



Sociedad Mexicana de Bioquímica, A.C.

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XXXII CONGRESO NACIONAL DE BIOQUÍMICA

4-8 DE NOVIEMBRE, 2018

Ixtapa Zihuatanejo, Guerrero

TRABAJOS SELECCIONADOS PARA PRESENTACIÓN ORAL

BIOLOGIA DE SISTEMAS I

Identification and Classification of Single Nucleotide Polymorphisms as Biomarkers associated with Dementia through Data Mining and Machine Learning

Erick Cuevas Fernández, Carlos Moncada Vázquez, Joel Sánchez Mendez, Montserrat Loredó Guillen, Heriberto Manuel Rivera

Evidence of the Red-Queen Hypothesis from Accelerated Rates of Evolution of Genes Involved in Biotic Interactions in *Pneumocystis*

Luis Delaye, Susana Ruiz-Ruiz, Enrique Calderon, Sonia Tarazona, Ana Conesa, Andrés Moya

Modeling the structure-function relationship in biological systems with machine learning

Fernando Fontove, Gabriel Del Río

Modeling the regulatory network of lymphopoiesis

Luis Mendoza

The cellular mechanisms of lifespan extension by metformin

Michelle Crisely Munguía Figueroa, Ceil Abreu Goodger and Alexander de Luna Fors

Effect of antibiotics in the ecological dynamic of microbial communities.

Daniela Reyes González, Rafael Peña Miller, José Utrilla Carreri and Ayari Fuentes Hernández

BIOLOGIA DE SISTEMAS II

Epikouros: Empowering society with scientific data

Gabriel Del Río, Daniel Yao, Jerónimo Vargas

Testing the Domino Theory of Gene Loss in *Buchnera aphidicola*: The Relevance of Epistatic Interactions

Luis Delaye, Gil Bor, Andrés Moya, David J. Martínez-Cano

Experimental evolution of resistance to antibiotics under different intensities of selective pressure.

Sandra Mayoral Álvarez, Rafael Peña Miller and Ayari Fuentes Hernández

IsomiR-index: a method for analyzing quantitatively the isomiR landscape

O. Omar Moreno-Proo, Mariana Flores-Torres, Filiberto Bautista-Moreno, S. Eréndira Avendaño Vázquez, C. Fabián Flores-Jasso



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De novo assembly of small RNA sequencing reads improves species assignment in combined parasite-host samples

Obed Ramírez-Sánchez, Cei Abreu-Goodger

Inquiry Based Science Education (IBSE) as a tool for learning Molecular Biology. The experience in México.

Viviana Escobar-Sánchez, James Karkashian Córdoba, Alicia González Manjarrez, Claudia Segal-Kischinevzky

BIOQUÍMICA I

Multi-protein regulation of intracellular pH during human sperm capacitation

Arturo Matamoros-Volante&Claudia L. Treviño

Effect of Ergosterol in the Tyrosine residue of the Bacilomycine D as a basis for studies of their interaction with lipid membranes

José Francisco Espinosa-Romero, Sathishkumar Munusamy and Carlos Muñoz-Garay

The cytochrome b carboxyl-terminal end is a central regulator of the bc₁ complex biogenesis in *Saccharomyces cerevisiae*

Daniel Flores-Mireles, Aldo E. García-Guerrero, Yolanda Camacho-Villasana, María Guadalupe Lozano-Rosas, Xochitl Pérez-Martínez

Biochemical basis of PirAvp/PirBvp toxins-receptor interactions: a galactosamine mediated binding in the epithelial cells of hepatopancreas of shrimp

Victorio-De Los Santos Marcelo; Vibanco-Pérez Norberto; Zenteno Edgar; Cano-Sánchez Patricia; Soto-Rodríguez Sonia

Growth and reserve lipids production with the non-pathogenic *Acinetobacter baylyi* strain ADP1 using different carbon sources

Karina J. Salcedo Vite¹, Juan C. Sigala Alanís², Daniel G. Segura González and Alfredo Martínez Jiménez

In vitro evaluation of the phosphate solubilization efficiency of fungal strains isolated from the rhizosphere of bean, corn and tomato plants.

