

SMB



XXX CONGRESO NACIONAL DE BIOQUÍMICA

2-8 de noviembre de 2014 · Guadalajara, Jal.

Program of Events

Sunday November 2, 2014

11:00 – 17:30 Registration
Hotel RIU

Opening Ceremony, Plenary Lectures

Guadalajara Room

18:00 – 18:30 Opening Ceremony

18:30 – 19:30 **Opening Lecture**

México, País de Asilo
Fernando Serrano Migallón
Facultad de Derecho, UNAM

Chair: Alicia González Manjarrez
Instituto de Fisiología Celular, UNAM

19:30 – 20:30 **Plenary Lecture**

Cerebral Microcircuits
José Bargas
Instituto de Fisiología Celular, UNAM

Chair: Miguel Lara Flores
ENES - León, UNAM

20:30 – 22:00 Welcome Cocktail
Salón Fiesta Guadalajara

Oral presentations will be held in the Guadalajara Room and Vallarta Room, Hotel RIU

“Having coffee with” will be held in the Tonalá Room, Hotel RIU

Poster presentations will be held in the Jalisco Room, Hotel RIU

Monday November 3, 2014

9:00 – 11:00 Oral Presentations 1
Guadalajara Room I

Systems Biology and Bioinformatics I

Chair: **Luis Delaye**
CINVESTAV – IPN – Unidad Irapuato

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| 9:00 – 9:15 | Dosage matters: Revealing the immediate fitness effects of experimental gene duplication
Diana Ascencio , Adriana Espinosa & Alexander de Luna
LANGEBIO, CINVESTAV-IPN |
| 9:15 – 9:30 | Transcriptomic analyses of the apterygotan insect <i>Thermobia domestica</i> : insights into the evolutionary origin of plant cell wall digestion in insects
Nancy Calderón Cortés , Hirofumi Watanabe
Escuela Nacional de Estudios Superiores Unidad Morelia, UNAM |
| 9:30 – 9:45 | The cellular crosstalks of metabolism by moonlighting activities
Adriana Espinosa & Alexander de Luna
LANGEBIO, CINVESTAV-IPN |
| 9:45 – 10:00 | Functional genomics characterization of Excretory/Secretory proteins from <i>T. solium</i> genome
Sandra Gómez, Laura Adalid-Peralta, Hector Palafox-Fonseca, Xavier Soberón, Edda Sciutto, Gladis Fragoso, Raúl J Bobes, Juan P Laclette, Luis del Pozo Yauner and
Adrián Ochoa-Leyva
UGPAS, Facultad de Química, UNAM - INMEGEN |
| 10:00 – 10:15 | Characterization haem and hemoglobin binding membrane protein (<i>spbhp-37</i>) in <i>Streptococcus pneumoniae</i>
José de Jesús Olivares-Trejo , María Elena Romero-Espejel, Mario A. Rodríguez and Sarita Montaña
Posgrado Ciencias Genómicas, Universidad Autónoma de la Ciudad de México |
| 10:15 – 10:30 | Prediction of Internal Ribosome Entry Sites (IRES) in <i>Saccharomyces cerevisiae</i> using computational strategies
Esteban Peguero Sánchez and Enrique Merino Pérez
Instituto de Biotecnología, UNAM |
| 10:30 – 10:45 | Genome-wide open chromatin profiling reveal new components of <i>Anopheles gambiae</i> innate immunity system
Verónica Valverde Garduño , Oscar Migueles, Zita Becerra and Manuel Castillo Méndez
CISEI, Instituto Nacional de Salud Pública |
| 10:45 – 11:00 | Interaction of antimicrobial peptides with membrane models by molecular dynamics simulations
José Luis Velasco , Ramón Garduño Juárez
Instituto de Ciencias Físicas, UNAM |

Biochemistry I

Chair: **Jaime García Mena**
CINVESTAV – IPN Zacatenco

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|---------------|---|
| 9:00 – 9:15 | Changes in <i>Arabidopsis thaliana</i> root proteome in response to capsaicin
Ana Laura Alonso Nieves , Argel Gastélum Arellánez, Jorge Molina Torres, Silvia Edith Valdés Rodríguez
CINVESTAV-IPN Unidad Irapuato |
| 9:15 – 9:30 | Identification of a R2R3-MYB transcription factor gene (<i>CaMyb31</i>) that regulates the capsaicinoid biosynthetic pathway in chili pepper fruits (<i>Capsicum annuum</i> L.)
Magda Lisette Arce Rodríguez and Neftalí Ochoa Alejo
CINVESTAV-IPN Unidad Irapuato |
| 9:30 – 9:45 | The biogenesis and control mechanisms of ribosomal activity in <i>Saccharomyces cerevisiae</i> .
Arnulfo Bautista-Santos , Reynaldo Tiburcio Félix and Samuel Zinker Ruzal.
Departamento de Genética y Biología Molecular. CINVESTAV-IPN Unidad Zacatenco |
| 9:45 – 10:00 | Altered Intracellular Ca ²⁺ Signaling Exacerbates Mitochondrial Fragility in Ventricular Myocytes from Obese Rats
Judith Bernal-Ramírez , Noemí García, Julio Altamirano
School of Medicine and Health Sciences. Tecnológico de Monterrey |
| 10:00 – 10:15 | Crystallographic, biochemical studies and solution structure by the small-angle X-ray scattering evidencing the dimeric formation of thioredoxin 1 from white leg shrimp <i>Litopenaeus vannamei</i>
Adam Andrés Campos-Acevedo , Enrique Rudiño-Piñera
Medicina Molecular y Bioprocesos, Instituto de Biotecnología, UNAM |
| 10:15 – 10:30 | Complex I activity decreases by low content of mitochondrial STAT3 obesity-induced
Ariel Charles Ponce , Josué Cantú Valdés and Noemí García
Department of Cardiology, School of Medicine, Tecnológico de Monterrey |
| 10:30 – 10:45 | Regulation of Deoxyxylulose phosphate synthase from <i>Arabidopsis thaliana</i>
Marel Chenge-Espinosa , Patricia León Mejía
Departamento de Biología Molecular de Plantas, Instituto de Biotecnología, UNAM |
| 10:45 – 11:00 | Discovery of the biosynthesis of arseno-organic molecules in <i>Actinobacteria</i>
Pablo Cruz Morales , Luis Yañez Guerra, Johannes Kopp, Jörg Feldmann and Francisco Barona Gómez
LANGE BIO, CINVESTAV – IPN Unidad Irapuato |

Biotechnology I

Chair: **Gabriel Rincón Enríquez**
CIATEJ - Jalisco

9:00 – 9:15	Antitumor activity evaluation of the protein extracts from the biological states of the house fly <i>Musca domestica</i> . Moyira Osny Aquino-Gil , Carlos Josué Solórzano-Mata, Víctor Manuel Aquino-Gómez, Itandehui Belem Gallegos Velasco, Socorro Pina-Canseco, Edgar Zenteno-Galindo y Yobana Pérez-Cervera. Facultad de Medicina, UNAM-UABJO
9:15 – 9:30	Characterization of the transcription induced by the intoxication of Cry toxins in mosquitoes Pablo Emiliano Cantón Ojeda , Mario Soberón Chávez, Alejandra Bravo de la Parra Instituto de Biotecnología, UNAM
9:30 – 9:45	Impact and mechanisms of shock wave application on human cells Karen Castaño-González , Luz María López-Marín, Blanca Edith Millán-Chiu, Francisco Fernández-Escobar, Carmen Yolanda Aceves-Velasco, Achim Max Loske-Mehling Centro de Física Aplicada y Tecnología Avanzada, UNAM
9:45 – 10:00	Improvement of enzymatic saccharification yield in <i>Arabidopsis thaliana</i> by expression of rice <i>SUB1A</i> transcription factor Lizeth Núñez-López , Blanca E. Barrera-Figueroa, Andrés Aguirre-Cruz, Julián M. Peña-Castro Instituto de Biotecnología, Universidad del Papaloapan
10:00 – 10:15	Plant pathogen interaction of agave wilt: The response of the <i>Agave tequilana</i> Weber var. Azul to the infection of <i>Fusarium oxysporum</i> Joaquín Alejandro Qui-Zapata , Gabriel Rincón-Enríquez, Emmanuel Bahena-Reyes, Patricia Dupré, José Manuel Rodríguez-Domínguez Centro de Investigación y Asistencia en Tecnología y Diseño del Edo. de Jalisco A. C.
10:15 – 10:30	MicroRNA profiling of <i>Arabidopsis AtGRDP1</i> overexpression line reveals deregulation of mir159 and mir160 in response to ABA Aída Araceli Rodríguez Hernández , Catalina Arenas Huertero and Juan Francisco Jiménez Bremont División de Biología Molecular, IPICyT
10:30 – 10:45	Bioprospecting of yeast strains capable of producing microbial oils as feedstock for biodiesel Luis Gerardo Treviño Quintanilla and Andrea Carina Martínez Burgos Universidad Politécnica del Estado de Morelos
10:45 – 11:00	Don't be afraid of mass spectrometry (MS) – Strategies to generate and analyze MS data in a 'normal' biochemistry laboratory Robert Winkler CINVESTAV – IPN, Unidad Irapuato

9:30 – 11:00
Vallarta Room

Technical Conferences

Chair: **Deyamira Matuz Mares**
Facultad de Medicina, UNAM

9:30 – 10:00	Digital PCR: Overview and Applications Maribel Acosta LIFETECH TECHNOLOGIES
10:00 – 10:30	Microscopy as a tool for molecular and subcellular analysis - an overview Christopher David Wood Laboratorio Nacional de Microscopía Avanzada. Instituto de Biotecnología, UNAM ACCESOLAB
10:30 – 11:00	SECQUENCE CAPTURE: a simple single-step enrichment method. Verenice Ramírez Rodríguez ROCHE DIAGNOSTICS
11:00 – 11:30	Coffee Break Foyer Guadalajara Room

11:30 – 12:30
Guadalajara Room

Plenary Lecture I

Fibrosis: Just a Scar or an Aberrant Remodeling Process?
The Paradigm of Idiopathic Pulmonary Fibrosis

Annie Pardo
Facultad de Ciencias, UNAM

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

12:30 – 14:00 Lunch

14:00 – 16:00 Plenary Session 1
Guadalajara Room I

Physicochemistry and Protein Design

“In Memoriam Dr. Armando Gómez Puyou”

Chair: **Daniel Alejandro Fernández Velasco**
Facultad de Medicina, UNAM

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- 14:00 – 14:30 “Brucei-fying” triosephosphate isomerase from *Trypanosoma cruzi*, or viceversa
Ruy Perez Montfort, Selma Díaz Mazariegos, Mónica Rodríguez Bolaños, Nallely Cabrera González, Marietta Tuena de Gómez Puyou and Armando Gómez Puyou
Instituto de Fisiología Celular, UNAM
- 14:30 – 15:00 Drug Discovery by Protein Structure Modeling. Proteins from Parasites as Target
Arturo Rojo Domínguez
Universidad Autónoma Metropolitana. Unidad Cuajimalpa
- 15:00 – 15:30 Reflections on the Catalytic Power of the TIM Barrel
John P. Richard
Department of Chemistry, University at Buffalo, USA
- 15:30 – 16:00 The unfolding story of a TIM barrel
D. Alejandro Fernández Velasco, Mariana Schulte-Sasse, Luis A. Becerril Sesín and Sergio Romero Romero

