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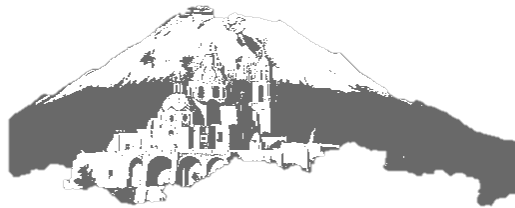
Sociedad Mexicana  
de Bioquímica  
Neurobiología

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## ***PROGRAM***

### **Ist Neurobiology Meeting of the Mexican Society for Biochemistry**



**Pre-Meeting Course: “Advanced Techniques in  
Neuroscience”**

***Hotel Presidente Intercontinental, Puebla, México  
April 2-6, 2016***



**18:30–19:30**

**Opening talk**

**Antonio Lazcano, Facultad de Ciencias, Universidad Nacional Autónoma de México**

*“Y si quieren saber de mi pasado, les diré que llegué de un mundo raro (de RNA)”*

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**MONDAY, APRIL 4**

**9:00–11:00**

**Symposium I**

**BRAIN METABOLISM AND ENERGY CONSUMPTION**

Chair: Lourdes Massieu

Co-Chair: Marcia Hiriart

9:00-9:30

*I.1 “The paradox of aerobic glycolysis in the brain”*

Felipe Barros, Centro de Estudios Científicos, Valdivia, Chile

9:30-10:00

*I.2 “Astrocyte-neuron metabolite transfer and the central regulation of circulating glucose levels”*

Roger Gutiérrez, Albert Einstein College of Medicine, NY, USA

10:00-10:30

*I.3 “Circadian desynchronization causes the metabolic syndrome via a disbalance of the autonomic nervous system”*

Rudolf Buijs Instituto de Investigaciones Biomédicas, UNAM, México

10:30-11:00

*I.4 “Optogenetic activation of nucleus accumbens’ axon fibers transiently stops consumption of sucrose”*

Ranier Gutiérrez, Centro de Investigación y de Estudios Avanzados, IPN, México

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**11:00–11:30**

coffee break

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**11:30 – 12:30**

**Plenary Lecture**

**Arturo Alvarez Buylla, University of California, San Francisco, USA**

*“Stem Cells and Neuronal Replacement in the Adult Brain”*

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**12:30 -14:30**

Lunch

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**14:30–15:30**

**Oral Presentations I: Neurodegeneration**

Chair: Octavio García, Facultad de Psicología, UNAM

14:30-14:45

*“Role of reactive oxygen species in the regulation of signaling pathways during neuronal death”*. Marco Antonio Zaragoza Campillo and Julio Morán Andrade. Instituto de Fisiología Celular, UNAM.

14:45-15:00

*“Pioglitazone protects human differentiated SH-SY5Y cells against MPP+-induced damage”*. Juan Carlos Corona and Michael R. Duchen. Hospital Infantil de México Federico Gómez.

15:00-15:15

*“Induction of autophagy as a neuroprotective mechanism in an animal model of Parkinson’s disease”*. Marcela Judith Ramírez Moreno, Alfredo González Alcocer,

María de Jesús Loera Arias, Odila Saucedo Cárdenas, Roberto Montes de Oca Luna, Humberto Rodríguez Rocha, Aracely García García. Facultad de Medicina. Universidad Autónoma de Nuevo León.

15:15-15:30 *"C/EBP $\beta$  regulates the expression of progesterone receptor in human glioblastoma cells"*. Valeria Hansberg-Pastor, Aliesha González-Arenas, Ignacio Camacho-Arroyo. Facultad de Química; Instituto de Investigaciones Biomédicas, UNAM.

**15:30-17:30**

**Symposium II**  
**MOLECULAR AND CELLULAR MECHANISMS**  
**OF NEURODEGENERATIVE DISEASES**

Chair: Magda Giordano

Co-Chair: Liliana Quintanar

15:30- 16:00 *II.1 "Cortical dopamine activity reduction induced by beta amyloid is related to cognitive and synaptic plasticity deficits in Alzheimer's disease mouse model"*  
Federico Bermúdez, Instituto de Fisiología Celular, UNAM, México

16:00-16:30 *II.2 "The Mitochondrial DNA Hypothesis of Alzheimer's Disease: Research on molecular mechanisms of neurodegeneration"*  
Ramón Trullas, Institut D'Investigacions Biomèdiques, CSIC, Barcelona

16:30-17:00 *II.3 "Changes in AMPA receptors and associated proteins are related to synaptic and learning impairment in early stages of Alzheimer's Disease"*  
José Rodríguez, Institut de Neurociències, UAB, Barcelona

17:00-17:30 *II.4 "Unraveling the brain activity for action switching may be the key to understand the role of basal ganglia on the generation of motor problems"*  
Fatuel Tecuapetla, Instituto de Fisiología Celular, UNAM, México

**17:30 - 19:30**

**Poster I**

**Neuropathology, Brain Metabolism, Development,**  
**Synaptic Transmission, Signal Transduction**  
**(All EVEN NUMBERS have been assigned to these topics)**

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**TUESDAY, APRIL 5**

**9:00 - 11:00**

**ISN Symposium III**  
**DAMAGE AND NEUROREPAIR**

Chair: Julio Morán

Co-Chair: José Rodríguez

9:00-9:30 *III.1 "Characterization of the neuronal pathology in mitochondrial disease"*  
Albert Quintana, Institut de Neurociències, UAB, Barcelona

9:30-10:00 *III.2 "Enhancing maturation, survival and axonal growth of embryonic stem cell-Derived neurons"*  
Iván Velasco, Instituto de Fisiología Celular, UNAM, México

