Sociedad Mexicana
de Bioquímica
Neurobiología

SMB

PROGRAM

III Neurobiology Meeting of the Mexican Society for Biochemistry

Pre-Meeting Workshop on Computational Neuroscience

Open House for the public / Día de Puertas Abiertas

Gran Plaza Hotel & Convention Center, Guanajuato, México
September 22-26, 2019

Organizing Committee:
Ignacio Camacho Arroyo, INPer-Facultad de Química, UNAM
Susana Castro Obregón, Instituto de Fisiología Celular, UNAM
Octavio García, Facultad de Psicología, UNAM
Aliesha González Arenas, Instituto de Investigaciones Biomédicas, UNAM
Hugo Merchant, Instituto de Neurobiología, UNAM
Silvia Solís Ortiz, Departamento de Ciencias Médicas, Universidad de Guanajuato

SUNDAY, SEPTEMBER 22

Pre-Meeting Workshop on Computational Neuroscience




Organizer: Dr. Victor de Lafuente
Instituto de Neurobiología, UNAM campus Juriquilla

9:00-11: 00 *Introduction to Computational Neuroscience: Matlab tools to study neurophysiological signals*
Dr. Victor de Lafuente
Instituto de Neurobiología, UNAM campus Juriquilla, México

11:00-11:30 Coffee Break

11:30-13:30 *Neural encoding and decoding for neuroprosthetics*
Dr. Mark Churchland
Columbia University Medical Center, USA

13:30-14:30 **Lunch**

14:30–15:30 *Machine Learning: theoretical and practical aspects*
Dr. Mario Treviño
Instituto de Neurociencias, Universidad de Guadalajara, Jalisco, México

15:30- 16:30 *Analytical tools for Magnetic Resonance Imaging*
Dr. Alonso Ramirez
Centro de Ivestigación en Matemáticas, CONACYT, Guanajuato, México

SUNDAY, SEPTEMBER 22

Open House for the public / Día de Puertas Abiertas



10:00-14:00 *Neuronas en acción.*
Actividades y demostraciones dirigidas a público menor de 12 años.
Dra. Luz Lazos
Coordinadora de Divulgación y Promoción Científica del Instituto de Fisiología Celular, UNAM.

11:00-12:00 *¿Qué hacen las hormonas sexuales en nuestro cerebro?*
Dr. Ignacio Camacho Arroyo
INPer-Facultad de Química, U.N.A.M.

12:00-13:00 *Te enamoras con el cerebro y no con el corazón*
Dra. Martha Silvia Solís Ortiz
Departamento de Ciencias Médicas, Universidad de Guanajuato

13:00-14:00 *Demostraciones de la música en el cerebro*
Dra. Martha Silvia Solís Ortiz
Departamento de Ciencias Médicas, Universidad de Guanajuato

General Interest

16:40 – 17:00 *Research oportunities in Germany*
Dra. Susana Castro Obregón
Ambassador Scientist, Alexander von Humboldt-Stiftung/Foundation
Instituto de Fisiología Celular, UNAM

17:00 – 17:20 *Mexican Sincrotrón in Hidalgo. Research opportunities for research on neurobiology.*
Dra. Brenda Valderrama
Coordinator, National Scientific Committee for the Mexican Sincrotrón
Instituto de Biotecnología, UNAM

SUNDAY, SEPTEMBER 22

III Neurobiology Meeting

17:45-18:00 **Welcome ceremony**

18:00–19:00 **Opening Talk**

Movement dynamics in the motor cortex
Dr. Mark Churchland
Columbia University Medical Center, USA

Chair: Dr. Hugo Merchant
Instituto de Neurobiología, UNAM

19:00 **Social hour with lite bites**

9:00–11:00 **Symposium I**

MONDAY, SEPTEMBER 23

NEURODEVELOPMENT




Coordinator and chair: Dr. Luis Covarrubias
Instituto de Biotecnologia, UNAM

I.1 Epigenetic instructions for building the cerebral cortex
Dr. Manuel Baizabal
Department of Neurobiology, Harvard Medical School, USA
I.2 Phospholipid phosphatase-3, a novel marker of neural stem cells, participates in the ventricular system remodeling and adult neurogenesis in mice
Dr. Diana Escalante
Instituto de Fisiología Celular, UNAM, México
I.3 Development of large-scale brain networks from infancy to adulthood
Dr. Sarael Alcauter
Instituto de Neurobiología, UNAM, campus Juriquilla, México
I.4 Engineering neurogenesis for the postnatal brain
Dr. Benedikt Berninger
Center for Developmental Neurobiology, King´s College, UK

11:00–11:30 **Coffee Break**

11:30 – 12:30 **Plenary Lecture I**

From hidden to overt: uncovering the roles of glia in hearing and hearing loss
Prof. Dr. Gabriel Corfas
Director Kresge Hearing Research Institute, University of Michigan, USA

Chair: Dr. Octavio García González
Facultad de Psicología, UNAM

12:30–13:30 **Oral Presentations I**

Chair: Dr. Lourdes Massieu Trigo
Instituto de Fisiología Celular, UNAM. Ciudad Universitaria. México

12:30 – 12:45 *Social behavior in ants relies on a specialized olfactory system.*
Leonora Olivos Cisneros
The Rockefeller University, USA
12:45 – 13:00 *Effects of maternal conditions on sexual preference of the male progeny.*
Alejandra Hernández González
CINVESTAV Sur, México
13:00 – 13:15 *Dual NMDAR signaling in cultured astrocytes: flux-independent pH sensor and flux-dependent regulator of mitochondrial membrane potential (m$\Delta\psi$) through cell membrane-mitochondria communication*.
Pavel Montes Oca Balderas
Instituto Nacional de Neurología y Neurocirugía / Instituto de Fisiología Celular, UNAM
13:15 – 13:30 *Th1/Th17 and Th2 Cytokines in Women with Severe Anxiety and Depression during late pregnancy.*
Philippe Leff-Gelman
Instituto Nacional de Perinatología “Isidro Espinosa de los Reyes”, México

13:30 -15:00 **Lunch**

15:00–17:00 **Symposium II**

NEUROBIOLOGY OF FEEDING IN HEALTH AND DISEASE




Chair: Dr. Yazmin Macotela
Instituto de Neurobiología, UNAM, campus Juriquilla, México
Coordinator: Dr. Ranier Gutiérrez
Laboratorio de Neurobiología del Apetito, Departamento de Farmacología, CINVESTAV, México

II.1 Striatal integration of food reward and satiety
Dr. Luis Tellez
Instituto de Neurobiología, UNAM campus Juriquilla, México
II.2 Visceral control of Brain reward systems
Dr. Ivan de Araujo
Icahn School of Medicine at Mount Sinai, New York City, USA
II.3 A hypothalamic-BNST circuit regulates delay discounting in decision making
Dr. Henry H. Yin
Duke University, USA
II.4 Lateral hypothalamus GABAergic neurons encode sucrose's palatability
Dr. Ranier Gutiérrez
Laboratorio de Neurobiología del Apetito, Departmento de Farmacología, CINVESTAV, México

17:00 – 17:05 **1 min talks for poster advertisings**

Chair: Dr. Gustavo Pedraza
Instituto de Biotecnología, UNAM, México

Demyelination associated to chronic arsenic exposure in Wistar rats.
Sandra A. Niño
Facultad de Ciencias Químicas, Universidad Autónoma de San Luis Potosí
Social Interaction: Adjustment to interdependent contingencies in a competition task with Long Evans rats
Diana Laura Jacobo Godínez
Facultad de Psicología. UNAM
Combined early life stress and neonatal lipopolysaccharide affect hippocampal glial cells and induce long term behavioral alterations.
Luis Miguel Saavedra Pimentel
Universidad Michoacana de San Nicolás de Hidalgo
The fascinating effects of music on the brain.
Miguel Ángel Mayoral-Chávez
Facultad de Medicina UNAM-Universidad Autónoma Benito Juárez de Oaxaca

