

Organizers



UASLP
Universidad Autónoma
de San Luis Potosí



Centro de
Investigaciones
Biológicas
del Noroeste



Mexican Society of Biochemistry *IX Congress of Reactive Oxygen Species in Biology and Medicine* *X Workshop on Comparative Aspects of Oxidative Stress in Biological Systems*



Scientific Program

September 22 - 26, 2025
San Luis Potosí, San Luis Potosí, México
Entrepreneurship and Innovation Center, UASLP

IX Congreso de Especies Reactivas de Oxígeno en Biología y Medicina

Monday, September 22, 2025	
13:00-18:00	PARTICIPANT REGISTRATION
16:30-17:00	OPENING CEREMONY –Authorities of the Autonomous University of San Luis Potosí and Organizing Committee.
17:00-18:00	INAUGURAL MASTER CONFERENCE Mitochondria and metals at the center of oxidative stress in Alzheimer disease. Speaker: George Perry, Ph.D., University of Texas San Antonio.
19:00-21:00	WELCOME COCKTAIL

Tuesday, September 23, 2025	
9:00-10:30	X WORKSHOP ON COMPARATIVE ASPECTS OF OXIDATIVE STRESS IN BIOLOGICAL SYSTEMS Reactive oxygen species detection <i>in vitro</i> in biomedical research. Speaker: Dra. Yessica Eduviges Zamudio Cuevas, Laboratorio de Líquido Sinovial, Instituto Nacional de Rehabilitación Luis Guillermo Ibarra Ibarra.
10:30-10:45	COFFE BREAK
	ORAL PRESENTATIONS Students participating in the Best Oral Presentation contest Moderator Dra. Margarita Rodríguez
10:45-11:00	Hydrogel based on plasma-activated water for <i>Escherichia coli</i> inactivation. Speaker: <i>Dra. Alma Neli Hernández Arias</i>
11:00-11:15	Phase separation by agglomerates as a novel regulation of redox balance; structural and mechanistic insights of hydrogen sulfide production by yeast cystathionine beta-synthase. Speaker: <i>Elias Nieto Zaragoza, Graduate student</i>
11:15-11:30	Relationship between the enzyme glucose-6-phosphate dehydrogenase (ZWF1) and hydrogen sulfide production in the yeast <i>Saccharomyces cerevisiae</i>. Speaker: <i>María Jatziry Camacho Campos, Undergraduate student</i>

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11:30-11:45	Maize plant infection by <i>Ustilago maydis</i> is regulated by H₂S fungal metabolism. Speaker: <i>Dr. Emilio Espinoza Simón</i>
11:45-12:00	Cysteine Oxidation as a Regulator of the A Subunit of the Vacuolar ATPase in <i>Saccharomyces cerevisiae</i>. Speaker: <i>Mariana Michell García Reyes, Graduate student</i>
12:00-12:30	COFFEE BREAK
12:30-13:30	MASTER CONFERENCE 1 The role of ROS in autoimmune diseases. Speaker: <i>Dra. Elsy Janeth Ramos González, Universidad de Zacatecas.</i>
14:00-16:00	LUNCH BREAK
	SYMPOSIUM 1 Redox Biochemistry in Plants, Fungi and Microorganisms. Moderator Dr. Alejandro de las Peñas
16:00-16:30	Polyamines and their relationship with reactive oxygen species in plant-microbe interactions. Speaker: <i>Dra. Margarita Rodríguez y Domínguez Kessler, Facultad de Ciencias, Universidad Autónoma de San Luis Potosí, UASLP.</i>
16:30-17:00	Antioxidants and oxidative stress: their relevance to the quality and preservation of postharvest products. Speaker: <i>Dra. Lluvia de Abril A. Soriano Melgar, Facultad de Ciencias Químicas, Universidad Autónoma de Coahuila.</i>
17:00-17:30	Resistance to oxidative stress in <i>Candida glabrata</i>: the key role of redox systems. Speaker: <i>Dra. Ma. Guadalupe Gutiérrez Escobedo. Instituto Potosino de Investigación Científica y Tecnológica A.C. IPICYT.</i>
17:30-18:00	COFFEE BREAK – Technical session with Agilent-Biotek Latino América
18:00-19:30	POSTER EXHIBITION