14:00 – 16:00 Plenary Session 2
Guadalajara Room II

Epigenetic Regulation in Fungus, Parasites and Plants

Chair: **Félix Recillas**
Instituto de Fisiología Celular, UNAM

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- 14:00 – 14:30 A protosilencer with unique properties modulates subtelomeric gene expression in *Candida glabrata*
Irene Castaño, Eunice López Fuentes, Alejandro Juárez-Reyes, Leonardo Castanedo Ibarra and Alejandro De Las Peñas
Instituto Potosino de Investigación Científica y Tecnológica
- 14:30 – 15:00 The role of TrxG and PcG during Arabidopsis root development.
Sánchez MP, Petrone E, Vega R, Flores J, Aceves P, Steckenborn S, Garay-Arroyo A, García-Ponce B and Álvarez-Buylla RE.
Instituto de Ecología, UNAM

15:00 – 15:30	Paramutation: transgenerational epigenetic inheritance and development Mario Arteaga-Vázquez , Omar Oltehua-López, Ana Dorantes-Acosta and Daniel Grimanelli Laboratorio de Epigenética y biología del desarrollo, Universidad Veracruzana
15:30 – 16:00	Chromatin structure modulates differential gene expression of the chicken α -globin locus Félix Recillas Targa , Christian Valdes Quezada, Cristian Arriaga Canon, Yael Fonseca Guzmán, Georgina Guerrero Instituto de Fisiología Celular, UNAM

14:00 – 16:00 Plenary Session 3
Guadalajara Room III

Human Genomics

Chair: **Xavier Soberón**
Instituto Nacional de Medicina Genómica

14:00 – 14:30	The Human Genome, fourteen years latter Francisco Xavier Soberon Mainero Instituto Nacional de Medicina Genómica
14:30 – 15:00	Dynamics of the Human Genome Rafael Palacios , Laura Gómez Romero, Kim Palacios-Flores, José Reyes, Delfino García, Margareta Boege, Guillermo Dávila, Margarita Flores Universidad Nacional Autónoma de México
15:00 – 15:30	Patterns of Genetic Diversity in Latin America: Insights from Human Population Genomics Andrés Moreno Estrada School of Medicine, Stanford University
15:30 – 16:00	The impact of genomics in the study and clinical management of cancer Alfredo Hidalgo Miranda Laboratorio de Genómica del Cáncer, Instituto Nacional de Medicina Genómica

14:00 – 16:00 Plenary Session 4
Vallarta Room

Oxygen Reactive Species

Chair: **Luis Cárdenas**
Instituto de Biotecnología, UNAM

14:00 – 14:30	Energy/redox metabolism in gene-environment interactions, and dopaminergic cell death associated with Parkinson's disease Rodrigo Franco , Annadurai Anandhan, Pablo Hernández-Franco Redox Biology Center, Universidad de Nebraska, USA
14:30 – 15:00	Nrf2 redox signaling confers long term protection in post-ischemic hearts Ana Cecilia Zazueta Mendizabal Instituto Nacional de Cardiología

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- 15:00 – 15:30 Hepatocyte Growth Factor/c-Met as a master regulator of redox cellular status and oxidative stress
Luis E. Gómez-Quiroz, Denise Clavijo-Cornejo, Cristina Enríquez, Oscar Bello Monroy, Roxana U Miranda, Verónica Souza, Leticia Bucio, Ma. Concepción Gutiérrez-Ruiz
 UAM Iztapalapa
- 15:30 – 16:00 REDOX state as an inductor and modulator of cellular senescence
Mina Königsberg Fainstein, Mina Königsberg, Francisco Triana-Martínez, Luis A Maciel-Barón, Sandra L Morales-Rosales, Viridiana Y González-Puertos, Claudio Torres, Norma E López-Díazguerrero
 UAM Iztapalapa

16:15 – 18:15 Oral Presentations 4
 Guadalajara Room I

Oxygen Reactive Species

Chair: **David Manuel Diaz Pontones**
 UAM - Iztapalapa

- 16:15 – 16:30 Colloidal Silver and cell viability association with markers of oxidative stress: heme oxygenase 1 Catalase 8 isoprostane and iron
 Lucerito Esmeralda Avila Lagunes y **Elda Maria del Rocio Coutiño Rodríguez**
 Instituto de Salud Pública, Universidad Veracruzana
- 16:30 – 16:45 The metallothionein gene from the white shrimp *Litopenaeus vannamei*: Characterization and expression in response to hypoxia
Monserath Félix-Portillo, José Alfredo Martínez-Quintana, Alma B. Peregrino-Uriarte, Gloria Yepiz-Plascencia
 Centro de Investigación en Alimentación y Desarrollo
- 16:45 – 17:00 A peptide that regulates the motility of sea urchin sperm, activates the mitochondrial metabolism mediated by the Carnitine Palmitoyl Transferase I (CPT-I)
Juan García-Rincón, Alberto Darszon & Carmen Beltrán
 Instituto de Biotecnología, UNAM
- 17:00 – 17:15 Cyclophosphamide induces oxidative stress in brain, liver and kidney of normal rats treated
Laura Guerrero-Medrano, Calderón-Salinas José Víctor
 Departamento de Bioquímica, CINVESTAV – IPN Zacatenco
- 17:15 – 17:30 C-Phycocyanin prevents renal mitochondrial dysfunction induced by cisplatin.
Berenice Fernández-Rojas, Daniela S. Rodríguez-Rangel, Fernando Granados-Castro, Negrete Mario, José Pedraza-Chaverri
 Department of Biology, Facultad de Química, UNAM
- 17:30 – 17:45 Does Senescence Associated Secretory Phenotype (SASP) profile change when senescence is induced by different ways?
Luis Ángel Maciel Barón, Sandra Lizbeth Morales Rosales, Viridiana Yazmín González Puertos, Claudio Torres, Mina Königsberg Fainstein
 Departamento de Ciencias de la Salud, UAM - Iztapalapa

- 17:45 – 18:00 Auranofin-induced oxidative stress causes redistribution of the glutathione pool in *Taenia crassiceps* cysticerci.
José de Jesús Martínez González, Alberto Guevara Flores, Luz Gisela Martínez García, Juan Luis Rendón Gómez e Irene Patricia del Arenal Mena
Departamento de Bioquímica, Facultad de Medicina, UNAM
- 18:00 – 18:15 The lipogenesis attenuation by hydrogen peroxide avoid the liver steatosis obesity-related but increase the mortality by starvation
José Raúl Pérez Estrada, David Hernández-García, Susana Castro Obregón, Luis Covarrubias
Instituto de Biotecnología, UNAM

16:15 – 18:15 Oral Presentations 5
Guadalajara Room II

Biochemistry II

Chair: **Martha Calahorra**
Instituto de Fisiología Celular, UNAM

- 16:15 – 16:30 Changes in water availability induce folding in intrinsically disordered stress proteins from plants.
Cesar L. Cuevas Velazquez, Gloria Saab Rincón, Carlos Amero, Maria Martinez Yamout, Gerard Kroon, Jane Dyson, Alejandra A. Covarrubias
Departamento de Biología Molecular de Plantas, Instituto de Biotecnología, UNAM
- 16:30 – 16:45 Protein-ligand interactions to understand the role of the mutations in the Shwachman-Diamond Syndrome
Eugenio de la Mora, Abril Gijsbers Alejandre, Adrián García Márquez, Alfonso Méndez Godoy, Nancy Marcial Bazaldúa, y Nuria Sánchez Puig
Instituto de Química, UNAM
- 16:45 – 17:00 Thrombin generation as parameter of response to therapeutic agents in patients with bleeding disorders
Hilda Luna-Záizar, Ana Rebeca Jaloma-Cruz, Sandra L. Ruiz-Quezada, Griselda G. Macías-López, María Amparo Esparza-Flores, Ana Cristina Ramírez-Anguiano, Fermín Paul Pacheco-Moisés.
CUCEI-Universidad de Guadalajara y Centro de Investigación Biomédica de Occidente, IMSS
- 17:00 – 17:15 Physicochemical study of the transcriptional repressor NagC from *Escherichia coli*
Dana Mariel Díaz Jiménez, Sergio Zonszein Strauss, Laura I. Álvarez Añorve, Mario L. Calcagno Montans.
Departamento de Bioquímica, Facultad de Medicina, UNAM
- 17:15 – 17:30 Effect of low-glucose cultivation on the *Entamoeba histolytica* energy metabolism
Rusely Encalada and Emma Saavedra
Departamento de Bioquímica. Instituto Nacional de Cardiología “Ignacio Chávez”
- 17:30 – 17:45 Analysis of differential compartmentalization between paralogous gene products: its role in functional diversification
Mirelle Citlali Flores-Villegas, Augusto Ortega-Granillo, Jure Piskur, Alicia González-Manjarrez
Institute of Cell Fiosiology, National Autonomous University of Mexico

- 17:45 – 18:00 Polymorphisms in mitochondrial genome affect the regulation of Cytochrome b synthesis in *Saccharomyces cerevisiae*
Aldo E. García Guerrero, Yolanda Camacho Villasana y Xochitl Pérez Martínez
Instituto de Fisiología Celular, UNAM
- 18:00 – 18:15 Diurnal restricted feeding schedules promotes changes in NF-KB presence in liver of WISTAR rats
Ana Cristina García-Gaytán, Mauricio Díaz-Muñoz, Isabel Méndez.
Instituto de Neurobiología, UNAM

16:15 – 18:15 Oral Presentations 6
Guadalajara Room III

Microbiology and Parasitology I

Chair: **Alejandro Carabin Lima**
Ciencias Microbiológicas, BUAP

- 16:15 – 16:30 Identification of genes involved in virulence of pUM505 plasmid from *Pseudomonas aeruginosa*
Ernesto Rodríguez Andrade, Víctor Meza Carmen, Carlos Cervantes and Martha Isela Ramírez Díaz
Instituto de Investigaciones Químico-Biológicas. UMSNH
- 16:30 – 16:45 Virulotyping of *Salmonella enterica* strains isolated from meat and dairy products from Michoacán
Lucía Paulina Maldonado Ruiz, Ma. Soledad Vázquez Garcidueñas, Gerardo Vázquez Marrufo
Ciencias Médicas y Biológicas “Dr. Ignacio Chávez”. Universidad Michoacana
- 16:45 – 17:00 Effects of 17 β -estradiol on the internalization of *Staphylococcus aureus* into bovine mammary epithelial cells
Ricardo Iván Medina Estrada, Joel Edmundo López Meza y Alejandra Ochoa Zarzosa
FMVZ, Universidad Michoacana de San Nicolás de Hidalgo
- 17:00 – 17:15 Metagenomic analysis of bacterial diversity in kefir and tibi grains
Verónica Lorena Cano García, Selvasankar Murugesan, Alberto Piña Escobedo, Héctor Mario Poggi Varaldo, Elvira Ríos Leal, Carlos Hoyo Vadillo, Bulmaro Cisneros Vega, Jaime García Mena
Genética y Biología Molecular, CINVESTAV – IPN Zacatenco
- 17:15 – 17:30 Identification of novel ciprofloxacin resistance genes of PUM505 plasmid from *Pseudomonas aeruginosa*
Víctor Manuel Chávez-Jacobo, Jesús Campos-García, Carlos Cervantes and Martha Isela Ramírez-Díaz
Instituto de Investigaciones Químico-Biológicas, Universidad Michoacana
- 17:30 – 17:45 Cell wall characterization and immune sensig of no-albicans species
María de Jesús Navarro-Arias, Eine Estrada-Mata, María Fernanda Rodríguez-Preciado, Edgar Cordero-Roldan, Mercedes Guadalupe López-Pérez and Héctor Manuel Mora-Montes.
División de Ciencias Naturales y Exactas. Universidad de Guanajuato