Plasmid Transfection in mouse brain using cationic polymers.
Katia R. Ávila Gutiérrez
División de Ciencias Naturales y Exactas. Universidad de Guanajuato

17:05 – 19:00 **Poster Session I (Even numbers)**

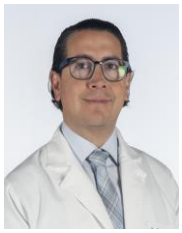
20:00 - **"Callejoneada", Guanajuato sightseeing**

9:00 – 11:00 **Symposium III**

TUESDAY, SEPTEMBER 24

CEREBRAL TUMORS



Chair: Dr. Liliana Quintanar
Departamento de Química, CINVESTAV, México
Coordinator: Dra. Aliesha González Arenas
Instituto de Investigaciones Biomédicas, UNAM, México

III.1 The role of renin-angiotensin in gliomas
Dr. Talia Wegman
Instituto Nacional de Cancerología, México
III.2 The important role of tumor microenvironment in medulloblastoma progression
Dr. Zeng-jie Yang
Philadelphia Fox Chase Cancer Center, USA
III.3 Gas1 as a tool for experimental glioma therapy
Dr. José Segovia
CINVESTAV, México
III.4 From neurology to neuro-oncology
Dr. Bernardo Cacho Díaz
Instituto Nacional de Cancerología, México

11:00 – 11:20 *Discover ANY maze to make easier your life as behavioral neuroscientist*
Dr. Sylvia Ortega Martínez. Scientific manager Neuroscience & ANY-maze™ Divisions. STOELTING Co

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11:00 – 11:30 **coffee break**

11.30 – 12:30 **Plenary Lecture II**

Dissociable dopamine dynamics for learning and motivation
Dr. Joshua Berke
UCSF Center for Integrative Neuroscience, USA

Chair: Dr. Hugo Merchant
Instituto de Neurobiología, UNAM

Oral Presentations II

12:30 – 13:30
Chair: Dr. Julio Morán Andrade
Instituto de Fisiología Celular, UNAM. Ciudad Universitaria. México

12:30 – 12:45 *TrkB-mediated LTP at Hippocampal Mossy Fiber Synapses on CA3 Interneurons.*
Ernesto Griego Melo
CINVESTAV Sur, México
12:45 – 13:00 *Comparison of actions between L-DOPA and different dopamine agonists in striatal DA-depleted microcircuits in vitro: pre-clinical insights*
Esther Lara González E.
Instituto de Fisiología Celular, UNAM, México
13:00 – 13:15 *Integrated single-cell analysis reveals coupled molecular gradient and functional subnetworks in the thalamic reticular nucleus*
Violeta Gisselle López-Huerta
Instituto de Fisiología Celular, UNAM, México
13:15 – 13:30 *Amyloid plaques: Friends or Foes? Exploring the association between Aβ plaques and soluble Aβ aggregates using the FAD4-42 mouse model*
José Sócrates López Noguerola. ICS, Universidad Autónoma del Estado de Hidalgo, México

13:30 - 15:00 **Lunch**

15:00 – 17:00 **Symposium IV**

"Symposium financed by CONACyT 2016 CB 282470 and PAEP-PMDCBQ"

NEURAL NETWORKS




Chair: Dr. Silvia Solís Ortiz
Universidad de Guanajuato, México
Coordinator: Dr. Angélica Zepeda
Instituto de Investigaciones Biomédicas, UNAM, México

IV.1 Imprinting and recalling cortical ensembles
Dr. Luis Carrillo Reid
Instituto de Neurobiología, UNAM, campus Juriquilla, México
IV.2 Heterosynaptic structural plasticity of adult born granule cells
Dr. Stephan Schwarzacher
Goethe-Universität, Frankfurt am Main, Germany
IV.3 The influence of spatial learning on the integration of adult-born granule neurons.
Dr. Nora Abrous
Neurocentre Megendie, Bordeaux, France
IV.4 Intracortical and corticostriatal circuits for sensory processing and behavior
Dr. David Margolis
Department of Cell Biology and Neuroscience, Rutgers University, USA

17:00 – 17:05 **1 min talks for poster advertisings**

Chair: Dr. Diana Escalante
Instituto de Fisiología Celular, UNAM, México

Is peripheral thyrotropin-releasing hormone-degrading ectoenzyme a therapeutic target for diet-induced obesity?
Karina Hernández Ortega
Instituto de Biotecnología, UNAM
Evaluation of 25-OH Vitamin D levels in multiple sclerosis: association with clinical and hematological parameters in Mexican patients.
Andrea Michel Arellano-Pliego
Universidad Autónoma de Guerrero
Chronic administration of glutamate decarboxylase inhibitors in the rat spinal cord induces motor alterations and motor neuron death
Diana Elizabeth Colín Martínez
Instituto de Fisiología Celular, UNAM

Autophagy inducers trehalose and metformin prevent dopaminergic cell death
Yareth Gopar Cuevas
Facultad de Medicina, Universidad Autónoma de Nuevo Léon
Reactive astrogliosis is exacerbated after spinal cord injury in diabetic rats.
Adriana Domínguez-Vázquez
Departamento de Ciencias Naturales e Ingeniería, UAM Cuajimalpa

17:05 – 19:00 **Poster Session II (Odd numbers)**

WEDNESDAY, SEPTEMBER 25

9:00 – 11:00 **Symposium V**

COGNITIVE NEUROBIOLOGY




Chair: Dr. Adán Domínguez Vargas
Escuela Nacional de Estudios Superiores Unidad León, UNAM, México
Coordinador: Dr. Francisco Sotres Bayón
Instituto de Fisiología Celular, UNAM, México

V.1 Brainstem-to-amygdala control of emotional associative learning
Dr. Joshua Johansen
RIKEN Center for Brain Science, Japan
V.2 Perturbations in the Activity of Cholinergic Interneurons in the Dorsomedial Striatum Impairs the Encoding of an Instrumental Contingency Change
Dr. Fatuel Tecuapetla
Instituto de Fisiología Celular, UNAM, México
V.3 Neural basis of bilaterally coordinated actions
Dr. Pavel Rueda-Orozco
Instituto de Neurobiología, UNAM, campus Juriquilla, México
V.4 Prefrontal control of conflict choice behavior
Dr. Francisco Sotres Bayón
Instituto de Fisiología Celular, UNAM, México

11:00 – 11:30 **coffee break**

11.30 – 12:30 **Plenary Lecture III**

Transcription factor-dependent control of adult hippocampal neurogenesis
Dr. Chichung Lie
Institut für Biochemie, Friedrich-Alexander Universität Erlangen-Nürnberg, Germany

Chair: Dr. Susana Castro Obregón
Instituto de Fisiología Celular, UNAM

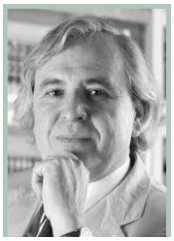
12:30 – 13:30 **Oral Presentations III**

Chair: Dr. Clorinda Arias Álvarez
Instituto de Investigaciones Biomédicas, UNAM

12:30 – 12:45 *FeRIC: a magnetogenetic technique to control neuronal excitability with no depth limitation*
Miriam Hernández-Morales
University of California Berkeley, USA
12:45 – 13:00 *Characterization of cortical dysplasias epileptogenicity in animal model*
Ana Itzel Aquiles Reyes
Instituto de Neurobiología, UNAM, México
13:00 – 13:15 *Long-term copper exposure induces autophagy upregulation and the loss of dopaminergic neurons in vivo*
Alfredo González Alcocer
Facultad de Medicina, Universidad Autónoma de Nuevo Léon, México
13:15 – 13:30 Krüppel-like Factors 9 and 13 Block Neurite Outgrowth Induced by cAMP Pathway Activation
José Avila-Mendoza
University of Michigan, USA

13:30 - 15:00 **Lunch**

15:00 – 16:00 **Closure Lecture**



The neural code
Dr. Ranulfo Romo
Instituto de Fisiología Celular, UNAM
El Colegio Nacional de México
USA National Academy of Sciences

Chair: Dr. Hugo Merchant
Instituto de Neurobiología, UNAM

16:00 - 16:30	**Closing Ceremony**
17:00 - 18:00	**Having a beer with…**
18:00 – 18:30	Business meeting
20:00 -	**Farewell Dinner**

THURSDAY, SEPTEMBER 26

9:00 - 11:00	**Breakfast** Talks with Speakers
12:00	**Departure**

Poster Sessions

Posters Session I. Even numbers

Monday September 23, 2019.

