- SAIB -
52th Annual Meeting
Argentine Society for Biochemistry and Molecular Biology

LII Reunión Anual
Sociedad Argentina de Investigación en Bioquímica y Biología Molecular

November 7th–10th, 2016
Cordoba, República Argentina
Pabellon Argentina Universidad Nacional de Cordoba

Cover Page:

Confocal microscopy images of Arabidopsis thaliana root are displayed in the cover. The selected roots are expressing a GFP reporter of a mitotic cyclin (CYCB1;1-GFP, green), also they are counterstained with propidium iodide (IP, red) to display the cell structure. In order to follow the progression through the cell cycle phases, the root cells were synchronized in S phase using HU, and after pictures were taken every 2 hours. This type of experiment was also used to generate RNA samples to analyze the dynamics of different gene expression during the cell cycle. Inside the circle, which shows the cell cycle phases, images of cells expressing a histone fused to the fluorescent protein VENUS and stained with IP, are displayed. Those images allow following the steps of mitosis in vivo inside the root (PL-P56: Identification of cell cycle regulators inplants, by Goldy, C; Ercoli, MF; Vena, R; Palatnik, J, Rodriguez, Ramiro E.)

Diseño de tapa: Natalia Monjes

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Universidad Nacional del Sur

DELEGATES OF SCIENTIFIC SESSIONS

-Cell Biology-
Laura Morelli
IIBBA – CONICET

-Lipids-
Ana Ves Losada
INIBIOLP - CONICET. Universidad Nacional de La Plata

-Microbiology-
Viviana Rapisarda
INSIBIO - CONICET. Universidad Nacional de Tucumán

-Plant Biochemistry and Molecular Biology-
Jorgelina Ottado
IBR - CONICET. Universidad Nacional de Rosario

-Signal Transduction-
Alejandro Colman Lerner
IFIBYNE–CONICET, Universidad de Buenos Aires

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1965-1968	*LUIS F. LELOIR*

Monday, November 7	Tuesday, November 8	Wednesday, November 9	Thursday, November 10
	9:00 - 11:00 **Symposia** *Room A (Sala de las Americas):* **Plants** *Room B(Salon de Grados):* **Lipids**	9:00 - 11:00 **Symposia** *Room A (Sala de las Americas):* **Cell Biology-PABMB-South Cone** *Room B (Salon de Grados):* **Microbiology**	9:00 - 11:00 **Symposia** *Room A (Sala de las Americas):* ***ISN-CAEN* Neuroscience** *Room B (Salon de Grados):* **Signal Transduction-COB**
	11:00-11:30 Coffee break	11:00-11:30 Coffee break	11:00-11:30 Coffee break
	11:30-12:30 **PABMB Plenary Lecture** *Charlie Boone* *Room A (Sala de las Américas)*	11:30-12:30 **"Héctor Torres" Lecture** *Raul Andino* *Room A (Sala de las Américas)*	11:30-12:30 **"Ranwel Caputto" Lecture** *Carlos Dotti* *Room A (Sala de las Américas)*
	12:30 Lunch	12:30 Lunch	12:30 Lunch
14:00 Registration	14:30-16:00 **Oral Communications** *Room B (Salon de Grados):* **Plants (PL-C01 to PL-C06)** *Room C (Salon Rojo):* **Structural Biology (SB-C01 to SB-C03)** **Biotechnology (BT-C01 and BT-C03)** *Room D(Salon Azul):* **Enzymology (EN-C01 and EN-C03)** **Neuroscience (NS-C01-C02)**	14:30-16:30 **Oral Communications** *Room B (Salon de Grados):* **Plant (PL-C07 to PL-C13)** *Room C (Salon Rojo):* **Cell Biology (CB-C01 to CB-C08)** *Room D (Salon Azul):* **Signal Transduction (ST-C01 to ST-C06)**	14:30-16:30 **Oral Communications** *Room B (Salon de Grados):* **Plants (PL-C014 to PL-C21)** *Room C (Salon Rojo):* **Lipids (LI-C01 to LI-C08)** *Room D (Salon Azul):* **Microbiology (MI-C01 to MI-C06)**
	16:10-17:10 **"Alberto Sols" Lecture** *Javier De Las Rivas* *Room A (Sala de las Américas)*	16:45-17:30 **The COB Short Talk** *Javier Martinez* *Room A (Sala de las Américas)*	16:40 Coffee break 16:40-18:40 **Poster Session** *Hall Pabellón Argentina* **BT-P01 to BT-P21 CB-P47 to CB-P67** **SB-P01 to SB-P03 ST-P01 to ST-P27** **NS-P01 to NS-P12 EN-P01 to EN-P17**
18:00 – **UNC Ceremony** **Honoris Causa Prof. Dr. B Alberts** *Room A (Sala de las Américas)* 18:30 - 19:00 **Opening Ceremony**	17:10 Coffee break 17:10 – 19:00 **Poster Session** *Hall Pabellón Argentina* **PL-P01 to PL-P35 LI-P01 to LI-P36** **MI-P01 to MI-P30**	17:30 Coffee break 17:30-19:30 **Poster Session** *Hall Pabellón Argentina* **CB-P01 to CB-P46 MI-P31 to MI-P51** **PL-P36 to PL-P71**	18:45-19:45 **Closing Lecture** *Carolina Vera* *Room A (Sala de las Américas)*
19:00 - 20:15 **Opening Lecture** **IUBMB Jubilee Lecture** *Bruce Alberts* *Room A (Sala de Las Américas)*	19:10-20:00 **Plenary Lecture** *Adriana Grupppi* *Room A (Sala de las Américas)*	19:45 **SAIB General Assembly** *Room A (Sala de las Américas)*	19:45- **Closing Ceremony & Awards** *Room A (Sala de las Américas)*
20:30 Cocktail			22:00 Closing Dinner

SAIB 2016

MONDAY, November 7th, 2016

14:00 **REGISTRATION**

18:00- ***UNC CEREMONY-HONORIS CAUSA PROF. BRUCE M. ALBERTS***

SALA DE LAS AMERICAS

18:30-19:00 ***OPENING CEREMONY***

- Jose Luis Bocco
SAIB President
CIBICI, CONICET - Universidad Nacional de Cordoba, Argentina

19:00-20:15 ***OPENING LECTURE "IUBMB JUBILEE LECTURE"***

- Bruce M. Alberts
Department of Biophysics and Biochemistry
University of California San Francisco, USA

"Spreading Science throughout Society: A Challenge for the 21st Century"

Chairperson: Hugo Maccioni

20:30 ***WELCOME COCKTAIL***

Patio de Las Palmeras Pabellon Argentina

TUESDAY, November 8th, 2016

09:00-11:00 ***SYMPOSIA***

Room A Sala de las Americas

PLANT SYMPOSIUM
Chairpersons: Juan C. Diaz Ricci and Estela Valle

-Regine Kahmann
Max Planck Institute for Terrestrial Microbiology, Dept. Organismic Interactions, Marburg, Germany

"Functional analysis of secreted effector of Ustilago maydis essential for host colonization"

-Pablo Manavella

Instituto de Agrobiotecnología del Litoral (IAL), Centro Científico Tecnológico Santa Fe (CCT), Santa Fe, Argentina

"Post-transcriptional regulation of the micro RNA pathway"

-John Lunn
Max Planck Institute of Molecular Plant Physiology, Potsdam-Golm, Germany

"Trehalose-6-phosphate and sucrose – A tale of two sugars"

-Jose Estevez
Fundación Instituto Leloir and IIBBA-CONICET, Ciudad Autónoma de Buenos Aires Argentina

"ARF5-RSL4 is the molecular link between auxin and ROS-controlled root hair polar growth"

Room B Salon de Grados

LIPID SYMPOSIUM
Chairpersons: Ana Ves Losada and Susana Pasquare

-Michael A. Welte
Department of Biology, University of Rochester, New York, USA

"Lipid droplets control nuclear functions via protein sequestration"

-Richard Lehner
Department of Cell Biology Universidad de Alberta, Canada

"Carboxylesterases: novel therapeutic targets in nonalcoholic fatty liver disease"

-Nicolás O. Favale
Facultad de Farmacia y Bioquímica - Universidad de Buenos Aires, IQUIFIB - CONICET. Buenos Aires, Argentina

"The role of sphingolipids metabolism in proliferation, differentiation and tissue organization"

-Natalia Wilke
CIQUIBIC-CONICET, Departamento de Quimica Biológica, Facultad de Ciencias Quimicas, Universidad Nacional de Córdoba, Argentina

"Sizes of lipid rafts: what have we learnt from artificial lipid membranes?

11:00-11:30 ***COFFEE BREAK***

11:30-12:30 ***PABMB PLENARY LECTURE***

SALA DE LAS AMERICAS

- Charlie Boone

University of Toronto, Donnelly Centre Toronto, Ontario, Canada

"A global genetic interaction network maps a wiring diagram of cellular function"

Chairperson: Alejandro Colman Lerner

12:30 ***LUNCH***

14:30-16:00 ***ORAL COMMUNICATIONS***

Room B *(Salon de Grados)****:*** Plants (PL-C01 to PL-C06)
Room C *(Salon Rojo Escuela Graduados Medicina)****:*** Structural Biology (SB-C01 to SB-C03) and Biotechnology (BT-C01 to BT-C03)
Room D *(Salon Azul Escuela Graduados Medicina):* Enzymology (EN-C01 to EN-C03) and Neuroscience (NS-C01 to NS-C02)

Room B Salon de Grados Pabellon Argentina

Plants (PL-C01 to PL-C06)
Chairpersons: Oscar Ruiz and Mariana Martin

14:30-14:45
PL-C01
MITOCHONDRIAL CONTRIBUTION TO BASAL PLANT DEFENSES VIA PROLINE DEHYDROGENASE (PRODH)
Fabro G, Rizzi YS, Alvarez ME. CIQUIBIC-CONICET, DQB-FCQ, Univ. Nac.Córdoba. E-mail: gfabro@fcq.unc.edu.ar

14:45-15:00
PL-C02
CHLOROPLAST REDOX STATUS MODULATES GENOMEWIDE STRESS RESPONSES IN SOLANACEOUS PLANTS
Pierella Karlusich JJ[1],Zurbriggen M[1],Shahinnia F[2],Hosseini S[2],Sonnewald S[2],Sonnewald U[2],Hajirezaei MR[2], Carrillo N[1]. [1]Instituto de Biología Molecular y Celular de Rosario (UNR-CONICET) [2]IPK Gatersleben, Alemania. E-mail: pierella@ibr-conicet.gov.ar

15:00-15:15
PL-C03
REGULATION OF CENTRAL METABOLISM BY TREHALOSE 6-PHOSPHATE
Figueroa C,[1,2],Feil R[1], Ishihara H[1], Krause U[1], Hoehne M[1], Encke B[1], Stitt M[1], Lunn JE[11]MPI of Molecular Plant Physiology, Golm, Germany. [2]IAL, UNL-CONICET, Santa Fe, Argentina. Email: carfigue@fbcb.unl.edu.ar

15:15-15:30
PL-C04
UNRAVELING THE CONTRIBUTION OF NADP-MALIC ENZYME 1 TO ALUMINUM STRESS RESPONSE IN ARABIDOPSIS ROOTS
Badia MB, Gerrard Wheeler MC, Andreo CS, Drincovich MF.CEFOBI, FCByF, UNRosario, Argentina E-mail: badia@cefobi-conicet.gov.ar

15:30-15:45

PL-C05

INFLUENCE OF SINAL7 IN VEGETATIVE PARAMETERS IN ARABIDOPSIS

Peralta DA, Gomez Casati DF, Busi MV. CEFOBI CONICET Fac Cs Bioquimicas y Farmacéuticas, Universidad Nacional de Rosario E-mail: peralta@cefobi-conicet.gov.ar

15:45-16:00

PL-C06

SCF E3 LIGASE REDOX REGULATION: IMPACT ON HORMONAL SIGNALINGS

Iglesias MJ, Terrile MC, Casalongue CA Instituto de Investigaciones biológicas IIB-CONICET-UNMDP E-mail: majoi84@hotmail.com

Room C Salon Rojo Escuela Graduados Medicina

Structural Biology (SB-C01 to SB-C03) and Biotechnology (BT-C01 to BT-C03)

Chairpersons: Augusto Bellomio and Horacio Heras

14:30-14:45

SB-C01

GENERATION OF NANOBODIES AS A TOOL FOR STRUCTURAL BIOLOGY

Alzogaray VA, Goldbaum FA. Fundación Instituto Leloir. E-mail: valzogaray@leloir.org.ar

14:45-15:00

SB-C02

STRUCTURAL AND FUNCTIONAL STUDIES OF THE NTRX RESPONSE REGULATOR, A DIMERIC ATP BINDING PROTEIN

Fernández I[1], Cornaciu I[2], Carrica MC[1], Uchikawa E[2], Márquez JA[2], Goldbaum FA[1]. [1]Fundación Instituto Leloir, IIBBA (CONICET). [2]EMBL Outstation Grenoble E-mail: ifernandez@leloir.org.ar

15:00-15:15

SB-C03

UNRAVELLING THE LONG-RANGE SIGNALING MECHANISM OF BACTERIOPHYTOCHROMES

Otero LH[1], Klinke S[1], Rinaldi JJ[1], Velázquez F[2], Mroginski M[2], Hildebrandt P[2], Goldbaum FA[1], Bonomi HR[1]. [1]Fundación Instituto Leloir, Argentina. [2]Technische Universität Berlin, Germany. E-mail: lotero@leloir.org.ar

15:15-15:30

BT-C01

CHARACTERIZATION OF ANTARCTIC MICROBIAL PHOTOLYASES AND RECOMBINANT PRODUCTION

Marizcurrena JJ[1], Morales D[1], Martinez W[2], Castro Sowinski S[1]. [1]Bioquímica y Biología Molecular, Fac Ciencias, UdelaR. [2]Epigenetica e Inestabilidad Genomica, IIBCE. E-mail: j_jmarrena@hotmail.com.