Dorcas Zúñiga Silgado; Jorge Luis Folch Mallo

BIOQUÍMICA II

Structural studies on the tail domain of the human cytoplasmic Dynein-1

Edgar Morales Ríos, Saúl Santiago Sánchez and Andrew P Carter

Structural and thermodynamic contribution of the binding site residues in the lysine-arginine-ornithine binding protein (LAO) to ligand affinity and selectivity.

Jesús Renán Vergara Gutiérrez; Sergio Romero Romero; Isabel Velázquez López; Adela Rodríguez, Alejandro Sosa Peinado; Daniel Alejandro Fernández Velasco



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Computational approach to optimize the PTP1B inhibitor JM151.

Mara Ibeth Campos Almazán, Alfredo Téllez Valencia, María Alicia Hernández Campos, Antonio Romo Mancillas, Erick Sierra Campos, Mónica Andrea Valdez Solana, Claudia Isela Avitia Domínguez

Structural similarity search and biochemical characterization of methicillin resistant *Staphylococcus aureus* shikimate dehydrogenase inhibitors.

Daniel Isaac Enríquez Mendiola; Alfredo Téllez Valencia; Mónica Andrea Valdez Solana, Erick Sierra Campos, Claudia Isela Avitia Domínguez

Cooperativity in a dimeric enzyme is boosted by a novel mechanism

Jorge Marcos-Viquez, Annia Rodríguez-Hernández, Andrea Medina-García, Mario L. Calcagno, Adela Rodríguez-Romero and Ismael Bustos-Jaimes

Precise design of protein and DNA nanomaterials through the engineering of protein polymers and DNA binding domains

Armando Hernández-García & Renko de Vries

BIOTECNOLOGÍA I

***Pseudomonas chlororaphis* as a new model for shikimic acid production.**

Alma Alva; Fabián Moreno; Francisco Bolívar; Adelfo Escalante

Metabolic engineering to improve hydrogen production by *Escherichia coli*

Victor E. Balderas-Hernandez, Kathya P. Landeros Maldonado, Adam Smoliński and Antonio De Leon Rodriguez

***Aspergillus sydowii*, a halophile fungus with potentials to degrade lignocellulose, polycyclic aromatic hydrocarbons and pharmaceuticals: a transcriptomic and biochemical view**

Ramón Alberto Batista-García, Hubert Cabana, Heidy Peidro-Guzmán, Yordanis Pérez-Llano, Deborah González Abradelo, María del Rayo Sánchez-Carbente, Jorge Luis Folch-Mallol, Verónica Lira-Ruan

Rational design of chimeric endolysins with application in aquaculture

César Salvador Cardona--Félix, Lina Angélica Zermeño-Cervantes, María Zulema Juárez Cortés

An orthogonal system for beta-branching in polyketide biosynthesis

Pablo Cruz-Morales & Jay D Keasling

Subcellular fractionation and proteomics as tools to elucidate molecular events leading to a higher producer phenotype in CHO cells

Saumel Pérez-Rodriguez, María de Jesús Ramírez, Mauricio A. Trujillo-Roldán, Octavio T. Ramírez, Bjørn Gunnar Voldborg, Tune Wulff, Norma A. Valdez-Cruz



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BIOTECNOLOGÍA II

Folates and N₂ fixation: Compartmentalized distribution of folates derivatives in mitochondria, plastids, and Rhizobium from Phaseolus vulgaris nodules in relation with N₂ fixation levels

Wendy Judith Berdeja Zamudio, Jacob I. Bañuelos Trejo, Perla A. Ramos Parra, Jorge Benavides Lozano, and Rocío I. Díaz de la Garza

Folate and ethylene metabolic crossroads: Ethylene modulation of folate pools and methionine synthase expression and activity in climacteric fruit

Rocío Isabel Díaz de la Garza, Carolina García Salinas, and Perla A. Ramos Parra

The Intragenic Method for Maize Improvement: Drought Tolerance and Improved Photosynthesis.