COGNITION AND BEHAVIOR

2	Hippocampal functional connectivity associations with cognitive skills in temporal lobe epilepsy. **Alfonso Fajardo-Valdez**, Raúl Rodriguez-Cruces, Luis Concha. Instituto de Neurobiología, UNAM, Campus Juriquilla, Querétaro, México
4	Enrichment environment acts proneurogenic but induces social aggression behavior in male- but not in female- GFAP-EGFP mice: relevance of sex. **Cabrera-Muñoz Edith Araceli**, Olvera-Hernández Sandra, Ortiz-López Leonardo, Reyes-Haro Daniel and Ramírez-Rodríguez Gerardo Bernabé. Instituto Nacional de Psiquiatría "Ramón de la Fuente Muñiz"
6	Litter size effect on vulnerability and resilience. **Maritza Montserrat Cervantes Palacios**, Marcel Pérez Morales, Kurt Hoffman, Beatriz Gómez González, Emilio Domínguez Salazar. Universidad Autónoma Metropolitana - Iztapalapa
8	Predictive rhythmic tapping to auditory metronomes in the nonhuman primate. **Yaneri A. Ayala**, Luis Prado, Hugo Merchant. Instituto de Neurobiología, UNAM Campus Juriquilla
10	Sucrose intensity percept and decision-making coding in the rat anterior insular and orbitofrontal cortex. **Esmeralda G. Fonseca de la Cruz**, Vicente Sandoval Hernández, Silvia Mejía Ortiz, Francisco Zepeda Arias, Sidney A. Simon and Ranier Gutiérrez Mendoza Department of Pharmacology, CINVESTAV
12	Social Interaction: Adjustment to interdependent contingencies in a competition task with Long Evans rats. **Diana Laura Jacobo Godínez**, Alejandro Segura Beltrán & Oscar Zamora Arévalo. Facultad de Psicología. UNAM
14	Hippocampal Neurons in a Visual Metronome Task. **Ana María Malagón**, Karla Mercado, and Victor de Lafuente. Institute of Neurobiology, UNAM
16	Vulnerability and resistance to ketamine in an animal model of schizophrenia depend of litter size. **Ariel Miravete Gutiérrez**, Maritza Montserrat Cervantes Palacios, Kurt Hoffman, Emilio Domínguez Salazar. Departamento de Biología de la Reproducción, Universidad Autónoma Metropolitana- Iztapalapa
18	Cannabis use alters the advantage given by the cannabinoid receptor 1 gene genotype on selective attention performance. **Ivett E, Ortega-Mora**, Ulises Caballero-Sánchez, Talía V. Román-López, Cintia B. Rosas-Escobar, Sandra Romero-Hidalgo, Juan Antonio González-Barrios, Mónica Méndez-Díaz, Oscar E. Prospéro-García, Alejandra E. Ruiz-Contreras. Lab. Neurogenómica Cognitiva, Coord. Psicobiología y Neurociencias, Fac. Psicología, UNAM
20	Assessing Retrospective Memory: Temporal Sequences and Delays. **Mario Pérez Calzada**, Adriana Felisa Chávez de la Peña, Manuel Alejandro García Martínez, Montserrat Vanegas Chavarría & Oscar Zamora Arévalo. Facultad de Psicología, UNAM
22	Brain electrical differences during working memory retrieval are related with maintenance or manipulation processes and task difficulty. **Talía Vianney Román-López**, Ulises Caballero-Sánchez, Silvia Anali Cisneros-Luna, Carlos Sánchez-Gachuz, Jesús Antonio Franco-Rodríguez, Mónica Méndez-Diaz, Oscar Prospéro-García, Alejandra Evelyn Ruiz-Contreras. Coordinación de Psicogiología y Neurociencias, Facultad de Psicología, UNAM

DEVELOPMENT & AGING

24	Progesterone promotes the proliferation, differentiation and maturation of oligodendroglial progenitor cells from the mouse embryonic spinal cord. **Juan Carlos González-Orozco**, Aylin Del Moral-Morales & Ignacio Camacho Arroyo. Facultad de Química, Departamento de Biología, Universidad Nacional Autónoma de México
26	Demyelination associated to chronic arsenic exposure in Wistar rats. **Sandra A. Niño**, Erika Chi, Juan Ortiz, Sergio Zarazúa, Luis Concha, Ma. Esther Jiménez. Facultad de Ciencias Químicas, Universidad Autónoma de San Luis Potosí
28	Autophagy induction reduces features of cellular senescence in the hippocampus of old rats. **Elisa Gorostieta-Salas**, Daniel Moreno-Blas, Jorge Domínguez-Bautista, Bulmaro Cisneros-Vega, Federico Bermudez-Rattoni, Susana Castro-Obregón. Instituto de Fisiología Celular, UNAM
30	Distribution of mitochondria in cells of Medial Nucleus of Trapezoid Body from rat. **Hernández-Santos José Antonio,** Fernández-Valverde Francisca, Orozco-Ibarra Marisol. Laboratorio de Neurobiología Celular y Molecular, Instituto Nacional de Neurología y Neurocirugía "Manuel Velasco Suárez"
32	Analysis of expression of single exon genes in the mouse embryonic telencephalon. **Katia Aviña-Padilla**, Andrés García-García, Jose Antonio Ramírez Rafael, Emilio Gabriel Herrera-Oropeza, Maribel Hernández-Rosales, VijayKumar Muley and Alfredo Varela-Echavarría. Instituto de Neurobiología UNAM- Campus Juriquilla
34	Neuronal Senescence is promoted by Dysfunctional Autophagy. **Daniel Moreno-Blas**, Elisa G. Gorostieta-Salas, Gabriel Muciño-Hernández, Alexander M. Pommer-Alba & Susana Castro-Obregón. Departamento de Neurodesarrollo y Fisiología, División de Neurociencias, Instituto de Fisiología Celular, UNAM
36	Cortical Neurons from Human Embryonic Stem Cells Derived and Maintained on the Human Amniotic Epithelium. Ávila González Daniela, Portillo Martínez Wendy, Molina Hernández Anayansi, García López Guadalupe, **Díaz Martínez Néstor Fabián**. Departamento de Fisiología y Desarrollo Celular, Instituto Nacional de Perinatología

TEACHING & SCIENCE COMMUNICATION

38	The fascinating effects of music on the brain. **Miguel Ángel Mayoral-Chávez**, María del Pilar Gabriel-de la Torre, Jael López-Martínez. Centro de investigación Facultad de Medicina UNAM-UABJO

STRESS

40	Oseltamivir and Bezafibrate Induce Synergic Effect Decreasing Oxidative Damage in Rat Brain Regions. **David Calderón Guzmán**, Norma Osnaya Brizuela , Maribel Ortiz Herrera, Hugo Juárez Olguín, Armando Valenzuela Peraza, Ernestina Hernández García, Gerardo Barragán Mejía, Francisca Trujillo Jiménez. Lab. Neuroscience. UNAM. National Institute of Pediatrics. Mexico
42	Systemic administration of fractalkine affects hippocampal neurogenesis and induces depression like-behavior in female Balb/C mice. **Ramírez-Rodríguez Gerardo Bernabé**, Lugo-Hernández Enrique, Vega-Rivera Nelly Martiza, Ortiz-López Leonardo. Instituto Nacional de Psiquiatría "Ramón de la Fuente Muñiz"