15:30-15:45

BT-C02

BIOCHEMICAL CHARACTERIZATION OF A CELLULOLYTIC COCKTAIL FROM AN ANTARCTIC FLAVOBACTERIUM ISOLATE

Herrera Marrero LM[1], Braña V[1], Franco Fraguas L[2], Castro Sowinski S[1]. [1]Bioquímica y Biología Molecular, Fac Ciencias, UdelaR, Uruguay. [2]Bioquímica, Fac Química, Udelar. E-mail: herreramarrerolorena@gmail.com

15:45-16:00

BT-C03

CADMIUM AND LEAD RESISTANT RHIZOSPHERIC BACTERIA AS CANDIDATES FOR RHIZOREMEDIATION PROCESSESS

Saran A[1], Fernandez L[1], Massot F[2], Merini LJ[1]. [1]EEA-Anguil, INTA-CONICET. [2]Instituto NANOBIOTEC, UBA-CONICET. E-mail: saran.anabel@inta.gob.ar

Room D Salon Azul Escuela Graduados Medicina

Enzymology (EN-C01 to EN-C03) and Neuroscience (NS-C01 to NS-C02)

Chairpersons: Eleonora Campos and Patricia Setton

14:30-14:45

EN-C01

IDENTIFICATION AND CHARACTERIZATION OF A NOVEL STARCH BRANCHING ENZYME FROM *Ostreococcus tauri*

Hedin N, Barchiesi J, Gomez-Casati DF, Busi MV. CEFOBI-CONICET-UNR. Facultad de Ciencias Bioquímicas y Farmacéuticas. Rosario, Argentina. E-mail: hedin@cefobi-conicet.gov.ar

14:45-15:00

EN-C02

KINETIC AND FUNCTIONAL CHARACTERIZATION OF OTDSP, A PHOSPHOGLUCAN PHOSPHATASE FROM *O. tauri*

Carrillo JB, Martín M, Gomez Casati DF, Busi MV. CEFOBI-CONICET. Facultad de Ciencias Bioquímicas y Farmacéuticas. Suipacha 531. Rosario, Argentina. E-mail: carrillo@cefobi-conicet.gov.ar

15:00-15:15

EN-C03

ALTERNATIVE CATALYTIC PROPERTIES IN THE GLYCOGEN-SYNTHASE FROM ACTINOBACTERIA

Asencion Diez MD[1], Cereijo AE[1], Alvarez HM[2], Iglesias AA[1]. [1]IAL (UNL-CONICET) [2] Instituto de Biociencias de la Patagonia (UNPSJB-CONICET. E-mail: masencion@fbcb.unl.edu.ar

15:15-15:30

NS-C01

THE VISUAL CYCLE IN THE INNER RETINA OF CHICKEN AND THE ROLE OF RETINAL G-PROTEIN-COUPLED RECEPTOR

Diaz NM[1]; Morera LP[1]; Tempesti TC[2]; GuidoME[1]
[1]CIQUIBIC-CONICET, FCQ, UNC [2]INFIQC-CONICET, FCQ UNC, E-mail: mguido@fcq.unc.edu.ar

15:30-15:45

NS-C02

METABOLIC DYSFUNCTION WORSENS COGNITION AND NEURONAL RESILIENCE IN A RAT MODEL OF EARLY ALZHEIMER

Martino Adami PV[1]; Galeano P[1]; Wallinger ML[2]; Rabossi A[1]; Radi R[3]; Gevorkian G[4]; Cuello AC[5]; Morelli L[1]
[1]FIL-IIBBA CONICET. [2]FMed, UBA. [3]CEINBIO, UdeLaR. [4]UNAM. [5]McGill University E-mail: pmadami@leloir.org.ar

16:10-17:10 ***"ALBERTO SOLS" LECTURE***

SALA DE LAS AMERICAS

- Javier De Las Rivas

Bioinformatics and Functional Genomics Group Cancer Research Center (CiC-IBMCC)
Consejo Superior de Investigaciones Científicas (CSIC) and Universidad de Salamanca (USAL)
Salamanca, SPAIN

"Human interactomics: build and analyse genome-wide protein networks using proteomics, transcriptomics and bioinformatics"

Chairperson: Viviana Rapisarda

17:10 ***COFFEE BREAK***

17:10-19:00 ***POSTER SESSION***

HALL PABELLON ARGENTINA

LI-P01 to LI-P36 MI-P01 to MI-P30

PL-P01 to PL-P35

19:10-20:00 ***PLENARY LECTURE***

SALA DE LAS AMERICAS

- Adriana Gruppi
CIBICI-CONICET, Facultad de Ciencias Químicas
Universidad Nacional de Córdoba, Argentina

"B lymphocytes and plasma cells do more than antibodies"

Chairperson: Jose Luis Bocco

WEDNESDAY, November 9th, 2016

09:00-11:00 ***SYMPOSIA***

Room A: *Sala de las Americas*

CELL BIOLOGY SYMPOSIUM- PABMB-SOUTH CONE
Chairpersons: Laura Morelli and Marcelo Rodriguez-Piñon

-Carlos Robello
Instituto Pasteur de Montevideo, Uruguay

"Cell reprogramming of human cells during the early Trypanosomacruzi infection"

-Fernando Lopez Diaz
Laboratory of Regulatory Biology, The Salk Institute for Biological Studies, La Jolla, CA USA-Argentina,

"*Genome plasticity, cellular stress and cellular reprograming in human breast cancer"*

-Alejandra Loyola
Laboratory of Epigenetics and Chromatin. Fundación Ciencia & Vida, Chile.

"*The processing and maturation of newly synthesized histones"*

-Flavio Meirelles
FZEA/Universidade São Pablo, Brazil

"*The epigenetic errors arising from the reprogramming process."*

Room B: *Salon de Grados*

MICROBIOLOGY SYMPOSIUM
Chairpersons: Carolina Touz and Viviana Rapisarda

-Jose Echenique
CIBICI CONICET Departamento de Bioquímica Clinica, Facultad de Ciencias Quimicas, Universidad Nacional de Cordoba, Cordoba

"Crosstalk between signal transduction systems contributes to pneumococcal pathogenesis"

-Beatriz E. Baca
Centro de investigaciones en Ciencias Microbiológicas, Instituto de Ciencias, Benemérita Universidad Autónoma de Puebla, México

"Structure, functional prediction, and phenotyping studies on genes encoding for proteins involved in cyclic-di-GMP in Azospirillum."

- Michael Seeger
Laboratorio de Microbiología Molecular y Biotecnología Ambiental, Universidad Técnica Federico Santa María, Valparaíso, Chile

"Burkholderia xenovorans LB400 synthesizes a novel non-ribosomal peptide siderophore for iron transport"

-Pablo Iván Nikel
Systems and Synthetic Biology Programme, Spanish National Center for Biotechnology (CNB-CSIC), 28049 Madrid, Spain

"Unleashing the catalytic potential of environmental bacteria."

11:00-11:30 ***COFFEE BREAK***

11:30-12:30 ***"HÉCTOR TORRES" PLENARY LECTURE***

SALA DE LAS AMERICAS

- Raul Andino
Department of Microbiology and Immunology, UCSF, San Francisco, USA

"Trans-generational antiviral immunity in insects"

Chairperson: Eduardo Ceccarelli

12:30 ***LUNCH***

14:30-16:30 ***ORAL COMMUNICATIONS***

Room B (*Salon de Grados):* Plants (PL-C07 to PL-C14)
Room C Salon Rojo (*Escuela Graduados Medicina):* Cell Biology (CB-C01 to CB-C08)
Room D Salon Azul (*Escuela Graduados Medicina):* Signal Transduction (ST-C01 and ST-C06)

Room B Salon de Grados

Plants (PL-C07 to PL-C14)
Chairpersons: Ariel Goldraij and Georgina Fabro

14:30-14:45
PL-C07
INSIGHT INTO DIVERSIFICATION AND EVOLUTION OF HD-ZIP I TRANSCRIPTION FACTORS IN STREPTOPHYTES
Romani FA, Chan RL, Moreno JE. Instituto de Agrobiotecnología del Litoral (IAL-UNL-CONICET). E-mail: fromani@santafe-conicet.gov.ar

14:45-15:00
PL-C08
AN OPEN READING FRAME PRESENT IN THE 5'UTR OF THE ARABIDOPSIS ATHB1 GENE REPRESSED ITS TRANSLATION
Ribone PA, Capella M, Chan RL. Instituto de Agrobiotecnología del Litoral (UNLCONICET). Santa Fe. E-mail: pamela.ribone@santafe-conicet.gov.ar

15:00-15:15
PL-C09
CYTOCHROME C MODULATES PLANT GROWTH RATE AND THE ACTIVITY OF THE GIBBERELLIN PATHWAY
Racca S, Welchen E, Gonzalez DH. Instituto de Agrobiotecnologia del Litoral (IAL-UNL-CONICET).Santa Fe, Argentina.E-mail:sofia.racca@hotmail.com

15:15-15:30
PL-C10
TCP15 CONNECTS GIBBERELLIN AND AUXIN PATHWAYS DURING STAMEN FILAMENT ELONGATION IN ARABIDOPSIS
Gastaldi V, Lucero LE, Gonzalez DH. Instituto de Agrobiotecnologia del Litoral (IAL-CONICET-UNL)Santa Fe, Argentina. Email: vgastaldi@santafe-conicet.gov.ar

15:30-15:45
PL-C11
POST-TRANSLATIONAL REGULATION OF MICRO RNA BIOGENESIS
Achkar NP, Manavella PA Instituto de Agrobiotecnología del Litoral (IAL), UNL CONICET Email: natalia.achkar@gmail.com

15:45-16:00
PL-C12
INTEGRATION OF LIGHT AND TEMPERATURE CUES IN PLANT DEVELOPMENT
Legris M[1], Costigliolo Rojas MC[1], Vierstra R[2], Casal J[1] [31]Fundación Instituto Leloir, IBBA–CONICET. [2]Washington University.[3]IFEVA, FAUBACONICET. E-mail: mlegris@leloir.org.ar

16:00-16:15

PL-C13

PAP-SAL1 RETROGRADE PATHWAY IS INVOLVED IN IRON HOMEOSTASIS IN *ARABIDOPSIS THALIANA*

Balparda M[1], Estavillo G[2], Gomez-Casati DF[1], Pagani MA[1] [1]CEFOBI (UNR-CONICET), Rosario, Argentina. [2]CSIRO Plant Industry, Canberra, Australia. E-mail: balparda@cefobi-conicet. gov.ar

16:15-16:30

PL-C14

IMPORTANCE OF THE PRECURSOR PRIMARY AND SECONDARY STRUCTURE DURING MICRORNA PROCESSING IN PLANTS

Rojas A, Bresso E, Schapire A, Moro B, Mateos J, Palatnik J. Instituto de Biología Molecular y Celular de Rosario (IBR)
E-mail: arojas@ibr-conicet.gov.ar

Room C Salon Rojo Escuela de Graduados de Medicina

Cell Biology (CB-C01 to CB-C08)

Chairpersons: Gaston Soria and Claudio Fader Kaiser

14:30-14:45

CB-C01

NEURAL STEM CELL DIFFERENTIATION INDUCED BY LIPIDS

Montaner A; Costa M; Banchio C. Instituto de Biología Molecular y Celular de Rosario (IBR)- CONICET, Rosario, Argentina. E-mail: montaner@ibr-conicet.gov.ar

14:45-15:00

CB-C02

SUPPRESSION OF STARD7 PROMOTES ENDOPLASMIC RETICULUM STRESS AND INDUCES ROS PRODUCTION

Flores Martín J; Reyna L; Ridano ME; Panzetta-Dutari GM; Genti-Raimondi S. Dpto. Bioquímica Clínica, Facultad de Ciencias Químicas-UNC. CIBICI-CONICET. Argentina. E-mail: jflores@fcq.unc.edu.ar.

15:00-15:15

CB-C03

STRATEGY TO STUDY PARAMETERS ABLE TO PREDICT LONGEVITY IN MEDFLY POPULATIONS

Bocchicchio P[12], Pujol-Lereis L[1], Rossi F1, Turdera L[2], Pérez M1, Rabossi A[1], Quesada-Allué L[12]. [1]IIBBA-CONICET y F. Inst. Leloir, [2]Depto.Quim.Biol. FCEyN-UBA. E-mail: pbocchicchio@leloir.org.ar

15:15-15:30

CB-C04

LOW NRF2 EXPRESSION DETERMINES LOW ADIPOGENESIS, INFLAMMATION AND HIGH METABOLIC RISK IN BOYS AND RA

Santillan LD, Gimenez MS, Ramirez DC. [1]Lab. of Exp. and Transl. Med. & [2]Lab. Nutr. and Environ. IMIBIO-SL-CONICET-UNSL. E-mail: lucassantillan2011@gmail.com.

15:30-15:45

CB-C05

NATURAL GENETIC VARIATION DETERMINES PROMOTER SHAPE, AFFECTING ROBUSTNESS OF GENE EXPRESSION

Schor I[12]; Degner JF[2]; Harnett D[2]; Cannavo E[2]; Casale FP[3]; Garfield D[2]; Stegle O[3]; Furlong EE[2]. [1]IFIBYNE (CONICET)-DFBMC (FCEN, UBA). [2]GB Unit, EMBL-Heidelberg (Germany); [3]EMBL-EBI (UK). E-mail: ieschor@fbmc.fcen.uba.ar.

15:45-16:00

CB-C06

MITOCHONDRIA-TARGETED CATALASE PREVENTS OXIDATIVE STRESS AND REVERTS ANTIOXIDANT RESPONSE IN DOWN SY

Helguera PR; Zamponi E; Busciglio J. Instituto de Investigación Médica Mercedes y Martín Ferreyra. E-mail: prhelguera@immf.uncor.edu.

16:00-16:15

CB-C07

MAPPING THE DYNAMICS OF THE GLUCOCORTICOID RECEPTOR AND ITS COREGULATOR NCOA-2 IN THE NUCLEUS

Stortz MD[1] , Presman DM[2], Bruno L, Annibale P[4], Hager GL[2], Gratton E[4], Levi V[56], Pecci A[15]. [1]IFIBYNE-CONICET. [2]NIH, USA. [3]IFIBA-CONICET [4]LFD, UC Irvine, USA. [5]QB, FCEN-UBA. [6]IQUIBICEN-CONICET. E-mail: mstortz@qb.fcen.uba.ar.