Verónica Garrocho Villegas, Víctor Arturo González Hernández and Estela Sánchez de Jiménez

Antagonistic activities analysis of Trichoderma spp. isolates over Fusarium graminearum, fusariosis causal agent on Triticum aestivum (wheat)

Kate Manuela López Hernández, Patricia Abigail Larios Melgarejo, Mauricio Nahuam Chávez Avilés

Carotenoid/Bacteriochlorophyll ratio during the culture of Rhodospseudomonas palustris ATCC1007 at different nitrogen concentration

Carlos Jeovanny López Romero, Luis Gilberto Torres Bustillos, Edgar Salgado Manjarrez, Elvia Inés García Peña

BISPHENOL-A ON THE GROWTH AND ENZYMATIC ACTIVITY OF Aspergillus fumigatus

Binicio Ramírez-Mendoza, Alberto de Jesus Ortiz-Zamora, Josué Israel Zamora-Zamora, José Luis Torres-García, Gabriela Córdoba-Sosa y 1Miriam Ahuactzin-Pérez

BIOTECNOLOGÍA III

Design of artificial virus-like protein-DNA nanoparticles with programmable self-assembly

Carlos Calcines Cruz, Javier Fernández Segura, Itzel González Carmona, Lucila Arroyo Rabasa, Armando Hernández García

Study of phenolic compounds present in tequila vinasse for its recovery and integral use on biorefinery processes

Cornejo-Corona Ivette, Orona-Tamayo Domancar, Ramírez-Hernández Christian Eduardo, Rodríguez-Rodríguez, Stephanie Maviel & Guerrero-Barranco Arturo

New source of natural bioactive compounds: Phenolic compounds and melanin of residues from energetic plant biomass with a high potential of nutraceuticals

Domancar Orona Tamayo, Elizabeth Quintana Rodríguez, Christian Eduardo Ramírez-Hernández, Ivette Cornejo Corona, José de Jesús Esparza Claudio, María Elena Valverde & Octavio Paredes López².

Bacterial biodegradation of endocrine disruptors di-(2-ethylhexyl) phthalate and di-isononyl phthalate

Marco Antonio Pereyra Camacho, Víctor Emmanuel Balderas Hernández, Antonio De León Rodríguez



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Characterization of catechol dioxygenases produced by aromatic hydrocarbons-degrading *Pseudomonas* strains obtained from the Gulf of México for its use in bioremediation.

Selma Julieta Rodríguez-Salazar, Sofía Millán-López, Katya Ornelas Ocampo, José Luis Rodríguez Mejía, Luis Felipe Muriel-Millán, Liliana Pardo-López

Antimicrobial activity of redclaw crayfish *Cherax quadricarinatus* Pro-rich recombinant peptide

Gisela Ruvalcaba-Rodríguez, Javier Jearim Maldonado-Romo, Lizandro René Rivera-Rangel, David Chavez-Flores, Antonio García-Triana

ESPECIES REACTIVAS DEL OXÍGENO

Dioxygen Avoidance Theory: An experimentally validated mathematical model for ROS-mediated cell differentiation

Wilhelm Hansberg and Elisa Domínguez-Hüttinger

Influence of redox signaling on the regulation of the Erk1/2 kinase and activation of the transcription factor Nrf2 in hearts with post-conditioning

Macías-López Arturo, Jorge Díaz-Ruiz, José Guevara-Chávez, Alcalá-Vargas Francisco and Buelna-Chontal Mabel

Transcriptome analysis of the antagonistic effect of NADPH oxidase gene RbohB in the common bean after rhizobial and arbuscular mycorrhizal inoculation

Citlali Fonseca-García, Alejandra E. Zayas, Jesús Montiel, Noreide Nava, Enrique Merino, Marco Juárez, Federico Sánchez (†), Carmen Quinto

A LORELEI characterization during the Rhizobium-legume interaction

Pascual Morales Edgar J., Cesario Solís Mariana, Quinto Carmen, and Cárdenas Torés Luis

Global gene expression analysis reveals a persistent activation of NRF2 in liver carcinogenesis: Implications in cancer drugs resistance.

Julio Isael Pérez-Carreón, Carlos David López-Torres, Dafne Guerrero-Escalera, Paulette Castro-Gil, Saúl Villa-Treviño, Julia Torres-Mena, Norma Arely López-Hernández, Jaime Arellano-Robledo

Development of monitoring oxygen and carbon dioxide transfer rate (OTR and CTR) device and cotton closure simulation during *Pichia pastoris* shake flask cultures

Daniel Cabrera Santos; Mauricio A. Trujillo Roldán

GENETICA I

Zinc dependent and HIZR-1 mediated activation of HLH-30 and the autophagy-lysosomal pathway is required for zinc homeostasis

