Salón and Foyer)*

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 cytokinins, 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, Centro de Investigación Científica de Yucatán.

**11:00-11:30**

**Coffee Break**

**11:30-13:00**

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

*Yucatán 1*

Chair: Edgardo Sepúlveda. CICESE

*Participation of the oncoprotein CagA from Helicobacter pylori in the pancreatic epithelial cells damage*

Anais Romero-Fabela. Departamento de Infectómica y Patogénesis Molecular. Cinvestav Zacatenco

*Biological and Functional Characterization of the SLC5/STAC Two-Component Signal Transduction Systems*

Edgardo Sepúlveda. Centro de Investigación Científica y de Educación Superior de Ensenada.

*Molecular Cartography of the Salmonella Type III Secretion System Sorting Platform*

Jose Eduardo Soto. Yale School of Medicine.

*Genomics "microbial dark matter" exploration for antimicrobial discovery*

Corina-Diana Ceapă. Instituto de Química, UNAM.

*Kinetic characterization of rhizobial bacterias as plant growth promoters (PGPB) in shaken flask and stirred tank.*

Engelberth René Torreblanca Pacheco. Instituto Tecnológico de Tuxtla Gutiérrez.

*Conformational landscape of the GTPase EFL1 and its implications in the Shwachman-Diamond Syndrome*

Nuria Sánchez Puig. Instituto de Química, UNAM.

*Yucatán 2*

Chair: Elia Diego García. El Colegio de la Frontera Sur

*Prolactin regulates H3k9ac and H3k9me2 epigenetic marks and miRNAs expression in bovine mammary epithelial cells during Staphylococcus aureus infection*

Marco Antonio Barajas Mendiola. Universidad Michoacana de San Nicolás de Hidalgo.

*Functional heterologous analysis of allelic variants of human genes potentially driven by natural selection*

César Mauricio Campa Álvarez. Unidad de Genómica Avanzada (Langebio), Cinvestav, Irapuato.

*Transcriptome analysis of the spider Phonetimpus pennimani reveals novel toxin transcripts.*  
Elia Diego-García. El Colegio de la Frontera Sur.

*Abf1 Participates in Cell Cycle Progression and Subtelomeric Silencing in Candida glabrata*  
Grecia Hernández-Hernández. Instituto Potosino de Investigación Científica y Tecnológica A.C.  
*Functional characterization of the Tau95 subunit of transcription factor TFIIIC in Trypanosoma brucei*  
Fabiola Mondragon Rosas. FES Iztacala, UNAM.

*Large-scale profiling of ncRNAs in budding yeast longevity*  
Ericka Moreno-Mendez. Unidad de Genómica Avanzada (Langebio), Cinvestav, Irapuato.

### *Yucatán 3*

Chair: Robert Winkler. LANGEBIO. Cinvestav

*Evaluation of endophytic bacteria as plant probiotics in Agave plants*  
Julio César Maldonado Gómez. Instituto Tecnológico de Tuxtla Gutiérrez.

*Structural studies of cell wall biosynthesis of pathogen MRSA. Implications in the antibiotic resistance*  
Carol Siseth Martínez Caballero. Instituto de Química. UNAM.

*Changes in induction temperature impacts the structure of recombinant HuGM-CSF inclusion bodies in thermoinducible E. coli*  
Norma A. Valdez-Cruz. Instituto de Investigaciones Biomédicas. UNAM.

*Real-time monitoring of volatile organic compounds (VOCs): From basic research to Citizen Science*  
Robert Winkler. Unidad de Genómica Avanzada (Langebio), Cinvestav, Irapuato.

*Litopenaeus vannamei glutathione peroxidases 2 and 4: Responses and modulation during hypoxia and reoxygenation*  
Paulina Estrada Cárdenas. Centro de Investigación en Alimentación y Desarrollo, A.C.

*Heterogenous gene expression and splicing in Hypersensitivity Pneumonitis Fibroblasts*  
Ana Lilia Torres Machorro. Instituto Nacional de Enfermedades Respiratorias "Ismael Cosío Villegas"

**13:00-14:30**

**Lunch**

14:30-16:15

Simultaneous Symposia (Salones Yucatán 1, 2, 3)

Yucatán 1

1. Molecular biology of fungi and their interactions

Chair: Meritxell Riquelme, Centro de Investigación Científica y de Educación Superior de Ensenada.

