

SOCIEDAD MEXICANA DE BIOQUÍMICA

IV CONGRESO DE ESPECIES REACTIVAS DEL OXÍGENO EN BIOLOGÍA Y MEDICINA

HACIENDA JURICA, QUERÉTARO, 19 AL 22 DE MARZO DE 2013

PROGRAM

TUESDAY, MARCH 19	
14:00 – 18:00	Registration
18:30 – 18:45	Opening Ceremony
19:00 – 20:00	<i>Plenary Opening Lecture</i> Dr. Henry Forman <i>Redox and electrophilic signaling in cancer, air pollution, and aging</i> President Elect Society for Free Radical Biology and Medicine, University of Southern California, Los Angeles
20:00 – 21:00	Welcome Cocktail
WEDNESDAY, MARCH 20	
7:30 – 8:30	<i>Early Morning Course day one</i> Oxidative stress: fundamental aspects and physicochemical insights Dr. Annia Galano Jiménez Departamento de Química, UAM, Iztapalapa
9:00 – 10:00	<i>Plenary Lecture</i> Dr. Enrique Cadenas <i>Mitochondrial energy-redox signaling in brain aging and neurodegeneration</i> University of Southern California, Los Angeles
10:00 – 10:30	Coffee break
10:30 – 12:30	<i>Symposium. Nutrition and natural antioxidants</i> Dr. Nimbe Torres y Torres <i>Dieta, estrés oxidante y diabetes</i> Instituto Nacional de Ciencias Médicas y Nutrición “Salvador Zubirán” Dr. Jorge Luis Rosado Loria <i>Efecto de la deficiencia de antioxidantes en la obesidad</i> Universidad Autónoma de Querétaro



	<p>Dr. Héctor Issac Rocha González <i>Natural antioxidants in the neuropathic pain treatment</i> Escuela Superior de Medicina del IPN, Unidad de Posgrado</p> <p>Dr. Juan Raúl Álvarez Idaboy <i>Glutathione endogenous antioxidant: radical scavenger and damaged DNA repairer</i> Facultad de Química, UNAM</p>
12:30 – 13:30	Business session
13:00 – 15:00	Lunch
15:00 – 16:00	<p>Oral Presentations</p> <p>Oxidative stress in cell death and disease</p> <p>Dr. Christian Cortés Rojo <i>Short-term supplementation with avocado oil ameliorates liver mitochondrial dysfunction and oxidative stress in streptozotocin-induced diabetic rats</i> IIQB, Universidad Michoacana</p> <p>Dr. Angel León Buitimea <i>L-Carnitine analogs modifies the proliferation and induce phagocytosis and respiratory burst in THP-1</i> Facultad de Farmacia, UAEM</p> <p>Adriana Guadalupe Pérez Ruiz <i>Effect antiproliferative of (-) epicatechin and its relationship with reactive oxygen species in breast cancer cell lines</i> Escuela Superior de Medicina, IPN</p> <p>María de Jesús Rincón Víquez <i>Detection of insulin polymers in plasma from obese patients and its relationship with insulin resistance</i> Escuela Superior de Medicina, IPN</p>
16:00 – 17:00	<p>Plenary Lecture</p> <p>Dr. Arturo Keller <i>Nanoparticles in the environment: life-cycle, fate & transport, and reactivity</i> University of California, Santa Bárbara</p>
17:00 – 17:15	Coffee Break



17:15 – 19:00	<p><i>Symposium. Nanoparticles and oxidative stress</i> Dr. Andrea de Vizcaya <i>Challenges associated with the toxicity evaluation and oxidative stress of engineered nanomaterials</i> CINVESTAV-IPN Unidad Zacatenco</p> <p>Dr. Carmen González Castillo <i>Study of silver nanoparticles on biological experimental models. Role of nitric oxide</i> Facultad de Ciencias Químicas, UASLP</p> <p>Dr. Aracely Angulo Molina <i>Functional nanofoods: synthesis, characterization and nanotoxic effects in cancer cells</i> Universidad de las Américas Puebla</p> <p>Dr. Patricia Ramírez Noguera <i>Efectos citotóxicos y genotóxicos asociados a nanopartículas fabricadas a base de polietilcianoacrilato, SiO₂ y quitosan</i> Facultad de Estudios Superiores – Cuautitlán, UNAM</p>
19:00 – 21:00	Poster Session. Odd numbers