Ciro Cubillas, Daniel Schneider, and Kerry Kornfeld

Quantitation of the relative protein levels of *Debaryomyces hansenii* catalases A and T through their fusion to a fluorescent reporter

Brandon Bustos-García, Claudia Segal-Kischinevzky, Viviana Escobar-Sánchez



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Analysis of the *Physcomitrella patens* methylation machinery mutant on development and stress response

Laura Esther Estrada Martínez, José Luis Reyes Taboada, Miguel Ángel Villalobos López, Catalina Arenas Huertero

Inaccurate microRNA detection in every cell culture due to Fetal Bovine Serum

Carlos Fabián Flores-Jasso, Mariana Flores Torres, Selma Eréndira Avendaño-Vázquez

Optogenetics applied to PLK4, the master regulator of the centrosome

Eduardo Brito-Alarcón, Rodrigo Alain Migueles Ramirez, Chris Wood & Adán Guerrero

Myelin and Lymphocyte Protein (MAL) induces MUC1 lysosomal degradation.

Antonio Roberto Lara Lemus, Bismarck Vázquez Almazán, Olivia Durán, Alejandro Leija and Ana Karina Saldaña Villa

GENETICA II

Defensin g-Thionin from *Capsicum chinense* induces apoptosis in the human breast cancer cell line MCF-7 and regulate histone H3 epigenetic modifications

María T. Arceo-Martínez, Jaquelina J. Guzmán-Rodríguez, Zoraya Palomera-Sánchez, Alejandra Ochoa-Zarzosa, Joel E. López-Meza

CTCF-KDM4A complex correlates with histone modifications that negatively regulate the tumor suppressor CHD5 gene expression in cancer cell lines

Lissania Guerra-Calderas, Rodrigo González-Barrios, Carlos César Patiño, Nicolás Alcaraz, Marisol Salgado-Albarrán, Clementina Castro Hernández and Ernesto Soto-Reyes

CTCF regulates IL6 expression in breast cancer cells

Gustavo Ulises Martínez-Ruiz, Guillermo Aquino-Jarquín, Ricardo Valle-Ríos, Jorge Melendez-Zajgla, Miguel Ángel Quevedo-Castillo

Methylation pattern of the human ATP2A3 gene promoter in gastric and colon cancer cell lines

Ángel Zarain-Herzberg, Iván Meneses-Morales, Eduardo Izquierdo-Torres, Lucía Flores-Peredo and Gabriela Rodríguez

***Candida glabrata* cis-acting element Sil2126 negatively regulates the expression of adhesion-encoding genes through chromatin loop formation**

Eunice López-Fuentes, Grecia Hernández-Hernández, Leonardo Castanedo, Guadalupe Gutiérrez-Escobedo, Katarzyna Oktaba, Alejandro De las Peñas, and Irene Castaño

Genetic analysis of aging factor SWR1 in *Saccharomyces* and *Drosophila*

Judith Ulloa Calzonzin, Katarzyna Oktaba Sosin, Alexander De Luna Fors



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GENETICA III

The TRPV4 cationic channel regulates the transcriptional activity of β -catenin through a direct interaction modulated by its channel activity

Refugio García-Villegas, Heidi Gabriela Espadas-Álvarez, Angélica Rueda y Sánchez de la Vega, Jacqueline Martínez-Rendón, Isabel Larré, Arturo Matamoros, Tatiana Romero-García

Using yeast genetic synthetic lethality to study NPA3 function.

Martín A. Mora-García, Tania A. Félix-Pérez, Diana I. Ascencio, Alejandro Juárez-Reyes, Lina R. Riego-Ruiz, Alexander DeLuna, Mónica R. Calera, and Roberto Sánchez-Olea

The pyrophosphohydrolase RppH is involved in the control of RsmA/CsrA expression in *Azotobacter vinelandii* and *Escherichia coli*

Leidy Patricia Bedoya-Pérez, Luis Felipe Muriel-Millán, Soledad Moreno, Elva Quiroz-Rocha, Nancy Rivera-Gómez, Guadalupe Espín

A long intergenic non-coding RNA is a novel positive regulator of the ABA FIVE-BINDING PROTEIN (AFP1) in *Arabidopsis thaliana*

Dhamar Gabriela Rodríguez Tenorio, Rosa Angélica Montelongo, Jaime Aportela Corte, Catalina Arenas Huertero