*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,

Centro de Investigación Científica y de Educación Superior de Ensenada.

Yucatán 2

2. 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 Brieba 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.

Yucatán 3

### 3. System Neuroscience

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

*Neural interactions mediating cognitive control in prefrontal networks*

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

*Regaining our bearings: Neural representations and circuits underlying spatial reorientation*

Isabel A. Muzzio, Department of Psychological and Brain Sciences, University of Iowa, 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.

**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: Jorge Ramírez, IFC UNAM

**17:45-18:15**

### **Flash Talks for poster advertising (Gran Salón Yucatán)**

*Memory in transcriptional regulatory dynamics of Escherichia coli in stressful environments*

Oscar Bruno Aguilar Luviano. Centro de Ciencias Genómicas. UNAM

*The role of non-coding SNPs associated with Alzheimer's disease in neuronal subpopulations of frontal and entorhinal cortex.*

Erick Cuevas Fernández. Universidad Autónoma del Estado de Morelos

*Detecting recombination in sars-cov by using information theory in a bayesian context*

Luis Delaye. Cinvestav Irapuato

*Aberrant CLDN6 expression in gastric cancer is associated with enhanced cholesterol metabolism and reduced cytotoxic activity.*

Sanyog Dwivedi. Facultad de Medicina, UNAM

*Estimation of interaction strengths in the E. coli regulatory network*

Jerónimo Martí Vértiz. Centro de Ciencias Genómicas. UNAM

*Genomic analysis of different pathotypes of Colletotrichum lindemuthianum*

Ma. Irene Morelos-Martínez. Universidad Michoacana de San Nicolas de Hidalgo

*Transcriptomic Analysis of the CM-334/P. capsici/N. aberrans Pathosystem reveals molecular modulation during resistance-breaking response*

Mariana Romo Castillo. Colegio de Postgraduados

*Redox regulation of the mitophagy receptor Atg32*

Ariann E. Mendoza Martínez. Instituto de Fisiología Celular, UNAM

*Hemicellulolytic capacity of different pathotypes of Colletotrichum lindemuthianum in culture with natural substrates*

Karla Morelia Díaz-Tapia. Universidad Michoacana de San Nicolás de Hidalgo

*Study of the regulation of the Humphreya coffeata terpenome by carbon source*

Ricardo Alfonso González Hernández. Instituto de Investigaciones Biomédicas, UNAM

*Development of a rapid gold nanoparticles-based lateral flow immunoassay for the detection of dengue virus*

Cynthia Martinez Liu. Universidad Autónoma de Nuevo León

*Effects of gold nanoparticles functionalized with polyethyleneimine on the moss Physcomitrium patens*

Zuleika Orbe Sosa. Instituto Politécnico Nacional

*Design of Self-assembled Antimicrobial Protein-based Nanoparticles*

Eddie Guillermo Sánchez Rueda. Instituto de Química, UNAM

*Simultaneous Aerobic-Anaerobic Biodegradation Of An Industrial Effluent Of Polymeric Resins With High Phenol Concentration At Different Organic Loading Rates In A Non-Conventional UASB Type Reactor*

Jesús Terreros Mecalco. Universidad Tecnológica del Valle de Toluca

*The MoBiMS: A miniature mass spectrometer for monitoring volatiles in biological systems*

Raúl Alcalde Vázquez. Laboratorio Nacional de Genómica para la Biodiversidad.

*Exposure to bis (2-ethylhexyl) phthalate (DEHP) induces oxidative stress in human skeletal muscle cells*

Elizabeth Brassea Pérez. Centro de Investigaciones Biológicas Del Noroeste S.C.

*Related-Thyroid hormone genes are altered by acute exposure to 2,4-dichlorophenoxyacetic in rat testes*

Vanessa Conde Maldonado. Centro de Investigación en Genética y Ambiente.

*Kynurenine attenuates mitochondrial depolarization and neuronal cell death AhR-independent way in a Parkinsonian model induced by rotenone exposure.*

María Del Rosario García Aguilar. Cinvestav Zacatenco.