10:00-10:30 *III.3 "Reversal of synapse degeneration by restoring Wnt signalling in the adult hippocampus: a therapeutic role in Alzheimer's disease?"*  
Aude Marzo, University College London, UK

10:30-11:00 *III.4 "Shaping plasticity to enhance recovery after brain injury."*  
Randolph Nudo, University of Kansas, USA

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**11:00 – 11:30**

coffee break

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**11:30 – 12:30**

**Plenary Lecture**

**Chaya Kalcheim, Hebrew University of Jerusalem, Israel**

*"The dynamics of dorsal spinal cord development: From Neural Crest to Roof Plate"*

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**12:30 - 14:30**

Lunch

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**14:30 – 15:30**

**Oral Presentations II: Brain Plasticity**

Chair: Aliesha González, Instituto de Investigaciones Biomédicas

14:30-14:45

*"The role of thrombospondin-1 (TSP-1), in neuronal changes induced by enriched environments"*. Jesús Antonio Villegas Piña, Octavio García. Facultad de Psicología, UNAM.

14:45-15:00

*"Activation of adult-born neurons after a focal hippocampal lesion and in response to a context-fear memory task"*. Andrea Aguilar Arredondo, Clorinda Arias Álvarez, Angélica Zepeda Rivera. Instituto de Investigaciones Biomédicas, UNAM.

15:00-15:15

*"Naloxone blocks neurogenesis in the olfactory bulb induced by paced mating in the female rat"*. Marianela Santoyo Zedillo, Wendy Portillo Martínez y Raúl G. Paredes Guerrero. Instituto de Neurobiología, UNAM.

15:15-15:30

*"To see is to believe"*. Guillermina Yankelevich Nedvedovich. Instituto de Investigaciones Biomédicas, UNAM.

**15:30 – 17:30**

**Symposium IV**

**MECHANISMS UNDERLYING BRAIN PLASTICITY:  
FROM GENES TO CIRCUITS**

Chair: Miguel Morales

15:30-16:00

*IV.1 "Mutational dynamics in the mitochondrial genome in the embryonic and adult mouse brain"*

Alfredo Varela, Instituto de Neurobiología, UNAM, México

16:00-16:30

*IV.2 "Neuronal Networks with plausible biophysical properties"*

Mario Treviño Villegas, Instituto de Neurociencias, Universidad de Guadalajara, México

16:30-17:00

*IV.3 "Diverse short-term dynamics of inhibitory synapses converging on striatal projection neurons: differential changes in a rodent model of Parkinson's Disease"*

José Bargas, Instituto de Fisiología Celular, UNAM, México

17:00-17:30

*IV.4 "Neural population dynamics in the primate motor cortex during interval timing"*.

Hugo Merchant, Instituto de Neurobiología, UNAM, México

17:30 – 19:30

**Poster II**

**Neuroendocrinology, Neuropharmacology, Electrophysiology, Stress,  
Glia, Plasticity and Cognition, Drug Abuse  
(All ODD NUMBERS have been assigned to these topics)**

19:30 -

Business meeting

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**WEDNESDAY, APRIL 6**

9:00 – 11:00

**Symposium V**

**GLIAL CELLS AND THEIR KEY ROLE IN BRAIN FUNCTION**

Chair: Rocío Salceda

Co-Chair: Fernando Peña

9:00-9:30

*V.1 "Astrocyte-mediated signaling in the activation of peripheral inflammatory Responses to CNS damage"*

Luis Bernardo Tovar-y-Romo, Instituto de Fisiología Celular, UNAM, México

9:30-10:00

*V.2 "Of Lipids and adult neurogenesis: The role of astroglial phospholipid Phosphatases"*

Diana Escalante, Instituto de Fisiología Celular, UNAM, México

10:00-10:30

*V.3 "Glial glutamate transporters: Key players in excitatory transmission"*

Arturo Ortega, Centro de Investigación y de Estudios Avanzados, IPN, México

10:30-11:00

*V.4 "The role of progesterone in glioblastoma growth"*

Ignacio Camacho Arroyo, Facultad de Química, UNAM, México

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11:00 – 11:30

coffee break

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11:30 – 12:30

**Plenary Lecture**

**Thomas Deller, Goethe Universität, Frankfurt am Main, Germany**

***"The spine apparatus - an organizer of plasticity at cortical synapses"***

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12:30 - 14:30

Lunch

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14:30 – 16:00

**Symposium VI**

**DRUG ABUSE**

Chair: Milagros Méndez

Co-Chair: Adriana Díaz-Anzaldúa

14:30-15:00

*VI.1 "Learning during early ontogeny: Involvement of the opioid system in modulating ethanol-mediated reinforcing aspects"*

Paula Abate, Instituto de Investigación M. y M. Ferreyra, Universidad Nacional de Córdoba, Argentina.

15:00-15:30

*VI.2 "Neurobiology of solvent misuse"*

Silvia Cruz, Centro de Investigación y de Estudios Avanzados, IPN, México

15:30-16:00 *VI. 3 "Cortical development alterations induced by endocannabinoid signaling Manipulation"*  
Ismael Galve Roperh, Universidad Complutense de Madrid, España

**16:00 – 16:50 Special Lecture**

**Ricardo Tapia, Instituto de Fisiología Celular, UNAM, México**  
*"Neurobiology and neuroethics of drug addiction and regulation"*

**17:00 – 18:00 Oral Presentations III: Neurotransmission**

Chair: Leonor Pérez Martínez, Instituto de Biotecnología, UNAM

17:00-17:15 *"MicroRNAs and response to nicotine in Drosophila melanogaster"*. Iván Sánchez Díaz, Fernando Rosales Bravo, Verónica Narváez Padilla, Enrique A. Reynaud Garza. Instituto de Biotecnología, UNAM.