THURSDAY, MARCH 21

7:30 – 8:30	<p><i>Early Morning Course day two</i> <i>Cell signaling by oxidative stress</i> Dr. María Elena Ibarra Rubio Facultad de Química, UNAM</p>
9:00 – 10:00	<p><i>Plenary Lecture</i> Dr. Michael Hitchler <i>Reprogramming the epigenome through oxidative stress and metabolism</i> Kaiser Permanente Los Angeles Medical Center</p>
10:00 – 10:30	Coffee break
10:30 – 12:30	<p><i>Symposium. Oxidative stress and cell signaling</i> Dr. Wilhelm Hansberg Torres <i>ROS, RAS-1, growth and development</i> Instituto de Fisiología Celular, UNAM</p> <p>Dr. Concepción Gutiérrez-Ruiz <i>Reactive oxygen species and the survival response in the liver</i> UAM Iztapalapa</p>



	<p>Dr. Rolando Hernández Muñoz <i>Role of lipid peroxidation and of oxidative stress in the rat liver regeneration induced by partial hepatectomy</i> Instituto de Fisiología Celular, UNAM</p> <p>Dr. Ma. Lourdes Rodríguez Fragoso <i>EGF receptor phosphorylation in ethanol-induced oxidative stress is associated with CYP2E1 overexpression in MCF-10A cells</i> Facultad de Farmacia, UAEM</p>
13:00-15:00	Lunch
15:00-16:00	<p>Oral Presentations</p> <p>Reactive species and signaling</p> <p>Mabel Buelna Chontal <i>Postconditioning increases NRF2 nuclear translocation via PKC activation and protects against reperfusion injury in heart</i> Instituto Nacional de Cardiología “Ignacio Chávez”</p> <p>Ahiezer Rodríguez Tobón <i>Reactive oxygen species and tyrosine phosphorylation in the epididymal sperm maturation of the mexican big-eared (Corynorhinus mexicanus) bat</i> Departamento de Biología de la Reproducción. UAM-I</p> <p>Ricardo Alberto Santana Martinez <i>Treatment of curcumin on alterations induced in a model of striatal degeneration in rats: protective effect related to its ability as enhancer of phase II enzymes.</i> Instituto Nacional de Neurología y Neurocirugía MVS.</p> <p>Ricardo Santillán Mendoza <i>Insulin stimulates autophagy in INT-1 tobacco cell cultures through H₂O₂</i> IIQB, Universidad Michoacana</p>
16:00-17:00	<p>Plenary Lecture</p> <p>Dr. Tania Zenteno Savín <i>Ischemia-reperfusion: lessons from marine mammals</i> Centro de Investigaciones Biológicas del Noreste, Baja California</p>
17:00 – 17:15	Coffee break
17:15 – 18:45	<p>Symposium. <i>Oxidative stress in biology and medicine</i></p> <p>Dr. Laura Roxana Torres Avilés <i>Oxidative stress as a possible mediator of life-history tradeoffs</i> Instituto de Ecología, UNAM</p>



<p>18:45 – 21:00</p>	<p>Dr. Verónica Mireya Rodríguez Córdova <i>The implications of oxidative stress in the development of neurodegenerative disorders caused by the environmental contaminants arsenic and atrazine</i> Instituto de Neurobiología, UNAM</p> <p>Dr. Brenda Anguiano <i>Iodine and redox balance: from physiology to cancer</i> Instituto de Neurobiología, UNAM</p> <p>Poster Session. Even Numbers</p>
<p>FRIDAY, MARCH 22</p>	
<p>7:30-8:30</p>	<p><i>Early Morning Course day three</i> <i>Evaluation of oxidative stress</i> Dr. José Pedraza Chaverri Facultad de Química, UNAM</p>
<p>9:00-10:00</p>	<p><i>Plenary Lecture</i> Dr. Mauricio Díaz Muñoz <i>Pro-oxidant reactions and reticular response in the liver are modulated by a protocol of restricted food access at daytime</i> Instituto de Neurobiología, UNAM</p>
<p>10:00 – 10:30</p>	<p>Coffee break</p>
<p>10:30 – 12:00</p>	<p>Oral Presentations Emerging topics in the field of oxidative stress</p> <p>Rodrigo Martínez Espinosa <i>Oxidative stress is involved in albendazole damage to Giardia duodenalis</i> CINVESTAV, IPN</p> <p>Dr. Igor Pottosin <i>Ros-induced changes in K⁺ and Ca²⁺ conductance across the root cell membrane in higher plants and their modulation by natural polyamines</i> CUIB. Universidad de Colima</p> <p>Jorge Alejandro Sosa Gutiérrez <i>Ascorbate-glutathione system participates in dormancy breakage in Vitis vinifera L. induced by chemical agents</i> Facultad de Ciencias Químicas, UJED</p> <p>Dr. Wilhelm Hansberg <i>How catalase recognizes H₂O₂ in a sea of water</i> Instituto de Fisiología Celular, UNAM</p>