*Evaluation of the toxic activity of hexanic extract of Sedum morganianum*

Cristian Romero Castillo. Universidad Popular Autónoma del Estado de Puebla.

*Effects of resveratrol against Giardia lamblia trophozoites through in silico and in vitro approaches*

José Roberto Vargas Villanueva. Universidad Autónoma de Coahuila.

**18:15-20:15**

**Poster Session 1**

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

BB BASIC BIOCHEMISTRY I  
G GENETICS, EPIGENETICS AND GENETIC REGULATION I  
MV MICROBIOLOGY & VIROLOGY I  
O OTHERS I  
ROS REACTIVE OXYGEN SPECIES  
SB SYSTEMS BIOLOGY & BIOINFORMATICS I  
TP TOXICOLOGY & PHARMACOLOGY I

**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: Adán 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 Fabián 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)**

*Yucatán 1*

Chair: Luis Antonio Pérez García. Universidad Autónoma de San Luis Potosí

*Functional Cyt1Aa is necessary to synergize Bin toxin against Bin-resistant larvae*

Nathaly Alexandre do Nascimento. Instituto de Biotecnología, UNAM

*Developed a porcine Deltacoronavirus recombinant membrane protein (rM-PDCoV) with potential use in an indirect immunoenzymatic assay (iELISA) for disease control and prevention.*

Francisco Jesús Castañeda Montes. Facultad de Medicina Veterinaria y Zootecnia, UNAM.

*Computational, structural and inhibitory studies on molecular interactions of the PirABvp toxin from Vibrio parahaemolyticus with their receptor on epithelial cells of shrimp hepatopancreas*

Vania Flores Benítez. Universidad Autónoma de Nayarit.

*Functional analysis of CSE-8: a hypothetical endoplasmic reticulum protein, chaperone of chitin synthases in Neurospora crassa*

Samantha González Téllez. Centro de Investigación Científica y de Educación Superior de Ensenada.

*PIR proteins and its functional role on the cell wall of Neurospora crassa*

Paul Alejandro Montaña Silva. Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco.

*Glycosylation of Candida albicans affects its interaction with specific receptors of the cardiac coronary endothelium*

Luis Antonio Pérez-García. Universidad Autónoma de San Luis Potosí.

## Yucatán 2

Chair: Víctor Aguilar Hernández. CICY

*Proteome of Agave angustifolia Haw.: insights about amino acids metabolism in albino plantlets*  
Mauricio Andrade-Marcial. Unidad de Biotecnología, Centro de Investigación Científica de Yucatán.

*Red amaranth (Amaranthus cruentus L.) as a promising source of betalains: an approach of metabolomic profile by UHPLC-MS/MS Orbitrap*

Jesús Alfredo Araujo-León. Centro de Investigación Científica de Yucatán.

*Isolation and characterization of SARS-CoV-2 neutralizing nanobodies*

Dulce Carolina Lugo Gil. Departamento de Bioquímica. Cinvestav Zacatenco.

*Molecular bases for the inhibition of the main protease (Mpro) of SARS CoV2*

Zaira Pino Dueñas. Universidad Autónoma de Ciudad Juárez.

*Exploring the functional role of Slm35 on mitophagy in Saccharomyces cerevisiae*

Hilario Ruelas. Instituto de Fisiología Celular. UNAM.

*Structural and Functional interplay between the [4Fe-4S] cluster and the active site of MUTYH and its implication in carcinogenesis*

Carlos Trasviña-Arenas. University of California.

Yucatán 3

Chair: Ernesto Soto-Reyes. Universidad Autónoma Metropolitana

*RNA polymerase II pausing contributes to maintain chromatin organization in the chicken erythrocytes*

Andrés Penagos Puig. Instituto de Fisiología Celular, UNAM.

*Unraveling the secrets of axolotl limb regeneration by the analysis of RNA seq and protein 3D structure prediction*

Ernesto Soto-Reyes. Universidad Autónoma Metropolitana Unidad Cuajimalpa.

*Characterization of the transcriptional and epigenetic profiles associated with the metabolic memory in vitro*

Martí Wilson Verdugo. Instituto de Fisiología Celular, UNAM.