GLIA

44	Evaluation of glial cells at the hippocampus of brain autistic-like mice C58/J. **De La Fuente-Granada Marisol**, Duarte-Campos Juan F, Barón-Mendoza Isabel C, González-Arenas Aliesha. Departamento de Medicina Genómica y Toxicología Ambiental, Instituto de Investigaciones Biomédicas, UNAM
46	Modulation of the response to an obesogenic diet by the astrocytic molecular clock. **Lucía Mendoza Viveros**, Clarisa Marmolejo Gutiérrez, Lorena Aguilar Arnal, Ricardo Orozco Solis. Instituto de Investigaciones Biomédicas, UNAM. INMEGEN
48	Combined early life stress and neonatal lipopolysaccharide affect hippocampal glial cells and induce long term behavioral alterations. **Saavedra Pimentel Luis Miguel,** Ochoa Zarzosa Alejandra, Torner Luz. Universidad Michoacana de San Nicolás de Hidalgo, (CMEB)

METABOLISM

50	Sucralose increases levels of oxidative stress in the brain of C57BL6 mice. **Cristina Doriany Balcón Pacheco**, Joel Ramírez Emiliano, César Ozuna, Elena Franco-Robles. Division of Life Sciences, University of Guanajuato Campus Irapuato-Salamanca
52	Neuroprotector effect of nicotinamide via colinergic in a model of cognitive deficit-induced by hypercaloric diet in rats. **Ramírez-Cruz Armando,** Ángeles-Mejía Selene, Benitez-García Gabriela Sugey**,** Romero-Vázquez Fernando Alfonso**,** Gómez-Olivares José Luis, Díaz-Flores Margarita. Unidad de Investigación Médica en Bioquímica. Hospital de Especialidades CMN Siglo XXI. IMSS
54	Fasting regulates markers of activity of thyrotropin-releasing hormone neurons in the dorsomedial nucleus and lateral hypothalamus of adult rats. Sex similarities and differences. **Karla Yamili Vargas Orihuela**, Lorraine Jaimes-Hoy, Fidelia Romero Arteaga, Arlene García-Vázquez, Patricia Joseph-Bravo, and Jean-Louis Charli**.** Departamento de Genética del Desarrollo y Fisiología Molecular, Instituto de Biotecnología, UNAM

NEUROENDOCRINOLOGY

56	Central estradiol protects the female brain against sleep loss related changes in blood-brain barrier function. **Enriquez Zamudio Mariely**, Medina-Flores Fernanda, González-Flores Óscar, Domínguez-Salazar Emilio, Velázquez-Moctezuma Javier, Gómez González Beatriz. Area of Neurosciences. Dept. Biology of Reproduction. Universidad Autónoma Metropolitana, Unidad Iztapalapa
58	Functional Electroencephalographic Connectivity and its Relationship with Hormones in Premenopause and Early Postmenopause. **Erika Guadalupe González-Pérez**, Markus Müller-Bender, Nicté Figueroa-Vega, Wady Ríos-Herrera, Martha Silvia Solís-Ortiz. Medical Sciences Department. University of Guanajuato
60	Neuro-immuno-endocrine changes induced by high- fat diet are associated with increased anxiety- like behavior in Wistar rats. **Hernández-Mondragón Juan Carlos,** Crespo-Ramírez Minerva, Apolinar-Manuel Leticia, Tesoro-Cruz Emiliano, Pérez de la Mora Miguel. Division of Neurosciences, Instituto de Fisiología Celular, UNAM
62	Sexual motivation is diminished in diabetic female rat. **Abigail Karina Hernández Munive**, Daniela Rebolledo Solleiro, Alonso Fernández Guasti. Centro de Investigación y de Estudios Avanzados

64	Effects of progesterone on the expression profile of miRNAs in human glioblastoma cells. **Diana Elisa Velázquez Vázquez**, Ignacio Camacho Arroyo. Unidad de Investigación en Reproducción Humana, Instituto Nacional de Perinatología-Facultad de Química, Universidad Nacional Autónoma de México
66	Evaluation of the proteomic profile of brain´s mouse by the effect of pharmacological regulatory compounds of cholecystokinin as a therapeutic alternative against overweight and obesity. **Vique-Sánchez JL,** Galíndez-Fuentes AI, Jiménez-Pineda A, Cruz-Aguirre AS and Benítez-Cardoza CG. Escuela Nacional de Medicina y Homeopatía – IPN
68	Transcriptional networks induced by prolactin in the hippocampus. **Erika Alejandra Cabrera-Reyes**, América Vanoye–Carlo, Edgar Ricardo Vázquez-Martínez and Marco Cerbón. Unidad de Investigación en Reproducción Humana, Instituto Nacional de Perinatología-Facultad de Química, Universidad Nacional Autónoma de México

NEUROPHARMACOLOGY

70	Effects of clonidine and oxytocin in the modulation of anxiety in rat. **Hernández-Mondragón Juan Carlos,** Crespo-Ramírez Minerva, Borroto-Escuela Dasiel, Fuxe, Kjell, Pérez de la Mora Miguel. Division of Neurosciences, Instituto de Fisiología Celular, Universidad Nacional Autónoma de México
72	The combination of fluoxetine-tramadol inhibits generalized seizures caused by pentylenetetrazole. **Sánchez Hernández Josué Denichi** and Manjarrez Marmolejo Joaquín. Laboratory of Physiology of the Reticular Formation, National Institute of Neurology and Neurosurgery MVS
74	Exosomes of depression diagnosed-patients as a source of potential biomarkers**. Vásquez-Pérez Jorge Manuel,** Flores-Ramos Mónica, Ortiz-López Leonardo, Ramírez-Rodríguez Gerardo Bernabé. Laboratorio de Neurogénesis, Subdirección de investigaciones clínicas, Instituto Nacional De Psiquiatría Ramón De La Fuente Muñiz

INTEGRATIVE PHYSIOLOGY

76	Integration of the direct and indirect pathway in the substantia nigra reticulata and its modulation by cannabinoids. **Báez-Cordero Ana Silvia**, Pimentel-Farfán Ana Karen, González-Pereyra Perla, Peña-Rangel María Teresa, Rueda-Orozco Pavel Ernesto. Department of Neurobiology of Development and Neurophysiology, Institute of Neurobiology, UNAM
78	Neuronal plasticity evoked by somatosensensory stimulation in the cortico-thalamus-striatal circuits. **Hidalgo-Balbuena Ana Elizabeth**, Luma Annie Yolene, Pimentel-Farfán Ana Karen, Peña-Rangel María Teresa, Rueda-Orozco Pavel Ernesto. Departamento de Neurobiología del Desarrollo y Neurofisiología. Instituto de Neurobiología, UNAM
80	Investigating the role of the pallidal cannabinergic system in the control of speed. **Martínez-Montalvo Mario Gabriel**, Ortega-Romero Diana Itzel, Peña-Rangel María Teresa, Rueda-Orozco Pavel Ernesto. Departamento de neurobiología del desarrollo y neurofisiología, Instituto de Neurobiología. UNAM
82	Exploring the role of dorsolateral striatum in bimanually coordinated movements in rats. **Pimentel-Farfan Ana Karen,** Báez-Cordero Ana Silvia, Peña-Rangel Maria Teresa & Rueda-Orozco Pavel Ernesto. Laboratorio de Neurofisiología de los Hábitos, Departamento de Neurobiología del Desarrollo y Neurofisiología, Instituto de Neurobiología. UNAM