16:15-16:30

CB-C08

ANTITUMORAL EFFECTS OF BIOENERGETIC MODULATION IN FELINE MAMMARY CARCINOMA CELLS

Arbe MF[1], Fondello C[1], Agnetti L[1], Tellado M[2], Alvarez G[2], Glikin GC[1], Finocchiaro LM[1], Villaverde MS[1]. [1]UTG, Área de Investigación, IOARH, FMed, UBA. [2]Cátedra de Química Biológica, FVet, UBA. E-mail: florenciaarbe@hotmail.com.

Room D Salon Azul Escuela Graduados Medicina

Signal Transduction (ST-C01 to ST-C06)

Chairpersons: Paula Portela and Veronica Gonzalez-Pardo

14:30-14:45

ST-C01

STRESS GRANULES CONTROL PROTEIN SYNTHESIS AND HAVE A NOVEL LINK TO NEURODEGENERATION

Perez-Pepe M, Katz MJ, Wappner P, Boccaccio GL. Fundación Instituto Leloir - IIBBA Conicet E-mail: maperez@leloir.org.ar

14:45-15:00

ST-C02

ROLE OF THE SCAFFOLD PROTEIN STE5 IN THE INTEGRATION OF CDK AND MAPK SIGNALS: A DYNAMIC VIEW

Repetto MV[1], Bush A[1], Winters MJ[2], Pryciak PM[2], Colman-Lerner AA[1]. [1] IFIBYNE-CONICET and Departamento de Fisiología, Biología Molecular y Celular, FCEN, UBA, Argentina. [2] MGM UMASS Med. School, USA. E-mail: vrepettor@fbmc.fcen.uba.ar

15:00-15:15

ST-C03

PROTEIN KINASE A LOCALIZATION IS CRITICAL FOR SPERM CAPACITATION

Stival V C[1], Ritagliati C[1], Luque GM, Baro Graf C[1], Visconti PE, Buffone MG, Krapf D[1]. [1]Laboratory of Cell Signal Transduction Networks, IBR (CONICET-UNR), Rosario, Argentina E-mail: stival@ibr-conicet.gov.ar

15:15-15:30

ST-C04

ESSENTIAL ROLE OF CFTR IN HUMAN SPERM REGULATION OF MEMBRANE POTENTIAL AND PHI DURING CAPACITATION

Puga Molina LP[1], Pinto NP[1], Krapf DK[2], Buffone MB[1]. [1]Instituto de Biología y Medicina Experimental [2]Instituto de Biología Molecular y Celular de Rosario E-mail: krapf@ibr-conicet.gov.ar

15:30-15:45

ST-C05

ACYL-COA SYNTHETASE 4 (ACSL4) IS PART OF THE ACQUISITION OF ANTICANCER DRUG RESISTANT IN CANCER

Orlando UD, Castillo AF, Solano AR, Maloberti PM, Podestá EJ. Instituto de Investigaciones Biomédicas, INBIOMED (UBA-CONICET), Facultad de Medicina, UBA. E-mail: ulises_orlando@yahoo.com.ar

15:45-16:00
ST-C06
TWO-COMPONENT SYSTEMS IN BACTERIA: HOW IS THE SIGNAL UNIDIRECTIONALLY TRANSMITTED?
Imelio J, Trajtenberg F, Mechaly A, Larrieux N, Buschiazzo A. Molecular & Structural Microbiology Lab, Institut Pasteur Montevideo.

16:45-17:30 ***THE COMPANY OF BIOLOGIST SHORT TALK***

SALA DE LAS AMERICAS

- Javier Martinez
Institute of Molecular Biotechnology– IMBA – and Medical University of Vienna, Austria

"Molecular mechanisms, biology and disease of mammalian tRNAsplicing"

Chairperson: Omar Coso

17:30 ***COFFEE BREAK***

17:30-19:30 ***POSTER SESSION***

CB-P01 to CB-P46 MI-P31 to MI-P51
PL-P36 to PL-P71

19:45 ***SAIB GENERAL BUSSINESS MEETING***

THURSDAY, November 10th, 2016

09:00-11:00 ***SYMPOSIA***

Room A Sala de Las Americas

ISN-CAEN-TRANSLATIONAL NEUROSCIENCE SYMPOSIUM
Chairpersons: Laura Morelli and Mario E. Guido

-Alejandra Alonso
Center for Developmental Neuroscience, College of Staten Island, CUNY, USA

"*Mechanism of tau-induced neurodegeneration: Identification of the elements for new putative therapeutic targets"*

-Ernesto Bongarzone
Dept. Anatomy & Cell Biology. College of Medicine, University of Illinois, Chicago, USA

"*AAV9 gene therapy and hematopoietic transplant prevent neurological decline in krabbe disease"*

-Mauricio Farez
Centro para la Investigación de Enfermedades Neuroinmunológicas (CIEN), FLENI, Buenos Aires, Argentina

"*Melatonin signaling pathways in Multiple Sclerosis"*

-Maria Dolores Ledesma Muñoz
Centro de Biología Molecular Severo Ochoa (CBMSO), Madrid-Spain

"Modulating lipids in the brain: towards a therapy for Niemann Pick disease"

Room B Salon de Grados

SIGNAL TRANSDUCTION SYMPOSIUM
Chairpersons: Alejandro Colman-Lerner and Pablo Aguilar

- Hernán García
University California Berkeley, CA, USA

" In the shadow of the fly: molecular mechanisms of shadow enhancers in development"

-Ezequiel Petrillo
IPFL Viena Austria

"A chloroplast retrograde signal regulates nuclear alternative splicing… in the roots!"

-Yoshikazu Ohya
Dept of Integrated Biosciences, University of Tokyo, Japan

"A cell cycle checkpoint to insure the integrity of the cell wall synthesis".

-Peter Pryciak
University of Massachussets,MA,USA

"Role of cyclin docking in CDK substrate choice and multi-site phosphorylation"

11:00-11:30 ***COFFEE BREAK***

11:30-12:30 ***"RANWEL CAPUTTO" LECTURE***

SALA DE LAS AMERICAS

- Carlos Dotti

Centro de Biología Molecular Severo Ochoa (CBMSO), Universidad Autónoma de Madrid, Madrid, Spain.

"Brain cholesterol dysregulation with age: contribution to the cognitive deficits of the old"

Chairperson: Jose Luis Daniotti

12:30 ***LUNCH***

14:30-16:30 ***ORAL COMMUNICATIONS***

Room B (*Salon de Grados):* Plants (PL-C15 to PL-C22)
Room C *(Salon Rojo Escuela Graduados Medicina):* Lipids (LI-C01 to LI-C08)
Room D (*Salon Azul Escuela Graduados Medicina):* Microbiology (MI-C01 to MI-C05)

Room B Salon de Grados

Plants (PL-C15 to PL-C22)

Chairpersons: Elina Welchen and Claudia Spampinato

14:30-14:45

PL-C15

BACTERICIDAL AND CYTOTOXIC ACTIVITIES OF POLYPHENOL EXTRACTS FROM ANDEAN AND INDUSTRIAL POTATOES

Lanteri ML[1], Silveyra MX[1],Damiano R[12], Andreu AB[1] [1]Instituto de Investigaciones Biológicas, UNMdP, CONICET .[2]INE "Dr. Juan H. Jara" Mar del Plata. Email:lanteri@gmail.com

14:45-15:00

PL-C16

REGULATION OF THE PLANT MICRO RNA MACHINERY BY A MSS47-MEDIATED EPIGENETIC MECHANISM

Ré DA, Manavella PA. Instituto de Agrobiotecnología del Litoral – UNL-CONICET SantaFe, 3000, Santa Fe, Argentina.E-mail:delfina.a.re@gmail.com

15:00-15:15

PL-C17

PHYTOCHROME B REGULATES SYSTEMIC SIGNALING OF DEFENSE RESPONSE IN ARABIDOPSIS

Moreno JE, Etchevers L Laboratorio de Biotecnología Vegetal, Instituto de Agrobiotecnología del Litoral (UNL-CONICET) E-mail:javier.moreno@santafe-conicet.gov.ar

15:15-15:30

PL-C18

PLANT NATRIURETIC PEPTIDES IMPROVE PLANT RESISTANCE DURING BIOTIC STRESS

Grandellis C, Ficarra F,Garavaglia BS,Gottig N,OttadoJ Instituto de Biología Molecular y Celular de Rosario (IBR-CONICET-UNR) E-mail:grandellis@ibr-conicet.gov.ar

15:30-15:45

PL-C19

A GLYCINE RICH PROTEIN IS INVOLVED IN *XANTHOMONAS CITRI* SUBSP. *CITRI*-PLANT INTERACTION

Vranych C, Piazza A, Ottado J, Gottig N. Instituto de Biología Molecular y Celular de Rosario (IBR-CONICET-UNR),Ocampo y Esmeralda, RosarioE-mail:vranych@ibr-conicet.gov.ar

15:45-16:00

PL-C20

DESIGN OF A GFP-BASED NON-INVASIVE BIOSENSOR TO DETERMINE NADP$^+$(H) REDOX STATE IN LIVING CELLS

Molinari PE[1], Zurbriggen M[2], Bustos-Sanmamed P[3], Krapp AR[3], Carrillo N[31]FBIOyF UNR, [2]Inst. Synthetic Biol. Heinrich Heine Univ. Dusseldorf Alemania, [3]IBR-CONICET Argentina E-mail: pmolinari@fbioyf.unr.edu.ar

16:00-16:15

PL-C21

HEAT STRESS INDUCES FERROPTOSIS LIKE CELL DEATH IN PLANTS

Distéfano A[1], Martin M*[1], Córdoba J[1], Bellido A[1], Roldán J[1], Bartoli C[2], Zabaleta E[1], Fiol D[1], Stockwell B[3], Dixon S[3], Pagnussat G[1] [1]IIB-CONICET-UNMdP, Mar del Plata, Argentina [2]INFIVE-CONICET-UNLP La Plata Argentina [3] Dept Biological Sciences, Columbia University, NY USA *equal contribution of both authors. E-mail: adistefa@mdp.edu.ar*

Room C Salon Rojo Escuela Graduados Medicina

Lipids (LI-C01 to LI-C08)

Chairpersons: Natalia Furland and Javier Valdez-Taubas

14:30-14:45

LI-C01

HIGH-NACL INDUCES SREBP-MEDIATED TRANSCRIPTIONAL REGULATION OF TRIGLYCERIDES

Weber K; Casali CI; Malvicini R; Parra LG; Etcheverry T; Fernandez MC UBA, FFYB, BCM; CONICET-IQUIFIB E-mail: kweber@ffyb.uba.ar

14:45-15:00

LI-C02

THE ETHER-LINKED LIPIDS OF RAT EPIDIDYMIS ARE AFFECTED BY MILD HYPERTHERMIA

Luquez JM; Santiago Valtierra FX; Oresti GM; Aveldaño MI; Furland NE INIBIBB, CONICET-UNS, 8000 Bahía Blanca, Argentina E-mail: jluquez@criba.edu.ar

15:00-15:15

LI-C03

ROLE OF GPA3/4 IN GLYCEROLIPID SYNTHESIS, PHAGOCYTOSIS AND CYTOKINE RELEASE IN ACTIVATED MACROPHAGES

Quiroga IY[1]; Pellon-Maison M[1]; Coleman RA[2]; Gonzalez-Baro MR[1] [1]INIBIOLP-UNLP-La Plata, Argentina [2]Dept. Nutrition, UNC, USA E-mail: yoseli_quiroga@hotmail.com

15:15-15:30

LI-C04

A METABOLIC CIRCADIAN CLOCK CONTROLS RHYTHMS IN IMMORTALIZED HUMAN GLIOBLASTOMA T98G CELLS

Wagner PM[1]; Sosa-Alderete L[1]; Gorné L[1]; Gaveglio V[2]; Salvador G[2]; Pasquare S[2]; Guido ME[1]
[1]CIQUIBIC-CONICET, Dept. Biol Chem. FCQ-UNC, Cordoba, Argentina. [2]INIBIBB-CONICET. Bahía Blanca.
E-mail: pwagner@fcq.unc.edu.ar

15:30-15:45

LI-C05

EXPRESSION OF ELOVL4 AND FA2H WITH SPERMATOGENIC CELL DIFFERENTIATION IN THE RAT TESTIS

Santiago Valtierra FX; Peñalva DA; Luquez JM; Furland NE; Aveldaño MI; Oresti GM INIBIBB, CONICET-UNS, Bahía Blanca, Argentina E-mail: gmoresti@criba.edu.ar

15:45-16:00

LI-C06

LOW-DENSITY MEMBRANE FRACTIONS FROM MALE GERM CELLS LACK SPHINGOLIPIDS WITH VERY LONG CHAIN PUFA

Santiago Valtierra FX; Mateos MV; Aveldaño MI; Oresti GM INIBIBB, CONICET-UNS, Bahía Blanca, Argentina E-mail: gmoresti@criba.edu.ar

16:00-16:15

LI-C07

MEMBRANE RESTRUCTURING INDUCED BY THE ENZYMATIC GENERATION OF CERAMIDES WITH VERY LONG CHAIN PUFA

Peñalva DA; Antollini SS; Ambroggio EE; Aveldaño MI; Fanani ML INIBIBB, CONICET-UNS, Bahía Blanca, and CIQUIBIC, UNC-CONICET, Córdoba, Argentina E-mail: gmoresti@criba.edu.ar

16:15-16:30

LI-C08

AN EXPANSION OF CYTOCHROME P450 GENES IN TRIATOMINES IS ASSOCIATED WITH PYRETHROID RESISTANCE

Pedrini N; Calderón Fernández GM; Salamanca JE; Dulbecco AB; Moriconi DE; Kumar S; Juárez MP INIBIOLP (CONICET-UNLP) E-mail: nicopedrini@yahoo.com