17:15-17:30 *"A functional metabotropic-like NMDAR in rat cultured astrocytes"*. Pavel Montes de Oca Balderas and Penélope Aguilera Hernández. Instituto Nacional de Neurología y Neurocirugía Manuel Velasco Suárez.

17:30-17:45 *"Bidirectional regulation of neuronal excitability of L-lactate via activation of a Gi-protein coupled receptor"*. Gabriel Herrera López y Emilio J. Galván. CINVESTAV, Zacatenco.

17:45-18:00 *"Peripheral oxytocin receptors as modulators of nociceptive transmission"*. Abimael González-Hernández, Alfredo Manzano-García, Irma A. Tello-García, Guadalupe Martínez-Lorenzana, Martha Carranza, Carlos Arámburo, and Miguel Condés-Lara. Instituto de Neurobiología, UNAM.

**18:00 – 19:00 Closing Lecture**

**Carlos Saura, Department de Bioquímica i Biologia Molecular, Universidad Autònoma de Barcelona, Barcelona**  
*"Mechanisms of memory loss and neurodegeneration in Alzheimer's disease"*

**19:00 – 19:30 Closing ceremony**

**Posters Session I**  
**Monday April 4. 17:30 – 19:30**

**Neuropathology**

- 2 Diurnal variation of glutamatergic system is associated with traumatic brain injury damage. Francisco Estrada Rojo, Marina Martínez Vargas, Liliana Carmona Aparicio, Elvia Coballase, Virginia Arriaga Avila, Adan Perez Arredondo, Rosalinda Guevara Guzmán, Luz Navarro. FM UNAM
- 4 Age-dependent changes in somatostatin positive neurons in different brain regions of *Calithrix jacchus* and *Tupaia belangeri*. Daniel Cuervo Zanatta, Eberhard Fuchs y Claudia Pérez Cruz. UPAEP
- 6 Allopregnanolone promotes proliferation in human glioblastoma cells. Carmen Janín Zamora-Sánchez, Valeria Hansberg-Pastor Ignacio Camacho-Arroyo. FQ UNAM
- 8 Amyloid- $\beta$  protein-induced actin cytoskeletal reorganization in human neuroblastoma cells is mediated by RhoA and prevented by NSAIDs. Patricia Ferrera, Angélica Zepeda y Clorinda Arias. IIB UNAM
- 10 An enriched environment improves glucose homeostasis and reduces inflammation in the hypothalamus of obese mice. Sol Díaz de León Guerrero, Gustavo Pedraza-Alva, Leonor Pérez-Martínez. IBT UNAM
- 12 Arsenic exposure modifies the expression of RAGE and B-amyloid in rat brain. Esquivel Niño Sandra Aurora, Martel-Gallegos Guadalupe, Jiménez-Cataño María E, Zarazúa Sergio. FQ UASLP
- 14 BDNF transfection and dopamine D3 receptor agonist treatment induces motor coordination and dendritic spines recovery with preservation of TH+ neurons in SNc in a Parkinson's disease model by Mn inhalation in rats. María Teresa Ibarra Gutiérrez, Anaya Martínez Verónica. FES Iztacala UNAM
- 16 Cognitive and emotional impairment induced by chronic neuropathic orofacial pain. Montes Ángeles Claudia Daniela, Gutiérrez Castañeda Nadia Estefanía García Urbina Alejandra Pérez Martínez Isaac Obed. FES Iztacala UNAM
- 18 Contribution of striatal cholinergic neurons to changes in the action-outcome contingency. Alatraste León Hector, Ramírez-Jarquín Josué Orlando, Llanos Moreno Argelia Itzel, Tecuapetla-Aguilar Fatuel. IFC UNAM
- 20 Contribution of the Indirect Pathway from Basal Ganglia to Switch Between Action Sequences. Ramirez Armenta Kathia Itzel, Ramirez Jarquín Josue, Tecuapetla Aguilar Fatuel. IFC UNAM
- 22 Dystrophic microglia and hyperphosphorylated tau are present in old common marmoset (*Callithrix jacchus*). Juan de Dios Rodríguez Callejas, Eberhard Fuchs Claudia Pérez-Cruz. CINVESTAV Zacatenco
- 24 Dystrophin Dp71 transcripts are differentially expressed in mouse brain and retina. Jorge Aragón, Mayram González-Reyes José Romo-Yáñez Ophélie Vacca Guadalupe Aguilar-González Alvaro Rendón Cyrille Vaillend Cecilia Montañez. CINVESTAV Zacatenco
- 26 Effect of docosahexaenoic acid on mitochondrial function in rotenone-treated rats. Norma Serrano Garcia, Anabel Jimenez Anguiano, José Pedraza Chaverri. INNyN
- 28 Effect of Dystrophins Dp71a and Dp71c overexpression on PC12 cells. Lilia Carolina León Moreno, Jorge Aragón Víctor Ceja Cecilia Montañez. CINVESTAV Zacatenco
- 30 Effects of lipopolysaccharide-induced inflammation in adult hippocampal neurogenesis. Martha Pérez Domínguez, Rodrigo Ibarra García Padilla Angélica Zepeda Rivera. IIB UNAM
- 32 Evaluation of mitochondrial fusion/fission proteins and bioenergetics defects in synaptosomes from the 3xTg mouse model of Alzheimer's Disease. César Espino De la Fuente Muñoz, Rosas Lemus Mónica, Moreno Castilla Perla. Bermudez Rattoni, Federico, Uribe Carvajal Salvador, Arias Clorinda. IIB UNAM