Methylation marks on the S-RNase promoter suggest a epigenetic regulation associated with a Gypsy retrotransposon-like sequence

Renata Salcedo Sánchez, Yuridia Cruz-González Zamora, Felipe Cruz García

Experimental analysis on the betIBA operon and betT1 gene promoters from *Pseudomonas aeruginosa* PAO1

Erick Jael Palomo Paz, Isabel Sánchez Morales, Javier Andrés Juárez Díaz, and Rosario A. Muñoz Clares

GENETICA IV

In vitro development of splice-switching oligonucleotides to revert intronic DRD2 polymorphisms effect associated to Substance Use Disorders

Alejandro Bustos Cortés, Selma Eréndira Avendaño Vázquez

Finding a 5-hydroxymethylcytosine “fingerprint” during hepatocyte differentiation. A clue for early cancer detection and intervention?

Jesús Rafael Rodríguez-Aguilera, Szilvia Ecsedi, Marie-Pierre Cros, Chloe Goldsmith, Nuria Guerrero-Celis, Rebeca Pérez Cabeza-de-Vaca, Félix Racillas-Targa, Héctor Hernández-Vargas and Victoria Chagoya de Sánchez

Participation of the epigenetic factor BORIS in transcriptional regulation of genes involved in ovarian cancer

Ernesto Soto-Reyes, Marisol Salgado-Albarrán, Rodrigo González-Barrios, Nicolás Alcaráz, Lissania Guerra-Calderas, Clementina Castro, Elena Arechaga-Ocampo, Yesennia Sánchez-Pérez, Alejandro García-Carrancá, Jan Baumbach



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Epigenetic modulation of Ca²⁺ homeostasis genes by Resveratrol helps to explain its anticancer properties

Ángel Zarain-Herzberg, Eduardo Izquierdo-Torres, Gabriela Rodríguez Rodríguez and Iván Meneses Morales

Long term effect of early overnutrition in the transcriptome of Wistar rat liver (*Rattus norvegicus*)

Miguel Angel Espinoza Camacho, Gerardo Sanchez Garcia, Luis Antonio Reyes Castro, Elena Zambrano González, Maria Elizabeth Tejero Barrera, Enrique Hong Chong and Laura del Bosque Plata

Comparison of microRNAs quantity in blood serum on patients from 65 years and older with frailty and patients clinically functional

García-Gamboa Ada Paulina, Rivera Sánchez José de Jesús, Fonseca-Sánchez Miguel Ángel, Queipo García Gloria Eugenia

INMUNOLOGÍA

Therapeutic model anti tumoral targeting E5 protein of human papillomavirus 16 to dendritic cells in vivo

Oscar Badillo-Godínez, Lilia Chihu-Amparán, Adolfo Pedroza-Saavedra, Laura Bonifaz-Alfonzo, Fernando Esquivel-Guadarrama, Lourdes Gutiérrez-Xicotencatl

Apoptosis of mouse hippocampal cells induced by *Taenia crassiceps* metacestode factor

Natalia Ivanovna Copitin Niconova, Nadia Zepeda Córdova, Sandra Georgina Solano Gálvez, José Luis Chávez Juárez, Ana María Fernández Presas, Fernando García Hernández, Patricia Tato Zaldívar, José Luis Molinari Soriano

Searching for the natural ligand of the Human Aminopeptidase N (CD13)

López- Cortés, Georgina Ivette. Ortega- Soto, Enrique

Lipids induce the formation of germinal centers in the same time as a protein antigen

Claudia Albany Reséndiz Mora, Viridiana Galicia Galicia, Sandra Laura Vela Patiño, Monserrat Figueroa Pensado, Luis Lamas Garcia, Isabel Baeza & Carlos Wong Baeza

A *Taenia crassiceps* factor induces apoptosis of spleen CD4⁺ T cells and TGF- β and Foxp3 gene expression in mice

Nadia Zepeda Córdova, Rocío Gabriela Tirado Mendoza, Natalia Ivanovna Copitin Niconova, Sandra Georgina Solano Gálvez, Ana María Fernández Presas, Patricia Tato Zaldívar, José Luis Molinari Soriano

BIOQUÍMICA Y BIOL MOL PLANTAS

Maize root exudates. Large-scale phenotyping of a tropical and temperate diversity panels.