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Wednesday, September 24, 2025	
9:00-10:30	X WORKSHOP ON COMPARATIVE ASPECTS OF OXIDATIVE STRESS IN BIOLOGICAL SYSTEMS Determination and functions of β-esterases in marine species. Speaker: Dra. Montserrat Solé, Instituto de Ciencias del Mar, ICM-CSIC, Barcelona, Spain.
10:30-10:45	COFFE BREAK
	ORAL PRESENTATIONS Students participating in the Best Oral Presentation contest Moderator Dr. Luis Cárdenas
10:45-11:00	<i>Trichoderma asperellum</i> mitigates oxidative stress in tomato plants exposed to low temperatures. Speaker: <i>María del Pilar Osorno-Suárez, Graduate student</i>
11:00-11:15	CKA2 Regulates Nitric Oxide Synthesis and Protein S-Nitrosylation in <i>Saccharomyces cerevisiae</i> under Heat Stress. Speaker: <i>Kevin Omar Torres Marcial, Graduate student</i>
11:15-11:30	Impact of maternal body mass index on the activity and expression of superoxide dismutase 3 in the different stages of human milk. Speaker: <i>Josue Damián Arrevillaga Hernández, Undergraduate student</i>
11:30-11:45	Evaluation of the antioxidant gap in neonates of women with preeclampsia. Speaker: <i>Juan Carlos Avilés García, Graduate student</i>
11:45-12:00	Evaluation of systemic status and its relationship with oxidation in the colostrum of women with obesity. Speaker: <i>Abel Billar Pedraza, Undergraduate student</i>
12:00-12:30	COFFEE BREAK
12:30-13:30	MASTER CONFERENCE 2 High-Tech Advancements and Their Unintended Consequences on the Marine Environment. Speaker: Ph.D. Rosa Freitas, University of Aveiro, Aveiro, Portugal.
14:00-16:00	LUNCH BREAK

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	SYMPOSIUM 2 Redox Biochemistry and One Health (Biomedicine, multifactorial, integrative focus, ecotoxicology, biomarkers, indicators, sentinel species). Moderator Dra. Guadalupe Gutiérrez
16:00-16:30	Metallothionein and other thiols as neuroprotectors and antioxidant stress agents in the central nervous system. Speaker: Dr. Camilo Ríos Castañeda, División de Neurociencias, Instituto Nacional de Rehabilitación Luis Guillermo Ibarra Ibarra.
16:30-17:00	Relationship between inflammation and oxidative stress during cellular senescence and brain aging. Speaker: Dra. Mina Königsberg, Departamento de Ciencias de la Salud, Universidad Autónoma Metropolitana, UAM-Iztapalapa.
17:00-17:30	Modulation of intestinal function by prolactin and oxytocin: role of nitric oxide. Speaker: Dra. María del Carmen González Castillo, Facultad de Ciencias Químicas, Universidad Autónoma de San Luis Potosí, UASLP.
17:30-18:00	COFFEE BREAK – Technical session Silvera
18:00-19:30	POSTER EXHIBITION
19:00-20:00	BUSSINES SESSION

Thursday, September 25, 2025	
9:00-10:30	X WORKSHOP ON COMPARATIVE ASPECTS OF OXIDATIVE STRESS IN BIOLOGICAL SYSTEMS Determination of oxidative stress by flow cytometry. Speaker: Dra. Adriana Monsivais Urenda, Facultad de Medicina, Centro Centro de Investigación de Ciencias de la Salud y Biomedicina, CICSaB, Universidad Autónoma de San Luis Potosí, UASLP.
10:30-10:45	BREAK
	ORAL PRESENTATIONS Students participating in the Best Oral Presentation contest Moderator Dra. Karina Martínez

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10:45-11:00	Food additive E171 induces oxidative stress, morphological alterations, and cell death in H9c2 cardiac cells. Speaker: <i>América Gutiérrez Arenas, Graduate student</i>
11:00-11:15	Anticonvulsant and neuroprotective effect of dapsone and cannabidiol in an epilepsy model induced with pentylenetetrazole in rats. Speaker: <i>Dra. Araceli Díaz Ruiz</i>
11:15-11:30	Reactive Oxygen Species (ROS) and Cancer in Women. Speaker: <i>Dra. Paola Maycotte González</i>
11:30-11:45	Cytotoxicity and Antioxidant Activity of Lanthanide-Doped Zinc Oxide Nanoparticles. Speaker: <i>Jorge L. Mejía-Méndez, Graduate student</i>
11:45-12:00	Modulation of oxidative stress and phagocytosis of urate crystals by Cyanidin-3-glucoside in 3D synovial cultures. Speaker: <i>Ingrid Salgado Gutiérrez, Graduate student</i>
12:00-12:30	COFFEE BREAK
12:30-13:30	MASTER CONFERENCE 3 Biomarkers of oxidative stress in early kidney damage. Speaker: Dr. Octavio Gamaliel Aztatzi Aguilar, Laboratorio de Toxicología de Contaminantes Atmosféricos y Estrés Oxidativo, CINVESTAV.
14:00-16:00	LUNCH BREAK
	SYMPOSIUM 3 Redox Biochemistry in Molecular Biology: Genetics, epigenetic and methylation, cell signaling Moderator Dr. Javier E. Jiménez
16:00-16:30	Cysteine residues: target of reactive oxygen species? Speaker: Dr. Francisco Torres Quiroz, Instituto de Bioquímica y Biología Estructural, Instituto de Fisiología Celular, Universidad Nacional Autónoma de México, UNAM.
16:30-17:00	Involvement of hypoxia-inducible factor 1 alfa (HIF-1α) in diseases of the musculoskeletal system. Speaker: Dr. Javier Fernández Torres, Instituto Nacional de Rehabilitación Luis Guillermo Ibarra Ibarra.