- 34 Evaluation of the RVG peptide ability as a DNA carrier for gene therapy in neurodegenerative diseases. Villa-Cedillo Sheila Adela, Zavala-Flores Laura Mireya, Acosta-Espinoza Esrom Jared, Rivera-Chávez Luis Felipe, García-García Aracely, Rodríguez-Rocha Humberto, Loera Arias María de Jesús, Montes de Oca-Luna Roberto, Saucedo-Cárdenas Odila. UANL
- 36 Frequency of the polymorphism 5-HTTLPR in patients with parkinson's disease. Esrom Jared Acosta Espinoza, Martínez-Rodríguez Héctor Ramón, Zavala-Flores Natalia, Montes de Oca Carlos Roberto, Sánchez-Sánchez Leyla Leticia, Villa-Cedillo Sheila Adela, Saucedo-Cárdenas Odila. (CIBIN) IMSS
- 38 Generation of an inducible cell model system to the study of spinocerebellar ataxia type 7 (SCA7). Enue Reynaldo Gómez Macías, Daniel Sánchez Celis Jaime García Mena Bulmaro Cisneros Vega Jonathan Magaña Aguirre Oscar Hernández Hernández. CINVESTAV Zacatenco
- 40 Glycine receptors expression in the retina from streptozotocin- diabetic rats. Elizabeth Morales Calixto, Miguel Ángel Velázquez Flores. IFC UNAM
- 42 Impaired Autophagy is Associated with Neuronal Senescence *in vitro*. Daniel Moreno Blas, Elisa Gorostieta Salas, Gabriel Muciño Hernández, Alexander Pommer Alba, Susana Castro Obregón. IFC UNAM
- 44 Improvement in learning and memory after treatment with a bifunctional tetrapeptide in triple transgenic mice for Alzheimer's disease. Jesús Mancilla-Pérez, Liliana Quintanar-Vera, Erika Orta-Salazar, Claudia Pérez-Cruz, Sofía Díaz-Cintra. INB UNAM
- 46 MicroRNAs 1303, 130a and let-7g\* expression levels in blood serum of patients with Pediatric Astrocytoma. Luis Ángel Simón Martínez, Ruth Ruíz Esparza Garrido, Miguel Ángel Velazquez Flores. CMN SXXI
- 48 Modifications in white matter tracts in MPTP-lesioned non-human primate model of Parkinson's disease. Gabriel Ramírez García, Carlos R. Hernández Castillo, Juan Fernández Ruíz, Adolfo López Ornelas, Itzel Escobedo Avila, Aurelio Campos Romo. FM UNAM
- 50 Neuronal correlates in cortex with the switch between action sequences. Asai Sánchez Fuentes, Ramírez-Jarquín Josué Orlando, Tecuapetla Águilar Fatuel. IFC UNAM
- 52 Quercetin protects against spinal motor neuron degeneration induced by chronic excitotoxicity *in vivo* through a Sirt1-dependent mechanism. Rafael Lazo Gómez, Rafael Lazo-Gómez, Ricardo Tapia. IFC UNAM
- 54 Presynaptic terminals afferent to spinal motoneurons are modified during the degeneration process induced by chronic excitotoxicity *in vivo*. Uri Nimrod Ramírez Jarquín, Ricardo Tapia. IFC UNAM
- 56 Protective effect of D-β-Hydroxybutyrate against excitotoxic neuronal death and its relationship to autophagy. Teresa Montiel, Susana Flores, Lourdes Massieu. IFC UNAM
- 58 Protective effects of S-allyl cysteine on behavioral, morphological and biochemical alterations in the brains of rats subjected to chronic restraint stress. Ana Ceolin Colpo, Hugo Becerril-Chávez, Ana Laura Colín-González, Juana Villeda-Hernández, Daniel Rembao-Bojórquez, Sonia Galván-Arzate, Anahí Chavarría, Iris N Serratos, María Eduarda de Lima, Abel Santamaría. INNyN
- 60 Recurrent moderate hypoglycemia exacerbates neuronal death and induces cognitive dysfunction after the hypoglycemic coma. Gabriela Languren, Teresa Montiel, Israela Balderas; Franco Chávez-Marchetta, Federico Bermúdez-Rattoni and Lourdes Massieu. IFC UNAM
- 62 Resveratrol reduces brain edema in cerebral ischemia. Alquisiras-Burgos I, Ortiz-Plata A y Aguilera P. INNyN
- 64 Role of autophagy on severe hypoglycemic neuronal death and its possible modulation by beta-hydroxybutyrate. Carmen Torres, Cristian Gerónimo, Teresa Montiel and Lourdes Massieu. IFC UNAM
- 66 Synergistic interaction in the antinociceptive and anti-inflammatory effect of DHA-diclofenac combination. Miranda-Lara Christopher Allan, Rodríguez-Ramos Fernando, Chávez-Piña Aracely Evangelina. ENHM IPN

- 68 | Thalamic contribution to activation of the basal ganglia during the initiation and executions of action sequences. Edgar Arturo Díaz Hernández, O Ramirez Jarquim and Fatuel Tecuapetla Aguilar. IFC UNAM
- 70 | The tetanus toxin C-fragment protects spinal motor neurons against degeneration by chronic excitotoxicity *in vivo*. Citlalli Netzahualcoyotzi, Ricardo Tapia. IFC UNAM