- 17:45 – 18:00 Inhibitory activity of *Flammulina velutipes* extracts against the *S. schenckii*: cell - host interaction
Svetlana Kashina, Lérica L. Flores Villavicencio, Myrna Sabanero López
Departamento de Biología, Universidad de Guanajuato
- 18:00 – 18:15 *Entamoeba histolytica* Infection Modulates the Expression of microRNA in Human Colon Cancer Cells
Itzel López-Rosas, Olga Hernández de la Cruz, José Ali Flores-Pérez, César López-Camarillo, Laurence A. Marchat
Escuela Nacional de Medicina y Homeopatía, IPN

16:15 – 18:15 Having coffee with.....
Tonalá Room

Four Round Tables for students
chosen from oral presentations

<i>Annie Pardo</i>	Alejandro Bustos Cortés Minerva Mata Rocha Jaquelina Julia Guzmán Rodríguez Rebeca Pérez Cabeza de Vaca Ma. De Lourdes Delgado Aceves	Nadia Aglae Rangel-Gauna Nadia Jacobo Herrera Mónica Alejandra Anaya Segura Selvasankar Murugesan Yuriana Oropeza Almazan
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Chair: Luisa Alba Lois

<i>John P. Richard</i>	Judith Bernal Ramírez Sergio Romero Romero Sandra Martínez Jarquín Magda Lisette Arce Rodríguez Geovani López Ortíz	Erika Gómez Chang Estefanía Herrera Herrera Diana Fabiola Díaz Jiménez Pablo Cruz Morales Jorge Marcos Viquez
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Chair: Daniel Alejandro Fernández

<i>Philippe Silar</i>	Oscar Rodríguez Lima Ángel Andrade Torres Jazmín Espinosa Rivero Ramón Alberto Batista García Emma Beltrán Hernández	Laura García Segura Carlos Vladimir Muro Medina Lucero Romero Aguilar
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Chair: Jesús Aguirre Linares

<i>Santiago Elena and Tony Gabaldon</i>	José Luis Aguilar Eréndira Rojas Ortega Dariel Márquez Gutiérrez Mariana Schulte Sasse Alejandro Juárez Reyes	Diana Ascencio Adrian Ochoa Leyva Esteban Peguero Sánchez José Luis Velasco José de Jesús Olivares Trejo
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Chair: Alexander De Luna Fors

18:15 – 20:15 Poster Session 1

B	BASIC BIOCHEMISTRY	1 – 37
SB	SYSTEMS BIOLOGY & BIOINFORMATICS	1 – 16
BT	BIOTECHNOLOGY	1 – 40
CD	CELL DIFFERENTIATION	1 - 28
G	GENETICS	1 – 23
GR	GENETIC REGULATION & EPIGENETIC	1 – 22
T	TOXICOLOGY	1 – 17
ST	SIGNAL TRANSDUCTION	1 – 32

Jalisco Room

9:00 – 11:00 Oral Presentations 7
Guadalajara Room I

Medicine, Health and Nutrition I

Chair: **Edith Araceli Cano Estrada**
Universidad Autónoma del Estado de Hidalgo

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|---------------|---|
| 9:00 – 9:15 | Potential Biomarkers for Duchenne Muscular Dystrophy and Carrier Detection
Mónica Alejandra Anaya Segura , Ikuri Álvarez Maya, Guillermina Ávila Ramírez, Froylan Arturo García Martínez, Luis Ángel Montes Almanza, Benjamín Gómez Díaz, Luz Berenice López Hernández
CIATEJ |
| 9:15 – 9:30 | Diffuse reflectance spectroscopy as a possible tool to complement liver biopsy for grading hepatic fibrosis in paraffin-preserved human liver specimens
Ursula Dinorah Arroyo Camarena , Diego Adrián Fábila Bustos, María Dolores López Vancell, Marco Antonio Durán Padilla, Guadalupe Itzel Azuceno García, Israel Torres Castro, Suren Stolik, José Manuel de la Rosa, Gabriela Gutiérrez Reyes, Galileo Escobedo González
Unidad de Medicina Experimental, Hospital General de México |
| 9:30 – 9:45 | Association of polymorphisms in SREBP2, HNF4A and ABCA1 with Metabolic Syndrome in Mexican blood donors
Alejandro Bustos Cortés , Mayra Jannet Álvarez Bahena, José Santos Ángeles Chimal, Jesús Santa-Olalla Tapia
Facultad de Medicina, Universidad Autónoma del Estado de Morelos |
| 9:45 – 10:00 | Physicochemical characterization and antimicrobial activity of propolis collected in the apiary “Las agujas” from the “La primavera” forest
María de Lourdes Delgado Aceves , Georgina Ivette López Cortés, Angelina Carolina Rodríguez Aranda, Cintia Gutiérrez Villegas, Patricia Paola Ochoa Guzmán, Jesús Ángel Andrade Ortega, Rafael Ordaz Briseño, Alfonso Enrique Islas Rodríguez
Centro Universitario de Ciencias Exactas e Ingenierías, Universidad de Guadalajara |
| 10:00 – 10:15 | Cytotoxicity of defensins γ -thionin (<i>Capsicum chinense</i>) and PaDef (<i>Persea americana</i> var. <i>drymifolia</i>) against cancer cell lines
Jaquelina Julia Guzmán-Rodríguez , Rodolfo López-Gómez, Alejandra Ochoa-Zarzosa and Joel E. López-Meza
Centro Multidisciplinario de Estudios en Biotecnología-FMVZ, UMSNH |
| 10:15 – 10:30 | New treatment for breast and colorectal cancers inhibiting mTOR pathway and glycolysis by promoting apoptosis and autophagy
Nadia J. Jacobo-Herrera , Verónica García-Castillo, Gabriela Figueroa-González, Carlos Pérez-Plasencia, Luis Ignacio Terrazas-Valdés, Alejandro Zentella-Dehesa
Instituto Nacional de Ciencias Médicas y Nutrición/ FESI- UNAM |
| 10:30 – 10:45 | Age-related reduction of muscle mass and strength in fast but not slow skeletal muscle. The role of costamer-nuclei proteins interactions
Joel Medina Monares , Rocío Álvarez Medina and Alicia Ortega Aguilar
Departamento de Bioquímica, Facultad de Medicina, UNAM |

10:45 – 11:00 Distal colon microbiota and Short chain Fatty Acids in association with Mexican Childhood Obesity
Selvasankar Murugesan, Maria Luisa Pizano Zárate, Hugo Martínez-Rojano, Flor María Galván Rodríguez, Alberto Piña Escobedo, Carlos Hoyo Vadillo, Jaime García Mena
 Departamento de Genética y Biología Molecular, CINVESTAV – IPN Zacatenco

9:00 – 11:00 Oral Presentations 8
 Guadalajara Room II

Biochemistry III

Chair: **Lina Raquel Riego**
 Instituto Potosino de Investigación Científica y Tecnológica

9:00 – 9:15 Study of the rearrangement of the canonical RNAD canonical enzymes during mRNA decay
Jaime García-Mena, Alberto Piña-Escobedo, Ben F Luisi, Lilianha Domínguez Malfavón
 Genética y Biología Molecular, CINVESTAV-IPN Zacatenco

9:15 – 9:30 Dynamics and chaotropic agents effects on the amyloidogenic lambda 3r light chain studied by NMR spectroscopy
Paloma Gil Rodríguez, Carlos Amero Tello
 Centro de Investigaciones Químicas, UAEM

9:30 – 9:45 An intramitochondrial PKA modulates placental steroidogenesis in a cAMP independent manner
Erika Gómez-Chang, Ma. Teresa Espinosa-García, Sofía Olvera-Sánchez, Oscar Flores-Herrera and Federico Martínez
 Bioquímica, Facultad de Medicina, UNAM

9:45 – 10:00 Role of p53 on tumor energy metabolism
Ileana Hernández-Reséndiz and Sara Rodríguez Enríquez
 Bioquímica. Instituto Nacional de Cardiología

10:00 – 10:15 Characterization of a hyaluronidase from the venom of the spider *Brachypelma verdezi*
Estefanía Herrera Herrera, Herlinda Clement and Gerardo Corzo
 Medicina Molecular y Bioprocesos, Instituto de Biotecnología, UNAM

10:15 – 10:30 Complex IV heterodimeric COX2 in *Polytomella* sp: Import and protein-protein interactions
Alejandra Jiménez Suárez, Héctor Vicente Miranda Astudillo, Martha Lilia Colina Tenorio, Miriam Vázquez Acevedo, Diego González Halphen
 Instituto de Fisiología Celular, UNAM

10:30 – 10:45 Analyses of the oligomeric organization of paralogous proteins in *S. cerevisiae*: Leu4 and Leu9 a specific case
Geovani Lopez, Mijail Lezama, James González, Ximena Martínez, Maritrini Colón and González Manjarrez Alicia
 Bioquímica y Biología Estructural. Instituto de Fisiología Celular, UNAM

10:45 – 11:00 DEAD-box RNA-helicases from *Bacillus subtilis* display differences in RNA-unwinding activity
Diana Fabiola Díaz-Jiménez, Gabriela Olmedo-Álvarez and Luis Gabriel Briebe de Castro
 CINVESTAV – IPN Unidad Irapuato