Room D Salon Azul Escuela Graduados Medicina

Microbiology (MI-C01 to MI-C06)

Chairpersons: Monica Delgado and Sandra Russal

15:00-15:15

MI-C01

THE ROLE OF RESPIRATORY OXIDASES IN THE MECHANISM OF ACTION OF MICROCIN J25

Galván AE[1], Chalón MC[1], Schurig-Briccio L[2], Minahk CJ[1], Gennis R[2], Bellomio A[1]. [1]INSIBIO (CONICET-UNT). Tucumán, Argentina. [2]Deparment of Biochemistry. University of Illinois. E-mail: emilcegalvan@hotmail.com

15:15-15:30

MI-C02

FUNCTIONAL CHARACTERIZATION OF THE CELL DIVISION PROTEIN FtsA OF *Streptococcus pneumoniae*

Yandar NY, Reinoso N, Cortes PR, Echenique J. Dpto. Bioquimica Clinica/CIBICI-CONICET, Fac. Cs. Químicas, UNC. E-mail: nyandar@fcq.unc.edu.ar

15:30-15:45

MI-C03

REGULATION OF THE SUBPOLAR FLAGELLUM SYNTHESIS IN *Bradyrhizobium diazoefficiens*

Dardis C, Mengucci F, Althabegoiti MJ, Lodeiro AR, Quelas JI, Mongiardini EJ. Instituto de Biotecnología y Biología Molecular (IBBM) CCT-La Plata CONICET, UNLP. E-mail: carolinadardis@biol.unlp.edu.ar

15:45-16:00

MI-C04

ENTEROBACTIN: A FENTON-SAFE SIDEROPHORE

Peralta DR, Adler C, Corbalán NS, Paz García EC, Pomares MF, Vincent PA. INSIBIO, CONICET-UNT. Chacabuco 461, T4000ILI – Tucumán, Argentina. E-mail: drperalta@fbqf.unt.edu.ar

16:00-16:15

MI-C05

THE *map* LOCUS OF *Brucella suis* IS INVOLVED IN CELL ENVELOPE BIOGENESIS AND VIRULENCE

Bialer MG[1], Ruiz-Ranwez V[1], Estein SM[2], Russo DM[1], Altabe SG[3], Sycz G[1], Zorreguieta A[1]. [1]Fundación Instituto Leloir, IIBBA-CONICET, Bs.As. [2]CIVETAN-CONICET, Tandil. [3]IBR-CONICET, Rosario. E-mail: mbialer@leloir.org.ar

16:15-16:30

MI-C06

CLONING, EXPRESSION & CHARACTERISATION OF THE HEPATITIS E VIRUS CAPSID PROTEIN OF GENOTYPES 1-4 FOR SERODIAGNOSTIC

Arce L[1], Stellberger T[2], Baiker A[2], Vizoso Pinto MG[1]. [1]INSIBIO (UNT-CONICET). Facultad de Medicina de la Univ. Nac. De Tucumán. Argentina. [2]LGL, Erlangen, Germany

16:40 ***COFFEE BREAK***

16:40-18:40 ***POSTER SESSION***

BT-P01 to BT-P21 **CB-P47 to CB-P67**

EN-P01 to EN-P17 **ST-P01 to LI-P27**

NS-P01 to NS-P12 **SB-P01 to SB-P03**

18:45-19:45 ***CLOSING LECTURE***

SALA DE LAS AMERICAS

-Carolina Vera

Centro de investigaciones del Mar y la Atmósfera
(CIMA/CONICET-UBA/FCEN) Ciudad Autónoma de Buenos Aires, Argentina

"Risks and challenges associated with Climate Change".

Chairperson: Silvia Moreno

19:45 ***CLOSING CEREMONY AND AWARDS***

22:00 ***CLOSING PARTY***

- ABSTRACTS:

All abstract will be published in:

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www.cricyt.edu.ar/biocell/

- Lectures
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- Symposia
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- Lipids: LI-01 to LI-04
- Microbiology: MI-01 to MI-04
- Plant Biochemistry and Molecular Biology: PL-01 to PL-04
- Signal Transduction: ST-01 to ST-04
- Translational Neuroscience: NS-01 to NS-04

- Oral Communications:
- Biotechnology: BT-C01 to BT-C03
- Cell Biology: CB-C01 to CB-08
- Enzymology: EN-C01 and EN-C03
- Lipids: LI-C01 to LI-C08
- Microbiology: MI-C01 to MI-C06
-Neuroscience: NS-C01 to NS-C02
- Plant Biochemistry and Molecular Biology: PL-C01 to PL-C21

- Structural Biology: SB-C01 to SB-C03
- Signal Transduction: ST-C01 to ST-C06

-Posters:
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LECTURES AND SYMPOSIA ABSTRACTS

MONDAY, November 7th, 2016

L-01

SPREADING SCIENCE THROUGHOUT SOCIETY: A CHALLENGE FOR THE 21ST CENTURY

Alberts, BM

Chancellor's Leadership Chair in Science and Education, University of California, San Francisco

From my 5 years in Washington and my 30 years of interacting with students at universities, I am convinced that our nation and the world badly need more people from the scientific community in a wide variety of professions. Not only the problem-solving skills of scientific inquiry, but also the values of science are critical: honesty, generosity, and a respect for all ideas and opinions regardless of their source of origin. The Worldwide Web makes real the dream of being able to connect all those trained as scientists to common sources of knowledge and discourse. But the Unites States can only lead the way if our university science departments greatly enlarge their own view of their mission. Most of all, we need our science faculty members to appreciate the many different types of contributions their students can make after they leave the university; to do this, we need to continually bring back to each of our departments not only those graduates who are making outstanding contributions to the scientific research, but also those who are making a difference in public policy, industry, government, journalism, law, commerce, community colleges, and our public school systems.

The National Academy of Sciences has been working to overcome the many challenges that face us in attempting to achieve the above goal. You can visit us at **www.nas.edu,** where the full text of more than a thousand of our publications are available for free, on-line.

TUESDAY, November 8th, 2016

LECTURES

L-02

A GLOBAL GENETIC INTERACTION NETWORK MAPS A WIRING DIAGRAM OF CELLULAR FUNCTION

Boone, C

Donnelly Centre, University of Toronto, Ontario, Canada

We generated a global genetic interaction network for *Saccharomyces cerevisiae*, constructing over 23 million double mutants, identifying ~550,000 negative and ~350,000 positive genetic interactions. This comprehensive network maps genetic interactions for essential gene pairs, highlighting essential genes as densely connected hubs. Genetic interaction profiles enabled assembly of a hierarchical model of cellfunction, including modules corresponding to protein complexes and pathways, biological processes, and cellular compartments. Negative interactions connected functionally related genes, mapped core bioprocesses, and identified pleiotropic genes, whereas positive interactions often mapped general regulatory connections among gene pairs, rather than shared functionality. The global network illustrates how coherent sets of genetic interactions connect protein complex and pathway modules to map a functional wiring diagram of the cell.

L-03

HUMAN INTERACTOMICS: BUILD AND ANALYSE GENOME-WIDE PROTEIN NETWORKS USING PROTEOMICS, TRANSCRIPTOMICS AND BIOINFORMATICS

De Las Rivas, J

Cento de Investigación del Cáncer, Consejo Superior de Investigaciones Científicas y Universidad de Salamanca (CiC-IBMCC, CSIC/USAL) Salamanca, Spain

http://www.i-m.mx/jdelasrivas/BioinfoFuncGenomicsCiC/ yhttp://www.cicancer.org/

Identification of the interactions between the biomolecular elements that comprise a cellular system is crucial to unravel its architecture and dynamics. Modern genome-wide technologies provide compendiums of the biomolecular entities that configurate a living system, including all the genes encoded, the corresponding derived proteins and the interactions between them. The maps of such interactions constitute the "interactomes", and we have developed bioinformatic tools and resources focused towards the construction and analyses of interactomes from different organisms (apid.dep.usal.es) displayed as complex protein networks. After using several quality controls to determine the confidence of the interactions, we present several studies to build different views of the "human interactome" using either integrated proteomic or transcriptomic data. We also present some specific examples of our current investigations in cancer to show how biomedical research can be better driven and focused using validated networks, because they allow revealing the specific links and associations between human genes and proteins.

L-04

B LYMPHOCYTES AND PLASMA CELLS DO MORE THAN ANTIBODIES

Gruppi, A

Dpto. Bioquímica Clínica, CIBICI-CONICET, Facultad de Ciencias Químicas, Universidad Nacional de Córdoba, Argentina

B lymphocytes are the only cell type in the organism capable of producing antibodies (Abs), which play an essential role in controlling replication of many pathogens. B cells may have a pathogenic role if they generate antibodies against the self-antigens, called autoantibodies.

B lymphocytes after stimulation, in particular contexts, can differentiate into short- or long-lived plasma cells or memory B cells. The latter cells are part of immunologic memory and responsible for lasting humoral immunity. In addition, B lymphocytes can influence immunity in multiple ways such as antigen presentation to T cells, expression of surface co-stimulatory moleculesand cytokine secretion. Consequently, B cells can act as drivers of innate and adaptive immunity. In this way, we observed that B cells and, particularly, plasma cells can produce cytokines as IL-17 and expresshigh levels of inhibitory molecules PD-L1 and CD39. Through these molecules B cells and plasma cells can regulate T cell immunity. The mechanism of IL-17 production and PD-L1 induction and function of IL-17+ and PD-L1+ B/plasma cells will be discussed.

SYMPOSIA

PL-S01

Functional analysis of secreted effector of *Ustilagomaydis* essential for host colonization

Liang L[1], Schipper K[1, 2], Ludwig N[1], Lo Presti L[1], Zechmann B[3], Glatter T[1], Lanver D[1], Reissmann S [1,] Kahmann R[1]

[1]Max Planck Institute for Terrestrial Microbiology, Dept. Organismic Interactions, Marburg, Germany [2]Present address: Heinrich Heine University Düsseldorf, Dept. Microbiology, Düsseldorf, Germany[3]Baylor University, Center for Microscopy and Imaging, Waco, Texas 76798, USA

Smut fungi comprise a large group of biotrophic pathogens that infect cereal crops and wild grasses. The best studied member of this group, *Ustilagomaydis*, infects maize and induces characteristic tumor formation and anthocyanin coloring. Interaction with the plant is largely determined by about 300 novel protein effectors that are conventionally secreted and are induced only after plant colonization. A successful colonization requires active effector-mediated suppression of plant defense responses and host tissue reprogramming. Secreted effector proteins can either display their activity in the apoplast or translocate to host cells. Based on a comprehensive RNAseq analysis during the different stages of host colonization we have classified the secretome into discrete effector classes and initiated their functional analysis. Among the early-induced effector genes we have found five genes which each lead to an early arrest phenotype of the respective single gene deletion mutant, abolish virulence completely and elicit massive plant defence responses. By performing Co-IPs of tagged versions of these five effectors from infected maize tissue followed by mass-spectroscopic analysis we have detected four of these proteins in a complex. We will discuss where this complex resides and speculate on its function during infection.

PL-S02

Post-transcriptional regulation of the micro RNA pathway

Manavella PA. IAL-CONICET-UNL. Santa Fe-Argentina

MicroRNAs (miRNAs) are small RNA molecules with critical roles during development of multicellular organisms. In plants, these small regulatory molecules are produced from primary miRNA transcripts by a single nuclear enzyme, DICER-LIKE 1 (DCL1). The accurate excision of a miRNA relies on the interaction of DCL1 with its cofactor HYPONASTIC LEAVES1 (HYL1). Once a miRNA is produced it is loaded into an ARGONAUTE (AGO) protein leading the RISC complex to a target mRNA. The miRNAs pathway comprises multiple well-orchestrated steps to ensure the precise and balanced silencing of target genes. In the past years, we have used a large-scale luciferase-based genetic screen, followed by whole-genome sequencing, to identify new co-factors regulating the miRNA production and activity. The analysis of the isolated mutants revealed new and intriguing layers of regulation of the pathway. Among them, we have found that the dephosphorylation of HYL1, by CPL1, is required for full activity of the protein. Such regulation is tightly controlled tissue specifically by RCF3. Lately we also found the biological purpose of the phosphorylated, inactive, reservoir of HYL1 in the cell. In another layer of post-translational regulation, we have identified mutant plants with an impaired AGO1 stability that lead to severe developmental defects caused by an unbalance miRNA-mediated gene silencing.

PL-S03

Trehalose-6-phosphate and sucrose – A tale of two sugars

Lunn J. Max Planck Institute of Molecular Plant Physiology, Potsdam-Golm, Germany

Trehalose 6-phosphate (Tre6P) is an essential signal metabolite in plants that influences leaf growth and senescence, stomatal function, flowering, inflorescence architecture and embryogenesis. Tre6P closely tracks diurnal and externally imposed fluctuations in the levels of sucrose. We propose that Tre6P functions as both a signal and negative feedback regulator of sucrose levels, helping to maintain intracellular sucrose concentrations within an optimal range. This function can be compared with the insulin-glucagon system for regulating blood glucose levels in animals. In leaves, Tre6P regulates photoassimilate partitioning to sucrose during the day and the remobilization of transitory starch reserves to sucrose at night, linking both of these to demand for sucrose from sink organs. In meristems and other growing tissues, Tre6P signals the availability of sucrose for growth, influencing developmental decisions and the fate of imported sucrose. The intertwined relationship between sucrose and Tre6P is captured in the sucrose-Tre6P nexus concept. This model helps us to understand how Tre6P exerts such a profound influence on plant growth and development, and provides a framework for engineering Tre6P metabolism for crop improvement.