	<p>Dr. Marco A. Liñán Cabello <i>Physiological responses to oxidative stress associated with Ph variations in the hermatypic coral Pocillopora capitata</i> FACIMAR, Universidad de Colima.</p> <p>Cristo Omar Puente Valenzuela <i>Arsenite effect on GSH/GSSG ratio in hepatocytes (HEPG2)</i> Facultad de Ciencias Biológicas, UJED</p>
12:00-13:00	<p><i>Plenary Lecture</i> Dr. Rafael Vázquez Duhalt <i>Intramolecular delocalization of free radicals: hemoproteins, a matter of life or death</i> Instituto de Biotecnología, UNAM</p>
13:00 – 13:30	Final announcements and closing ceremony
13:00 – 15:00	Lunch

Organizing Committee

Dr. Lourdes Massieu Trigo
Instituto de Fisiología Celular, UNAM

Dr. Mahara Valverde Ramírez
Instituto de Investigaciones Biomédicas, UNAM

Dr. María E. Gonsebatt Bonaparte
Instituto de Investigaciones Biomédicas, UNAM

Dr. Alejandro de las Peñas Nava
Instituto Potosino de Investigación Científica (IPICYT)

Local Committee

Dr. Teresa García Gasca
Facultad de Ciencias Naturales, UAQ

Dr. Adriana Jheny Rodríguez Méndez
Facultad de Ciencias Naturales, UAQ

Dr. Roberto Augusto Ferriz Martínez
Facultad de Ciencias Naturales, UAQ

Lic. Elsa Fernanda Chávez Alabat
Facultad de Ciencias Naturales, UAQ

POSTER SESSION. ODD NUMBERS

WEDNESDAY 18:45 – 21:00

ESPECIES REACTIVAS Y SEÑALIZACIÓN

1. NORDIHYDROGUAIARETIC ACID ATTENUATES THE OXIDATIVE STRESS-INDUCED DECREASE OF CD33 EXPRESSION IN HUMAN MONOCYTES. **Silvia Guzman-Beltran**, José Pedraza-Chaverri, Susana González-Reyes, Yolanda González, Karen Bobadilla, Fernando Hernández-Sánchez, Martha Torres
3. ETHANOL AND RESVERATROL REGULATE NR1 AND NR2A NMDA RECEPTOR SUBUNIT EXPRESSION IN CEREBRAL ISCHEMIA. **Cerón Silva AL**, Millán Vega A, Ortiz-Plata A, Salazar MI, Espinoza-Rojo M, Aguilera P.
5. OXIDATIVE DAMAGE DURING FRAGILITY AND ITS RELATIONSHIP WITH THE ANTI-INFLAMMATORY RESPONSE AND NADPH OXIDASE ACTIVITY. **González Puertos Viridiana Yazmín**, Alarcón Aguilar Adriana, Conde-Pérezprina Juan Cristóbal, Juárez Cedillo Teresa, Rosas Carrasco Oscar, Königsberg Mina. Luna-López Armando.
7. NF-KB P50 SUBUNIT REGULATES BCL-2 OVEREXPRESSION DURING OXIDATIVE CONDITIONING HORMESIS RESPONSE. **Luna-López Armando**, González-Puertos Viridiana Yazmín, Romero-Ontiveros Jaquelinne, Ventura-Gallegos Jose Luis, Zentella Alejandro, Gómez-Quiroz Luis Enrique, Königsberg Mina.
9. CHARACTERIZATION OF SECONDARY METABOLITES FROM OPPORTUNISTIC FUNGAL PATHOGEN *Candida glabrata*. **Mancilla Montelongo MG**, Gutiérrez Escobedo MG, De Las Peñas Nava A.
11. COMPARATIVE ANALYSIS OF ANTIOXIDANT CAPACITY OF MELATONIN (MLT) AND SEROTONIN (5-HT) ON THE ACTIVITY OF HUMAN LEUCOCYTES. **Mendieta Irasema**, Moreno K, Rodríguez A, García-Alcocer G, Escobar J, Berumen LC.
13. SILVER NANOPARTICLES INDUCED BIOCHEMICAL AND PHYSIOLOGICAL CHANGES IN RESPIRATORY PRIMARY CULTURE CELLS AND ISOLATED RAT TRACHEAL SEGMENTS. ROLE OF NITRIC OXIDE. **Salazar-García S**, Ramírez-Lee MA, Espinosa-Tanguma R, Ali S, González C.
15. BENEFIT OF PHYSICAL ACTIVATION ON OXIDATIVE STRESS. **Eneida Camarillo Romero**, Montenegro Morales LP, Cerecero Aguirre P, Vázquez de Anda FG, Camarillo Romero MS, Huitrón Bravo GG