### Brain Metabolism

- 72 | Protective effects of *Ilex paraguariensis* extracts in oxidative stress parameters in mice brain with Diabetes mellitus induced. Maria Eduarda de Lima, Ana Z Ceolin Colpo, Hemerson Rosa, Andreia C Fernandes Salgueiro, Marianne Pires da Silva, Dérick S Noronha, Vanderlei Folmer, Abel Santamaria del Angel. INNyN
- 74 | Short term effect of early overnutrition in the transcriptome of Wistar rat hypothalamus (*Rattus norvegicus*). Miguel Angel Espinoza Camacho, Gerardo Sanchez Garcia, Carlos Javier López Victorio, Alfredo Varela Echavaría, Jorge Tonatiuh Ayala Sumuano, Luis Antonio Castro Reyes, Elena Gonzalez Zambrano, Maria Elizabeth Tejero Barrera, Enrique Chong Hong y Laura del Bosque Plata. FM UNAM
- 76 | A dietary portfolio modulates SIRT1 expression in astrocytes and reduces brain inflammation while improving working memory in a transgenic mice model of Alzheimer disease. Syeda Tauqeerunnisa begum, Ana Laura Vargas Pinedo, Sofía Yolanda Díaz-Cintra, Nimbe Torres-Torres, Claudia Perez-Cruz. CINVESTAV Zacatenco.
- 78 | A dietary portfolio restores SIRT1 levels and reverses dendritic spine loss in prefrontal cortex's neurons of obese rats. Lizbeth Pérez Jiménez, Begum S, Sánchez-Tapia, Ramirez-Mirafuentes A, Torres-Torres N, and Perez-Cruz C. CINVESTAV Zacatenco
- 80 | A High Calorie Diet Causes Memory Loss, Metabolic Syndrome And Oxidative Stress Into Hippocampus And Temporal Cortex Of Rats. Guadalupe Pulido Fernandez, Claudia Escobedo, Eduardo Rojas, Jorge Guevara, Patricia Aguilar Alonso, Eduardo Brambila, Gonzalo Flores, Alfonso Díaz, Samuel Treviño. BUAP
- 82 | B2 and B6 Vitamins Restore Dopamine Levels in Rat Brain Regions Altered by 3-Nitropropionic Acid. Monica Vianey Punzo Soto, Monica Vianey Punzo Soto, David Calderón Guzmán, Norma Osnaya Brizuela, Maribel Ortiz Herrera, Hugo Juárez Olguín, Ernestina Hernández García, Gerardo Barragán Mejía, Armando Valenzuela Peraza, Belén Juárez Tapia. I.NAL. Pediatría
- 84 | Does the dorsomedial nucleus-lateral hypothalamus thyrotropin-releasing hormone projection sense energy balance alterations?. Karla Yamili Vargas Orihuela, Lorraine Jaimes-Hoy, Haydn Esau Urbina, Fidelia Romero Arteaga, Edith Sánchez Jaramillo, Patricia Joseph-Bravo, Jean-Louis Charli. IBT UNAM
- 86 | Hipoglycemic coma induces overexpression of endoplasmic reticulum stress markers and caspase activation: B-hydroxybutyrate as an alternative energy source. Marco Flores-Méndez, Teresa Montiel, Lourdes Massieu. IFC UNAM
- 88 | Involvement of energy metabolism and Sirtuin 1 inhibition in the expression of Alzheimer's disease markers. Manuel Flores León, Clorinda Arias. IIB UNAM

### Development

- 90 | Telomerase activity and cell cycle length are associated to the transition from neurogenesis to gliogenesis in the mouse embryonic spinal cord. Leonora Olivos-Cisneros, Jesús Ramírez-Santos Gabriel Gutiérrez-Ospina. IIB UNAM
- 92 | Glycine receptors expression during rat retina development. Miguel Ángel Velázquez Flores, Gustavo Sánchez Chávez, Rocío Salceda Scanelles. CMN SXXI
- 94 | Cytomegalovirus infection affects the differentiation of neural stem cells. Edson I. Rubio-Hernandez, Hilda M. González-Sánchez, Ana Sonia Silva-Ramírez, Daniel E. Noyola D.E., Alberto Martínez-Serrano, Claudia G. Castillo. FM UASLP

- 96 | Transcriptome comparative analysis of mouse and chick telencephalon during embryonic development. Carlos Javier López Victorio, Ayala-Summano J, Lozano-Flores C, González-Santos L, Linares-Belman PB, y Varela Echavarría A. INB UNAM

### Synaptic Transmission

- 98 | On the presence of synaptic proteins in melanopsin containing ganglion cells of rat retina. Karla Carrillo Macías, Linda Rosales, Antonio Hernandez, Jorge Alberto Perez León. UACDJ
- 100 | Comparison of synaptic proteins distribution within the retinae of Wild animals. Oscar Iván Sánchez Estrada, Diana Patricia Martínez López, Jorge Alberto Pérez León. UACDJ
- 102 | KV and KIR channels identified at presynaptic terminals of the corticostriatal synapses in rat. Jaime Barral, David Meneses, Ana V. Vega, Gustavo Islas Rios. FES Iztacala UNAM

### Signal Transduction

- 104 | On the presence of neurotransmitter molecules in the *Eurythoe complanata*. Miguel de Jesús Robles Varela, Jorge Alberto Pérez León José Estuardo López Vera. UACDJ
- 106 | Melatonin-induced dendritogenesis in hippocampal hilar neurons: study of the signaling pathway. Marcela Valdés Tovar, Aline Domínguez Alonso Héctor Solís Chagoyán Gloria Benítez King. I. NAL. Psiquiatria
- 108 | Role of Wnt signaling pathway on hippocampal reorganization after entorhinal cortex lesion. Lizbeth Esmeralda García Velázquez, Clorinda Arias Álvarez. IIB UNAM
- 110 | Twin, a Component of the CCR4-NOT Complex, is involved in Thermal Nociception in *Drosophila*. Ivan Fernandez Cruz, Enrique Reynaud Garza. IBT UNAM