PL-S04

ARF5-RSL4 IS THE MOLECULAR LINK BETWEEN AUXIN AND ROS-CONTROLLED ROOT HAIR POLAR GROWTH

Mangano S, Denita Juarez SP[1], Marzol E*, Estevez JM. Fundación Instituto Leloir and IIBBA-CONICET, Buenos Aires, Argentina. *These authors equally contributed to this work.*

Polar-growth present in root hairs is sustained by oscillating levels of Reactive Oxygen Species (ROS). These cells endogenously controlled by auxin are able to grow hundred-folds of their original size toward signals important for plant survival. Here, we showed that ROS-production is under the control of the transcription factor RSL4, who in turn is regulated by auxin through the Auxin

Responsive Factor 5 (ARF5). In this manner, auxin controls ROS-mediated polar-growth depending on NADPH oxidases (or RBOHs for RESPIRATORY BURST OXIDASE HOMOLOG proteins) and secreted type-III Peroxidases (PER). A novel group of two RBOHs (RBOHH,J) and four PERs (PER1,44,60,73) are then required to modulate $_{apo}$ROS homeostasis. Finally, $_{apo}$ROS as H_2O_2 would be transported by the Plasma membrane Intrinsic Protein PIP2;7 back to the cytoplasm to activate downstream responses. Overall, our findings indicate that auxin regulates $_{apo}$ROS-reliant root hair polar growth through the action of ARF5-mediated RSL4 expression.

LI-01

LIPID DROPLETS CONTROL NUCLEAR FUNCTIONS VIA PROTEIN SEQUESTRATION

Welte M A

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Inside cells, neutral lipids are stored inside lipid droplets (LDs), unique organelles with a neutral lipid core, a phospholipid shell, and dozens if not hundreds of proteins. LDs have well-characterized roles in cellular lipid metabolism; emerging evidence indicates that they also regulate nuclear functions, via the exchange of lipids, transcription factors, and chromatin components. In Drosophila embryos, LDs are associated with large quantities of histones, anchored via the novel protein Jabba. Using Jabba mutants, we found that histone binding to LDs serves two biological functions: it allows eggs to safely store large amounts of histones to support embryogenesis, and it buffers the histone supply, preventing histone overaccumulation in the nucleus. We are now identifying the regions of Jabba that mediate LD- and histone binding. Using live imaging, we found that early on histones are dynamically bound, rapidly exchanging between LDs; this is presumably how histone buffering is achieved. Intriguingly, at a particular time during embryogenesis, histones exchange ceases. We are now examining the molecular basis of this transition and its physiological consequences. Our work may provide a paradigm for how LDs regulate and buffer protein availability in general.

LI-02

CARBOXYLESTERASES: NOVEL THERAPEUTIC TARGETS IN NONALCOHOLIC FATTY LIVER DISEASE

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Aberrant triacylglycerol (TG) metabolism is central in obesity and associated pathologies that include insulin resistance and type 2 diabetes, nonalcoholic fatty liver disease and cardiovascular disease. Fatty liver is the leading cause of abnormal liver functions. We have recently demonstrated that an endoplasmic reticulum-localized carboxylesterases modulate hepatic TG content. Carboxylesterase 1d/Triacylglycerol Hydrolase (Ces1d/TGH, also termed Ces3 in mice or CES1 in humans) participates in the provision of substrates for very-low density lipoprotein (VLDL) assembly. Mice lacking Ces1d/TGH show decreased blood lipid concentration, improved glucose metabolism and are protected from high fat diet-induced atherosclerosis and inflammation. Therefore, one can conclude that Ces1d/TGH plays a pro-atherogenic, pro-diabetic and pro-inflammatory role. Carboxylesterase 1g/Esterase-x (Ces1g/Es-x), which shares 76% amino acid sequence identity with Ces1d/TGH, exhibits different function to Ces1d/TGH. Mice lacking Ces1g/Es-x show hallmarks of metabolic syndrome including insulin resistance, hyperinsulinemia, increased lipogenesis, hepatic and adipose lipid accumulation and hyperlipidemia. Therefore, Ces1g/Es-x is protective against the development of hyperlipidemia, hyperinsulinemia and insulin resistance.

LI-03

THE ROLE OF SPHINGOLIPID METABOLISM IN PROLIFERATION, DIFFERENTIATION AND TISSUE ORGANIZATION

Favale NO.

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Sphingolipids (SLs) are a diverse group of lipids which serve a variety of functions in mammalian cell physiology. Sphingosine Kinase (SK) and its product sphingosine-1-Phosphate (S1P) are classically recognized to play critical roles in cell proliferation and survival. We investigate the importance of SK/S1P pathway in cellular fate of MDCK cells subjected to hypertonic medium. In this condition the cells pass through three stages: proliferative, confluent and finally differentiated state. We observed that in proliferative stage the partial inhibition of SK induced a cell cycle arrest in G0. Moreover, we observed an induction to differentiation in a mechanism that did not involved S1P receptor activation. On the other hand, we demonstrated that for the acquirement of the differentiation phenotype, MDCK cells required a basal S1P synthesis to maintain adherent junction (AJ) formation. In this condition SK-S1P pathway, by modulation the de novo synthesis of SLs, regulated the establishment of AJ. Preservation of epithelial tissue requires an efficient renewal of cells initiated by their extrusion. In this condition SK inhibition and knock-down avoided the correct extrusion. These results showed that SK/S1P pathway has multiple functions on the cellular fate depending on their physiological condition.

LI-04

SIZES OF LIPID RAFTS: WHAT HAVE WE LEARNT FROM ARTIFICIAL LIPID MEMBRANES?

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Lipids are able to arrange in different supramolecular structures (artificial model membranes), and phase coexistence is often observed, with domain sizes distributing in a very wide range, starting from the nanometer (reported in Giant Unilamellar Vesicles and supported films) to the micrometer (observed in a lot of model membranes). Domain growth by coalescence and Ostwald ripening are generally slow (minutes to hours), being the domain size correlated with the size of the capture region. Therefore, domain sizes strongly depend on the amount of domains which, in the case of a nucleation process depends on the oversaturation of the system, on line tension and on the perturbation rate in relation to the membrane dynamics. Here, the influence of each of these factors on the distribution of sizes of the domains in different model membranes will be discussed. The analyzed parameters respond to very general physical rules, and

therefore a similar behavior for the rafts in the plasmatic membrane of cells is proposed, but taken into account the obstructed mobility of the molecules and the continuous changes in the system.

WEDNESDAY, November 9th, 2016

LECTURES

L-05

TRANS-GENERATIONAL ANTIVIRAL IMMUNITY IN INSECTS

Kunitomi, M, Tassetto, M*, Whitfield, Z, Dolan, P, and Andino, R*
*Department of Microbiology and Immunology, University of California, San Francisco, USA. *equal contribution*

Effective antiviral protection in multicellular organisms relies on both cell autonomous and systemic immunity. Systemic immunity mediates the spread of antiviral signals from infection sites to distant uninfected tissues. In arthropods, RNA interference (RNAi) constitutes the main intracellular antiviral response. Whether insects possess a systemic antiviral protection system remains unclear. Here we show that insects have a complex systemic RNAi-based antiviral response mediated by macrophage-like haemocytes. Haemocytes take up dsRNA from infected cells and, through endogenous transposon reverse transcriptases, produce virus-derived complementary DNAs (vDNA). These vDNAs recombine with endogenous retrotransposons and integrate into the insect genome. We discovered a diverse set of endogenous viral elements (EVEs) in insect genomes that are responsible to generate active antiviral sRNAs. EVEs are acquired horizontally and are integrated into piClustersto template *de novo* synthesis of secondary viral siRNAs (vsRNA). In turn, EVE-derived siRNAs are secreted in exosome-like vesicles to protect uninfected tissues. Thus, similar to vertebrates, insects use specialized cells to generate acquired systemic antiviral immunity and immunological memory.These results suggest the exciting possibility that insects have evolved CRISPR-like, trans-generational adaptive antiviral immunity through the acquisition of EVEs that serve as templates for biogenesis of small antiviral RNAs.

L-06

MOLECULAR MECHANISMS, BIOLOGY AND DISEASE OF MAMMALIAN tRNA SPLICING

Weitzer S, Popow J, Jurkin J, Henkel T, Pinto P, Panizza S, AsanovicI & Martinez J. Institute of Molecular Biotechnology– IMBA – and Medical University of Vienna.

Transfer RNAs (tRNA) are encoded as precursor molecules that must undergo processing to generate mature tRNAs for protein translation. Processing entails chemical modifications and removal of 5'-leader, 3'-trailer and intronic sequences. Removal of introns during pre-tRNA splicing requires endonuclease andligase activities. We have dissected the pre-tRNA splicing machinery in mammalian cells identifying the 5'-RNA-kinase CLP1, a subunit of the tRNA splicing endonuclease (TSEN) complex; the pentamerichuman tRNA ligase complex, joining tRNA exon halves; and archease, a co-factor that provides multiple turnover to the tRNA ligase. We havealso adventured *in vivo*by generating knockout and knock-in mice and analyzing fibroblasts from patients with mutations in CLP1 and TSEN: We uncovered the function of CLP1 in motor neuron disease and assigned the tRNA ligase complex and archease to the cytoplasmic splicing of the Xbp1-mRNA during the unfolded protein response. We are currently investigating the unexpected role of the tRNA ligase complex in oxidative stress and digging into the yet obscure topic of RNA repair by purifying a novel, 2', 3'-cyclic phosphodiesterase in human cells. Taken together, thesestudies contribute to a renewed interest in the so-called "old" tRNA molecules, with highlights from their synthesis, processing and functions beyond translation.

SYMPOSIA

CB-01

CELL REPROGRAMMING OF HUMAN CELLS DURING THE EARLY TRYPANOSOMA CRUZI INFECTION

Chiribao, M.L.[1,2], Libisch, G.[1], Parodi, A.[1,3], Rego, N.[1], Greif, G.[1], Faral, P.[1], Robello, C.[1,2]
[1]Institut Pasteur de Montevideo; [2]Facultad de Medicin, Uruguay; [3]Facultad de Ciencias, Uruguay

Trypanosoma cruzi invades almost any type of cell: when parasites enter their host the establishment of the infection depends on their ability to rapidly invade epithelial cells that constitute the first barrier against infections; trypanosomes can invade macrophages, with consequent relevance on immunity, and in chronic disease a significant percentage of patients evolve to cardiomyopathy. We studied the early response of human cells to *Trypanosoma cruzi* infection, in different cells through the analysis of the transcriptome, showing that hundreds of genes are up and down regulated immediately after infection. Surprisingly, each cell type has extremely different responses. Epithelial cells are mostly altered in pathways related to inflammatory and lipid metabolism genes; in cardiomyocytes energy metabolism and protein synthesis related genes are the most affected pathways; in macrophages although, as expected, immune response related genes are the most affected, a more in deep analysis at the level of alternative splicing patterns indicates that the most up regulated genes are related to autoimmune diseases. In summary, human cells are reprogrammed by *T. cruzi*, and early responses are probably exploited by the parasite to establish the initial infection and posterior systemic dissemination.

CB-02

GENOME PLASTICITY, CELLULAR STRESS AND CELLULAR REPROGRAMING IN HUMAN BREAST CANCER

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Genome plasticity can be thought as ageneral principleunderpinning how cells functionally organize, make use of, or modify DNA sequencesto integrate multiple molecular circuits into a unifiedgene expressionoutput affecting cell fatein response to environmental cues.Myresearchfocuses on the molecular mechanisms of gene regulation inhuman mammary cellsand its involvementin both cancer initiation and progression.I will present data showing how cellular stresscan play decisive but alsosubordinate roles in determining cell fatein different stages of the cancer progression timeline.For example, the ubiquitously active Transforming Growth Factor (TGF)-β/Smad pathway overrides the stress response in pre-cancerous and tumor cells contributing to tumorigenesis and drug resistance by affecting both transcription and translation of the p53 coding gene. On the other hand, we have found through a single-cellRNA-sequencing approach that stress can shape abundance and fidelity of RNAs securing diversity within cancer cells populationsand helping to sustain reversible drug tolerance states. I will also discussour most recent approaches to understand how cellular stress can impact on the physical and functional genome organization of normal mammary cells. I will discuss the implications of these findings in our understanding of cancer evolution and potential newer treatment avenues.

CB-03

THE PROCESSING AND MATURATION OF NEWLY SYNTHESIZED HISTONES

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Histone proteins are synthesized in the cytoplasm by free ribosomes, after which they are translocated into the nucleus for its deposition into chromatin. Before nuclear translocation occurs, newly synthesized histones undergo a cascade of events that allow them to acquire their correct folding and to establish post-.translational modifications. In this processing pathway, at least four different protein complexes participates, each one comprised of specific histone interacting proteins, including chaperones. How this processing pathway is regulated and what is the impact into gene expression remains unclear and is the focused of our research. Methylation of lysine 9 on histone H3 (H3K9), a mark that primes the formation of heterochromatin, is the only lysine methylation detected on newly synthesized histone H3. We showed that H3K9 mono- and dimethylation is imposed during translation of histone H3 by the methyltransferase SetDB1. We discuss the importance of these results in the context of heterochromatin establishment and maintenance. Our results enabled us to propose a regulatory means of these marks for controlling cytoplasmic/ nuclear shuttling and the establishment of early modification patterns.

CB-04

THE EPIGENETIC ERRORS ARISING FROM THE REPROGRAMMING PROCESS

Meirelles F

FZEA/Universidade São Pablo, São Pablo, Brazil

MI-01

CROSS TALK BETWEEN SIGNAL TRANSDUCTION SYSTEMS CONTRIBUTES TO PNEUMOCOCCAL PATHOGENESIS.

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Living cells modulate their gene expression patterns in response to environmental cues to adapt and to survive. In bacteria, extracellular signals are transduced into the cells mainly by signal transduction mechanisms named as two-component systems (TCS). *Streptococcus pneumoniae*, a significant bacterial human pathogen, induce competence by a quorum-sensing mechanism associated to the ComDE TCS under slight alkaline conditions. We previously described that acidic stress induces two types of cellular response in *S. pneumoniae*, either by triggering cell death by autolysis (and releasing the pneumolysin cytotoxin), or by inducing a survival mechanism known as acid tolerance response (ATR). In this work, we report an alternative activation pathway of ComE. We performed molecular, biochemical and functional assays to characterize another signal transduction system that activates ComE by crosstalk phosphorylation. We also found that this new signaling pathway regulates autolysis and ATR under acidic stress, and that these mechanisms modulate the intracellular survival of *S. pneumoniae* in pneumocytes. We propose that the convergence of these signal transduction systems represents a key pathway in the global stress response and contributes to the pneumococcal pathogenesis.