ESTRÉS OXIDANTE EN LA DIFERENCIACIÓN Y EL DESARROLLO

17. ACTIVITY OF GLUCOSE 6-PHOSPHATE DEHYDROGENASE DURING SEXUAL DIFFERENTIATION IN THE MALE RAT HYPOTHALAMIC PERINATAL TREATED WITH TAMOXIFEN. **Chávez García R**, Ortega Camarillo C, Ávalos Rodríguez A, Borderas Tordecillas F, Vergara Onofre M.

ESTRÉS OXIDANTE EN LA MUERTE CELULAR Y LA ENFERMEDAD

19. SULFORAPHANE ATTENUATES GENTAMICIN-INDUCED NEPHROTOXICITY: ROLE OF MITOCHONDRIAL PROTECTION. **Mario Negrette Guzmán**, Sara Huerta Yepez, Omar Noel Medina Campos, Zyanya Lucía Zatarain Barrón, Rogelio Hernández Pando, Edilia Tapia, José Pedraza Chaverri.
21. OXIDATIVE DAMAGE BY AIR ENVIRONMENTAL EXPOSURE IN URBAN CHILDREN. **Alvarado-Cruz I**, Sánchez-Guerra M., Hernández-Cadena L., Espinosa-Juárez L., Monroy Pérez V, Solís-Heredia M.J., Pelallo-Martínez N., Quintanilla-Vega B.

- 23 ANTIOXIDANT-MEDIATED PROTECTIVE EFFECT OF HAWTHORN (*Crataegus mexicana*) SKIN EXTRACT IN ERYTHROCYTES AGAINST OXIDATIVE DAMAGE. **Banderas-Tarabay José Antonio**, Grada-Sánchez M, Pérez-Cholula JC, Rodríguez-Torres L, and Méndez-Iturbide D.
- 25 EFFECT OF POLYPHENOL EXTRACT FROM GREEN TEA [P60] ON GENOTOXIC AND CYTOTOXIC DAMAGE INDUCED BY Cr (IV) IN MICE CD-1 STRAIN. **García-Rodríguez MC**, Carvente-Juárez MM, Montaña-Rodríguez AR, Altamirano-Lozano MA
- 27 SUBCHRONIC ADMINISTRATION OF S-ALLYLCYSTEINE (SAC) ACTIVATES Nrf2 FACTOR IN CEREBRAL CORTEX. **González García María Cecilia**, Chávez-Domínguez R, Silva-Islas C, Chánez-Cárdenas ME, Barrera-Oviedo D, Maldonado PD.
- 29 ROLE OF NADPH-OXIDASE IN THE DEATH OF CULTURED CEREBELLAR ASTROCYTES. **Guadalupe Domínguez**, Julio Morán.
- 31 OXIDATIVE STRESS EFFECT OF A SPORTS MEDICAL PROGRAM ON OLDER ADULTS WITH AND WITHOUT METABOLIC SYNDROME. **Gutiérrez López Liliana**, García Galindo Miguel Ángel, Hernández Hernández Héctor Daniel, García Sánchez José Rubén, Rincón Viquez Ma de Jesús, Olivares Corichi Ivonne María
- 33 THE NATIVE FLORA OF YUCATAN PENINSULA AS A SOURCE OF BIOACTIVE METABOLITES WITH ANTIOXIDANT, ANTI-INFLAMMATORY AND/OR ANALGESIC ACTIVITY. **Hiatzy Eislin Zapata Estrella**, Mijangos-Ramos IF, Escalante-Erosa F, García-Sosa K, Valdir Cechinel Filho, Meira-Quintão NL, Peña-Rodríguez LM
- 35 HUMAN RENAL EPITHELIUM AND OXIDATIVE STRESS. **Martínez Alcaraz Edith Ruth**, Myrna Sabanero López, Gloria Barbosa Sabanero.
- 37 EFFECT OF 3-HYDROXYKYNURENINE AND 3-HYDROXYANTHRANILIC IN OXIDATIVE DAMAGE MARKERS INDUCED BY FeSO₄ AND ONOO. **Ramírez Ortega Daniela**. Vázquez Cervantes GI, Ugalde-Muñiz P, Pineda Olvera B, Pedraza-Chaverri J, Santamaría Del Ángel A y Pérez De la Cruz V.
- 39 PROTECTIVE EFFECT OF CURCUMIN AGAINST HEMIN-INDUCED NEUROTOXICITY IN PRIMARY CULTURES OF CEREBELLAR GRANULE NEURONS OF RATS. **Susana González-Reyes**, Silvia Guzmán-Beltrán José Pedraza-Chaverri.
- 41 ESTROGENIC MODULATION ON THE OXIDATIVE STRESS AND AGING IN THE DORSAL HIPPOCAMPUS. **Vicente Beltrán Campos**, Medina-Aguirre IG, Díaz-Ruiz A, Padilla-Gómez E, Alcaraz-Zubeldia M, Aguilar-Zavala H, Rios C, Díaz Cintra S.
- 43 EVALUATION OF THE PROTECTIVE EFFECT OF ETHANOL & RESVERATROL IN A MODEL OF CEREBRAL ISCHEMIA IN RAT. **Yaseck_Trejo**, Montes de Oca Balderas P. Ortiz-Plata A. Pedraza-Chaverri J. Aguilera P.
- 45 RELATIONSHIP BETWEEN OXIDATIVE STRESS AND PERIODONTAL DISEASE IN OLDER PEOPLE. **Beatriz Hernández Monjaraz**, Santiago-Osorio E, Betancourt-Rule JM, Mendoza-Núñez VM