Martha G. Lopez-Guerrero^{1, a}, Peng Wang^{1, b}, Sophie Alvarez^b, Daniel P. Schachtman^c, Karin van Dijka



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Low levels of polyamine alter resistance in Arabidopsis to necrotrophic and hemi-biotrophic pathogens

Ana Isabel Chávez Martínez, María Azucena Ortega Amaro, Alicia Becerra Flora, Martha Torres Basaldúa, Mario Alberto Serrano Ortega and Juan Francisco Jiménez Bremont

Crosstalk between Methyl jasmonate and Polyamines on the Arabidopsis growth

María Azucena Ortega Amaro, Silvia Pérez Sánchez, Ana Isabel Chavez Martinez, Montserrat Chacón Flores, Alicia Becerra Flora and Juan Francisco Jiménez Bremont

The role of the TRPV channel in osmobiogenesis of the tardigrade *Hypsibius dujardini*

Erendira Anai De la Torre-Gonzalez, Zyanya Mayoral-Peña, Fausto Arellano-Carbajal

NaTrxh is an essential protein in the pollen rejection response in Nicotiana, which reduces to S-RNase increasing its activity

María Daniela Torres Rodríguez, Bruce McClure, Lilian González Segura and Felipe Cruz García

Characterization of the function of long non-coding RNA lncTATA on the development of *Arabidopsis thaliana*

Susana Isabel Vargas Camacho, Jaime Apórtela Cortez y Catalina Arenas Huertero

MEDICINA I

Identification and selection of genetic biomarkers for atherosclerosis

Javier Álvarez Arroyo, María Montserrat Loredo Guillén, Joel Sánchez Méndez, Erick Cuevas Fernández and Heriberto Manuel Rivera

Establishment of ex vivo and in vivo models for the study of bone remodeling

Brenda Ivette Iduarte-Frias, Liria M Fajardo-Yamamoto, Pierrick GJ Fournier, Patricia Juárez

Profibrotic Role of Matrix Metalloproteinase-28 and Potential Diagnostic Biomarker for Idiopathic Pulmonary Fibrosis

Mariel Maldonado, Ivette Buendía-Roldán, Alfonso Salgado-Aguayo, Iliana Herrera, Moisés Selman, Annie Pardo

Ageing and absence of Zmpste24 protects premature ageing mice from developing bleomycin-induced pulmonary fibrosis through the overexpression of antifibrotic microRNAs.

Jazmín Calyeca, J Raúl Olmos, Rogelio Jasso, Miguel Gaxiola, Quetzali Rivera, Yalbi Bálderas, Vilma Maldonado, Moisés Selman and Annie Pardo

Restoration of circadian levels of NAD⁺ reduces physiopathology caused by a high-fat diet

Quetzalcoatl Escalante Covarrubias, Lorena Aguilar Arnal

Omega-3 fatty acids in diabetes

Ricardo Mejía Zepeda, Ramiro Perusquía García, Diana A. Martiñon Ramírez, Raymundo Coate Camacho, Uriel A. Vicenteño Monroy, Karla Avendaño Briseño, Jorge Escutia Martínez, María Fernanda Campos Guzmán and María del Consuelo Figueroa García



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MEDICINA II

Expression of PD1 and TIM3 in the inflammatory peritumoral infiltrate of patients with breast cancer

Miguel Angel Fonseca-Sánchez, Yanelly Trujillo Cabrera, Carlos Lara, Manuel Acuña Tovar, Joselin Hernández-Ruiz, Gloria Queipo

Activation of energy metabolism by estrogen in human breast carcinoma

Silvia Cecilia Pacheco Velázquez, Ingrid Itzayanna Ortega Mejía

LPS-induced cancer progression on triple negative breast cancer cells via nitric oxide signaling pathway mediated by TLR4/NF- κ B

Karina Ruiseco-Flores, María Julieta López-Cuevas, Eduardo Monjaraz-Guzmán

Antiproliferative effect of molecular iodine and cyclophosphamide in acute lymphoblastic leukemia cells

Soria-Ornelas Maritza L, Delgado-González Evangelina, Aceves Carmen

Analysis of irisin protein expression, in infiltrating breast cancer, in postmenopausal women with different body mass indexes

María Elena Tejeda Hernández, Patricia Canto, Alberto Tenorio, Ramón Coral- Vázquez, Verónica Bautista Piña, Claudia Vega García, Alejandro Zentella Dehesa, Marcela Leal García, Juan Pablo Méndez

Over-elongation of centrioles in cancer promotes centriole amplification and size deregulation, as recurrent features of cancer cells.