MI-02

STRUCTURE, FUNCTIONAL PREDICTION, AND PHENOTYPING STUDIES ON GENES ENCODING PROTEINS INVOLVED IN CYCLIC-DI-GMP IN *Azospirillum.*

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The cyclic-di-GMP (c-di-GMP) encompasses a signaling system that regulates many bacterial behaviors among them, the switch between motile and sessile life-styles in bacteria. Cell c-di-GMP level in bacteria is regulated by opposite enzyme activities of diguanylate cyclase (DGC) and phosphodiesterase (PDE), which are proteins possessing GGDEF and EAL domains, respectively. We analyzed *Azospirillum brasilense* and *Azospirillum lipoferum* genomes, by using bioinformatics and structural approaches to determine how many genes occur in genomes, encoding for predicted proteins involved in turnover of c-di-GMP. Analyzed sequences showed that, *A. brasilense* Sp245, Sp7, and AZ39 encode for 36, 32, and 36 proteins, respectively. *While A. lipoferum* B510 and 4B encode for 42 and 41 proteins, respectively. 22 proteins are conserved in all genomes including 10 DGCs, 4 PDEs, and 8 hybrid proteins. As reported in other soil bacteria, *Azospirillum* genomes encode for a large number of predicted proteins involved in c-di-GMP metabolism. We analyzed four DGC proteins encoded by *cdgA, cdgB, cdgC,* and *cdgD* genes from *A. brasilense* 245 by mutant construction and comparative analysis of motility and adherence phenotypes against WT, by motility assays, biofilm and exopolysaccharide (EPS) production, and microscopy observations. This work shows that genes studied were functional and participate in motility, chemotaxis, biofilm formation and cell division.

MI-03

Burkholderia xenovorans LB400 SYNTHESIZES A NOVEL NON-RIBOSOMAL PEPTIDE SIDEROPHORE FOR IRON TRANSPORT

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B. xenovorans LB400 is a model bacterium to study the metabolism and biotransformation of aromatic compounds. The aim of this study was to characterize a non-ribosomal peptide synthetase containing gene cluster in *B. xenovorans* LB400. LB400 *mba* gene cluster encodes proteins involved in the biosynthesis and transport of a siderophore, and possesses a unique *mba* gene organization. Bioinformatic analysis revealed in the *mba* gene cluster the presence of promoters that are probably regulated by the ferric uptake regulator protein Fur and by the RNA polymerase extracytoplasmic function sigma factor MbaF. RT-PCR analyses showed under iron limitation the expression of six iron-regulated transcriptional units. Chrome azurol S assay indicates that strain LB400 synthesized a siderophore. ESI-MS and MALDI-TOF-MS analyses revealed that the siderophore is a non-ribosomal peptide that forms an iron complex of 676 Da. Based on bioinformatic prediction and functional analyses, we propose a novel structure of the LB400 siderophore involved in iron transport, which is closely related to malleobactin-type siderophores from other *Burkolderiales*. *Supported by RIABIN, FONDECYT (1151174 & 1110992) and USM (131562 & 131342) grants.*

MI-04

UNLEASHING THE CATALYTIC POTENTIAL OF ENVIRONMENTAL BACTERIA

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Novel microbial cell platforms are required to expand the scope of basic knowledge and for a number of technical applications, and this quest has been further boosted by the increasing availability of dedicated genetic toolboxes over the last few years. The so-called "model" bacteria, such as *Escherichia coli* or *Bacillus subtilis*, are mostly appropriate hosts in the context of basic research but they are often not entirely suitable for performing some specific applications. Contemporary Synthetic Biology relies on the adoption of a biological *chassis* for plugging-in and -out genetic circuits and for engineering new-to-Nature functionalities. In contrast to several well established hosts, environmental bacteria constitute an almost ideal starting point to design flawless microbial *chassis*, since these microorganisms are pre-endowed with a number of metabolic and stress-endurance traits which are optimal for biotechnological needs. One such example is represented by the ubiquitous soil bacterium *Pseudomonas putida* KT2440, originally isolated from polluted soil, and perhaps the best saprophytic laboratory Pseudomonad that had retained its ability to survive and function in the environment. Against this background, recent developments on the metabolic taming of *P. putida* will be discussed in the context of Synthetic Biology strategies.

THURSDAY, November 10th, 2016

LECTURES

L-07

BRAIN CHOLESTEROL DYSREGULATION WITH AGE: CONTRIBUTION TO THE COGNITIVE DEFICITS OF THE OLD.

Martín MG [1, 2], Palomer E[1], Benvegnù S[1] and ***Dotti CG[1]***

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Aging is associated with the occurrence of numerous physiological modifications in various organs including the brain. With advancing age, neurons lose their capability to adapt to and recover from accumulating and potentially damaging alterations such as oxidative stress, DNA damage, mitochondrial impairment, and protein misfolding and aggregation. One of the most evident consequencesof these biochemical changes are deficits in learning and memory. While these are, in general, minimally invalidating, the underlying biochemical alterations constitute an indispensable condition for the occurrence of pathological brain aging. In fact, althoughaging is not sufficient it is a necessary condition for neurodegenerative conditions like non-familial Alzheimer´s disease. Thus, we searched for potential genetic master switches responsible for the age-associated cognitive loss. In addition to unbiased screenings, we searched for up and down-regulated genes responsible for the levels of synaptic lipids, asthey make the mattresses from whichall membrane receptors signal to survival and performance pathways. We identified age-associated changes in the levels of expression of cholesterol and sphingomyelin regulatory genes. In this presentation, I will address the causes and short and long-range consequences of the change in expression of a cholesterol catabolism gene.

L-08

RISKS AND CHALLENGES ASSOCIATED WITH CLIMATE CHANGE

Vera, C

Centro de Investigaciones del Mar y la Atmósfera (CIMA)/CONICET-UBA/FCEyN, IFAECI-UMI3351/CNRS

"Climate Change" is a concept globally used as a reference to the impact of human activities on the global climate, mainly through changes in the atmosphere composition. Decades ago, the possibility of such anthropogenic influence was alerted by the international scientific community. On December 2015, the countries adopted the Paris Agreement, in which they agreed to work to limit global temperature rise. In this context, the lecture will provide a brief review of the scientific basis underlying the climate change at global scales and in particular over South America. Special focus will be made in describing the key climate change signals influencing Argentina that require the implementation of adaptation options. The lecture will also discuss the last inventory of greenhouse gases emissions of the country and the potential mitigation options to reduce them.

The global scientific assessment reports made by the Intergovernmental Panel on Climate Change (IPCC) have a large influence on the government decisions made not only at United Nation levels but also at regional and national levels. The lecture will describe which are the current and future challenging questions that the global scientific community needs to urgently address and communicate, not only related with the climate change but also with the more general framework of the sustainable development.

SYMPOSIA

NS-01

MECHANISM OF TAU-INDUCED NEURODEGENERATION: IDENTIFICATION OF NEW PUTATIVE THERAPEUTIC TARGETS

Morozova V[1], Baquero J[2], Cohen LS[1], Phillips G[1], Idrissi A. El [1], Kleiman FK[2] and Alonso A. del C[1]., College of Staten Island and Hunter College; City University of New York

Hyperphosphorylated tau is one of the markers of Alzheimer disease and other tauopathies. We have shown that the conformational change on tau induced by hyperphosphorylation results in a gain of toxic function that disrupt the microtubule system, act as a "prion" protein to the normal tau and translocate into the nucleus and ourin vitro preliminary results suggest that tau might be involved in mRNA stability.

We created an inducible pseudophosphorylated tau (Pathological Human Tau, PH-Tau) mouse model to study the effect of conformationally modified tau in vivo. Leaky expression resulted in two levels of PH-Tau; 4% basal and 14% upon induction of the endogenous tau respectively. Unexpectedly, low PH-Tau resulted in cognitive deficits, decrease in the number of synapses and synaptic proteins, and localization to the nucleus. Induction of PH-Tau triggered neuronal death (60% in CA3), astrocytosis, and loss of the processes in CA1. These findings suggest that changes in tau phosphorylation and localization might play a key role in controlling cognitive functions by two different mechanisms depending on the levels of PH-Tau expression, ranging from microtubule stability to regulation of gene expression, affecting the neuronal transcriptome before the appearance of traditional markers.The understanding of these two different mechanisms will provide new therapeutical targets.

NS-02

AAV9 GENE THERAPY AND HEMATOPOIETIC TRANSPLANT PREVENT NEUROLOGICAL DECLINE IN KRABBE DISEASE

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Krabbe disease is a lethal genetic disorder, which causes progressive central and peripheral demyelination, sensory-cognitive deficits, muscle atrophy, and early death.The disease is due to loss-of-function mutations in the gene encoding for the lysosomal enzyme galactosylceramidase (GALC) and the resulting toxic accumulation of the lipid psychosine.The current standard of care for Krabbe patients is Hematopoietic Stem Cell Transplantation (HSCT) from healthy donors, which extends lifespan, but still results in serious debilitating traits.

Here, we developed, optimized, and testedthe use ofadeno-associated virus serotype9 (AAV9) to correct for GALCdeficiency in combination with HSCT.Using the Twitcher mouse model of Krabbe disease, we show that AAV9 gene therapy restored GALC activity in CNS, PNS, and systemic organs, thereby significantly reducing the accumulation of psychosine.Immunohistology demonstrated spreadtransduction of central neurons and astrocytes. When combined with neonatal HSCT, AAV9 gene therapy nearly completely corrected the neurological phenotype, with twitcher mice surviving by over 1000% of their expected lifespan. Histopathology showed the reversal of demyelination, neuro-inflammation, and neuropathy. These results reveal the profound benefit of AAV9 gene therapy could have on human Krabbe'spatients when used in conjunction with current therapies.

NS-03

MELATONIN SIGNALING PATHWAYS IN MULTIPLE SCLEROSIS

Farez, MF

Centro para la Investigación de Enfermedades Neuroinmunológicas (CIEN), FLENI, Buenos Aires, Argentina

Multiple sclerosis (MS) is an immune-mediated disease of the central nervous system characterized by the destruction of myelin by autoreactive T cells. $CD4^+$ T cells producing IFN-γ (Th1 cells) or IL-17 (Th17 cells) are considered important contributors to MS immunopathogenesis. $FoxP3^+$ regulatory T cells (Tregs) and IL-10-secreting type 1 regulatory T cells (Tr1) regulate the activity of effector T cells, accordingly, deficits in Tregs and Tr1 cells have been described in MS. Seasonal changes in disease activity have been observed in MS, suggesting that environmental factors influence the disease course. We found that melatonin levels, whose production is modulated by seasonal variations in night length, negatively correlate with MS activity in humans. Treatment with melatonin ameliorates disease in an experimental model of MS, autoimmune experimental encephalitis, and directly interferes with the differentiation of human and mouse T cells. Melatonin induces the expression of the repressor transcription factor Nfil3, blocking the differentiation of pathogenic Th17 cells and boosts the generation of protective Tr1 cells via Erk1/2 and the transactivation of the IL-10 promoter by ROR-α. These results suggest that melatonin is another example of how environmental-driven cues can impact the immune system and have implications for autoimmune disorders such as MS.

NS-04

MODULATING LIPIDS IN THE BRAIN: TOWARDS A THERAPY FOR NIEMANN PICK DISEASE

Pérez-Cañamás, A; Arroyo, A.I.; Gabandé-Rodriguez, E. Galván,C.; Ledesma, MD.

Centro Biología Molecular Severo Ochoa, Madrid, Spain

Alterations of brain lipid levels contribute to the pathology of an increasing number of neurological diseases including lysosomal storage disorders and neurodegenerative diseases. Understanding the roles that lipids play in neurons and whether we can modulate their levels and counteract the consequences of their alterations are main goals in our

laboratory. In recent years we have addressed these questions using mice lacking the acid sphingomyelinase (ASMko), which mimic Niemann Pick disease type A. This is a genetic lysosomal storage disorder causing neurodegeneration and early death. We have determined that the most abundant sphingolipid, sphingomyelin, accumulates in the lysosomes and in plasma and synaptic membranes of ASMko mice neurons. High sphingomyelin levels lead to unpolarized distribution of molecules, impaired autophagy, calcium imbalance and synaptic alterations. We have characterized the molecular mechanisms leading to these phenotypes that include inefficient endocytosis, lysosomal membrane permeabilization, impairment of the plasma membrane calcium ATPase and low actin polymerization. These read outs have allowed us to evaluate the efficacy of different compounds that can cross the brain blood barrier and diminish sphingomyelin storage and/or its deleterious consequences in the brain opening therapeutic perspectives for a devastating disease.

ST-01

IN THE SHADOW OF THE FLY: MOLECULAR MECHANISMS OF SHADOW ENHANCERS IN DEVELOPMENT

García, H *University California Berkeley, CA, USA*

An abiding mystery in biology is how a single cell develops into a multicellular organism. As this cell divides, its progeny read their DNA to become the cell types such as muscle, liver, and brain cells. We now know that during development, cells not only decide which genes to express; they also decide about when, where, and how to express them. This gene expression control is dictated by DNA sequences called enhancers. Recently, it was discovered that many developmental genes are regulated by additional "shadow" enhancers: both primary and shadow enhancers can independently drive comparable patterns of gene expression. However, it is not clear how enhancer pairs work together and whether they exercise regulatory functions that a single enhancer cannot. I will discuss how we used the fruit fly *Drosophila melanogaster* to uncover the molecular mechanisms behind the combined action of enhancer pairs by integrating theoretical modeling with novel technology to quantify enhancer activity in single cells of a developing embryo. Our results suggest that the competition of enhancer pairs for the target gene can give rise to different behaviors—they can work additively, subadditively, or superadditively. This work provides a framework to predictively understand developmental programs by identifying the regulatory strategies used by the fruit fly embryo to shape the adult body plan.

ST-02

A CHLOROPLAST RETROGRADE SIGNAL REGULATES NUCLEAR ALTERNATIVE SPLICING… IN THE ROOTS!