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84	Activation of TLR9 with a synthetic ligand in a murine medulloblastoma xenograft. **Abarca-Merlín Daniela Melissa**, Maldonado-Bernal Carmen, Álvarez-Arellano Lourdes. Laboratorio de Investigación en Neurociencias, Hospital Infantil de México Federico Gómez
86	Increase of TNF alpha plasmatic concentrations is associated to depressive symptoms in residents from central zone in Veracruz. **Balderas-Vazquez Cecilia Luz**, Valenzuela Limón Olga Lidia, Rodríguez-Landa Juan Francisco, Garcia-Montalvo Eliud Alfredo, Bernal-Morales Blandina. UV-Xalapa, Veracruz, México
88	Role of NADPH oxidase-2 in the progression of the inflammatory response secondary to striatum excitotoxic damage. **Diego Rolando Hernández Espinosa**, Lourdes Massieu Trigo y Julio Morán Andrade. División de Neurociencias, Instituto de Fisiología Celular, Universidad Nacional Autónoma de México
90	Effects of Anti-NMDA receptor antibodies on NMDA-induced intracellular Ca^{2+} rise: possible implications for anti-NMDAR encephalitis. **Montes Oca Balderas, Pavel**, Gómora García Juan Carlos, Massieu Trigo Lourdes, Hernández-Cruz, Arturo. Unidad de Neurobiología Dinámica, Departamento de Neuroquímica, INNN
92	Evaluation of the protein expression the Neurotrophic factors in rats with chronic spinal cord injury immunized with the A91 peptide. **Thalía Rodríguez-Barrera**, Julián García-Sánchez, Adrián Flores-Romero, Elisa García-Vences, Antonio Ibarra and Roxana Rodríguez-Barrera. Facultad de Ciencias de la Salud, Universidad Anáhuac

NEUROPATHOLOGY

94	Content and colocalization of progesterone receptor and protein kinase c alpha increased according to malignancy grade in biopsies of mexican patients. **Arcos-Montoya Denisse**, Mejía-Pérez Sonia, Wegman-Ostrosky Talia, González-Arenas Aliesha. Instituto de Investigaciones Biomédicas, Universidad Nacional Autónoma de México
96	The proliferation of neural progenitor cells in the adult mouse hippocampus depends on the duration of the proinflammatory profile induced by LPS. **Ávila-Muñoz Evangelina**, Pérez-Domínguez Martha, Domínguez-Rivas Eduardo and Zepeda Angélica. Departamento de Medicina Genómica y Toxicología Ambiental, Instituto de Investigaciones Biomédicas, Universidad Nacional Autónoma de México
98	Tau hyperphosphorylation in mouse brain during diabetic ketoacidosis. **Jorge Andrés Cázares Preciado**, Elizabeth Mata Villegas, Argelia Rosillo de la Torre, Gustavo Basurto Islas. División de Ciencias e Ingenierías, Universidad de Guanajuato, Campus León
100	LPS-induced neuroinflammation promotes distinct effects on the proliferation of defined subpopulations of neural progenitor cells in the adult dentate gyrus. **Eduardo Domínguez-Rivas**, Martha Pérez-Domínguez, Evangelina Ávila-Muñoz, Angélica Zepeda. Departamento de Medicina Genómica y Toxicología Ambiental, Instituto de Investigaciones Biomédicas, Universidad Nacional Autónoma de México
102	A New Murine Model Of H-ABC Human Tubulinopathy. **Ángeles Garduño Robles**, Valeria Piazza, José Ramón Eguíbar Cuenca, Ma. Del Carmen Cortés, Sergio Pantano, Silvia Alejandra López Juárez, Victor H. Hernández González. División de Ciencias e Ingenierías, Universidad de Guanajuato
104	Friend or Foe? Participation of IRE1 in the unfolded protein response induced by glucose deprivation in cortical neurons. **Juan Carlos Gomora-Garcia**, Lourdes Massieu Trigo Instituto de Fisiología Celular, Universidad Nacional Autónoma de México

106	Estrogen receptor beta activation induces medulloblastoma cells proliferation whereas PKCs activation blocks it. **Hernández-Rojas Rubí**, De la fuente-Granada Marisol, González-Arenas Aliesha. Instituto de Investigaciones Biomédicas, Universidad Nacional Autónoma de México
108	Estradiol induces epithelial-to-mesenchymal transition on human glioblastoma cells. **Ana María Hernández-Vega**, Ignacio Camacho-Arroyo. Unidad de investigación en Reproducción Humana, Instituto Nacional de Perinatología-Facultad de Química, UNAM
110	Olfactory alterations in a *Drosophila* Parkinson´s disease model expressing α-synuclein**. Estefanía De Allende Becerra**, Enrique Alejandro Reynaud Garza. Instituto de Biotecnología, UNAM
112	Calorie restriction modify stroke outcome in a mice model. **M. Xóchitl Mendoza-Rojas**, Hilda Martínez-Coria and Héctor E. López-Valdés. Instituto Nacional de Neurología y Neurocirugía Manuel Velasco Suárez
114	Longitudinal evaluation of bundle-wise water diffusion changes following axonal degeneration in a region of fiber crossing. **Omar Narvaez-Delgado**, Ricardo Coronado-Leija, Gilberto Rojas-Vite, Marcos Aranda, Alonso Ramirez-Manzanares, José Luis Marroquin, Jorge Larriva-Sahd, and Luis Concha. Instituto de Neurobiología, UNAM
116	Non-evoked electroretinogram reveals slow oscillatory activity that is altered in obese mice. **Noguez Imm Ramsés**, Martínez-Torres Ataúlfo, Thébault Stéphanie. Instituto de Neurobiología, Campus UNAM-Juriquilla
118	Effect of a high-fiber diet on amyloid aggregation and memory performance of APP/PS1 transgenic mouse. **Hernández-Acosta Julieta**, Cuervo-Zanatta Daniel, Pérez-Grijalva Brenda, Reyes-Chávez Ricardo M, Sánchez-Valle Vicente and Perez-Cruz Claudia. Instituto de Neurobiología, UNAM
120	Inhibition of HDAC4 with sodium butyrate does not prevent AMPA-induced excitotoxic degeneration of spinal motoneurons in vivo. **Prior-González Mara**, Lazo-Gomez Rafael, Tapia Ricardo. División de Neurociencias, Instituto de Fisiología Celular, UNAM
122	The Ketone body beta-hydroxybutyrate restores autophagic degradation in the brain of hypoglycemic rats. **Carmen Torres-Esquivel,** Teresa Montiel-Montes, Marco Flores-Méndez, and Lourdes Massieu-Trigo. Departamento de Neuropatología Molecular, División de Neurociencias, Instituto de Fisiología Celular, UNAM
124	The mRVG29 peptide as vehicle for delivery of the CDNF gene in an animal model of Parkinson's disease. **Sheila Adela Villa Cedillo**, Daniel Matta Yee Chig, Humberto Rodríguez Rocha, Aracely García García, María de Jesús Loera Arias, Adolfo Soto Dominguez, Roberto Montes de Oca Luna, Odila Saucedo Cárdenas. Universidad Autónoma de Nuevo León, Facultad de Medicina, Departamento de Histología

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126	Effect of nicotine abstinence on both the anxiolytic-like behavior and synaptic transmission of the ventral hippocampus in young rats. **Varela Correa María Berenice**, Ayala Rodríguez Jesús David & García Colunga Jesús. Instituto de Neurobiología, UNAM campus Juriquilla

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128	Dendritic complexity in prefrontal cortex and hippocampus of the autistic-like mice C58/J. **Barón-Mendoza Isabel**, Del Moral-Sánchez Ireri, Martínez-Marcial Mónica, García-