*Stress-associated and growth-dependent mutagenesis is divergently regulated by c-di-AMP levels in Bacillus subtilis*

Karen Abundiz Yáñez. Division of Natural and Exact Sciences. Universidad de Guanajuato.

*Complement receptor 3 (CR3) is activated via an inside-out signalling pathway triggered by CD13 in human macrophages*

Laura Díaz Álvarez. Instituto de Investigaciones Biomédicas, UNAM.

*Resveratrol inhibits the insulin pathway in liver cells by activating PKC*

Karla Daniela Hernández González. Laboratory of Signal Transduction, Department of Biochemistry, Cinvestav IPN.

### Technical Conferences (Salón Mérida)

Chair: Teresa Hernández. CICY

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

*Mentoría de mujeres en STEM, ¿te animas?*

Elizabeth Brassea-Pérez, Mina Königsberg. CIBNOR, La Paz. BC. Universidad Autónoma Metropolitana. Iztapalapa.

**13:00-13:15**

**Group photo (ESCALINATAS A LA ENTRADA DEL HOTEL FIESTA AMERICANA)**

**13:15-14:30**

**Lunch**

**14:30-16:15**

**Simultaneous Symposia (Salones Yucatán 1, 2, 3)**

*Yucatán 1*

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, Departamento de Genética Molecular. 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.

*Yucatán 2*

5. 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.

Yucatán 3

6. Plant development and specialized metabolism

Chair: Felipe Augusto Vázquez Flota, CICY.

*Grow or fight: a phospho-switch prioritizes ABCG36/PEN3/PDR8-mediated transport toward defense*

Markus Geisler, Department of Biology, University of Fribourg, Suiza.

*The integrate use of metabolomics and transcriptomics as and strategy to identify phytochemicals compounds to use in control pest. 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.

**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)**

*The respiratory chain of Rhodotorula mucilaginosa*

Paulina Castañeda Tamez. Instituto de Fisiología Celular, UNAM.

*Priming mycobacterial esx-secreted protein B to form a channel-like structure*

Abril Gijsbers. Instituto de Química, UNAM.

*The human copper transporter 1 (hCTR1) as a possible transporter of Casiopeina III-ia in MDA-MB-231 cells*

Rogelio Hurtado Alamea. Facultad de Química, UNAM.

*Evaluation of different carbon sources in the production of carotenoids in the yeast Rhodotorula mucilaginosa*

Ofelia Alejandra Méndez Romero. Instituto de Fisiología Celular, UNAM.

*Hydrogen sulfide synthesis by yeast cystathione B-synthase is required to survive ER stress.*

Elias Nieto Zaragoza. Instituto de Fisiología Celular, UNAM.

*Study of Complex II biogenesis in Saccharomyces cerevisiae*

Ulrik Hiram Pedroza Dávila. Instituto de Fisiología Celular, UNAM.

*Liver versus Cardiac Mitochondria: Comparison of Some Effectors on the Mitochondrial Permeability Transition Pore*

Carolina Ricardez García. Instituto de Fisiología Celular, UNAM.

*Evaluation of multifunctional qualities of the rhizobian species Rhizobium sp. ACO-34A as a plant growth promoter rhizobacteria*

Víctor Manuel Maranto Gómez. Instituto Tecnológico de Tuxtla Gutiérrez.

*Exploring the functional role of the OmpR-type regulators in R. etli.*

María M. Banda. Centro de Ciencias Genómicas, UNAM.

*Influence of OxyR on the expression of phaseolotoxin synthesis genes in Pseudomonas savastanoi pv. phaseolicola NPS3121*

Rafael Arnulfo Juárez Navarro. Universidad Autónoma de Nayarit.

*Serotonin effect in early regeneration of Lumbriculus variegatus*

Juana María López Martínez. Facultad de Ciencias Naturales, UAQ.

*Alternative CUG Codon Usage in the Halotolerant Yeast Debaryomyces hansenii: An Analysis of Gene Expression Provides New Insights into Adaptation to Extreme Environments.*

Daniel Ochoa-Gutiérrez. Facultad de Ciencias, UNAM.