Epigenetic, Genetic Regulation I

Chair: **Cristina Aranda Fraustro**
Instituto de Fisiología Celular, UNAM

- | | |
|---------------|--|
| 9:00 – 9:15 | <p>Heterologous expression of <i>Debaryomyces hansenii</i> catalase genes in <i>Saccharomyces cerevisiae</i>
 Claudia Segal-Kischinevsky, Diego Noriega, Román Castillo, Ángel García, Viviana Escobar, Víctor Valdés-López, Luisa Alba-Lois
 Laboratorio de Biología Molecular y Genómica, Facultad de Ciencias, UNAM</p> |
| 9:15 – 9:30 | <p>Mediator as a link between development and abiotic stress response in plants
 Martínez-Camacho Carol, Núñez-Ríos Tania, Sawers Ruairidh, Gillmor Stewart
 Laboratorio Nacional de Genómica para la Biodiversidad. CINVESTAV – IPN</p> |
| 9:30 – 9:45 | <p>Small RNAs regulate the response to injury of the filamentous fungus <i>Trichoderma atroviride</i>
 José Manuel Villalobos-Escobedo, Nohemí Carreras-Villaseñor, Joel Rodríguez-Medina, Cei Abreu-Goodger and Alfredo Herrera-Estrella
 LANGE BIO – CINVESTAV – IPN Unidad Irapuato</p> |
| 9:45 – 10:00 | <p><i>BAT1</i> & <i>BAT2</i> paralogous subfunctionalization is determined by expression divergence and chromatin reorganization in the yeast <i>Saccharomyces cerevisiae</i>
 James González, Joseph Strauss, Geovani López, and Alicia González
 Depto. de Bioquímica y Biología Estructural, Instituto de Fisiología Celular, UNAM</p> |
| 10:00 – 10:15 | <p>In search for <i>cis</i>-regulatory elements activated by Dengue virus infection in <i>Aedes aegypti</i> midgut cells
 Manuel Castillo Méndez, Graciela H. Gleason, Krystal Maya Maldonado, José Ramos Castañeda and Verónica Valverde Garduño
 CISEI, Instituto Nacional de Salud Pública. CINVESTAV – IPN, Irapuato</p> |
| 10:15 – 10:30 | <p>Polyamines and Absciscic Acid: a new link between two pathways involved in stress responses in <i>Arabidopsis thaliana</i>
 Diana Sánchez Rangel, Ana Isabel Chávez Martínez and Juan Francisco Jiménez Bremont
 Department of Molecular Biology, IPICYT</p> |
| 10:30 – 10:45 | <p>Tumor-soluble factors derived from the breast cancer cell line ZR75.30 mimic a TNF pro-inflammatory transcriptome and phenotype in primary human endothelial cells.
 Alejandro Zentella-Dehesa, Janini Mejía-Rangel, Emilio J Córdova, Lorena Orozco, Ventura-Gallegos JL, Felipe Vadillo-Ortega, Patricio Gariglio
 Facultad de Medicina, UNAM/INMEGEN. IIB-UNAM. INCMNSZ</p> |
| 10:45 – 11:00 | <p><i>Caenorhabditis elegans</i> as a model to study the involvement of microRNAs in lipotoxicity
 Jonathan Alcántar Fernández, Ana M Salazar Martínez, Rosa E Navarro González, Martha Elva Pérez Andrade, Juan Miranda Ríos
 Unidad de Genética de la Nutrición, IIB, UNAM e Instituto Nacional de Pediatría</p> |

9:00 – 11:00
Vallarta Room

Technical Conferences II

Chair: **Adriana Julián Sánchez**
Facultad de Medicina, UNAM

- 9:00 – 9:30 Cell Mutiparameter Analysis using Fluorescence Microscopy. High-content analysis – Automated imaging and analysis of cellular assays
Sandra Rosa da Silva
Product Group Manager - Latin America
GE Healthcare Life Sciences
- 9:30 – 10:00 Reporter Bioassays to Assess Therapeutic Antibodies in ADCC and Immunotherapy Programs
Mei Cong
Director of Customer Assay Services. Department of Research, Promega Corporation
UNIPARTS
- 10:00 – 10:30 Optimizing protein purification using new Chromatography generation (NGC)
Mariana Perez
Especialista en Aplicaciones México
BIORAD
- 10:30 – 11:00 Fluorescence-based Detection of Proteins: Quantification in Western Blots and in Cells
Michael Van Waes
QUIMICA VALANER
- 11:00 – 11:30 Coffee Break
Foyer Guadalajara Room
- 11:30 – 12:30 Oral Presentations 10
Guadalajara Room I

Cell Differentiation and Immunology

Chair: **Omar Arroyo Helguera**
Universidad Veracruzana

- 11:30 – 11:45 Cortactin deficiency causes increased ROCK1-mediated actin-contractility and decreased adrenomedullin secretion leading to enhanced endothelial permeability
Alexander García-Ponce, Alí Francisco Citalán-Madrid, Hilda Vargas-Robles, Abigail Betanzos, Klemens Rottner, Dietmar Vestweber, Michael Schnoor
Department of Molecular Biomedicine, CINVESTAV – IPN Zacatenco
- 11:45 – 12:00 Asymmetric Cell Division of Corneal Epithelial Cells
Eber Gómez-Flores, Erika Sánchez-Guzmán, Federico Castro-Muñozledo
Departamento de Biología Celular, CINVESTAV – IPN Zacatenco
- 12:00 – 12:15 Does IFC-305 compound could be modulating the Kupffer cell phenotype?
Rebeca Pérez Cabeza de Vaca, Nuria Guerrero Celis and Victoria E Chagoya de Sánchez
Biología Celular y Desarrollo, IFC, UNAM

- 12:15 – 12:30 HS1 regulates the neutrophil extravasation cascade during inflammation by converging PKA signaling into integrin activation
Michael Schnoor, Dietmar Vestweber
Molecular Biomedicine, CINVESTAV – IPN Zacatenco

11:30 – 12:30 Oral Presentations 11
Guadalajara Room II

Biochemistry IV

Chair: **Vicente Castrejón Téllez**
Instituto Nacional de Cardiología “Ignacio Chávez”

- 11:30 – 11:45 Allosteric and cooperativity, together forever?
Jorge Marcos Víquez and Mario L. Calcagno
LFQIP, Bioquímica, Facultad de Medicina, UNAM
- 11:45 – 12:00 Studies on functional divergence between *Saccharomyces cerevisiae* *ALT1* and *ALT2* using *Kluyveromyces lactis* *KIALT1* and *Lachancea Kluyveri* *LkALT1* as “ancestral type yeast”
Ximena Martínez de la Escalera Fanjul, Maritrini Colón González, Lina Riego-Ruiz & Alicia González
Bioquímica y Biología Estructural. Instituto de Fisiología Celular UNAM
- 12:00 – 12:15 Physicochemical properties correlate with evolutionary categories of bacterial expansins
Claudia Martínez-Anaya, Sonia Dávila, Ernesto Pérez-Rueda, Nina Pastor, Lorenzo Segovia
Instituto de Biotecnología, UNAM
- 12:15 – 12:30 *In vivo* detection of compounds from organisms by mass spectrometry using low-temperature plasma (LTP) ionization
Sandra Martínez-Jarquín, Robert Winkler
Biotecnología y Bioquímica. CINVESTAV Unidad Irapuato

11:30 – 12:30 Oral Presentations 12
Guadalajara Room III

Genetics

Chair: **Fernando Fernández Ramírez**
Hospital General de México

- 11:30 – 11:45 Study of the expression of gene *Ccs* (*Capsanthin-capsorubin synthase*) AT different maturation stages in two different morphotypes of Habanero Pepper (*Capsicum chinense* Jacq.) by RT-PCR Real-Time Technique
Margarita Aguilar-Espinosa, Fátima Alejandra Borges-García, Renata Rivera- Madrid
Centro de Investigación Científica de Yucatán
- 11:45 – 12:00 Detection of mutations related to Multidrug-Resistencia in clinical *Mycobacterium tuberculosis* from Mexico by next generation sequencing technology
Minerva Mata Rocha, Vanessa M. González Covarrubias, Omar F. Cruz Correa, Francisco X. Soberón Mainero
Instituto Nacional de Medicina Genómica

- 12:00 – 12:15 Analysis of the effects of HPV16 E2 expression on the cell cycle in HaCaT cells
Janet Sánchez Ramos, Victoria Domínguez Catzín, Alfredo García Venzor, Erick Gustavo Ramírez Salazar and José Efraín Garrido Guerrero
 Genética y Biología Molecular. CINVESTAV – IPN Zacatenco
- 12:15 – 12:30 The nuclear higher-order structure (NHOS) defined by the topological relations DNA-nuclear matrix is species-specific
Evangelina Silva-Santiago and Armando Aranda-Anzaldo
 Laboratorio de Biología Molecular, Facultad de Medicina, UAEM

12:30 – 14:00 Lunch

14:00 – 16:00 Plenary Session 5
 Guadalajara Room I

Evolutionary Genomics Hispanic-Mexican

Chair: **Alexander De Luna Fors**
 LANGE BIO CINVESTAV Irapuato

- 14:00 – 14:30 Evolution of genomes by copy and paste: phylogenomics reveals non-vertical evolutionary relationships in fungi
Toni Gabaldón
 ICREA Research Professor, Comparative Genomics Group, Centre for Genomic Regulation (CRG), Barcelona, Spain
- 14:30 – 15:00 Ecological metagenomics of cycads and their bacterial symbionts: metabolic insights into a million-year old association
Angélica Cibrian-Jaramillo, Pablo Cruz, Antonio Hernández, José Antonio Corona, Luis Delaye, Francisco Barona-Gómez.
 Laboratorio Nacional de Genómica de la Biodiversidad, CINVESTAV
- 15:00 – 15:30 Experimental evolution of genome architecture and complexity in RNA viruses
Santiago F. Elena, Anouk Willemsen, José L. Carrasco, Mark P. Zwart
 Instituto de Biología Molecular y Celular de Plantas (CSIC-UPV), Valencia, Spain
- 15:30 – 16:00 Evolution of the transcription circuit underlying biofilm formation in *Candida* species
Eugenio Mancera, Alexander D. Johnson
 Microbiology & Immunology, University of California, San Francisco, USA

14:00 – 16:00 Plenary Session 6
Guadalajara Room II

Physiological Relevance of Signaling Pathways Crosstalk

Chair: **Marina Macías Silva**
Instituto de Fisiología Celular, UNAM

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| 14:00 – 14:30 | TGF-beta and GPCR Signals Converge to Regulate the Stability of Ski and SnoN Transcriptional Cofactors in Hepatocytes
Marina Macías Silva
Departamento de Biología Celular y Desarrollo, IFC - UNAM |
| 14:30 – 15:00 | RhoGEFs: integral components of signaling modules
José Vázquez-Prado
Department of Pharmacology, CINVESTAV-IPN Zacatenco |
| 15:00 – 15:30 | Modulation of Toll-like receptor 4 (TLR4) signaling in mast cells
Claudia González Espinosa
Departamento de Farmacobiología, CINVESTAV-IPN Sede Sur |
| 15:30 – 16:00 | Modulation of G protein-coupled receptors by receptor tyrosine kinases
J. Adolfo García-Sáinz
Instituto de Fisiología Celular, UNAM |
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14:00 – 16:00 Plenary Session 7
Guadalajara Room III