	Rebollar Jorge Omar, García Octavio, Garzón-Cortés Daniel, González-Arenas Aliesha. Instituto de Investigaciones Biomédicas, Universidad Nacional Autónoma de México
130	Connectivity in the auditory and premotor cortex in the rat brain. **De León Andrez Cynthia Ivette**, García Saldivar Pamela, Aguilar Ayala Yaneri, Rojas Piloni Gerardo, Concha Loyola, Luis Merchant Hugo. Instituto de Neurobiología, UNAM campus Juriquilla, Querétaro
132	The improvement of living conditions increases the effects of Citalopram at the level of neuroplasticity and behaviors associated with depression. **Domínguez-Flores Betsabé**, Ortíz-López Leonardo, Vega-Rivera Nelly M., Flores-Ramos Mónica and Ramírez-Rodríguez Gerardo Bernabé Instituto Nacional de Psiquiatría "Ramón de la Fuente Muñiz"
134	Long-lasting effects of environmental enrichment on behavior: implications of neuroplasticity in male Balb/C mice**. Granados-Juárez Andrea,** Cabrera-Muñoz Edith, Ortiz-López L, and Ramírez Rodríguez Gerardo Bernabé. Laboratorio de Neurogénesis. Instituto Nacional de Psiquiatría "Ramón de la Fuente Muñiz
136	Analysis of the multineuronal activity patterns in the respiratory rhythm generator and its reconfiguration during hypoxia. **Juárez Vidales Josué de Jesús,** Pérez Ortega Jesús, Loera Hernández Jonathan Julio, Méndez Salcido Felipe, Peña Ortega José Fernando. Instituto de Fisiología Celular, UNAM
138	Repetitive transcranial magnetic stimulation induces antidepressant like effects and modifies cellular populations involved in the generation of new neurons. **Meneses-San Juan David**, Ortiz-López Leonardo, González-Olvera Jorge Julio and Ramírez-Rodríguez Gerardo Bernabé. Instituto Nacional de Psiquiatría "Ramón de la Fuente Muñiz
140	Striatal Parvoalbumin expressing neurons activate the striatal microcircuit and switch between different network states. **Mariana Duhne**, Esther Lara-González, Antonio Laville, and José Bargas. División Neurociencias, Instituto de Fisiología Celular, UNAM
142	Alterations in dendritic spine density and morphology correlate with an abnormal BDNF content in the prefrontal cortex of the autistic-like mice C58/J. **Maqueda-Martínez Emely** and González-Arenas Aliesha. Instituto de Investigaciones Biomédicas, UNAM

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144	Plasmid Transfection in mouse brain using cationic polymers. **Katia R. Ávila Gutierrez**, Vania Martínez Godínez, Sylvie Remaud, Víctor H. Hernández González, Alejandra López-Juárez. División de Ciencias Naturales y Exactas. Universidad de Guanajuato

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146	Arsenic alters the expression but not the function of P2X7 and P2Y2 purinergic receptors in Neuro2a cells: implications for Alzheimer Disease. **Marcos Santiago Nava**, Mayra Delgado Ramírez, Rainald P. Ordaz Ramos, Aldo Rodríguez Menchaca, Rogelio Arellano Ostoa, Sergio Zarazúa Guzmán, Guadalupe Martel Gallegos. Laboratorio de Biomedicina, UAMZM-Universidad Autónoma de San Luis Potosí
148	GPR40 and GPR120 receptors activation with DHA and its implication in cytoskeleton rearrangement in hippocampal neurons of an autistic-like mouse. **Guzmán-Vázquez Sandra,** Barón-Mendoza Isabel, Flores-León Manuel, González-Arenas Aliesha. Instituto de Investigaciones Biomédicas, UNAM

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COGNITION AND BEHAVIOR

1	Nucleus accumbens shell single-unit activity encoding of reward probability estimation. **Jorge Benjamín Arroyo Casillas**, Esmeralda G. Fonseca de la Cruz, and Ranier Gutiérrez Mendoza. Department of Pharmacology, CINVESTAV
3	Differential patterns of Evoked Related Events of the retrieval of spatial and temporal contexts. **Ulises Caballero-Sánchez**, TV. Román-López, AY. Polo-Romero, AE. Ruiz-Contreras. Universidad Nacional Autónoma de México
5	Neuroprotective effects of Adiponectin in an Amyloid Beta1-42 model. **Sergio Alan Candelas Juárez**, Amor Herrera González, Carlos Beltrán Mondragón, Mara Guzmán Ruiz, Rosalinda Guevara Guzmán. Departamento de Fisiología, Facultad de Medicina, UNAM
7	Evidence-Integration Mechanisms of Rhythmic Stimuli Discrimination. **Espinoza Monroy Marisol** and de Lafuente Flores Victor Hugo Institute of Neurobiology, National Autonomous University of Mexico
9	Perceptual decision making in the intraparietal sulcus: Implications in the modulation of local field potential. **Flores Alonso Santiago I**. and De Lafuente-Flores V. Department of Neurobiology of Development and Neurophysiology, Institute of Neurobiology, UNAM Campus Juriquilla
11	Decision-making process in areas of sensory integration. **Goyri-Aguirre Miriam**, Rojas-Hortelano, Eduardo and De Lafuente-Flores, Victor Hugo. Department of Neurobiology of Development and Neurophysiology, Institute of Neurobiology, UNAM Campus Juriquilla
13	Optogenetic inhibition of the Dorsomedial versus Dorsolateral Striatum. **Llanos Moreno Argelia**, Cuevas-Vicente Nisa, Alatriste-León Hector, Valdez-Fernandez Yiatziry, Ramirez-Jarquín Josué Orlando & Tecuapetla Fatuel. Instituto de Fisiología Celular, UNAM
15	High-Fat and High-Fructose Diet-Induced Obesity Impair Recognition Memory in C57BL/6 Adult Mice. **Humberto Martínez Orozco**, Sofía Yolanda Díaz Miranda, Cuauhtémoc Sandoval Salazar, Joel Ramírez Emiliano, Luis Antonio Reyes Castro, Martha Silvia Solís Ortiz. Departamento de Ciencias Médicas, División de Ciencias de la Salud, Campus León, Universidad de Guanajuato
17	Association of Adiposity with Inhibitory Control and Prefrontal Symptoms in Women with Excess Body Weight. **María de los Remedios Moreno Frías**, Martha Silvia Solís Ortiz. Departamento de Ciencias Médicas, División Ciencias de la Salud Campus León, Universidad de Guanajuato.
19	Repetitive transcranial magnetic stimulacion (5 Hz) promotes learning and memory processes, increases the number of doublecortin associated cells and the axons of granule cells in Swiss-Webster female mice. **Palacios-Cabriales Diana M**, Meneses-San Juan David, Ortiz-López L and Ramírez-Rodríguez Gerardo Bernabé. Instituto Nacional de Psiquiatría "Ramón de la Fuente Muñiz"
21	Cortico-strital contribution to execution of a chain of sequences. **Sánchez-Fuentes Asai**, Ramírez-Armenta Kathia Itzel, Diaz-Hernandez Edgar, Ramirez-Jarquín Josué Orlando & Tecuapetla Fatuel. Instituto de Fisiología Celular, UNAM