ESTRÉS OXIDANTE EN MICROORGANISMOS

- 47 ANTIOXIDANT EFFECT OF PHYCOBILIPROTEINS EXTRACTED FROM *Spirulina maxima* ON PLASMID DNA FROM *Escherichia coli*. **Alan Rubén Estrada Pérez**, M Patricia Cervantes Cervantes, Nora B Medina Jaritz, Roxana Olvera Ramírez, José Luis Muñoz Sánchez JL.
- 49 CARBONYLATION OF HSP70 PROTEIN FROM *Trypanosoma cruzi* DURING IT *in vitro* CULTURE. **Ignacio Martínez Martínez**, Bertha Espinoza Gutiérrez
- 51 IRON-SULFUR PROTEIN BIOGENESIS AND OXIDATIVE STRESS IN *Saccharomyces cerevisiae*. **Pérez-Gallardo Rocío Viridiana**, Díaz-Pérez Alma Laura Campos-García Jesús.
- 53 REGULATION OF *Candida glabrata* EPA2 EXPRESSION BY OXIDATIVE STRESS. **Jacqueline Juárez Cepeda**, Orta Zavalza E, De las Peñas Nava A

- 55 THE SINGLE CATALASE OF *Candida glabrata* PROTECTS *Saccharomyces cerevisiae* FROM HYDROGEN PEROXIDE. **Israel Cañas-Villamar**, Castaño I, De Las Peñas A

ESTRÉS OXIDANTE EN PLANTAS

- 57 QUANTIFICATION OF PHENOLIC COMPOUNDS AND ASSESSMENT OF ANTIOXIDANT CAPACITY IN COLORIN (*Erythrina americana* miller). **Laura Lisset Bata García**, Ana Angélica Feregrino Pérez, Andrés Cruz-Hernández, Ramón Guevara González, Adriana Jheny Rodríguez Méndez
- 59 ASSESSMENT OF THE EFFECT OF DETERGENTS IN THE DUCKWEED (*Lemna gibba* L.) **Alma Sobrino**, Morales-Torres J

MÉTODOS Y MODELOS PARA EL ESTUDIO DE LAS ESPECIES REACTIVAS

- 61 ANTIOXIDANT ACTIVITY OF PHYCOCYANIN. **Fernández-Rojas Berenice**, Medina-Campos Omar Noel, Pedraza-Chaverri José.
- 63 COMPUTATIONAL STUDY OF DIHYDROXYBENZENES RELATED WITH THE ENZYMIC BROWNING. **Ortega Moo María Cristina**, Vargas Fosada Rubicelia
- 65 TOXIC EFFECT OF ANTI-FLU DRUGS IN *Daphnia magna*. **Alma Sobrino Figueroa**