Adan Guerrero, Gaelle Marteil, Andre F. Vieira, Bernardo P. de Almeida, Pedro Machado, Susana Mendonca, Marta Mesquita, Beth Villarreal, Irina Fonseca, Maria E. Francia, Katharina Dores, Nuno P. Martins, Swadhin C. Jana, Erin M. Tranfield, Nuno L. Barbosa-Morais, Joana Paredes, David Pellman, Susana A. Godinho, Monica Bettencourt-Dias

MICRO

Mixing synthetic ecology and metagenomics towards mine waste bioremediation

Luis D. Alcaraz, Miguel Romero, Diana Gallego, Jazmín Blaz, Arely Lechuga, Hugo Barajas, José Martínez Rodríguez, Francisco Molina-Freaner, and Rocío Cruz-Ortega

Strategy to identification of mutations in resistant Mycobacterium tuberculosis isolates in Jalisco Mexico

Guadalupe Gutierrez-García, Martin López-Rodríguez, Natividad Ayala-Chavira, Blanca Torres-Mendoza, Eduardo Vázquez-Valls and Ikuri Álvarez-Maya

Characterization of a putative TCS implicated in the response to salinity stress in Rhizobium etli CFN42

David Correa-Galeote, Susana Rodríguez, David Zamorano-Sánchez and Lourdes Girard



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Identification and characterization of a family of outer membrane proteins of *Helicobacter pylori*, which scavenges iron from human sources.

José de Jesús Olivares-Trejo, Marco Antonio González-López, Cristhian Sánchez-Cruz

Inhibition of the quorum sensing system is not enough to suppress virulence of *Pseudomonas aeruginosa*

Martín Paolo Soto-Aceves, Miguel Cocotl-Yañez, Israel Castillo-Juárez, Gloria Soberón- Chávez

STRATEGIES OF *Avibacterium paragallinarum* TO SUCCESSFULLY COLONIZE HOST TISSUES

María Elena Cobos Justo, Brenda Romero Hernández, Fernando Pérez Cortés Patricia Sánchez Alonso, Erasmo Negrete Abascal, Víctor Pérez Márquez, Candelario Vázquez Cruz

NEUROCIENCIAS

VASOINHIBINS PROMOTE APOPTOTIC CELL DEATH IN HIPPOCAMPAL NEURONAL PRIMARY CULTURES

Rodrigo Manuel Aroña, Edith Arnold, Fernando Macías, Miriam Ulloa, Josué Rivera, Carmen Clapp, Gonzalo Martínez de la Escalera

Effect of oxidative stress on the P2X7 purinergic receptor and the glycogen synthase kinase transcriptase, in the hippocampus of the rat exposed to low doses of ozone

Velázquez-Pérez Raúl, Rodríguez-Martínez Erika, Valdés-Fuentes Marlen, Selva Rivas-Arancibia

Study of the differences between the proteomic profile of the dorsolateral prefrontal cerebral cortex of individuals who died by suicide and of individuals who died from other causes

Manuel Alejandro Rojo – Romero, Nora Andrea Gutiérrez – Nájera, Jonatan Torres – Campuzano, Ana Luisa Romero – Pimentel, Mirna Edith Morales – Marín, Fernando García – Dolores, Roberto Cuauhtémoc Mendoza – Morales, Alejandra Mendoza – Larios, Ernesto Díaz – Otáñez, Eli Elier González – Sáenz, Humberto Nicolini – Sánchez

Prolactin protects rat cortical astrocytes against oxidative stress.