DEVELOPMENT & AGING

23	An approach to the study of linguistic deficiencies in Alzheimer's patients through words association norms. **Luna-Umanzor Diana Iris**, Minto-García Aline, Ríos-Ponce Alma Esperanza, Jiménez-Flores Dania, Flores-Coronado Marco Antonio, Arias-Trejo Natalia. Facultad de Psicología, Universidad Nacional Autónoma de México
25	Relation of animal protein intake and brain dynamics in indigenous infants of an Isolated Me'phaa community. **Rosa María De la Fuente Rodríguez**, Olga Araceli Rojas Ramos, Ariatna Hernández Catillo, Rodolfo Solís Vivanco, Javier Nieto-Gutiérrez, Isaac González-Santoyo. Neuroecology Lab, Faculty of Psychology, National Autonomous University of Mexico
27	Regulation of actin cytoskeleton by p47 overexpression in cerebellar granule neurons. **Medina Ruiz Gabriela Itzetl** y Morán Julio. División de Neurociencias, Instituto de Fisiología Celular, Universidad Nacional Autónoma de México
29	Relation between the intake of lipids and the brain dynamics on indigenous children from a Me'phaa community**. Ariatna Hernández Castillo**, Olga Araceli Rojas Ramos, Rosa María de la Fuente Rodríguez, Rodolfo Solís Vivanco, Javier Nieto Gutierrez, Isaac González Santoyo. Neuroecology Laboratory, Facultad de Psicología, UNAM
31	The role of the autophagy during the early nervous system development. **Pilar Sarah Acevo-Rodríguez**, Sandra Cabrera-Benítez, Diana Escalante-Alcalde and Susana Castro-Obregón. Departamento de Neurodesarrollo y Fisiología, División de Neurociencias, Instituto de Fisiología Celular, UNAM
33	Development and validation of a biophysical mathematical model for studying aging in three types of hippocampal neuron. **Parra-Reyes J. Alejandra**, McKiernan Erin C. Department of Physics, Faculty of Science, UNAM
35	Effect of prolactin on the process of differentiation of mouse embryonic stem cells to cortical neurons. **Omar Martinez-Alarcon**, G. Madai Castillo-Villalon, Daniela Avila-Gonzalez, Guadalupe Garcia-Lopez, Anayansi Molina-Hernandez & N. Fabian Diaz. Departamento de Fisiología y Desarrollo Celular**.** Instituto Nacional de Perinatologia

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37	Early life stress, epigenetics and resilience, and their influence on the development of psychiatric illnesses. **Jael López-Martínez** , María del Pilar Gabriel-de la Torre, Miguel-Ángel Mayoral-Chávez. Centro de Investigación UNAM-UABJO
39	Bachelor's program on Neuroscience: UNAM. **Camila del Rio Castro**, Xarenny Jazmín Díaz Zarate, Allan Irasek Rico Becerra & Diana Monserrat Silvas Baltazar. Instituto de Fisiología Celular, UNAM

STRESS

41	Evaluation of the protective effect of resveratrol on behavioral alterations and oxidative stress in prenatally stressed rats. **Edith Zugaide-García**, Margarita López-Martínez, Alberto M. Guzmán-Grenfell, Philippe Leff-Gelman, Carlos Z. Gómez-Castro. Instituto Nacional de Perinatología
43	Effects of curcumin on oxidative damage in brain of mice fed a high fructose diet. **María C. León-García,** Joel Ramírez-Emiliano, Luz A. Ortega-Hernández, Martha S. Solís-Ortiz, Victoriano Pérez-Vázquez and Elena Franco-Robles. Departamento de Ciencias Médicas, División de Ciencias de la Salud, Campus León. Universidad de Guanajuato

GLIA

45	Reactive astrogliosis is exacerbated after spinal cord injury in diabetic rats**. Adriana Domínguez-Vázquez**, Pedro Medina-Granados, Cynthia Sámano-Salazar. Depto. de Ciencias Naturales e Ingeniería, UAM-Cuajimalpa
47	Translational control by silica nanoparticles exposure in glial cells. **Rodríguez-Campuzano Ada Génesis**, De Vizcaya- Ruiz Andrea, López-Bayghen Esther, and Ortega Arturo. Laboratorio de Neurotoxicología, Departamento de Toxicología, CINVESTAV-IPN
49	Rotenone damages cytoskeleton and reduces glutamine synthetase and GSH in rat astrocyte primary cultures. **María Fernanda Tovar-González**, Omar Fuentes-Lugo, Norma Serrano-García Marisol Orozco-Ibarra. Laboratorio de Neurobiología Molecular y Celular, Instituto Nacional de Neurología y Neurocirugía, "Manuel Velasco Suárez"

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51	Role of Palmitic Acid in the hyperphosphorylated state of tau protein. **Valeria Melissa García-Cruz**, Karina Sánchez-Alegría, Patricia Ferrera and Clorinda Arias. Departamento de Medicina Genómica y Toxicología Ambiental, Instituto de Investigaciones Biomédicas, UNAM
53	High fat diet-induced obesity development modulates thyrotropin releasing hormone biosynthesis in the juxtaparaventricular perifornical lateral nucleus of the hypothalamus in male rats. **Rosa María Uribe Villegas**, Oscar Eduardo Bastida Salazar, Marlen Asucena Ramírez Busto, Miguel Cisneros Ramírez, Patricia Joseph-Bravo, Jean-Louis Charli Casalonga. Instituto de Biotecnología, Universidad Nacional Autónoma de México

NEUROENDOCRINOLOGY

55	Thyrotropin-releasing hormone-degrading ectoenzyme null male mice are resistant to diet-induced obesity. **Cote-Vélez, Antonieta,** Hernández-Ortega, Karina, Aguilar-Vargas, Gabriela, Uribe, Rosa María, Joseph-Bravo, Patricia and Charli, Jean-Louis. Instituto de Biotecnología, Universidad Nacional Autónoma de México
57	Expression and hormonal regulation of mPRδ and mPRε in human glioblastoma cells. **Aylin Del Moral-Morales**, Juan Carlos González-Orozco, Ana Gabriela Medina Piña, Jose Moises Capetillo-Velázquez & Ignacio Camacho-Arroyo. Unidad de Investigación en Reproducción Humana, Instituto Nacional de Perinatología-Facultad de Química, UNAM
59	Stressed female rats during adolescence have a deficient response of HPT axis to energy demands. **Angélica Gutiérrez Mata**, Andrea Castillo Campos, Miguel Cisneros, Jean-Louis Charli, Patricia Joseph-Bravo. Departamento de Genética del Desarrollo y Fisiología Molecular, Instituto de Biotecnología, UNAM
61	Is peripheral thyrotropin-releasing hormone-degrading ectoenzyme a therapeutic target for diet-induced obesity? **Hernández-Ortega, Karina,** Anaya Mitzi Lucero, Uribe, Rosa María, Cote Vélez Antonieta, Parra-Montes de Oca Marco Antonio, Pérez Estrada José Raul, Joseph-Bravo Patricia and Charli Jean Louis. Instituto de Biotecnología, Universidad Nacional Autónoma de México
63	Stress during rat adolescence modifies the thyroid axis response to voluntary exercise. **Parra-Montes de Oca Marco Antonio**, Charli Jean-Louis, Joseph-Bravo Patricia.

	Departamento de Genética del Desarrollo y Fisiología Molecular, Instituto de Biotecnología, UNAM
65	β2-tanycytes thyrotropin-releasing hormone-degrading ectoenzyme regulates thyrotropin secretion. **Adair Rodríguez-Rodríguez**, Rosa María Uribe, Patricia Joseph-Bravo and Jean-Louis Charli. Instituto de Biotecnología, UNAM
67	Progesterone metabolite, allopregnanolone, promotes migration and invasion of human glioblastoma cells. **Carmen J Zamora-Sánchez**, Ignacio Camacho-Arroyo. Unidad de Investigación en Reproducción Humana, Instituto Nacional de Perinatología-Facultad de Química, Universidad Nacional Autónoma de México

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69	Anticonvulsive and Neuroprotective effect of Scammonin 1 and Tyrianthin C on cortex and hippocampus in mouse brain. **José Manuel Castro G**, Juana Villeda H, Ismael León R, María del Carmen Gutiérrez V. Laboratorio de Neurofarmacología, Centro de Investigación en Biotecnología. UAEM
71	Pioglitazone favors neurogenesis and increases dendrite spines in the hippocampus without affect learning and memory processes or depressive-like behavior in female Balb/C mice. **Hernández-Velasco Natalia**, Vega-Rivera Nelly M, Reyes-Haro Daniel and Ramírez-Rodríguez Gerardo Bernabé. Laboratory of Neurogenesis, Division of Clinical Research, National Institute of Psychiatry "Ramón de la Fuente Muñiz"
73	Influence of mental health and the use of antidepressant during pregnancy and its effect on the neurological development of Mexican children. **Meza-Rodríguez María del Pilar**, Garza-Morales Saúl Jesús, Fuentes-Medina Diana, Zorrilla-Dosal José Antonio, Farfán-Labonne Blanca, Padilla-García Manuel Alejandro, Leff-Gelman Felipe, Belmont-Gómez Aurora, Camacho-Arroyo Ignacio. Departamento de Neurociencias, Instituto Nacional de Perinatología