Genomics of Mendelian Diseases in NorthWestern Mexico

Simposio Universidad Anfitriona

Chair: **Bertha Ibarra Cortés**
Universidad de Guadalajara

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| 14:00 – 14:30 | Genomic approach of a monogenic disease: hemophilia as a model
Ana Rebeca Jaloma Cruz
Centro de Investigación Biomédica de Occidente, IMSS |
| 14:30 – 15:00 | Hemoglobinopathies
Bertha Ibarra Cortés and F. Javier Perea
Centro Universitario en Ciencias de la Salud, Universidad de Guadalajara |
| 15:00 – 15:30 | Fragile X Syndrome and Cancer
J. Patricio Barros Núñez , Mónica Rosales Reynoso, Berenice Ochoa Hernández
Centro de Investigación Biomédica de Occidente, IMSS |
| 15:30 – 16:00 | Application of Genomic Medicine to Chronic-Degenerative disorders
Juan S. Armendáriz Borunda
Centro Universitario en Ciencias de la Salud, Universidad de Guadalajara |
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14:00 – 16:00 Plenary Session 8
Vallarta Room

Molecular Biology of Viruses

Chair: **Ramón González García Conde**
Facultad de Ciencias, UAEM

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| 14:00 – 14:30 | Protective immune response against rotavirus infection
Fernando Esquivel-Guadarrama
Facultad de Medicina, UAEM |
| 14:30 – 15:00 | Epidemiology and evolution of Influenza A virus, application of next-generation sequencing
Pavel Isa Haspra
Instituto de Biotecnología. UNAM |
| 15:00 – 15:30 | Molecular pathogenesis of human papillomavirus oncoproteins
Lourdes Gutiérrez Xicoténcatl
CISEI, Instituto Nacional de Salud Pública |
| 15:30 – 16:00 | The adenoviral oncoproteins: Multiple roles in virus-cell interactions
Ramón A. González
Facultad de Ciencias, UAEM |

16:15 – 17:15 Oral Presentations 13
Guadalajara Room I

Neuroscience and Neurobiology

Chair: **Patricia Ferrera Boza**
Instituto de Investigaciones Biomédicas, UNAM

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| 16:15 – 16:30 | Systemic activation of innate immunity induced by LPS inhibits long- and short-term plasticity and increases phosphorylation of TrkB receptor in the MF-CA3 synapse of the hippocampus
Martín Avila and Emilio J. Galvan
Department of Pharmacobiology. CINVESTAV-IPN South Campus |
| 16:30 – 16:45 | Sirtuin modulation protects against spinal motor neuron loss induced by chronic excitotoxicity <i>in vivo</i>
Rafael Lazo-Gómez , Ricardo Tapia
División de Neurociencias, Instituto de Fisiología Celular, UNAM |
| 16:45 – 17:00 | TRPV1 channel regulation by steroidal molecules and its analgesic effect
Sara L. Morales-Lázaro , Itzel Llorente, Félix Sierra-Ramírez, Barbara Serrano-Flores, Carlos Díaz-García, Marcia Hiriart, Sidney A. Simon, Tamara Rosenbaum.
División de Neurociencias, Instituto de Fisiología Celular, UNAM |
| 17:00 – 17:15 | Striato-nigral circuits control sugar-induced inflexible intake
Luis A Tellez , Tatiana L Ferreira, Sara Medina, Wenfei Han and Ivan E de Araujo.
The J.B. Pierce Laboratory & Department of Psychiatry. Yale University. |

Toxicology

Chair: **Federico Centeno Cruz**
Instituto Nacional de Medicina Genómica

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| 16:15 – 16:30 | Anti -tumor and Immuno modulatory Effect of 6-Pentadecyl Salicylic Acid in an <i>in Vivo</i> Model
Josephin Nerling Rashida Gnanaprakasam , Estrada Muñiz E, Vega L
Departamento de Toxicología.CINVESTAV – IPN Zacatenco |
| 16:30 – 16:45 | Las nanopartículas de dióxido de titanio son internalizadas mediante fagocitosis en células gliales
Elizabeth Huerta-García , Sandra Gissela Márquez-Ramírez, María del Pilar Ramos-Godínez, Ernesto Alfaro-Moreno, Alejandro López-Saavedra, Rebeca López-Marure.
Instituto Nacional de Cardiología “Ignacio Chávez” |
| 16:45 – 17:00 | Diethyldithiophosphate (DEDTP) Induces Changes in Tumor Infiltrating Lymphocytes, Macrophages and Natural Killer Cells in 4T1 Murine Breast Cancer Model
Dunia Margarita Medina Buelvas , Elizabeth Estrada Muñiz, Libia Vega Loyo
Departamento de Toxicología.CINVESTAV – IPN Zacatenco |
| 17:00 – 17:15 | CYP2E1 induction leads to oxidative stress and cytotoxicity in cerebellar granule neurons
Valencia-Olvera Ana Carolina , Morán Julio, Camacho-Carranza Rafael, and Espinosa-Aguirre Jesús Javier
Instituto de Investigaciones Biomédicas, UNAM |

Signal Transduction I

Chair: **Teresa Hernández Sotomayor**
Centro de Investigación Científica de Yucatán

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| 16:15 – 16:30 | Analysis of profibrosing molecules in cells stimulated with cigarette smoke extract
Semiramis Stephania García Trejo , Marco Antonio Checa Caratachea, Moisés Eduardo Selman Lama, Annie Pardo Cemo, Víctor Manuel Ruiz López.
Instituto Nacional de Enfermedades “Respiratorias. Ismael Cosío Villegas” |
| 16:30 – 16:45 | Smad transcriptional co-factors Ski and SnoN exhibit a highly dynamic turnover in normal <i>versus</i> transformed hepatocytes
Cassandre Caligaris , Genaro Vázquez-Victorio, Marcela Sosa-Garrocho, Diana G. Ríos-López, Alvaro Marín-Hernández, Rafael Moreno-Sánchez, Marina Macías-Silva
Instituto de Fisiología Celular, UNAM |
| 16:45 – 17:00 | GPI/AMF inhibition blocks the development of the metastatic phenotype of mature multi-cellular tumor spheroids
Juan Carlos Gallardo-Pérez and Sara Rodríguez-Enríquez
Departamento de Bioquímica. Instituto Nacional de Cardiología |
| 17:00 – 17:15 | The flavonoid epicatechin activates the PI3K/Akt pathway in healthy mouse's hearts
Sergio De los Santos Enriquez , Viridiana García Pérez, Israel Ramírez Sánchez, Ileana Patricia Canto Cetina, Ramón Mauricio Coral Vázquez
Escuela Superior de Medicina-IPN. CMN 20 de Noviembre, ISSSTE. |

17:15 – 19:15 Poster Session 2

B	BASIC BIOCHEMISTRY	38 – 75
BT	BIOTECHNOLOGY	41 – 83
E	BIOCHEMISTRY EDUCATION	1 – 5
OR	OXYGEN REACTIVE SPECIES	1 – 18
I	IMMUNOLOGY	1 – 16
M	MEDICINE, HEALTH & NUTRITION	1 – 23
MP	MICROBIOLOGY & PARASITOLOGY	1 – 22
RG	GENETIC REGULATION & EPIGENETIC	23 – 45
ST	SIGNAL TRANSDUCTION	33 – 63

Jalisco Room

19:30 – 20:30
Guadalajara Room

Plenary Lecture II

The control of transcription during early development

Michael Eisen

Howard Hughes Medical Institute
University of California, Berkeley

Chair: **Guadalupe Espin**
Instituto de Biotecnología, UNAM

9:00 – 11:00 Oral Presentations 16
Guadalajara Room I

Signal Transduction II

Chair: **Roberto Sánchez Olea**
Universidad Autónoma de San Luis Potosí

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| 9:00 – 9:15 | Exploring the role of Rho GTPases on leptin-induced migration, of breast cancer cells in culture
Eduardo Castañeda-Saucedo , Napoleón Navarro-Tito, Miguel A. Mendoza-Catalán, Mercedes Calixto-Gálvez, Itzel Carranza-Mendoza
Universidad Autónoma de Guerrero |
| 9:15 – 9:30 | Compromised Pak1 activity sensitizes FA/BRCA-proficient breast cancer cells to PARP inhibition
Luis Enrique Arias Romero , Olga Villamar Cruz y Jonathan Chernoff
Cancer Biology Program, Fox Chase Cancer Center, USA. FESI, UNAM |
| 9:30 – 9:45 | Akt inhibits β -catenin signaling
Itzel Zenidel Gutiérrez Martínez , José Antonio Hernández Trejo, Aurora Candelario Martínez and Porfirio Nava Domínguez
Departamento de Fisiología, Biofísica y Neurociencias. CINVESTAV, IPN Zacatenco |
| 9:45 – 10:00 | Akt-induced apoptosis during inflammation is regulated by 14.3.3 proteins
José Antonio Hernández Trejo , Itzel Zenidel Gutiérrez Martínez, Mauricio Efrén Gómez Suarez, Marcela Hernández Ruiz, Dimelza Lisett Suarez Pérez, Aurora Antonia Candelario Martínez, Jose Luna Muñoz, Vianney Ortiz Navarrete and Porfirio Nava Domínguez
Fisiología, Biofísica y Neurociencias. CINVESTAV – IPN Zacatenco |
| 10:00 – 10:15 | Novel RACK1 ligands from the Dinoflagellate <i>Symbiodinium microadriaticum</i> identified by the yeast two-hybrid system
Tania Islas Flores and Marco A. Villanueva Méndez
Instituto de Ciencias del Mar y Limnología, Unid. Acad. de Sist. Arrecifales, UNAM |
| 10:15 – 10:30 | Real time monitoring of the acrosomal reaction in human sperm
Esperanza Mata Martínez , Claudia Sánchez-Cárdenas, Alberto Darszon y Claudia L Treviño
Instituto de Biotecnología-UNAM |
| 10:30 – 10:45 | Functional characterization of <i>AtGRDP1</i> gene during the growth and development of <i>Arabidopsis thaliana</i>
Carlos Vladimir Muro-Medina , Aída Araceli Rodríguez-Hernández, Adriana Leticia Salazar Retana, Jocelin Itzel Ramírez Alonso and Juan Francisco Jiménez-Bremont
División de Biología Molecular. IPICYT |
| 10:45 – 11:00 | Futile Hog1p phosphorylation in response to hiperosmotic stress in <i>Saccharomyces cerevisiae</i>
Aracely Vázquez-Ibarra , Miriam Rodríguez-González and Roberto Coria.
Genética Molecular, Instituto de Fisiología Celular, UNAM |