*An Insight into the novel hybrid regulation complex Rtg3-Nrg1 of Saccharomyces cerevisiae*

Edgar Adrián Ramírez González. Instituto de Fisiología Celular, UNAM.

*Characterization of Cross-kingdom tRH-target interactions and their role in Trichoderma atroviride-Arabidopsis thaliana mutualistic relationship*

Daniel Rafael Saldaña Torres. Instituto Potosino de Investigación Científica y Tecnológica A.C.

*Expression of IL-2, IL-4, IL-5, IL-10 and TGFβ genes in patients with COVID-19 in Mexico City.*

Jennifer Viridiana Sánchez Camacho. Escuela Superior de Medicina, IPN.

*Target genes, cell processes and miR-23b-3p effect on HMGB2 expression in cervical cancer*

Gladys Wendy Valente Niño. Universidad Autónoma de Guerrero.

*Development of a whole cell biosensor using Bacillus subtilis spores for arsenic detection in water.*  
Luz Idalia Valenzuela García. Centro de Investigación en Materiales Avanzados, Subsede Durango.

*Plant-associated bacteria (PAB): Resources of specialized metabolites.*  
Reynaldo Villanueva Enríquez. Instituto de Química, UNAM.

*Characterization of extracellular vesicles released by the parasite Entamoeba histolytica and evaluation of their immunomodulatory effects on human neutrophils.*  
Julio César Carrero. Instituto de Investigaciones Biomédicas, UNAM.

*Cellular Immune Response on Cherax quadricarinatus after different immunostimulations*  
Crystal Guluarte. Universidad Nacional Autónoma de México.

*Screening of Agave plants as alternative of  $\alpha$ -glucosidase inhibitors source*  
Elia Donají Juárez Niño. CIIDIR. Instituto Politécnico Nacional, Oaxaca.

**18:15-20:15**

**Poster Session II**

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

BB BASIC BIOCHEMISTRY II  
BT BIOTECHNOLOGY I  
G GENETICS, EPIGENETICS AND GENETIC REGULATION II  
IP IMMUNOLOGY & PARASITOLOGY  
M MEDICINE, HEALTH & NUTRITION I  
MV MICROBIOLOGY AND VIROLOGY II

**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.

*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.

*Fibrillarin 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 Ibarngüengoytia

*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, )**

*Yucatán 1*

Chair: Adrián Hernández-Díaz Couder. Instituto Nacional de Cardiología "Ignacio Chávez"

*Decreased expression of CB1 receptors in atherosclerosis is associated to a vasorelaxing effect of ACEA on aortic rings*

María del Rosario Álvarez Valadez. Universidad de Colima.

*Cortactin deficiency induces pancreatic epithelial impairment*

Abigail Betanzos. Departamento de Infectómica y Patogénesis Molecular. Cinvestav.



*High fructose consumption induces lipid accumulation in adipocytes by regulation of miR-143-5p levels in extracellular vesicles*

Adrián Hernández-Díaz Couder. Departamento de Inmunología, Instituto Nacional de Cardiología Ignacio Chávez.

*The molecular iodine effect on the mitochondrial dynamics of neuroblastoma stem cells*  
Jazmin Lizeth León Pichardo. Instituto de Neurobiología, UNAM.

*The combination of AZD4547 with calcitriol synergistically inhibited BT-474 breast cancer cell proliferation, stemness, and tumorsphere formation*

Edgar Armando Méndez Pérez. Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán.

*RANKL signaling in breast cancer stem cells*

Alejandro Ordaz Ramos. Instituto Nacional de Medicina Genómica.

*Biochemical aspects of biotin deficiency in mammals*

Antonio Velázquez Arellano. Unidad de Genética de la Nutrición, Instituto de Investigaciones Biomédicas, UNAM

*Yucatán 2*

Chair: Julio Freyre González. Centro de Ciencias Genómicas. UNAM

*Conservation analysis of sequence-divergent lincRNAs in Brassicaceae*

Evelia Lorena Coss Navarrete. Unidad de Genómica Avanzada. Langebio. Cinvestav. IPN.