### Posters Session II

Tuesday April 5. 17:30 – 19:30

### Drug Abuse

- 1 | Prenatal ethanol exposure during late gestation facilitates drug intake in offspring and selectively alters Met-enkephalin content in brain reward areas. Aurora Cosette Reyes-Guzmán, Paula Abate, Karla Hernández-Fonseca, Milagros Méndez. I. NAL. Psiquiatria
- 3 | Association between promoter variants of the dopamine and serotonin transporter genes in undergraduate Mexican students with alcohol abuse or dependence. Adriana Díaz Anzaldúa, Nydia Betancourt Mendieta, Verónica Ituarte Valenzuela, Gustavo Adolfo Castillo Canalis, José Octavio Hernández Lagunas, Adriana Francisco Balderas, Leonila Rosa Díaz-Martínez, Alejandro Díaz-Martínez. I. NAL. Psiquiatria
- 5 | Energy Drink Administration In Combination With Alcohol Cause An Inflammatory Response And Oxidative Stress In The Hippocampus And Temporal Cortex Of Rats. Nataly Sanchez Rojas, Claudia Escobedo Sanchez, Samuel Treviño, Jorge Guevara, Eduardo Brambila, Albino Moreno-Rodríguez, Ulises Peña-Rosas, Patricia Aguilar-Alonso, Alfonso Díaz. BUAP
- 7 | Ethanol induces selective, dose-dependent and region-specific effects on opioid peptide mRNA expression in the rat brain. Karla Hernández-Fonseca, Milagros Méndez Ubach. I. NAL. Psiquiatria
- 9 | Nicotine effect in a *Drosophila melanogaster* model of Parkinson's disease induced by human  $\alpha$ -Synuclein and Synphilin expression. Luis Angel Carvajal Oliveros, Pérez Arizmendi Nancy Aslhey, Reynaud Garza Enrique Alejandro. IBT UNAM

## Electrophysiology

- 11 Gap junction inhibitor, carbenoxolone, alters glucose-induced electrical activity in mouse pancreatic beta cells. Raúl Colín Hidalgo, J González-Damián, W Egidio Villareal, I Atwater, EM Pérez-Armendariz. FM UNAM
- 13 Recording of Native Ionic Currents from Primary Cultured Chromaffin Cells by Automated Patch-Clamp Electrophysiology. Carlos Mauricio Matus Nuñez, Pedro David Segura Chama, Cesar Oliver Lara Figueroa, Diana Alicia Millan Aldaco, Arturo Picones Medina. IFC UNAM
- 15 Mechanisms underlying the ischemic damage in area CA3 of the hippocampus. Tecuatl Tolama Carolina, Galván Espinosa Emilio Javier. CINVESTAV Zacatenco.
- 17 A type of dendrotoxin inhibits the ASIC current in dorsal root ganglion neurons from rat. Báez Chacón Adriana, Salceda Ruanova Emilio, Fló Díaz Martín, Graña Alfonso Martín, Fernández Granja Cecilia, Vega Saenz de Miera Rosario, Soto Eguibar Enrique. BUAP
- 19 Characterization of electrophysiological alterations in the hippocampal CA3 region a model of prenatal infection. María del Carmen Soto Luis, Emilio Javier Galván Espinosa. CINVESTAV Zacatenco
- 21 Dye coupling between granule cells and their target neurons as evidence of intercellular communication. Ixmátlahua Ribera Diana Jazmín, Gutiérrez Aguilar Rafael. CINVESTAV Sede Sur
- 23 Functional role of low-voltage activated Ca<sup>2+</sup> current (LVA) in vestibular afferent neurons in culture. Enoch Luis Baltazar, Maricruz Rangel Galván, Emmanuel Seseña Méndez, Rosario Vega Sáenz de Miera and Enrique Soto Eguibar. BUAP
- 25 Pallidoreticular pathway control the electrical activity of reticular thalamic nuclei. Nelson Villalobos Vásquez, Alberto Alatorre, Martha T. Acosta Mejía, Enrique Querejeta Villagómez. ESM IPN
- 27 Serotonin modulates ionic currents in vestibular afferent neurons. Javier Lima Domínguez, Enoch Luis Baltazar Rosario Vega Enrique Soto. BUAP
- 29 Design software acquisition and analysis techniques nonlinear dynamics signals obtained through a Holter monitor prototype. Paulina Abrica González, Zamora Justo José Alberto, Chávez Sandoval Blanca Estela, Ibañez Hernández Miguel Angel Antonio, Muñoz Diosdado Alejandro, Virgilio González, Ramón Alejandro, Balderas López José Abraham. UPIBI-IPN
- 31 Voltage-activated calcium channels as functional markers of mature neurons in human olfactory neuroepithelial cells: implications for the study of neurodevelopment in neuropsychiatric disorders. Héctor Solís Chagoyán, Edgar Flores-Soto, Jorge Reyes-García, Marcela Valdés-Tovar, Eduardo Calixto, Luis M. Montaña, Gloria Benítez-King.I. NAL. Psiquiatria.