Miriam Ulloa, Fernando Macías, Rodrigo Manuel Aroña, Carmen Clapp, Gonzalo Martínez de la Escalera, Edith Arnold

The role of autophagy and cellular senescence during the development of spinal cord and differentiation of motoneurons

Jorge Antolio Domínguez-Bautista and Susana Castro-Obregón

Cellular systems proposed as a model for the study of dementia

Fernanda Anaid Villarreal Reyes; Erick Cuevas Fernández ; Heriberto Manuel Rivera

TOXICOLOGÍA

Phytochemical scrutiny and evaluation of the biological activity of wood extracts

Malinali Ambriz-Ortiz, Josué Altamirano-Hernández, Crisanto Velázquez-Becerra



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Characterization of the interaction of the antimicrobial peptides Pin2 and Pin2 [GVG] using lipid membrane model systems

Brandt Bertrand, Sathishkumar Munusamy, Gerardo Corzo, Iván Arenas Sosa, Carlos Muñoz-Garay

FIG1-dependent cell death during cell cycle arrest in yeast

Vladimir Juarez A, Gabriel Del Rio

Moringa oleifera seed prolamin fraction and its inhibitory capacity on the angiotensin converting enzyme-I

Jesús Ricardo Pérez Velázquez, Mónica Andrea Valdez Solana, Miguel Aguilera Ortiz, Jorge Armando Meza Velázquez y Erick Sierra Campos

Lupresan, a new drug that prevents or reverts the formation of lipidic particles that trigger a lupus mouse model

Carlos Wong Baeza; Claudia Albany Reséndiz Mora; Luis Alfonso Lamas García, Sandra Vela Patiño, Irene Nevárez Lechuga, Juan Carlos Santiago Hernández; Carlos Wong Ramírez; María Isabel Baeza Ramírez

Highly purified extracellular vesicles from Fetal Bovine Serum reveal a mutually exclusive two-set of microRNAs

Filiberto A. Bautista-Moreno, Mariana Flores-Torres, O. Omar Moreno-Proo, S. Eréndira Avendaño-Vázquez, C. Fabián Flores-Jasso

TRANSDUCCIÓN I

Identification of Novel Substrates of Protein Tyrosin Phosphatase 1B in Breast Cancer Cells Through SILAC-based Phosphoproteomics

Luis Enrique Arias Romero, Olga Villamar Cruz and Marco Antonio Loza Mejía

Role of pALT^{Ink4a/b} in mouse embryonic fibroblasts during the establishment of cellular senescence

Miguel del Ángel Muñoz and Susana Castro Obregón

Transcription analysis of endothelial cells treated with tumor soluble factors of cell line ZR-7530

Andrei Ivan Favela Orozco, Alberto Jose Cabrera Quintero, José Luis Ventura Gallegos, Beatriz Mora Ramiro, Mayte Cervantes Badillo, Minerva Janini Mejía Rangel, Martin Arturo Gallardo Vera, Juan Pablo Aragón Hernández, Jorge Román Audifred Salomón, Alejandro Zentella Dehesa

The importance of cell context: Ski and SnoN regulatory mechanisms in hepatocytes

Diana G. Ríos-López, Cassandre Caligaris, Genaro Vázquez-Victorio, Marcela Sosa-Garrocho, Alvaro Marín-Hernández, Marina Macías-Silva

Wnt pathway-related Extracellular Antagonists expression in osteoblast-like cells

Alma Y. Parra-Torres, Juana Enríquez and Rafael Velázquez-Cruz



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TRANSDUCCION II

The role of Voltage-Gated Sodium Channels Subunits in Osteosarcoma Metastasis

Nidia Ednita Beltrán Hernández, Heriberto Manuel Rivera

Role of Transforming Growth Factor Beta in Neuroblastoma Bone Metastasis

Patricia Juárez, Liria M Fajardo-Yamamoto, Brenda I Duarte, Pierrick GJ Fournier

Tomosyn functions as a PKC δ -regulated fusion clamp in mast cell degranulation

Iris K. Madera-Salcedo, Luca Danelli, Neeraj Tiwari, Bárbara Dema, Emeline Pacreau, Shamila Vibhushan, Joëlle Birnbaum, Chantal Agabriel, Valérie Liabeuf, Caroline Klingebiel, Gaël Menasche, Marina Macias-Silva, Marc Benhamou, Nicolas Charles, Claudia González-Espinosa, Joana Vitte and Ulrich Blank

Genomic stability is promoted by autophagy and NR4A nuclear receptors

Muciño Hernández G and Castro Obregón S.

Characterization of the function of the non-coding intermediate RNA ImncEIN2 in the ethylene perception pathway

Jesús Nieto Hernandez, Jaime Aportela Cortez, Sergio Casas Flores, Catalina Arenas Huertero

Natural intra-species variation of the mutational effects of the TOR pathway in cell survivorship

J. Abraham Avelar-Rivas, Alexander De Luna