*A metanalysis of genomewide aging assays reveals the central modulators of chronological lifespan in budding yeast*

Erika Viridiana Cruz Bonilla. Unidad de Genómica Avanzada. Langebio. Cinvestav. IPN.

*Advancing global regulatory network inference: an integrative framework*

Juan Miguel Escorcía Rodríguez. Centro de Ciencias Genómicas, UNAM.

*Transcriptomic composition of venom glands of the recently described Mexican scorpion Centruroides possanii*

Patricia Elizabeth García Villalvazo. Universidad de Colima.

*Computational modeling of the dynamics of the gut microbiota metabolism*

Cristian Mendoza Ortiz. Instituto Nacional de Medicina Genómica.

*Regulatory perturbations of ribosome allocation in bacteria reshape the growth proteome with a trade-off in adaptation capacity*

José Utrilla Carreri. Centro de Ciencias Genómicas, UNAM.

*Yucatán 3*

Chair: Pierrick GJ Fournier. CICESE

*Neuroendocrine differentiation of lung cancer cells and its effect on the mice immune system*

Ricardo Fosado Rodríguez. Facultad de Química, Universidad Autónoma de Querétaro.

*Bone microenvironment-suppressed T cells increase bone metastases*

Pierrick GJ Fournier. Centro de Investigación Científica y de Educación Superior de Ensenada.

*Symmetry is more an antioxidant than an euglycemic advantage*

Samuel Álvarez-Almazán. FES Cuautitlán, UNAM.

*Role of pregnancy on insulin-induced vasorelaxation: the influence of angiotensin II receptors*

Betzabel Rodríguez Reyes. Escuela Superior de Medicina, IPN.

*Repurposing of Metformin and Sodium Oxamate in combination with Doxorubicin, reveals intrinsic apoptosis in cervical cancer, in vitro*

Izamarly Delgado-Waldo. Instituto Nacional de Cancerología.

*Global analysis of the cellular mechanism of metformin in a yeast model*

Jimena Meneses Plascencia. Laboratorio Nacional de Genómica para la Biodiversidad.

**Technical Conferences (Salón Mérida)**

11:30-12:00

Chair: Arturo Hernández. IFC, UNAM

*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

*The National Laboratory of Channelopathies (LaNCa) of the Institute of Cellular Physiology*

Arturo Hernández Cruz. Instituto de Fisiología Celular, UNAM.

**13:00 – 14:30**

**Lunch**

**14:30 – 16:15**

**Simultaneous Symposia (Salones Yucatán 1, 2, 3)**

*Yucatán 1*

7. Oxidative stress by xenobiotics: toxicity and treatments

Chair: José Víctor Calderón Salinas, Cinvestav, Zacatenco.

*Oxidative stress in metabolisms, poisoning, chemotherapy and radiotherapy: The oxidation for better and for worse*

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.

*Yucatán 2*

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.

*Yucatán 3*

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.

*Betaglycan's mysterious in vivo affairs*

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

**16:15 – 16:45**

**Coffee break**

**16:45 – 17:45**

**Plenary Lecture VII (Gran Salón Yucatán)**

*Unraveling 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)**

*Detection and validation of molecular markers related to the two-way relationship between Renal Cell Carcinoma and Chronic Kidney Disease*

Arijahir Alexis Mancio Cárdenas. Cancerología.

*Gastroprotective activity of Callistemon citrinus extract in an induction model of gastric ulcers in obese rats*

Jonathan Saúl Piñón-Simental. Universidad Michoacana de San Nicolás Hidalgo.

*KCNJ11 and ABCC8 polymorphisms associated to sulfonylurea secondary failure in Type 2 Diabetes Mellitus*

Nidia Samara Rodríguez Rivera. UNAM, Facultad de Medicina.

*GC/MS Analysis, Antioxidant Activity, and Antimicrobial Effect of Pelargonium peltatum (Geraniaceae)*

Gilberto Velázquez-Juárez. Universidad de Guadalajara.

*Role of Taurine as a preventive component in Vascular Cognitive Impairment*

Andrea Villalobos Villaseñor. Universidad autonoma del estado de Morelos.

*Black yeasts from deep-sea sediments of the Gulf of Mexico: cell growth under oligotrophic and hypersaline conditions*

Maria Dolores Camacho López. Centro de Investigación Científica y de Educación Superior de Ensenada.