INTEGRATIVE PHYSIOLOGY

75	Changes in the functional coupling between mPFC and BLA associated with reversal learning of spatial memory task. **Estrada Reyes Yoana**, Olvera Cortés María Esther, Cervantes Alfaro José Miguel, López Vázquez Miguel Ángel. Laboratorio de Neurociencias, Facultad de Ciencias Médicas y Biológicas "Dr. Ignacio Chávez" UMSNH.
77	Pharmacological manipulation of the cannabinoid receptor type I in the basal ganglia output nuclei in a model of Parkinson's disease in mice. **González-Pereyra Perla**, Báez-Cordero Ana Silvia, Peña-Rangel Maria Teresa, Rueda-Orozco Pavel E. Departamento de Neurobiología del Desarrollo y Neurofisiología, Instituto de Neurobiología, UNAM
79	Evaluation of the participation of the central medial nucleus of the thalamus in a bimanual task and in the interhemispheric activity of the cortico-striatal circuitry. **Luma Annie Yolene**, Pimentel-Farfán Ana Karen, Peña-Rangel María Teresa, Rueda-Orozco Pavel E. Department of Neurobiology of Development and Neurophysiology, Institute of Neurobiology, UNAM
81	Role of the direct and indirect pathway of the basal ganglia in the adjustment of speed during the execution of motor sequences. **Ortega-Romero Diana Itzel**, Peña-Rangel María Teresa, Rueda-Orozco Pavel Ernesto. Departamento de Neurobiología del Desarrollo y Neurofisiología, Instituto de Neurobiología, UNAM

83	Pallidal GATs modulate cortical oscillations by inhibition of reticular neurons. **Villalobos Vásquez Nelson**, Ortiz Zárate Mindrid Ireri, Acosta Mejía Martha Teresa, Magdaleno Madrigal Víctor Manuel. Academia de Fisiología, Escuela Superior de Medicina, Instituto Politécnico Nacional
85	Sensory and Motor Cortical Input to Dorsal Striatum: Differences in Microcircuitry, Synaptic Physiology and Behavioral Effects. **Alex J. Yonk*, Branden D. Sanabria*, Sindhuja S. Baskar***, Christian R. Lee, David J. Margolis. *Equal contribution. Department of Cell Biology and Neuroscience, Rutgers, The State University of New Jersey

NEUROIMMUNOLOGY

87	The role of KChIP3 in the development of Alzheimer's disease. **Bolivar Jesus Arcos-Encarnación**, Eladio Cortes-Flores, Leopoldo Goméz-Caudillo, Sergio Manuel Encarnación-Guevara, Maribel Herrera-Ruiz, Gustavo Pedraza-Alva and Leonor Peréz-Martínez. Laboratorio de Neuroinmunobiología. Departamento de Medicina Molecular y Bioprocesos, Instituto de Biotecnología. UNAM
89	Evaluation of the expression of genes associated with inflammation and regeneration in rats immunized with the A91 peptide before a chronic spinal cord injury. **Juan Francisco-Márquez**, Marcela Garibay López, Adrián Flores-Romero, Elisa García-Vences, Antonio Ibarra and Roxana Rodríguez-Barrera. Facultad de Ciencias de la Salud, Universidad Anáhuac México
91	Pericyte detachment during sleep loss disrupts blood-brain barrier. **Fernanda Medina-Flores**, Gabriela Hurtado-Alvarado, Maria A. Deli, Beatriz Gómez-González. Posgrado en Biología Experimental, CBS, UAM-Iztapalapa
93	Caspase-1-dependent inflammation alters the protein levels of the TNF/TNFRII neuroprotector and the proBDNF/p75 neurodegenerative modules in a familial Alzheimer´s disease mouse model. **Jorge Luis Ochoa-Almazán**, Martha Pedraza-Escalona, Rodrigo Ramos-Acevedo, Magdalena Guerra-Crespo, Leonor Pérez-Martínez and Gustavo Pedraza-Alva. Laboratorio de Neuroinmunobiología. Departamento de Medicina Molecular y Bioprocesos, Instituto de Biotecnología. UNAM

NEUROPATHOLOGY

95	4-Aminopyridine protects against motor alterations in a chronic excitotoxic model of spinal motor neuron degeneration. **Acosta-Galeana Isabel**, Prior-González Mara, Tapia Ricardo. División de Neurociencias, Instituto de Fisiología Celular, UNAM
97	Evaluation of 25-OH Vitamin D levels in multiple sclerosis: association with clinical and hematological parameters in Mexican patients. **Arellano-Pliego Andrea Michel**, Playas-Pérez Gil, Urióstegui-Acosta Mayrut Osdely, Calixto-Gálvez Mercedes, González-Calixto Cecilia, Ramírez-Peralta Arturo, Vázquez-Villamar Mirna, Parra-Rojas Isela, Muñoz-Valle José Francisco, Muñoz-Barrios Salvador. Universidad Autónoma de Guerrero
99	Progesterone induces the activation of cSrc protein through its intracellular receptor in human glioblastoma cells. **Claudia Bello-Alvarez**, Aylin Del Moral-Morales and Ignacio Camacho-Arroyo. Unidad de Investigación en Reproducción Humana, Instituto Nacional de Perinatología-Facultad de Química, Universidad Nacional Autónoma de México
101	Chronic administration of glutamate decarboxylase inhibitors in the rat spinal cord induces motor alterations and motor neuron death. **Colin Elizabeth**, Tapia Ricardo. División de Neurociencias, Instituto de Fisiología Celular, UNAM

103	Effect of inhibition LPA1 in an in vivo glioblastoma model. **Mendoza-Cardozo Sonia**, De la Fuente-Granada Marisol, Valdés-Rives Silvia Anahí, González - Arenas Aliesha-Arenas. Instituto de Investigaciones Biomédicas, Universidad Nacional Autónoma de México
105	Allosteric modulation of nicotinic receptors reduces L-DOPA induced dyskinesias in parkinsonian mice. **Alejandra Liliana Gómez-Paz**, Marcela Palomero-Rivero, Diana Millán-Aldaco, Rene Drucker-colín, José Bargas-Díaz. Departamento de Neurociencia Cognitiva, Instituto de Fisiología Celular, UNAM, México
107	Autophagy inducers trehalose and metformin prevent dopaminergic cell death. **Yareth Gopar-Cuevas**, Rosa N. Díaz-Pérez, Odila Saucedo-Cárdenas, Gilberto Jaramillo Rangel, María de Jesús Loera-Arias, Roberto Montes-de-Oca-Luna, Humberto Rodríguez Rocha, Aracely García-García. Facultad de Medicina, Departamento de Histología, Universidad Autónoma de Nuevo León,
109	Effect of the environmental enrichment on klotho levels in transgenic mice. **Dania Vanessa Peláez-López**, Nahiatzi Guillermo-Román, Hector E. López-Valdés, Isabel Arrieta-Cruz, Hilda Martínez-Coria. Laboratorio Experimental de Enfermedades Neurodegenerativas, Facultad de Medicina, UNAM-Instituto Nacional de Neurología y Neurocirugía
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119	Human olfactory neural progenitor cells derived from the olfactory epithelium (hNS/PCs-OE) show differences in the soluble factors content in depression-diagnosed and in borderline personality disorder- patients. **Ortiz-López Leonardo**, González-Olvera Jorge, Dávalos-Guzmán Alan, Vegas-Rodríguez Javier, Flores-Ramos Mónica and Ramírez-Rodríguez Gerardo Bernabé. Instituto Nacional de Psiquiatría "Ramón de la Fuente Muñiz
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