Petrillo, E

Max F. Perutz Laboratories, Med. Universität Wien, Dept. f. Med. Biochemie, Wien, Austria

Light is a source of energy and also a regulator of plant physiological adaptations. We have previously shown that light/dark transitions affect alternative splicing of a subset of Arabidopsis genes, preferentially those encoding proteins involved in RNA processing. These effects require functional chloroplasts and are also observed in the roots when the communication with the photosynthetic tissues is not interrupted, suggesting that a signaling molecule travels through the plant. We are now aiming to identify the nature of the light signals that communicate the chloroplast status to the nuclei of leaf and of root cells. Focusing on the determination of the nature of the mobile signal that impacts in the roots, we have found evidence implying sugars as the main candidate to be responsible for the observed effects in the non-photosynthetic tissues, and we are currently dissecting the signaling pathway in the root cells.

ST-03

A CELL CYCLE CHECKPOINT TO INSURE THE INTEGRITY OF THE CELL WALL SYNTHESIS

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Critical events during cell cycle progression are regulated by cell cycle checkpoints to ensure the proper completion of cell division. A cell cycle checkpoint to insure the integrity of the cell wall synthesis in the budding yeast is called the cell wall integrity (CWI) checkpoint (Suzuki et al., 2004; Nat Cell Biol 6:861-). Without a supply of cell wall materials for bud growth, the cell cycle is arrested with duplicated and adjacent SPBs before entry into M phase by downregulating M-phase cyclin *CLB2*. We have identified more than 20 factors involved in this checkpoint. In addition to dynactin complex (Arp1, Nip100 & Jnm1), Las17 complex, HOG MAPK signaling pathway, CWI MAPK signaling pathway, late S-phase transcription factor Hcm1 (Negishi et al., 2016; Mol Cell Biol 36:491-) and M-phases specific transcription factors (Fkh2 & Ndd1) had a critical function in the CWI checkpoint. Examination of double mutants suggested that HOG MAPK functions in the upstream of the dynactin complex and Las17 complex, as well as CWI MAPK pathway. These signaling fed to the downstream negative regulation of the transcriptional machinery. Our study revealed cellular pathways that regulate proliferation in response to cell wall stresses to coordinate the cell cycle and the cell wall synthesis.

ST-04

ROLE OF CYCLIN DOCKING IN CDK SUBSTRATE CHOICE AND MULTI-SITE PHOSPHORYLATION

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Eukaryotic cell division is driven by cyclin-dependent kinases (CDKs). Distinct cyclin-CDK complexes are specialized to drive different cell cycle events, though the key molecular differences are only partly understood. In budding yeast,

cell cycle entry is regulated by three G1 cyclins. We found that some CDK substrates contain a novel docking sequence ("LP" motif) that is recognized only by specific G1 cyclins and not by later S- or M-phase cyclins. To probe the molecular basis, we used phylogenetic comparison to identify key cyclin residues that permit docking. Mutation of these residues disrupts efficient, multi-site phosphorylation of substrates and causes a delay in cell cycle entry. To shed light on how cyclins became functionally diversified during evolution, we have tested homologs from numerous fungi. The findings suggest that LP docking existed in an ancestral fungal G1 cyclin, and then diverged among distinct subgroups of yeast cyclins to yield a pattern of both shared and unique targets. Finally, we are studying why some CDK substrates are poorly phosphorylated in M phase. The results imply selective pressure on M-cyclins to reduce potency, which may impose greater reliance on cyclin-specific recognition mechanisms. These studies illuminate how variation in both substrate docking and intrinsic potency of cyclins helps shape the CDK-substrate network.

POSTERS

BIOTECHNOLOGY

BT-P01

RECOMBINANT EXPRESSION OF SWEET PLANT PROTEIN MNEI IN FOOD-GRADE *Lactococcus lactis*

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BT-P02

USE OF AFFINITY TAGGED VMA1 INTEIN FOR THE PRODUCTION OF RECOMBINANT PHARMACEUTICAL PROTEINS.

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BT-P03

EXPRESSION OF THE HYBRID BACTERIOCIN ENT35-MCCV IN *Saccharomyces cerevisiae*

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BT-P04

ETHANOL FERMENTATION BY ANTARCTIC YEASTS

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BT-P05

ROLE OF XYLR ON XYLOSE METABOLISM IN *Herbaspirillum seropedica* EZ69

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BT-P06

STRATEGY FOR THE CONSTRUCTION OF *Saccharomyces cerevisiae* STRAINS ABLE TO ASSIMILATE XYLOSE

Fagundez A[1], Malán AK[1], Carbo N[1], Giménez M[1], Catalán AI[1], Guigou M[2], Lareo C[2], Batista S[1]. [1]Molecular Microbiology Unit, IIBCE. Uruguay. [2]Dept. Bioengineering, Faculty of Engineering, Uruguay. E-mail: alefagundez87@gmail.com

BT-P07

TRANSGENIC MAIZE PLANTS EXPRESSING HAHB11: A PROMISING PROOF OF CONCEPT

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BT-P08

MALTOOLIGOSACCHARIDES PRODUCTION FROM GLUTEN FREE STARCHES

Caminata Landriel S[1], Castillo de las Mercedes J[1], Rodríguez Gastón JA[1], Taboga O[2], Ferrarotti SA1, Costa H[1]. [1]Lab. Qca. Biológica, Dto. Cs. Básicas, Univ. Nacional de Luján. [2]Inst. Biotecnología, CICVyA-INTA. E-mail: solcaminata@yahoo.com.ar

BT-P09

DODECENLY SUCCINIC ANHYDRIDE-COLLAGEN MODIFIED HYDROGELS

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BT-P10

ANTIOXIDANT ACTIVITY OF *Larrea divaricata* LOADED IN MUCOADHESIVE POLYMERS AND SILICA COMPOSITES

Alvarez Echazú MI, Olivetti CE, Peralta I, Perna O, Alonso R, Anesini C, Alvarez GS, Desimone MF. Universidad de Buenos Aires. CONICET. IQUIMEFA. Facultad de Farmacia y Bioquímica, Argentina. E-mail: alvarezechazu@ffyb.uba.ar

BT-P11

CASEINOLYTIC AND MILK-CLOTTING ACTIVITY OF *Solanum tuberosum* ASPARTIC PROTEASES (*ST*APS)

Tito FR, Pepe A, Frey ME, D'Ippólito S, Daleo GR, Guevara MG. IIB. UNMdP-CONICET. Mar del Plata. Argentina. E-mail: gguevara@mdp.edu.ar

BT-P12

VSPS OF *G. lamblia* AS CARRIERS IN CHRONIC ORAL ADMINISTRATION OF PEPTIDE DRUGS

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BT-P13

ACTIVE PACKAGING AGAINST *Escherichia coli* O157:H7 IN MEAT INDUSTRY

Koltan M[1], Paz García EC[1], Sanchez M[2], Pomares MF[1], Blanco Massani M[2], Eisenberg P[2], Vincent PA[1]. [1]INSIBIO, CONICET-UNT. Tucumán, Argentina. [2]INTI-Plásticos. Buenos Aires, Argentina. E-mail: marianokoltan@gmail.com

BT-P14

CLONING AND EXPRESSION OF A ROTAVIRUS VP6-FLIC131 FUSION PROTEIN

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BT-P15

BENEFICIAL RHIZOBACTERIA ENCAPSULATED IN NANOFIBERS FOR POTENTIAL APPLICATION AS SOYBEAN INOCULANTS

De Gregorio P[1], Michavila G[1], Lemes Santos F[2], Bonilha F[2], LM[1], Caram Di Santo M[1], Pomares M[1], Vincent P[1]. [1]INSIBIO, CONICET-UNT, Tucumán, Argentina. [2]Federal University of Rio Grande do Sul, Brazil. E-mail: priscilladegregorio@gmail.com

BT-P16

DESIGN OF A BIOTECHNOLOGICAL TOOL FOR INCREASING PROTEIN EXPRESSION IN PLANTS

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BT-P17

***Pseudomonas stutzeri* AS A PROMISING PLANT GROWTH-PROMOTING BACTERIA FOR SOYBEAN IN SALINE SOILS**

Lami MJ[1], Costa SB[1], Zenoff AM[1], Caram C[1], Esquivel-Cote R[2], Vincent PA[1], Espinosa Urgel M[3], De Cristóbal RE[1]. [1]INSIBIO CONICET-UNT, Arg. [2]Microbiología, Edafología, Col. Postgraduados, Mex. [3]EEZ, Granada España. E-mail: majesuslami@hotmail.com

BT-P18

DEVELOPMENT OF HETEROGENEOUS BIOCATALYST FOR PECTIN HYDROLYSIS OF VEGETABLE RESIDUES

Ramírez Tapias YA[1,2], Lapasset Laumann A[1], Britos CN[1], Trelles JA[1,2]. [1]Laboratorio de Investigaciones en Biotecnología Sustentable, UNQ. [2]CONICET.

BT-P19

BIOSYNTHESIS OF GALACTOSYL-FLOXURIDINE USING IMMOBILIZED *B*-GALACTOSIDASE FROM *Micrococcus luteus*

Sarquiz A[1,2], Britos CN[1], Rivero CW[1,2], Trelles J.A[1,2]. [1]Laboratorio de Investigaciones en Biotecnología Sustentable, UNQ. [2]CONICET.

BT-P20

ENCAPSULATION *ECHINOCOCCUS GRANULOSUS* ANTIGENS FOR THE DEVELOPMENT OF A NANOVACCINE

Silvarrey C[1], Benavídez U[1], Briancon S[2] and Esteves A[1]. Universidad de la República, Uruguay; [2]Universidad Claude Bernard, Lyon, France.

BT-P21

BIOREMEDIATION STRATEGIES BASED ON A NATIVE STRAIN ISOLATED FROM SITES CONTAMINATED WITH HYDROCARBONS.

Conde Molina D[1], Liporace F[1], Vázque S[2], Merini L[3], Giulietti AM[2], Quevedo C[1].[1.] Biotechnology Research Laboratory, FRD-UTN, [2]. NANOBIOTEC, FFyB,UBA-CONICET, [3]. EEA-INTA Anguil, Argentina.

CELL BIOLOGY

CB-P01

PROTEIN S-ACYLATION IN *Trichomonas vaginalis*

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CB-P02

A NOVEL SIGNAL FOR ENDOCYTOSIS AND POLARITY IN YEAST

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CB-P03

ST3GAL II AND β4GALNT I ARE S-ACYLATED AT N-TERMINAL CYSTEINES INVOLVED IN HOMO-DIMERIZATION

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CB-P04

IDENTIFICATION OF A PLASMA MEMBRANE FUSION SUPERFAMILY, FUSEXIN, SUFFICIENT TO FUSE GAMETES, ENVELOP

Valansi C[1#], Moi D[2#], Matveev E[1], Graña M[3], Romero H[4], Aguilar PS[2], Podbilewicz B[1]. [1]Dep of Biology, Technion- Israel Institute of Technology, Israel. [2]Lab Biol Cel de Membranas, IIB-UNSAM, Argentina. [3]Institut Pasteur Montevideo, Uruguay. [4]Lab de Org y Evol del Genoma, Facultad de Ciencias, UdeLaR, Uruguay. [#]contributed equally to this work. Email: paguilar@iibintech.com.ar and podbilew@technion.ac.il

CB-P05

CHANGES IN SECRETORY PATHWAY MARKERS IN A PC12 CELL MODEL OF PARKINSON´S DISEASE

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CB-P06

POST-TRANSLATIONAL INCORPORATION OF L-DOPA INTO THE C-TERMINUS OF α-TUBULIN IN LIVING CELLS

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CB-P07

DEVELOPMENT OF SCREENING METHODS TO IDENTIFY TRANSLESION DNA SYNTHESIS INHIBITORS

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CB-P08

KLF6 TUMOR SUPPRESSOR ACTIVITY IS ASSOCIATED TO THE INDUCTION OF CELLULAR SENESCENCE

Sabatino ME, Pansa MF, García AI, Carbajosa S, Villafañez F, Soria GR, Bocco JL. Centro de Investigaciones en Bioquímica Clínica e Inmunología. CIBICI-CONICET. Córdoba, Argentina.E-mail: mesabatino@fcq.unc.edu.ar.

CB-P09

IDENTIFICATION OF TLS INHIBITORS THROUGH THE DEVELOPMENT OF IMAGING-BASED SCREENING PLATFORMS

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CB-P10

KLF6 SUCBELLULAR DISTRIBUTION AS A MARKER OF TUMOR AGGRESSIVENESS IN HUMAN COLON ADENOCARCINOMA

Grupe V[1], Sabatino ME[2], Cordero V[3], Cabalier E[3], Lucca A[1], Cortiñas E[1], Monteverdi L[1], Bocco JL[2]. [1]Fund. Progreso de la Medicina. [2]CIBICI-CONICET-UNC. [3]Hosp. Nacional Clínicas. Córdoba, Argentina. E-mail: verogrupe@hotmail.com.