Biochemistry V

Chair: **Nuria Sánchez Puig**
Instituto de Química, UNAM

9:00 – 9:15	Dynamic characterization of the native state of amiloidogenic protein 6aJL2 and the mutant R24G Roberto Carlos Maya Martinez , Paloma C. Gil Rodríguez, Carlos Amero Tello Centro de Investigaciones Químicas, Universidad Autónoma del Estado de Morelos
9:15 – 9:30	Molecular cloning, expression and transport analysis of the first SWEET transporter from <i>Zea mays</i> Sobeida Sánchez-Nieto , Roberto D. Carvente-García, Sara L. Morales-Lázaro, Tamara Rosenbaum, Paulina Aguilera-Alvarado Departamento de Bioquímica, Facultad de Química, UNAM
9:30 – 9:45	Variable and new electron transport pathways in <i>Candida albicans</i> , and other surprises. Antonio Peña , Norma Silvia Sánchez, and Martha Calahorra Department of Molecular Genetics. Instituto de Fisiología Celular. UNAM
9:45 – 10:00	Free amino acids profile and consumption during early development of the Pacific red snapper <i>Lutjanus peru</i> larvae Renato Peña , Silvie Dumas, Ivette Moguel-Hernández, Noemí García-Aguilar Unidad Piloto de Maricultivos. CICIMAR-IPN
10:00 – 10:15	The folding mechanism of the lysine, arginine, ornithine binding protein (LAO) Jesús Renan Vergara Gutiérrez , Haven A. López Sánchez, Nancy O. Pulido-Mayoral, Alejandro Sosa Peinado, Rogelio Rodríguez-Sotres, D. Alejandro Fernández Velasco Departamento de Bioquímica. Facultad de Medicina. UNAM
10:15 – 10:30	Kinetic characterization of glycogen synthesis and degradation pathways in tumor cells Marco Antonio Reyes-García and Álvaro Marín-Hernández Departamento de Bioquímica, Instituto Nacional de Cardiología, Ignacio Chávez
10:30 – 10:45	Purification and characterization of Alt1 and Alt2 of <i>Saccharomyces cerevisiae</i> : Functional divergence of the enzymes involved in alanine metabolism Rojas- Ortega Eréndira , Díaz -Guerrero Miguel Ángel, Gonzalez- Manjarrez Alicia Instituto de Fisiología Celular, UNAM
10:45 – 11:00	Pseudohysteresis in an enzyme following a ping pong bi bi kinetic mechanism. The case of Thioredoxin-glutathionereductase (TGR) Juan Luis Rendón , Alberto Guevara Flores, I. Patricia del Arenal Mena, and Juan Pablo Pardo Departamento de Bioquímica, Facultad de Medicina, UNAM

Microbiology and Parasitology II

Chair: **Irma Romero Álvarez**
Facultad de Medicina, UNAM

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| 9:00 – 9:15 | <i>A Burkholderia cenocepacia</i> gene encoding a non-functional tyrosine phosphatase is required for the delayed maturation of the bacteria-containing vacuoles in macrophages
Angel Andrade and Miguel A. Valvano
Microbiology and Immunology, University of Western Ontario |
| 9:15 – 9:30 | Characterization of lignocellulolytic activities from a halophile strain of <i>Aspergillus caesiellus</i> isolated from a sugarcane bagasse fermentation
Ramón Alberto Batista-García , Edgar Balcázar-López, Estefan Miranda-Miranda, Ayixón Sánchez-Reyes, Laura Cuervo-Soto, Denise Aceves-Zamudio, Karina Atriztán-Hernández, Catalina Morales-Herrera, Rocío Rodríguez-Hernández and Jorge Folch-Mallol
Centro de Investigación en Biotecnología, UAEM |
| 9:30 – 9:45 | The nonphosphorylated IIA ^{Ntr} protein induces RpoS degradation by ClpAP protease in <i>Azotobacter vinelandii</i>
Luis Felipe Muriel Millan , María Soledad Moreno León, Guadalupe Espín Ocampo
Microbiología Molecular, Instituto de Biotecnología, UNAM |
| 9:45 – 10:00 | Inhibitory effect of <i>Parthenium hysterophorus</i> on <i>Helicobacter pylori</i> adherence <i>in vitro</i>
Jazmín P. Espinosa Rivero , Suleima Ríos Tovar, Erika P. Rendón Huerta, Martha Lydia Macías Rubalcava and Irma Romero
Bioquímica. Facultad de Medicina, UNAM |
| 10:00 – 10:15 | The recombinant enzyme 3-hydroxy-3-methyl glutaryl coenzyme A reductase from <i>Candida glabrata</i> (rec-HMGRGc) as a model for studying synthetic inhibitors
Dulce María-Andrade Pavón , José Antonio-Ibarra, César Hugo-Hernández Rodríguez, Lourdes-Villa Tanaca
Microbiología, Escuela Nacional de Ciencias Biológicas – IPN |
| 10:15 – 10:30 | Isolation and partial characterization of TATA binding protein (TBP) gene of <i>Taenia solium</i>
Oscar Rodríguez-Lima , Lucia Jiménez, Ángel Zarain-Herzberg, Ponciano García-Gutiérrez and Abraham Landa
Departamento de Microbiología y Parasitología, Facultad de Medicina, UNAM |
| 10:30 – 10:45 | Membrane topology and identification of functional amino acids in the ArnT protein from <i>Burkholderia cenocepacia</i>
Faviola Tavares-Carreón , Kinnari B. Patel and Miguel A. Valvano
Microbiology and Immunology, Western University, London, Ontario, Canada |
| 10:45 – 11:00 | Synthesis of acetate in <i>Entamoeba histolytica</i>
Citlali Vázquez Martínez , Erika Pineda, Emma Saavedra
Departamento de Bioquímica. Instituto Nacional de Cardiología Ignacio Chávez |

9:00 – 11:00
Vallarta Room

DAAD CONFERENCE

Research in Germany

9:00 – 9:40 Investigación en Alemania: Consejos sobre la organización y el financiamiento de proyectos conjuntos de investigación
Susanne Faber
Coordinadora de Marketing, DAAD México

9:40 – 10:20 Los programas de beca de la Fundación Alexander von Humboldt (AvH)
Claudia L. Treviño Santa Cruz
Representante Alexander von Humboldt Stiftung

10:20 – 11:00 Los programas de la Fundación Alemana para la Investigación Científica (DFG)
Christina Siebe
Representante Deutsche Forschungsgemeinschaft (DFG)

11:00 – 11:30 Coffee Break
Foyer Guadalajara Room

11:30 – 12:30
Guadalajara Room

Plenary Lecture III

Dynamics of Endocytosis
Tomas Kirchhausen
Boston Children's Hospital

Chair: **Maria Eugenia Gonsebatt**
Instituto de Investigaciones Biomédicas, UNAM

12:30 – 14:00 Lunch

Frontiers in Bioenergetics and Mitochondrial Function

Chair: **Marietta Tuena Sangri**
Instituto de Fisiología Celular, UNAM

- 14:00 – 14:30 Protein synthesis inside mitochondria: the story of subunit 1 of the cytochrome c oxidase
Xochitl Pérez Martínez, Yolanda Camacho Villasana, Angélica Zamudio Ochoa, Juan Pablo Mayorga Juárez, Rodolfo García Villegas, Miguel Shingú Vázquez, Aldo E. García Guerrero, Emmanuel Frías Jiménez
Genética Molecular, Instituto de Fisiología Celular, UNAM
- 14:30 – 15:00 Dissecting the peripheral arm of the mitochondrial ATP synthase of chlorophycean algae.
Diego González-Halphen, Miriam Vázquez-Acevedo, Héctor Miranda-Astudillo, Martha Lilia Colina-Tenorio, Araceli Cano-Estrada, Lorenzo Sánchez-Vásquez y Alexa Villavicencio-Queijeiro
Instituto de Fisiología Celular, UNAM
- 15:00 – 15:30 Unveiling the ζ subunit of the α -proteobacterial F_1F_o -ATPase nanomotor: a novel natural inhibitor of rotation different to bacterial ϵ and mitochondrial IF_1 .
Mariel Zarco-Zavala, Edgar Morales-Ríos, Guillermo Mendoza-Hernández, Gerardo Pérez-Hernández, Francisco Mendoza-Hoffmann, Raquel Ortega, and José J García-Trejo
Facultad de Química and Facultad de Medicina, UNAM
- 15:30 – 16:00 Energy associated with the binding of nucleotides in the isolated α and β subunits and their role in $(\alpha\beta)_3$ and $\alpha_3\beta_3\gamma$ subcomplexes.
Guillermo Salcedo Barrientos, Marietta Tuena de Gómez-Puyou, Enrique García Hernández
Bioquímica y Biología Estructural. Instituto de Fisiología Celular, UNAM

Genomics

Chair: **Luis Herrera Estrella**
LANGE BIO – CINVESTAV – IPN Irapuato

- 14:00 – 14:30 Genomic history of domestication of common bean
Alfredo Herrera-Estrella, Anna Vlasova, Martha Rendón-Anaya, Salvador Capella-Gutiérrez, Miguel Hernández-Oñate, André Minoche, Ionas Erb, Francisco Câmara-Ferreira, Pablo Prieto-Barja, André Corvelo, Walter Sanseverino, Gastón Westergaard, Juliane C. Dohm, Georgios Ioannis Pappas Jr, Soledad Saburido-Alvarez, Darek Kedra, Irene Gonzalez, Luca Cozzuto, María A. Aguilar-Morón, Nuria Andreu, O. Mario Aguilar, Jordi García-Mas, Maik Zehnsdorf, Martín P. Vázquez, Alfonso Delgado-Salinas, Luis Delaye, Ernesto Lowy, Alejandro Mentaberry, Rosana P. Vianello-Brondani, José Luís García, Tyler Alioto, Federico Sánchez, Heinz Himmelbauer, Marta Santalla, Cedric Notredame, Toni Gabaldón, and Roderic Guigó
LANGE BIO – CINVESTAV – IPN Irapuato

14:30 – 15:00	Architecture and evolution of a minute plant genome Enrique Ibarra-Laclette, Eric Lyons, Victor Albert and Luis Herrera-Estrella LANGEBIO – CINVESTAV – IPN Irapuato
15:00 – 15:30	Common bean transcriptomics: analysis of global regulators for the rhizobia symbiosis and the abiotic stress responses Georgina Hernández , Jamie O'Rourke, Luis P. Íñiguez, Damien Formey, Bárbara Nova-Franco, Ana B Mendoza-Soto, Alfonso Leija, Sara I. Fuentes, Pablo Peláez, Mario Ramírez, Federico Sánchez, Lourdes Girard, José L. Reyes, Carroll P. Vance Centro de Ciencias Genómicas, UNAM
15:30 – 16:00	Genome-wide perspectives on evolution and molecular adaptation in polar bear Charlotte Lindqvist Department of Biological Sciences, University at Buffalo (SUNY), Buffalo
14:00 – 16:00	Plenary Session 11 Guadalajara Room III

Mechanisms of Neurodegeneration

Chair: **Carlos Beas**
GENIAR, Universidad de Guadalajara

14:00 – 14:30	Neuronal damage and epileptogenesis induced by monosodium glutamate neonatal treatment Monica E Ureña-Guerrero y Carlos Beas-Zárate Departamento de Biología Celular y Molecular, CUCBA, Universidad de Guadalajara
14:30 – 15:00	Mast cells and their involvement in brain damage and epileptogenesis processes Luisa Rocha México
15:00 – 15:30	Ferritin a stress oxidative marker in the neurodegenerative processes Alberto Lazarowski Facultad de Farmacia y Bioquímica- Universidad de Buenos Aires, Argentina
15:30 – 16:00	Are early metabolic alterations in the hippocampus of the mouse model APPswe/PS1d9 alzheimer's disease the cause of disease? Antoni Camins Espuny Centro de Investigación Biomédica en Red. Facultad de Farmacia. España