*In vitro antagonism, effect on tomato plants in greenhouse and functional genomic analysis of the thermotolerant strain Bacillus velezensis AF12*

Salvador Chávez Avila. Universidad Michoacana de San Nicolás de Hidalgo.

*Electrochemical immunosensor for the detection of antibodies against an epitope of GP5 protein from PRRS virus.*

Luis Enrique Franco Correa. Universidad Michoacana de San Nicolás de Hidalgo.

*Molecular evolution of the Spike protein of SARS-CoV-2: evidence of adaptation*

Georgina I. López Cortés. Instituto de Investigaciones Biomédicas, UNAM.

*T6SS secretion mechanism and novel protein-protein interactions of TecA, a Burkholderia cenocepacia toxin*

Julia Monjaras Fera. Queens University Belfast.

*Action mechanisms of Rouxiella Badensis SER3 against postharvest fungal pathogens from a genomic perspective*

Luzmaria Raquel Morales Cedeño. Universidad Michoacana de San Nicolás de Hidalgo.

*Fungal Puzzle Piece: Characterization of Cell Wall Protein ACW-1 in Neurospora crassa*

Ana Sofía Ramírez Pelayo. Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, A.C.

*Study of prokaryotic diversity and functional markers genes involved in the hydrocarbon degradation and the antibiotic resistance in sediments of the coast of Baja California*

Ileana Sarahi Ramos Mendoza. Universidad Autónoma de Baja California.

*Extracellular vesicles from Neurospora crassa: vehicles for cell wall-related proteins.*

Daniel Alfonso Salgado-Bautista. Centro de Investigación Científica y de Educación Superior de Ensenada.

*Insights into the mechanism used by a bacterial community to degrade lignocellulose*

Mónica Noel Sánchez González. Universidad Autónoma de Yucatán.

*Genome mining of Bacillus halotolerans AF23, a thermo- and halotolerant strain with plant growth promoting activities*

María Fernanda Valencia Marín. Universidad Michoacana de San Nicolás de Hidalgo.

*Prolactin prevents oxidative stress-induced cell death in hippocampal neurons*

Fernando Macías. Instituto de Neurobiología, UNAM.

*Modulation of Bone Cell Activity and Bone Remodeling by Sulfated Polysaccharides Derived from Brown Algae*

Jessica Sharlin Landeros Juárez. CICESE.

*Proteomic and molecular study of somatic embryogenesis in Coffea spp.*

Ana Odeth Quintana Escobar. Centro de Investigación Científica de Yucatán.

*MEDIATOR18 regulates Arabidopsis root system architecture, auxin signaling and is a critical factor for cell viability in root meristems*

Javier Raya González. Universidad Michoacana de San Nicolás de Hidalgo.

**18:15 – 20:15**

**Poster Session III**

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

BB BASIC BIOCHEMISTRY III  
G GENETICS, EPIGENETICS AND GENETIC REGULATION III  
M MEDICINE, HEALTH & NUTRITION II  
MV MICROBIOLOGY AND VIROLOGY III  
NN NEUROSCIENCES AND NEUROBIOLOGY  
ST SIGNAL TRANSDUCTION I

**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, Departamento de Biotecnología y Bioingeniería. Cinvestav, Zacatenco.

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

Jerónimo Bravo Sicilia, Instituto de Biomedicina de Valencia - CSIC, 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 (ESCALINATAS A LA ENTRADA DEL HOTEL FIESTA AMERICANA)**

**Group photo**

**13:00 – 14:30**

**Lunch**

**14:30-16:30**

**Poster Session IV**

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

BB BASIC BIOCHEMISTRY IV  
BT BIOTECHNOLOGY II  
G GENETICS, EPIGENETICS AND GENETIC REGULATION IV  
O OTHERS II  
SB SYSTEMS BIOLOGY & BIOINFORMATICS II  
ST SIGNAL TRANSDUCTION II  
TP TOXICOLOGY II

**17:00-18:00**

**Closing Lecture (Gran Salón Yucatán)**

Julia Tagüeña. Instituto de Energías Renovables, 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)**