TÓPICOS EMERGENTES EN EL CAMPO DE LAS ESPECIES REACTIVAS

- 67 SYNTHESIS, CHARACTERIZATION AND TOXICOLOGICAL EVALUATION OF MALTODEXTRIN CAPPED CADMIUM SULFIDE NANOPARTICLES IN HUMAN CELL LINES AND CHICKEN EMBRYOS **León-Buitimea A**, Rodríguez-Fragoso P, Reyes-Esparza J, Rodríguez-Fragoso L.
- 69 MANIPULATION OF XANTHINE OXIDASE-DERIVED REACTIVE SPECIES REDUCES OBESITY-INDUCED INFLAMMATION AND IMPAIRMENT OF GLUCOSE TOLERANCE. **Cantu-Medellin N**, Weidert ER, Shoenborn CJ, Champion HC, Baust J, Tarpey MM and Kelley EE.
- 71 SEMICONDUCTOR NANOPARTICLES EXHIBIT CYTOTOXICITY AND MITOCHONDRIAL IMPAIRMENT THROUGH ROS STIMULATION IN A459 CELLS. **Vicente Escamilla Rivera**, Marisela Uribe-Ramírez, Velumani Subramaniam, Andrea De Vizcaya-Ruiz.
- 73 ANTIOXIDANT DEFENSES IN *Perna viridis* (BIVALVIA: MITILIDAE) UNDER ANOXIA, ANHIDROBIOSIS Y REOXYGENATION, IN COPPER AND CADMIUM PREEXPOSURE ORGANISMS. **Edgar Zapata Vivenes**, Sánchez G. & Nusetti O

EXTEMPORÁNEOS

Área Especies Reactivas y Señalización

- 75 SIGNAL TRANSDUCTION PATHWAYS INDUCED BY FC γ RECEPTORS IN THP-1 AND U937 MONOCYTIC CELL LINES. **Rodríguez Cruz A**, Mora N, Rosales C
- 77 DYNAMIC OF REACTIVE OXYGEN SPECIES IN ROOT HAIR CELLS AND POLLEN TUBES ARE ESSENTIAL FOR POLAR GROWTH. **Luis Cárdenas**, Alejandra Hernández-Barrera, Rosana Sánchez, Jesús Montiel, Eric Johnson, Federico Sánchez, Carmen Quinto, Hen-ming Wu, Alice Cheung

POSTER SESSION. EVEN NUMBERS
THURSDAY 18:45 – 21:00

ESPECIES REACTIVAS Y SEÑALIZACIÓN

2. MODULATION OF NERVE GROWTH FACTOR EXPRESSION BY IONIZING RADIATION IN MOUSE TISSUES. **Albarrán-Ponce LÁ**, Fajardo-Miranda RM, Gamboa de Buen I, Valdovinos-Flores C, Vázquez-Vázquez MA and Gonsebatt ME
4. POSTFATIGUE TENSION IS REDUCED BY SODIUM ASCORBATE AND NICORANDIL. **Elizabeth Sánchez Duarte**, Trujillo Trujillo Xochitl, Saavedra-Molina Alfredo, Huerta-Viera Miguel, Cortés-Rojo Christian, Calderón-Cortés Elizabeth, Montoya-Pérez Rocío
6. EFFECT OF ARSENIC EXPOSURE ON THE CYSTINE/GLUTAMATE TRANSPORT IN NEONATAL MOUSE BRAIN. **Lucio A. Ramos Chávez**, Pavel Petrosyan y María E Gonsebatt
8. EFFECT OF REDOX STATE DURING PREMATURE SENESCENCE INDUCED DUE PROTEOSTASIS LOSS, IN PRIMARY MICE LUNG FIBROBLASTS. **Maciel Barón L**, González Puertos VY, Galván-Arzate S, Tello-Solís S, Castro-Obregón S, Konigsberg Fainstein Mina
10. ELEVATED CONCENTRATIONS OF GLUCOSE SELECTIVELY BLOCK THE NITRIC OXIDE – DEPENDENT VASORELAXATION INDUCED BY PROLACTIN IN RAT CORONARY VESSELS. **Martínez-Cuevas PP**, Rubio R, González C.
12. ROLE OF OXIDATIVE STRESS IN THE ACTIVATION OF THE MAPK PATHWAY DURING THE APOPTOTIC DEATH OF NEURONS. **Morán J**, Zaragoza-Campillo MA
14. SYSTEMIC NERVE GROWTH FACTOR MODULATES THE TRANSCRIPTION OF AMINO ACID TRANSPORTERS AND GLUTATHIONE (GSH) SYNTHESIS IN MICE STRIATUM. **Valdovinos-Flores, C**, Petrosyan P y Gonsebatt ME
16. EFFECT OF RESVERATROL AND ETHANOL ON THE mRNA EXPRESSION OF GLUT3 IN CEREBRAL ISCHEMIA. **Anahí Tornes Reyes**, Ortíz-Plata A, Medina-Campos ON, Salazar MI, Pedraza-Chaverri J, Aguilera P and Espinoza-Rojo M