14:00 – 16:00 Workshop
Vallarta Room

Workshop PLoS-Open Acces Publishing

Chair: **Michael Eisen**
Howard Hughes Medical Institute
University of California, Berkeley

16:15 – 18:15 Oral Presentations 19
Guadalajara Room I

Medicine, Health & Nutrition

Chair: **Alfredo Tellez Valencia**
Universidad Juárez del Estado de Durango

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| 16:15 – 16:30 | Silencing of the mitochondrial calcium uniporter improves post-ischemic cardiac dysfunction and attenuates mitochondrial Ca^{2+} overload and apoptosis in rat myoblast and cardiomyocytes
Yuriana Oropeza-Almazán Alberto Marbán, Eduardo Reyes, Jesús R. Garza y Gerardo García-Rivas
Escuela de Medicina y Ciencias de la Salud. Tecnológico de Monterrey |
| 16:30 – 16:45 | Energy metabolism in human triple-negative breast carcinoma
Silvia Cecilia Pacheco Velázquez and Sara Rodríguez Enríquez.
Departamento de Bioquímica, Instituto Nacional de Cardiología "Ignacio Chávez" |
| 16:45 – 17:00 | Membrane fluidity of kidney microsomes during development of diabetes
Ismael Herminio Pérez Hernández , Ricardo Mejía Zepeda
Facultad de Estudios Superiores Iztacala, UNAM |
| 17:00 – 17:15 | Genetic determinants associated with antibiotics resistance in <i>Mycobacterium tuberculosis</i> strains from Michoacán
Liliana Pérez Reyes , Gerardo Vázquez Marrufo, Christian Serrato Morales, Miriam Espinoza-de Anda y Ma. Soledad Vázquez-Garcidueñas
Facultad de Ciencias Médicas y Biológicas "Dr. Ignacio Chávez". Universidad Michoacana |
| 17:15 – 17:30 | Expression and clinical relevance of heat shock proteins of 90 kDa, Hsp90 α and Hsp90 β , in patients with renal carcinoma
Nadia Aglae Rangel-Gauna , Ma. Delia Pérez-Montiel, Miguel A. Jiménez-Ríos, David Cantú de León, Luis Alonso Herrera-Montalvo, Carlo César Cortés-González
Instituto Nacional de Cancerología, IIB, UNAM |
| 17:30 – 17:45 | MicroRNA amplification from neonatal screening samples
Sandra Patricia Rodil García , Angélica Montoya Contreras, Luis Antonio Salazar Olivo
Instituto Potosino de Investigación Científica y Tecnológica |
| 17:45 – 18:00 | Combination of cell therapy and gene therapy reduces experimental liver fibrosis
Alejandra Meza-Ríos , Juan Armendáriz-Borunda, Leonel García-Benavides, Jesús García-Bañuelos, Adriana Salazar-Montes, Ana Sandoval-Rodríguez
Institute for Molecular Biology and Gene Therapy, Department of Molecular Biology and Genomics, Health Sciences University Center, University of Guadalajara |

- 18:00 – 18:15 Drug resistance promoted by hypoxia in human medulloblastoma cells involves modulation of extracellular pH control proteins, cytochrome P450 enzymes and cell cycle arrest
Jesús Valencia Cervantes, Daniel Martínez Fong, Sara Rodríguez Enríquez, José Antonio Arias Montaña, Víctor Manuel Dávila Borja
 Laboratorio de Oncología Experimental, Instituto Nacional de Pediatría

16:15 – 18:15 Oral Presentations 20
 Guadalajara Room II

Biochemistry VI

Chair: **Juan Pablo Pardo**
 Facultad de Medicina, UNAM

- 16:15 – 16:30 Lipid droplet accumulation in *Ustilago maydis* depends on the nitrogen source
Lucero Romero Aguilar, Guadalupe Guerra Sánchez, Ariana Zavala Moreno, Juan Pablo Pardo Vázquez, Mónica Montero Lomelí, Christian A Cárdenas Monroy
 Microbiología. Escuela Nacional de Ciencias Biológicas, IPN
- 16:30 – 16:45 Kinetic and thermodynamic control in the thermal unfolding of bacterial Triosephosphate Isomerases
Sergio Romero Romero, Miguel A. Costas Basín, Adela Rodríguez Romero, D. Alejandro Fernández Velasco
 Fisicoquímica e Ingeniería de Proteínas, Facultad de Medicina, UNAM
- 16:45 – 17:00 Using X-rays to describe electronic fluxes in REDOX enzymes
Enrique Rudiño-Piñera, Eugenio De la Mora, Hugo Serrano-Posada, Sonia Patricia Rojas-Trejo, César S. Cardona-Félix and Claudia Rodríguez-Almazán
 Medicina Molecular y Bioprocesos, Instituto de Biotecnología, UNAM
- 17:00 – 17:15 Different expression of the inhibitory ζ subunit of the F_1F_0 -ATPase nanomotor among free-living, symbiotic, and parasitic-proteobacteria
Francisco Mendoza-Hoffmann, Mariel Zarco-Zavala, Raquel Ortega, Edgar Morales-Ríos & José J García-Trejo
 Biología, Facultad de Química, UNAM
- 17:15 – 17:30 Evolutive and structural correlation of reconstructed eukaryotic ancestors of the enzyme *triosephosphate isomerase*.
Mariana Schulte-Sasse Jiménez, Nancy O Pulido Mayoral, Miguel Costas Basín, Enrique García Hernández, Adela Rodríguez Romero and D. Alejandro Fernández-Velasco
 Facultad de Medicina, UNAM
- 17:30 – 17:45 Functionalization of Multi-Walled Carbon Nanotubes with *Amaranthus Leucocarpus* Lectin
Carlos Alejandro Vásquez Martínez, Pedro Hernández Cruz, Itandehui Gallegos Velasco, Yadira Gochi Ponce, Alma Dolores Pérez Santiago
 Instituto Tecnológico de Oaxaca
- 17:45 – 18:00 Disentangling the tertiary-quaternary coupling mechanism of allosteric transition of Glucosamine-6-phosphate deaminase of *Escherichia coli*.
Roberto Jareth Vazquez-Nuñez, Sergio Zonszein Strauss, Laura I Álvarez-Añorve, Mario L Calcagno
 Departamento de Bioquímica, Facultad de Medicina, UNAM

18:00 – 18:15 Structural plasticity of the LAO protein in response to the binding of different ligands
Rubén Priego Jiménez, Nancy O Pulido Mayoral, Alejandro Sosa Peinado, Enrique Rudiño Piñera and D Alejandro Fernández Velasco
 Departamanto de Medicina Molecular y Bioprocesos, Instituto de Biotecnología, UNAM

16:15 – 18:15 Oral Presentations 21
 Guadalajara Room III

Genetic Regulation

Chair: **Alma Rosa Villalobos**
 Universidad de Guadalajara

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| 16:15 – 16:30 | Global changes in expression of microRNAs in <i>Caenorhabditis elegans</i> worms subjected to fasting
Laura García Segura , Armando Hernandez Mendoza, Cei Abreu Goodger, Martha Elva Perez Andrade, Jonathan Alcantar Fernández, Juan Miranda Rios
Unidad de Genética de la Nutrición. IIB, UNAM e Instituto Nacional de Pediatría |
| 16:30 – 16:45 | Systematic identification of subtelomeric silencing pathways in <i>Saccharomyces cerevisiae</i>
Alejandro Juárez-Reyes , Jhonatan Hernández-Valdés & Alexander de Luna
Laboratorio Nacional de Genómica para la Biodiversidad. CINVESTAV – IPN |
| 16:45 – 17:00 | Epigenetic deregulation of BORIS and CTCF in breast cancer
Iliana Alcalá-Moreno , Ernesto Soto-Reyes, Daniela Morales-Espinosa, Lissania Guerra-Calderas, Rodrigo González-Barrios, Héctor Aquiles Maldonado-Martínez, David Cantú de León, Clementina Castro, Luis A. Herrera
Unidad de Investigación Biomédica en Cáncer – INCAN / IIB, UNAM |
| 17:00 – 17:15 | The role of ADX proteins in chromatin organization
Silvia Meyer Nava , Mario Zurita and Viviana Valadez Graham
Instituto de Biotecnología, UNAM |
| 17:15 – 17:30 | Impact of Random Mutagenesis of the Transcriptional Regulator IscR of <i>Dickeya dadantii</i> Over Genetics Regulation of Iron-Sulfur Clusters Biogenesis
Diego Eloyr Navarro-López , Evangelina Esmeralda Quiñones-Aguilar, Joaquín Alejandro Qui-Zapata, Gabriel Rincón-Enríquez
Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco AC |
| 17:30 – 17:45 | Aim25 and its role during aging and oxidative stress in the yeast <i>Saccharomyces cerevisiae</i>
José Luis Aguilar , Raymond Laboy, Fabiola Jaimes, Alexander de Luna y Soledad Funes
Laboratorio Nacional de Genómica para la Biodiversidad, CINVESTAV – Irapuato |
| 17:45 – 18:00 | Role of the small RNAs synthesis machinery on the antagonistic capacity of <i>Trichoderma atroviride</i>
Beltrán-Hernández Emma , Molina-Torres Jorge, Herrera-Estrella Alfredo
Laboratorio Nacional de Genómica para la Biodiversidad CINVESTAV- Irapuato |
| 18:00 – 18:15 | Global Methylation Profiling in Mexican Patients with Locally Advanced Cervical Cancer
Marcela Angélica De La Fuente Hernández , Jorge Fernández Retana, David Francisco Cantú de León, Jaime Alberto Coronel Martínez, Carlos Guadalupe Pérez Plasencia
Instituto Nacional de Cancerología |

16:15 – 18:15 Having coffee with.....
Tonalá Room

Four Round Tables for students chosen from oral presentations		
<i>Tomas Kirchhausen</i>	José Carlos Campero	José Manuel Villalobos Escobedo
	Diana Sánchez Rangel	Ana Cristina García Gaytán
	Jonathan Alcántar Fernández	Sobeida Sánchez Nieto
	José Alfredo Villanueva	Jesús Renán Vergara
	Carol Martínez Camacho	Araceli Vázquez Ibarra
Chair: <i>Rubén López Revilla</i>		
<i>Michael Eisen</i>	James González	Eber Gómez Flores
	Brisa Aranzazú Campos Oliver	Luis Ángel Maciel Barón
	Manuel Castillo Méndez	Dana Mariel Díaz Jiménez
	Luis Enrique Arias Romero	Faviola Tavares Carreón
	Arnulfo Bautista Santos	Luis Felipe Muriel Millán
Chair: <i>Lina Riego</i>		
<i>Sandy Johnson</i>	Ximena Martínez de la Escalera	Itzel López Rosas
	Mijail Lezama	Claudia Martínez Anaya
	Claudia Segal	Evangelina Silva Santiago
	Elda Maria del Rocio Coutiño	Janeth Sánchez Ramos
	Jonathan Lozano Salgado	Semiramis Stephania García Trejo
Chair: <i>Gloria Soberón</i>		
<i>Peter Walter</i>	Mirelle Citlali Flores Villegas	Erika Garay Garduño
	Alejandro Zentella	Esperanza Mata Martínez
	Juan García Rincón	Elizabeth Huerta García
	Rusely Encalada	Sara Morales Lázaro
	Verónica Lorena Cano García	Luis A. Téllez
Chair: <i>Leonardo Peraza</i>		
Cassandre Caligaris		
Ana Carolina Valencia Olvera		