## Stress

- 33 Chronic levodopa treatment induces nitrosative stress, astrogliosis and spatial working memory impairment in rats with intra-nigral 6-OHDA lesion. Gabriel Ramírez García, Victoria Palafox Sanchez, Liliana Martínez Mendieta, Ilhuicamina Daniel Limon Pérez de León. FM UNAM
- 35 Effects of Extremely Low Frequency Stimulation in the Oxidant System of Stressed Wistar Rats. Leticia Quesnel Galván, Brianda Díaz Fragoso Leticia Verdugo Díaz. FM UNAM
- 37 CoCl<sub>2</sub>-induced chemical hypoxia provokes differential responses at transcript and protein levels as well as changes at subcellular localization of hemeoxygenase isoforms. Jorge Muñoz Sánchez, Marisol Orozco Ibarra Perla Maldonado María Elena Chánez Cárdenas. INNyN
- 39 Corticosterone into the dorsal striatum impairs memory retrieval of an inhibitory avoidance task. Penélope Martínez Campos, Norma Serafin, Roberto Agustín Prado Alcalá, Benno Roozendaal y Gina Lorena Quirarte. INB UNAM

- 41 Effect of delayed and abbreviated environmental enrichment on hippocampal neurogenesis after traumatic brain injury. Georgina Jazmín Rojo Soto, Naima Lajud Anthony Kline. Centro de Investigación Biomédica de Michoacán
- 43 Effect of early life stress on hippocampal neurogenesis and its relationship with metabolic risk on mature rats. Roberto Ruiz González, Ma. Angélica Roque Galicia, Naima Lajud Avila. Centro de Investigación Biomédica de Michoacán
- 45 Effect of stress on gut mucopolysaccharide content from BALB/c mice. Juan Manuel Morales Pablo, Meléndez-Avalos Araceli, Sáinz-Espuñes Teresita, Godínez-Victoria Marycarmen, Cruz-Hernández Teresita Rocío, Campos-Rodríguez Rafael, Drago-Serrano Maria Elisa. UAM
- 47 Effect of stress on the expression of claudins in the ileum of BALB/c. Nancy Machorro Rojas, Machorro-Rojas Nancy, Godínez-Victoria Marycarmen, Sáinz-Espuñes Teresita, Castañeda-Sánchez Jorge Ismael, Campos-Rodríguez Rafael, Drago-Serrano Maria Elisa. UAM
- 49 Epigenetic effects of maternal separation on thyrotropin-releasing hormone. Adrián Pérez Maldonado, Vargas Orihuela Yamili Jaimes-Hoy, Lorraine Charli Jean Louis, Soberón Xavier, Joseph-Bravo Patricia. IBT UNAM
- 51 Restraint Stress increases TRH and TRH-R2 expression in thalamic nuclei. Mariana Gutiérrez-Mariscal, Fernando Cázarez Márquez, Edith Sánchez, Rosa María Uribe and Patricia Joseph Bravo. IBT UNAM
- 53 Role of ROS produced by mitochondria and NOX (NADPH-Oxidase) in apoptotic death of cerebellar granule neurons. Carolina Cid Castro, IFC UNAM

## GLIA

- 55 El papel de las NADPH oxidasas durante el daño excitotóxico en el núcleo estriado del ratón. Diego Rolando Hernández Espinosa, Lourdes Massieu Trigo, Edgar Zenteno Galindo, Julio Eduardo Morán Andrade. IFC UNAM
- 57 Analysis of the thyrotropin-releasing hormone-degrading ectoenzyme, pyroglutamyl peptidase II, in tanyocyte primary cultures. Adair Rodríguez-Rodríguez, Antonieta Cote-Velez, Beetsi Urrieta-Chávez, Patricia Joseph-Bravo, Jean-Louis Charli. IBT UNAM
- 59 APP metabolism is modulated by cholesterol in cultured astrocytes. Ávila-Muñoz María Evangelina, Arias-Álvarez Clorinda. IIB UNAM
- 61 Aquaporin 1 is localized in the Schmidt-Lanterman incisures and at the paranodes of the nodes of Ranvier in the rat sciatic nerve. Edith Segura-Anaya, Alejandro Martínez-Gómez, Myrna Dent. FM UAEM
- 63 Characterization of Na<sup>+</sup> dependent amino acid transporters in rat astrocytoma C6 cells. Edgar Rodríguez García, Adrián Chávez Cano, Tayde Gabriela Serrano Cano, Paulina Malagón Bautista, Arturo Ortega, Angelina Rodríguez Torres. UAQ
- 65 Conjugated linoleic acid induces selective inhibition of the astrocytoma cell survival through a PPAR-gamma independent mechanism. Ana Sonia Silva Ramirez, Claudia G. Castillo, Hilda Minerva Gonzalez-Sanchez, Alejandro Rocha-Uribe, Marco Martin Gonzalez-Chavez, Edgar Rangel-Lopez, Abel Santamaria, Carmen Gonzalez. UASLP
- 67 Electron transport chain proteins in astrocytes isolated from newborn and adult rats. Marisol Orozco Ibarra, Anayeli García Serafín, Irma Janet Espinoza Bello, Norma Serrano-García, Mónica Adriana Torres-Ramos. INNyN
- 69 Microglial and cytokine changes in the hippocampus and peripheral cytokine secretion in response to an immune – stress challenge in rat pups. Saavedra Pimentel Luis Miguel, Bertha Fenton Navarro Torner Luz. UMSNH
- 71 P2Y1 receptors expression in myelinating oligodendrocytes of rat optic nerve. Guadalupe Martel-Gallegos, Edith Garay Rogelio O. Arellano. INB UNAM
- 73 Possible role of NF-κB in Cytochrome P450 epoxygenases down-regulation during an inflammatory process in astrocytes. Navarro-Mabarak Cynthia, Camacho-Carranza Rafael, Espinosa-Aguirre Javier. IIB UNAM

- 75 Searching for negative regulators of microglia activation: an alternative for Alzheimer's disease treatment? Elisa Medrano Jiménez, Jaime Totoriello García, Enrique Jiménez Ferrer, Maribel Herrera-Ruíz, Alejandro Zamilpa Álvarez, Martha Pedraza Escalona, Gustavo Pedraza and Leonor Pérez Martínez. IBT UNAM