ESTRÉS OXIDANTE EN LA DIFERENCIACIÓN Y EL DESARROLLO

18. INSULIN PROMOTES ARABIDOPSIS ROOT HAIR GROWTH IN A ROS-DEPENDENT MANNER. **Edgar José Pascual Morales**, García Pineda Ernesto, Mellado Rojas María Elena, Beltrán Peña Elda María
20. CHANGES IN THE ACTIVITY OF THE GLUCOSE-6-PHOSPHATE DEHYDROGENASE DURING HYPOTHALAMIC SEXUAL DIFFERENTIATION IN RATS TREATED WITH TESTOSTERONE PROPIONATE PERINATALLY FEMALES. **González González Alicia**, Chávez García R, Ortega Camarillo C, Ávalos Rodríguez A, Borderas Tordecillas R, Vergara Onofre M.

ESTRÉS OXIDANTE EN LA MUERTE CELULAR Y LA ENFERMEDAD

24. ROLE OF OXIDATIVE STRESS ON HYPOGLYCEMIC CEREBRAL DAMAGE AND ITS POSSIBLE PROTECTION BY D-β-HYDROXYBUTYRATE. **Alberto Julio-Amilpas**, Teresa Montiel y Lourdes Massieu
26. EFFECT OF HYPOXIA ON A549 EPITHELIAL CELLS AND LUNG F-13 FIBROBLASTS VIABILITY. A PRELIMINARY STUDY. **Arnoldo Aquino Gálvez**, González-Ávila G, Gutiérrez-González LH, Delgado Tello J, Sommer B.
28. DIALLYLDISULPHIDE ACTIVATES Nrf2 FACTOR AND DECREASES THE CEREBRAL ISCHEMIC INJURY. **Chávez Domínguez Rodolfo**, González García Cecilia Ortíz, Plata Alma Maldonado Jiménez Perla