18:15 – 20:15 Poster Session 3

B	BASIC BIOCHEMISTRY	76 – 113
SB	SYSTEMS BIOLOGY & BIOINFORMATICS	17 – 33
PH	PHARMACOLOGY	1 – 24
I	IMMUNOLOGY	17 – 31
M	MEDICINE, HEALTH & NUTRITION	24 – 47
MP	MICROBIOLOGY & PARASITOLOGY	23 – 45
N	NEUROSCIENCE & NEUROLOGY	1 – 16
GR	GENETIC REGULATION & EPIGENETIC	46 – 65
T	TOXICOLOGY	18 – 34
ST	SIGNAL TRANSDUCTION	64 – 92

Jalisco Room

Friday November 7, 2014

9:00 – 11:00 Plenary Session 12
Guadalajara Room I

Molecular Epidemiology

Chair: **Rubén López Revilla**
Instituto Potosino de Investigación Científica y Tecnológica

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| 9:00 – 9:30 | Molecular epidemiology of infectious diseases
Rubén López-Revilla
Biología Molecular. Instituto Potosino de Investigación Científica y Tecnológica |
| 9:30 – 10:00 | Genetic diversity and transmission of the <i>Mycobacterium tuberculosis</i> Complex in San Luis Potosí
Julio Juárez-Álvarez
Biología Molecular, Instituto Potosino de Investigación Científica y Tecnológica |
| 10:00 – 10:30 | Experimental pulmonary tuberculosis, epidemiological contributions
Rogelio Hernández-Pando
Patología. Instituto Nacional de Ciencias Médicas y Nutrición “Salvador Zubirán” |
| 10:30 – 11:00 | High prevalence and anomalous association with neoplastic lesions suggests an outbreak of human papiloma virus type 33 cervical infection in San Luis Potosí, Mexico
Raúl De la Rosa-Martínez
Biología Molecular. Instituto Potosino de Investigación Científica y Tecnológica |
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9:00 – 11:00 Plenary Session 13
Guadalajara Room II

Nanobiotechnology

Chair: **Rafael Vázquez Duhalt**
Centro de Nanociencias y Nanotecnología, UNAM

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| 9:00 – 9:30 | Nanobiotechnology: challenges and opportunities in an emerging discipline
Victor Manuel Castaño Meneses
Centro de Física Aplicada y Tecnología Avanzada, UNAM |
| 9:30 – 10:00 | Biological systems as targets for study of new properties induced by nanomaterials
María del Carmen González Castillo
Facultad de Ciencias Químicas, Universidad Autónoma de San Luis Potosí |
| 10:00 – 10:30 | Heterogeneous biocatalysis. Laccase as an example
Sergio A. Águila
Departamento de Bionanotecnología, Centro de Nanociencias y Nanotecnología, UNAM |
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10:30 – 11:00 Virus-like nanoparticles as potential carriers of cytochrome P450 for chemo therapy pro-drug activation
Rafael Vazquez-Duhalt
 Centro de Nanociencias y Nanotecnología, UNAM

9:00 – 11:00 Plenary Session 14
 Guadalajara Room III

Bioética

Chair: **Ricardo Tapia Ibargüengoytia**
 Instituto de Fisiología Celular, UNAM

9:00 – 9:30 Por qué es importante la laicidad en bioética
Roberto Blancarte
 El Colegio de México/Colegio de Bioética

9:30 – 10:00 De las Células Troncales a la Dignidad Humana pasando por el Cigoto
Rubén Lisker
 Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán

10:00 – 10:30 Muerte encefálica y trasplante de órganos: ¿estamos bien?
Patricio Santillán Doherty
 Instituto Nacional de Enfermedades Respiratorias, Colegio de Bioética

10:30 – 11:00 Ética científica: la responsabilidad de los científicos y los límites de la ciencia
Ricardo Tapia
 División de Neurociencias, Instituto de Fisiología Celular, UNAM.

9:00 – 11:00 Plenary Session 15
 Vallarta Room

Biochemistry and Plant Molecular Biology

Chair: **Miguel Lara Flores**
 ENES -León, UNAM

9:00 – 9:30 MEDIATOR 25 regulates root architecture and intraspecific plant competition
 Via auxin signaling
José López-Bucio, Javier Raya-González, Randy Ortiz-Castro, León Francisco Ruíz-Herrera, Edith Muñoz-Parra, Ramón Pelagio-Flores
 Instituto de Investigaciones Químico-Biológicas, Universidad Michoacana

9:30 – 10:00 *Phaseolus vulgaris* TOR gene is required for rhizobial infection, nodule development and symbiotic nitrogen fixation
Kalpana Nanjareddy

10:00 – 10:30 Zygotic Genome Activation in inbred and hybrid embryos of *Arabidopsis thaliana*
Stewart Gillmor, Del Toro De León, Gerardo, García Aguilar, Marcelina
 LANGEBIO, CINVESTAV – IPN Unidad Irapuato

10:30 – 11:00	Tracking the genetic pathway of pollen rejection in <i>Nicotiana</i> Felipe Cruz-García , Liliana García Valencia , Lilia Gracida Bernal y Yuridia Cruz-González Zamora Departamento de Bioquímica, Facultad de Química, UNAM
11:00 – 11:30	Coffee Break Foyer Guadalajara Room
11:30 – 12:30	Guadalajara Room
Plenary Lecture IV	
How Transcription Circuits Evolve and Produce Biological Novelty Alexander D. Johnson University of California, San Francisco	
Chair: Miguel Lara Flores Escuela Nacional de Educación Superior, UNAM. León	
12:30 – 14:00	Lunch
14:00 – 16:00	Plenary Session 16 Guadalajara Room I
Epigenetic Mechanisms in Plants: Their significance in Biotechnological Developments	
Chair: Clelia De la Peña Seaman Centro de Investigación Científica de Yucatán	
14:00 – 14:30	Epigenetic regulation in the common bean (<i>Phaseolus vulgaris</i> L.) and its potential use for crop improvement Raúl Álvarez-Venegas , Aarón Barraza, José Luis Cabrera-Ponce, and Keren Martínez-Aguilar Department of Genetic Engineering. CINVESTAV – IPN Unidad-Irapuato
14:30 – 15:00	Epigenetic Control by Small RNAs during Maize Somatic Embryogenesis Tzvetanka D. Dinkova , Vasti T. Juárez-González, Carolina Chávez-Hernández, José L. Contreras-Guerra, Naholi D. Alejandri-Ramírez Departamento de Bioquímica. Facultad de Química, UNAM
15:00 – 15:30	miRNAs and fruit development Stefan de Folter , Ricardo A. Chávez-Montes, Yolanda Ruiz-Suárez, Valentín Luna-García, Karla L. González-Aguilera, Andrés Cruz-Hernandez, Nayelli Marsch-Martínez, Flor de Fátima Rosas-Cárdenas LANGE BIO CINVESTAV IPN Irapuato
15:30 – 16:00	Epigenetic changes during in vitro culture of important plants Clelia De-la-Peña Centro de Investigación Científica de Yucatán

14:00 – 16:00 Plenary Session 17
Guadalajara Room II

Fungal Molecular Biology
“In Memoriam” Dr. Jure Piskur

Chair: **Jesús Aguirre Linares**
Instituto de Fisiología Celular, UNAM

- 14:00 – 14:30 Order vs chaos: the regulation of vesicle traffic in *Neurospora crassa*
Meritxell Riquelme and Eddy Sánchez-León
Center for Scientific Research and Higher Education of Ensenada (CICESE)
- 14:30 – 15:00 How do fungi transform dead plants into fruiting bodies?
Philippe Silar
Laboratoire Interdisciplinaire des Energies de Demain
Univ Paris Diderot, Sorbonne Paris
- 15:00 – 15:30 A non-canonical function of the yeast high osmolarity glycerol (HOG) pathway
Roberto Coria
Genética Molecular, Instituto de Fisiología Celular, UNAM
- 15:30 – 16:00 ROS signaling and fungal development
Jesús Aguirre
Biología Celular y Desarrollo, Instituto de Fisiología Celular, UNAM

14:00 – 16:00 Plenary Session 18
Guadalajara Room III

Biochemistry and Molecular Biology of Bacteria
“In Memoriam Dr. José Edgardo Escamilla Marván”

Chair: **Guadalupe Espín Ocampo**
Instituto de Biotecnología, UNAM

- 14:00 – 14:30 A new proposal for bacterial evolution: What we have learned from the analysis of *Azotobacter vinelandii* genome
Gloria Soberón Chávez, Adrián González-Casanova, Eneas Aguirre-von-Wobeser; Guadalupe Espín, Luis Servín-González, Noemi Kurt, Dario Spanò and Jochen Blath
Instituto de Investigaciones Biomédicas, UNAM
- 14:30 – 15:00 Post-transcriptional and post-translational alginates regulation synthesis in *Azotobacter vinelandii*.
Miguel Castañeda, Liliana López Pliego, Itzel Paulina Morales, Ana Laura Rodríguez.
Instituto de Ciencias, Benemérita Universidad Autónoma de Puebla
- 15:00 – 15:30 Isolation and Characterization of Cr(VI)-Reducing Bacteria with Potential Application in Soil Bioremediation Strategies
Katy Juárez, Paloma Lara, Italia Moreno, Bianca Flores, Fernando McKay, Enrique Morett
Instituto de Biotecnología, UNAM

15:30 – 16:00	Biosynthesis of arseno-organic molecules in Actinobacteria Francisco Barona-Gómez , Pablo Cruz-Morales, Luis Yañez-Guerra, Hilda E. Ramos-Aboites, Fernanda Iruegas-Bocardo, Johannes Kopp, Jörg Feldmann Evolution of Metabolic Diversity Laboratory, LANGEBIO, CINVESTAV – IPN Irapuato		
16:00 – 18:00	Poster Session 4		
	B	BASIC BIOCHEMISTRY	113 – 151
	BT	BIOTECHNOLOGY	84 – 125
	OR	OXYGEN REACTIVE SPECIES	18 – 33
	G	GENETICS	24 – 43
	M	MEDICINE, HEALTH & NUTRITION	48 – 71
	MP	MICROBIOLOGY & PARASITOLOGY	46 – 68
	N	NEUROSCIENCE & NEUROLOGY	17 – 32
	GR	GENETIC REGULATION & EPIGENETIC	67 – 86
	V	VIROLOGY	1 – 18
Jalisco Room			

18:15 – 19:15
Guadalajara Room

Plenary Lecture V

Unfolded Protein Response in Health and Disease

Peter Walter

Howard Hughes Medical Institute/
University of California, San Francisco

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

19:15 – 19:45 Final Announcements

Closing Ceremony

21:00 Closing Dinner