### Neuroendocrinology

- 77 Differential recruitment of transcription factors and epigenetic changes on progesterone receptor isoform promoters in a mouse embryonic hypothalamic cell line. Edgar Ricardo Vázquez Martínez, Ignacio Camacho-Arroyo, Angel Zarain-Herzberg, María Carmen Rodríguez, Luciano Mendoza-Garcés, Patricia Ostrosky-Wegman, Marco Cerbón. INPer
- 79 Characterization of energy balance in mice KO for the thyrotropin releasing hormone degrading enzyme. Antonieta Cote-Velez, Ricardo Uribe-Ayala, Edgar Garcia Palacios, Ivan Lazcano, Patricia Joseph Bravo Jean Louis Charli. IBT UNAM
- 81 Glucocorticoids curtail cAMP-induced TRH transcription by a protein:protein interaction between glucocorticoid receptor and catalytic PKA. Israim Sotelo Rivera, Rosa María Uribe, Jean-Louis Charli y Patricia Joseph-Bravo. IBT UNAM
- 83 Maternal separation modifies the expression of regulatory elements of the TRH system in response to food deprivation or a palatable diet, in a sex-dependent manner. Lorraine Jaimes-Hoy, Mariana Gutiérrez-Mariscal Fidelia Romero Patricia Joseph-Bravo. IBT UNAM
- 85 Reproductive experience modifies GFAP-immunoreactivity in paravaginal ganglia of female rabbits. Verónica García Villamar, Luisa Clara Regina Hernández Kelly, Arturo Ortega Soto Margarita Martínez Gómez, Francisco Castelán. UAT
- 87 Association between a CLOCK gene polymorphism and circadian phenotypes in patients with bipolar disorder. Gustavo Rojas Andrade, Yolanda Ocampo Mendoza, José Octavio Hernández Lagunas, Mario César García Alanís, Federico Alejandro Díaz-Madrid, Franciso Romo-Nava, Doris Gutiérrez-Mora, Claudia Becerra-Palars, Carlos Berlanga Cineros, Adriana Díaz-Anzaldúa. I. NAL. Psiquiatria

### Neuropharmacology

- 89 Effect of Ibervillea sonorae extracts in GLUT1 and GLUT3 expression in cells Bergmann Glia and neural granular cells. María Guadalupe Ramírez Sotelo, Selene Rosales Sosa, Agustín Ignacio Cabrera Llanos, Arturo Ortega Soto. IPN
- 91 Bioavailability of a bifunctional molecule in a blood-brain barrier model. Yanahi Posadas Torrentera, Lorenza Gonzalez-Mariscal y Muriel, Jael Miranda Guzman, Jose Mario Ortega Olvera, Liliana Quintanar Vera and Claudia Perez-Cruz. CINVESTAV
- 93 Choice behavior guided by learned taste aversion requires the orbitofrontal cortex. Ana Paulina De las Peñas-Rincón, Leticia Ramírez-Lugo, Sandybel Ángeles-Durán and Francisco Sotres-Bayon. IFC UNAM
- 95 Effect of oral levodopa and reboxetine on motor recovery and total striatal catecholamine levels in a model of subarachnoid hemorrhage in rats. Alim Caelli Fuentes Bello, Santiago-Martínez Paula, Carmona-Aparicio Liliana, Montes-López Sergio, Pérez-de la Cruz Verónica, Carrillo-Mora Paul. FC UNAM
- 97 Effects of clonidine and oxytocin in the modulation of anxiety in rat. Juan Carlos Hernández Mondragón, Crespo-Ramírez Minerva, Pérez de la Mora Miguel, Fuxe Kjell. IFC UNAM
- 99 Effects of oxytocin and quinpirole in the amygdaloid modulation of anxiety. Alberto Dexter Hernández Hernández, Miguel Pérez de la Mora, Minerva Crespo Ramirez, Kjell Fuxe. IFC UNAM
- 101 Role of arginine vasopressin on the amygdaloid modulation of fear and anxiety in the rat. Oscar René Hernández Pérez, Saul Favila, Minerva Crespo Ramírez, Kjell Fuxe, Miguel Pérez de la Mora. IFC UNAM

- 103 | Validation of a behavioral task to study the brain mechanisms of active suppression of fear. Illescas Huerta Elizabeth Sarahi, Ramírez Lugo Leticia Sotres Bayón Francisco. IFC UNAM

### Plasticity and Cognition

- 105 | Effect of chronic stress and streptozotocin-induced diabetes on medial prefrontal cortex's neuronal plasticity and behavior in adolescent rats. Karina Hernández Mercado, Claudia Pérez Cruz Luis Reyes Castro. CINVESTAV Zacatenco.
- 107 | After effects of high-sucrose diet on cognitive function in a rat model of metabolic syndrome. Susana Hernández Ramírez, Guzmán-Ramos Kioko, Velasco Myrian, Rodríguez-Durán Luis, Bermudez-Rattoni Federico, Hiriart Marcia. IFC UNAM
- 109 | Brain plasticity induced by sexual experience in female mice. Cortés Sánchez Rebeca Alejandra. Paredes Guerrero Raúl Paredes Portillo Martinez Wendy. INB UNAM
- 111 | Chronic exposure to Wnt ligands modulates the expression of synaptic plasticity markers in the hippocampus *in vivo*. Abril Estefania Ortiz Matamoros, Clorinda Arias Álvarez. IIB UNAM
- 113 | Modifications in Tau protein content in frontal cortex and hippocampus of mice of the strain C58/J with autism phenotype. Barón Mendoza Isabel Cristina, Zepeda Rivera Angélica. González Arenas Aliesha. IIB UNAM
- 115 | Structural and synaptic plasticity in SHANK3 mutant mice as autism genetic model. Beatriz Gutiérrez Vera y Gerardo Rodrigo Perera Murcia, Yazmín Ramiro Cortés. IFC UNAM