- 30 IN VIVO EFFECT OF GREEN TEA FLAVONOIDS (EPIGALLOCATECHIN-3-GALLATE AND QUERCETIN) ON THE GENOTOXICITY OF HEXAVALENT CHROMIUM: ANTIOXIDANT AND PROOXIDANT. **García-Rodríguez MC**, Montaña-Rodríguez AR, Nicolás-Méndez T, Altamirano-Lozano MA.
- 32 OXIDATIVE DNA DAMAGE ASSOCIATED WITH DECREASED ENZYMATIC ACTIVITY AND GENE EXPRESSION IN THYMUS OF MALNOURISHED RATS. **GRACIELA GAVIA GARCIA**, González Martínez H, Nájera Medina O, Miliar García A, Koninsberg Fainsten M, Luna López A, Conde Pérez-Prina C, Bonilla González E, González Torres MC
- 34 SCAVENGING CAPACITY OF TRYPTOPHAN METABOLITES: 3-HYDROXYANTHRANILIC ACID AND 3-HYDROXYKYNURENINE. **Gustavo Ignacio Vázquez Cervantes**, Ramírez-Ortega D, Lugo-Huitrón R, Rangel-López E, Pedraza-Chaverrí J, Santamaría A, Pérez de la Cruz V.
- 36 EFFECTS OF A PROGRAM OF PHYSICAL ACTIVITY INSTITUTIONAL ABOUT OXIDATIVE STRESS ON ELDERLY ADULTS WITH AND WITHOUT METABOLIC SYNDROME. **Hernández Hernández Héctor Daniel**, Gutiérrez López Liliana, García Galindo Miguel Ángel, García Sánchez José Rubén, Rincón Víquez Ma de Jesús, Olivares Corichi Ivonne María
- 38 ASSOCIATION BETWEEN TOTAL ANTIOXIDANT AND BIOMARKERS OF ENDOTHELIAL DYSFUNCTION. **María del Socorro Camarillo Romero**, Eneida Camarillo Romero, Hugo Mendieta Zeron, Ma. Victoria Dominguez Garcia, Miriam Flores Merino, Araceli Amaya Chavez, G. Gerardo Huitron Bravo
- 40 MECHANISMS OF CELL DAMAGE DURING OXIDATIVE STRESS IN LYMPHOCYTES. **Oxana Dobrovinskaya**, Edgar Bonales-Alatorre, Ulises Díaz-Llerenas, Igor Pottosin
- 42 CHANGES IN PANCREATIC REDOX BALANCE DURING CHRONIC EXPOSURE TO CADMIUM IN WISTAR RATS. **Samuel Treviño Mora**, Patricia Aguilar Alonso Alfonso, Daniel Díaz Fonseca Eduardo Miguel Brambila Colombes.
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- 46 ANTIDIABETIC ACTIVITY OF TIMBE (*Acaciella angustissima*) PODS METHANOLIC EXTRACT ON STREPTOZOTOCIN-INDUCED DIABETIC RATS. **Wendy Monserrat Carmen Sandoval**, Guevara-González RG, Reynoso-Camacho R, Salazar- Olivo L, Torres-Pacheco I, Feregrino-Pérez AA, and Lomas-Soria C
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- 54 THE EFFECT OF RAW PHICOBILIPROTEIN EXTRACT OF *Spirulina maxima* IN THE SURVIVAL OF *Saccharomyces cerevisiae* PREVIOUSLY SUBMITTED TO OXIDATIVE STRESS **Sánchez García Irma Itzel**, Medina Jaritz Nora Beatriz Olvera Ramírez Roxana
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- 58 INHIBITION OF LOCAL SILENCING INCREASES THE RESISTANCE OF *Candida glabrata* TO FLUCONAZOLE AND OXIDATIVE STRESS. **Orta-Zavalza E**, Guerrero-Serrano GL, Gutiérrez-Escobedo MG, Cañas-Villamar I, Juárez-Cepeda J, Castaño I and De Las Peñas A
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- 78 GENOTOXICITY IN HUMAN PERIPHERAL LYMPHOCYTES EXPOSED IN VITRO TO HEAVY METALS ASSOCIATED TO PM10 OF THE AIRBORNE OF ECATEPEC ZONE (STATE OF MEXICO). **Zelmy Castro Gálvez**, María Elena Calderón Segura, Rocío García Martínez, Sandra Gómez Arroyo.
- 80 CONSEQUENCES OF OXIDATIVE STRESS IN DIABETES FOLLOWED BY EPR. **Stephany Natasha Arellano**, Aguilar-Molina AM, Villanueva-López C, Zamorano-Ulloa R, Ramírez-Rosales D

INSTRUCCIONES PARA PRESENTACIONES ORALES

- Les solicitamos que sus presentaciones estén elaboradas en inglés y en formato de POWERPOINT, y que las lleven en una memoria USB. Las presentaciones deben ser compatibles con WINDOWS-XP.
- Los trabajos deberán ser entregados en la oficina del congreso, con al menos un día de anticipación de la presentación para permitir a los encargados tenerlas listas y que ustedes puedan verificar su trabajo.
- Con el propósito de no entorpecer los trabajos de los respectivos simposia, no se permitirá el intercambio de la computadora instalada para las presentaciones, les pedimos encarecidamente no insistir y llevar sus presentaciones listas y probadas en formato de POWERPOINT COMPATIBLE CON WINDOWS-XP
- Contaremos con proyector, laptop y apuntadores para las exposiciones. Si tienen algún requerimiento especial, les solicitamos hacérselo saber

INSTRUCCIONES PARA LA ELABORACIÓN DEL CARTEL

- Los trabajos con número non, deberán ser instalados el día 20 antes de las 10am y retirados el mismo día al terminar la sesión.
- Los trabajos con número par, deberán ser instalados el día 21 antes de las 10am y retirados el mismo día al terminar la sesión.
- Habrá disponible material para pegar su trabajo (cinta de doble cara y/o chinchetas).
- El Comité Organizador no se hará responsable de ningún trabajo que no sea retirado dentro del horario establecido
- La dimensión de los carteles será de 90 cm de ancho X 150 cm de alto.

- El formato es libre, aunque se sugiere que incluya la información indicada a continuación.
 - Título
 - Autor(es)
 - Institución
 - Dirección
 - Correo Electrónico
 - Cuerpo del Cartel
 - Introducción
 - Hipotesis y Objetivo(s)
 - Metodología (breve)
 - Resultados (Figuras y Tablas)
 - Discusión
 - Conclusiones
 - Referencias Bibliográficas Seleccionadas (máximo cinco)
 - Tipo de Fuente: Arial, tamaño mínimo recomendado 24.

Horario de presentación

Miércoles

19:00 – 21:00hrs

Jueves

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