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17:00-17:30	Co-inoculation with <i>Trichoderma</i> species alters ROS balance and reduces pathogen resistance in <i>Arabidopsis</i> 35S::TaEPL1-3 line Ponente: Dr. Juan Francisco Jiménez Bremont, Instituto Potosino de Investigación Científica y Tecnológica, IPICYT.
17:30-18:00	COFFEE BREAK – Technical demonstration Silvera at COPOCYT-UASLP
18:00-19:30	POSTER EXHIBITION

Friday, September 26, 2025

9:00-10:30	X WORKSHOP ON COMPARATIVE ASPECTS OF OXIDATIVE STRESS IN BIOLOGICAL SYSTEMS Basic techniques for human and animal cell culture. Speaker: Dra. Claudia Castillo, Facultad de Medicina, Coordinación para la Innovación y Aplicación de la Ciencia y la Tecnología, CIACYT, Universidad Autónoma de San Luis Potosí, UASLP. “Cell Culture II: 3D Models”, where we will address the advantages of the three-dimensional models in the study of reactive oxygen species. Speaker: Dr. Edson Iván Rubio Hernández, Unidad de Investigación en Virología y Cáncer. Hospital Infantil de México Federico Gómez.
10:30-10:45	COFFEE BREAK
	ORAL PRESENTATIONS Students participating in the Best Oral Presentation contest Moderator Dr. Mina Konisberg
10:45-11:00	The exposure of shrimp to the pollutant naphthalene changes differentially superoxide dismutase isoenzymes expression and total activity while increasing lipid peroxidation. Speaker: <i>Dra. Laura Camacho Jiménez</i>
11:00-11:15	Hydrogen sulfide dysregulation modulates mitochondrial ROS production in <i>Saccharomyces cerevisiae</i> under ethanol stress. Speaker: <i>Denisse Fuentes Calderón, Undergraduate student</i>
11:15-11:30	Association of maternal antioxidant status during pregnancy with infant adiposity at one month of age. Speaker: <i>Karen Nayeli Hernández Vázquez, Graduate student</i>

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11:30-11:45	Antioxidant response in cats naturally infected with <i>Bartonella</i> spp. Speaker: <i>Juan Martín León Frías, Graduate Student</i>
11:45-12:00	Analysis of Oxidative Stress Mechanism Activation Induced by Synthetic Curcuminoids as Antitumor Treatment in a Murine Breast Cancer Model. Speaker: <i>QBP. Juana Narváez Morales</i>
12:00-12:30	COFFEE BREAK
12:30-13:30	MASTER CONFERENCE 4 Oxidative stress as central factor in liver disease. Speaker: Dr. Luis Enrique Gómez Quiroz, Universidad Autónoma Metropolitana, Universidad Autónoma de México, UAM-Iztapalapa.
14:00-16:00	LUNCH BREAK
	SYMPOSIUM 4 Redox Biochemistry in Ecology and Evolution. Moderator Dra. Karina Martínez
16:00-16:30	Mechanisms of ischemia tolerance in diving seals. Speaker: José Pablo Vázquez-Medina, Ph.D., Department of Integrative Biology, University of California, Berkeley.
16:30-17:00	Oxidative stress and life histories in birds Speaker: Dra. Roxana Torres, Laboratorio de Conducta Animal, Instituto de Ecología, UNAM.
17:00-17:30	Antioxidant system and oxidative stress in shrimp under environmental changes. Speaker: Dra. Gloria Yepiz Plascencia, Centro de Investigación en Alimentación y Desarrollo, A.C, CIAD.
17:30-18:00	COFFEE BREAK
18:00-19:30	POSTER EXIBITION
19:30-20:00	CLOSING CEREMONY
21:00-02:00	CLOSING DINNER



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