CB-P11

DEVELOPMENT OF A SCREENING PLATFORM FOR THE IDENTIFICATION OF LETHALITY INDUCERS IN CANCER CELLS

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CB-P12

STAPHYLOCOCCAL α-TOXIN REGULATES C-JUN ONCOPROTEIN ACTIVATION, ITS mRNA LEVEL AND PROTEIN STABILITY

Moyano AJ[2], Racca AC[1], Soria GR[1], Andreoli V[1], Smania AM[2], Panzetta-Duttari G[1], Sola C[1], Bocco JL[1]. [1]CIBICI, Dpto. de Bioquímica Clínica; [2]CIQUIBIC, Dpto. de Química Biológica, Fac. Cs. Químicas, UNC. E-mail: amoyano@fcq.unc.edu.ar

CB-P13

CORRELATION BETWEEN PMCA ACTIVITY AND TUBULIN ON PLATELET FUNCTION IN SPONTANEOUSLY HYPERTENSIVE RAT

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CB-P14

NATURAL ANTISENSE TRANSCRIPTS IN THE REGULATION OF ACSL4 EXPRESSION IN BREAST CANCER CELLS

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CB-P15

INSULIN INDUCES THE EXOCYTIC TRAFFIC OF LRP1 FROM GSV–LIKE STRUCTURAL VESICLES

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CB-P16

CHARACTERIZATION OF HUMAN SIALIDASE NEU3 MEMBRANE ASSOCIATION

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CB-P17

POST-TRANSLATIONAL INCORPORATION OF PHENYLALANINE INTO TUBULIN AS A CAUSE OF NEURONAL DYSFUNCTION

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CB-P18

LRP1 PARTICIPATES IN HEMIN-INDUCED AUTOPHAGY, MODYFING ITS TRAFFICKING IN ERYTHROLEUKEMIA CELLS

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CB-P19

UTEROSOME-LIKE VESICLES PROMPT HUMAN SPERM FERTILIZING CAPACITY

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CB-P20

TEMPORAL REGULATION OF STRESS GRANULES BY CIRCADIAN CLOCKS AND OTHER MECHANISM

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CB-P21

IDENTIFICATION OF KLDHC5 AS AN INTERACTING PROTEIN OF STARD7

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CB-P22

CHLORPYRIFOS INDUCES ENDOPLASMIC RETICULUM STRESS ASSOPCIATED WITH P53 DEGRADATION IN JEG-3 CELLS

Reyna L, Flores-Martín J, Ridano ME, Panzetta-Dutari GM, Genti-Raimondi S. Dpto. Bioquímica Clínica, Facultad de Ciencias Químicas-UNC. CIBICI-CONICET. Argentina. E-mail: lucireyna@fcq.unc.edu.ar.

CB-P23

STARD7 KNOCKDOWN LEADS TO α5β1 INTEGRIN UPREGULATION AND GOLGI FRAGMENTATION IN HTR8/SVNEO CELLS

Cruz Del Puerto MM, Flores-Martín J, Reyna L; Panzetta-Dutari GM, Genti-Raimondi S. Dpto. Bioquímica Clínica, Facultad de Ciencias Químicas-UNC. CIBICI-CONICET. Argentina. E-mail: mdelpuertoi@fcq.unc.edu.ar.

CB-P24

TAMS INDUCE ENDOCRINE RESISTANCE AND STEM CELL-LIKE ENRICHMENT IN BREAST CANCER CELLS

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CB-P25

VITAMIN A DEFICIENCY: ALTERS OXIDATIVE STRESS AND INFLAMMATION GENE EXPRESSION IN MAMMARY GLAND.

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CB-P26

IN VIVO GPAT2 KNOCK-DOWN ACTIVATES APOPTOTIS

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CB-P27

CELLULAR CHANGES ASSOCIATED WITH R-CRT PRO-APOPTOTIC ACTION INDUCED BY BORTEZOMIB IN GLIOMA CELLS

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CB-P28

PERIVITELLIN SYNTHESIS ADAPTS TO REPRODUCTIVE ACTIVITY IN THE SNAIL *Pomacea canaliculata*

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CB-P29

VALIDATION OF REFERENCE GENES FOR REPRODUCTIVE STUDIES IN THE INVASIVE SNAIL *Pomacea canaliculata*

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CB-P30

ROLE OF CHROMATIN STRUCTURE ON SMN2 E7 ALTERNATIVE SPLICING

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CB-P31

4-HYDROXY-3-(3-METHYL-2-BUTENYL)-ACETOPHENONE (4-HMBA) INHIBES PROLIFERATION OF MELANOMA B16F0 CELLS

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CB-P32

FLAVIVIRUS: TOWARDS THE DESIGN OF A MOLECULAR PLATFORM FOR ANTIVIRAL ASSAYS

Vazquez CT[1], Ispizua JI[1], Bandoni Garay DP[1], Lorch MS[1], Contigiani MS[2], Lozano ME[1], Goñi SE[1]. [1]Área de Virosis Emergentes y Zoonóticas, LIGCBM, UNQ, Arg. [2]Lab de Arbovirus, INViV, UNC, Arg.E-mail: tahiscecilia@hotmail.com

CB-P33

NS1: DIFFERENT APPROACHES TO IMMUNE RECOGNITION AND FLAVIVIRUS DIAGNOSIS

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CB-P34

MOLECULAR TOOLS DEVELOPMENT FOR ST. LOUIS ENCEPHALITIS VIRUS PATHOGENESIS STUDY

Ispizua JI[1], Brandoni Garay DP[1], Vázquez CT[1], Albrieu G[2], Díaz LA[2], Contigliani MS[2], Lozano ME[1], Goñi SE[1]. [1]Área de Virosis Emergentes y Zoonóticas, LIGCBM, UNQ, Arg. [2]Lab de Arbovirus, INViV, UNC, Arg.E-mail: Ispizua.juan@hotmail.com

CB-P35

GOLGI BODIES IN THE GOLGI-LACKING PARASITE *Giardia lamblia*

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CB-P36

DEVELOPMENT OF AN ORAL VACCINE AGAINST TUBERCULOSIS BASED ON VIRUS-LIKE PARTICLES

Martina MA[1], Rupil LL[1], Serradell MC[1], García VE[2], Colombo MI[3], Berod L[4], Sparwasser T[4]; Luján HD[1]. [1]UCC, CIDIE-CONICET. [2]IQUIBICEN, UBA-CONICET. [3]IHEM-CONICET, UNCuyo. [4]TWINCORE. E-mail: mmartina@cidie.ucc.edu.ar.

CB-P37

IMMUNOGENIC PROPERTIES OF THE EXTRACELLULAR DOMAIN OF VARIANT SURFACE PROTEINS OF *Giardia lamblia*

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CB-P38

VARIANT-SPECIFIC SURFACE PROTEINS AS MEDIATORS OF ANTIGENIC VARIATION IN *Giardia lamblia*

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CB-P39

VLPS PSEUDOTYPED WITH VARIANT SURFACE PROTEINS OF GIARDIA AS AN EFFECTIVE ORAL INFLUENZA VACCINE

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CB-P40

ROLE OF MVBS FORMATION DURING ANTIGEN CROSS-PRESENTATION BY DENDRITIC CELLS

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CB-P41

CHARACTERIZATION OF VAMP ISOFORMS INVOLVED IN CORTICAL GRANULE EXOCYTOSIS IN MOUSE OOCYTE

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CB-P42

ASSESSMENT OF KRÜPEL-LIKE FACTOR 6 FUNCTION IN HUMAN EXTRAVILLOUS TROPHOBLAST CELLS

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CB-P43

FUNCTIONAL CROSS-TALK BETWEEN THE GLUCOCORTICOID AND PROGESTIN RECEPTORS

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CB-P44

N-TERMINAL DOMAIN OF C-FOS AS A NEGATIVE DOMINANT FOR BRAIN CANCER THERAPY

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CB-P45

LIPOSOMAL VEHICULIZATION OF ZN PHTHALOCYANINES AND AMINE DERIVATES IN PDT INACTIVATION OF T98G CELLS

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CB-P46

CYTOPLASMIC FRA1 AND CFOS AS POTENTIAL TARGETS FOR BREAST CANCER THERAPY

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CB-P47

POSSIBLE TREATMENTS AGAINST *Trypanosoma cruzi* THROUGH THE COMBINED USE OF TRYPANOCIDAL DRUGS.

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CB-P48

THE INVOLVEMENT OF SPLICING FACTORS IN THE SUMO CONJUGATION PATHWAY

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CB-P49

SECRETION PROFILE OF THE TCTASV-C PROTEINS IN DIFFERENT *Trypanosoma cruzi* STRAINS

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CB-P50

FORMING EXOSOMES WITHOUT ALL THE FOUNDING PLAYERS

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CB-P51

CHARACTERIZATION OF THE ROLE OF *Saccharomyces cerevisiae* EISOSOMAL MEMBRANE DOMAINS IN AGING

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CB-P52

HUMAN ERYTHROCYTES AS EARLY TARGETS OF THALLIUM TOXICITY

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CB-P53

TL(I) AND TL(III) AFFECT DIFFERENTIALLY PC12 CELL DIFFERENTIATION

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CB-P54

IS THE METABOLISM OF EXTRACELLULAR ATP INVOLVED IN THALLIUM-MEDIATED CITOTOXICITY?

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CB-P55

EARLY RESPONSE OF ANTIOXIDANT ENZYMES TO TL(I)- AND TL(III)-MEDIATED OXIDATIVE STRESS IN PC12 CELLS

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CB-P56

THE TRANSLATION INHIBITOR 4EBP IS REQUIRED FOR ADAPTATION TO HYPOXIA IN DROSOPHILA

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CB-P57

miRNA TURNOVER CONTROL BY LINEAR AND CIRCULAR RNA TARGETS

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CB-P58

ANTITUMOR EFFECT OF A CU(II) COMPLEX WITH SACCHARINATE AND GLUTAMINE RELEASED FROM SILICA SPHERES

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CB-P59

ANALYSIS OF NEW ORGANOMETALLIC COMPOUNDS AS POTENTIAL AGENTS AGAINST CHAGAS DISEASE

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CB-P60

BDNF EXPRESSION IN THE TESTES OF RESERPINE-TREATED RATS

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CB-P61

SYK: A SPECIFIC TARGET FOR CELLULAR IMMUNOTHERAPY OF RETINOBLASTOMA

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CB-P62

GALECTIN-3 DEFICIENCY DRIVES LUPUS-LIKE AUTOIMMUNE DISEASE BY PROMOTING SPONTANEOUS GERMINAL CENTERS FORMATION

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CB-P63

TOWARDS NEW THERAPIES AGAINST CANCER: STUDYING PIN1 AS A THERAPEUTIC TARGET IN NEUROBLASTOMA

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CB-P64

RETINOIDS AND HER2 INHIBITORS AFFECT THE BEHAVIOR OF MAMMARY CANCER STEM CELLS

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CB-P65

NORCANTHARIDIN IMPAIRS MAMMARY CANCER STEM CELLS GROWTH AND IN VIVO TUMOR PROGRESSION

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CB-P66

GLUCOSE 6-PHOSPHATE DEHYDROGENASE INHIBITION SENSITIZE MELANOMA CELLS TO METFORMIN TREATMENT

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CB-P67

DIFFERENTIAL EFFECTS OF TWO ORGANOPHOSPHORUS PESTICIDES ON POLYAMINE METABOLISM IN TOAD EMBRYOS

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ENZYMOLOGY

EN-P01

KINETIC AND STRUCTURAL CHARACTERIZATION OF UDP-GLUCOSE PYROPHOSPHORYLASE FROM Euglena gracilis

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EN-P02

CRDSP, A PHOSPHOGLUCAN PHOSPHATASE INVOLVED IN STARCH METABOLISM IN *C. reinharditii*

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EN-P03

OXIDOREDUCTASE ACTIVITY AND IRON-SULFUR CLUSTER BINDING OF GLUTAREDOXINS FROM *Leptospira interrogans*

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EN-P04

HETEROLOGOUS PRODUCTION AND CHARACTERIZATION OF A THERMOSTABLE GH10 FAMILY ENDO-XYLANASE

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EN-P05

MODELING AND CHARACTERIZATION OF β-XYLOSIDASE ECXYL43 ON NATURAL AND ARTIFICIAL SUBSTRATES

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EN-P06

ASSOCIATION BETWEEN ALDOSE REDUCTASE AND TUBULIN: EFFECT OF TYROSINE DERIVATIVES.

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EN-P07

STIMULATION OF ALDOSE REDUCTASE ACTIVITY BY TUBULIN: EFFECT OF PHENOLIC ACID DERIVATIVES

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EN-P08

RIBULOSE 5-PHOSPHATE EPIMERASE ISOENZYMES IN *Trypanosoma cruzi*: STRUCTURE, KINETICS AND LOCALIZATION

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EN-P09

CHARACTERIZATION OF HEME OXYGENASE AND FERREDOXIN-NADP+ REDUCTASE IN *Leptospira biflexa*

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EN-P10

BIOCHEMICAL CHARACTERIZATION OF THE GLYCOGEN STORAGE DISEASE-ASSOCIATED A16P MUTANT OF GLYCOGENIN

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EN-P11

STRUCTURE TO FUNCTION STUDIES ON SUCROSE SYNTHASES FROM *Anabaena variabilis*

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EN-P12

SHIFTING COFACTOR SPECIFICITY OF PEACH GLUCITOL DEHYDROGENASE BY STRUCTURE-GUIDED MUTAGENESIS

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EN-P13

KINETIC AND REGULATORY CHARACTERIZATION OF *Arabidopsis thaliana* PHOSPHOENOLPYRUVATE CARBOXYKINASE

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EN-P14

MECHANISM OF INHIBITION OF EPIGALLOCATECHIN ON THE PLASMA MEMBRANE CA2+-ATPASE

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EN-P15

DIFFERENTIAL INHIBITION OF PLASMA MEMBRANE CA2+-ATPASE BY QUERCETIN AND GOSSYPIN

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EN-P16

BERYLLIUM AND ALUMINUM FLUORIDE COMPLEXES TO STUDY PHOSPHORYLATED STATES IN THE NA,K-ATPASE

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EN-P17

REDOX MODULATION OF HSIRT6, KEY ENZYME OF METABOLISM AND INFLAMMATION

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LIPIDS

LI-P01

OXER1 IS INVOLVED IN ADRENOCORTICAL CELL PROLIFERATION

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LI-P02

ω-6 AND ω-3 FATTY-ACIDS ON EARLY STAGES OF MICE SUBMANDIBULAR GLANDS TUMOR

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LI-P03

ROLE OF PHOSPHATIDYLCHOLINE BIOSYNTHESIS ON NEURONAL DIFFERENTIATION

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LI-P04

BIOCHEMICAL CHARACTERIZATION OF GM1 MICELLES-AMPHOTERICIN B INTERACTION

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LI-P05

NITRO-FATTY ACID MODULATES MACROPHAGE LIPID METABOLISM

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LI-P06

LIPID CHARACTERIZATION OF CORTICAL BRAIN IN A STZ-INDUCED RAT MODEL OF SPORADIC ALZHEIMER'S DISEASE

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LI-P07

IN VITRO AND IN VIVO EVALUATION OF MANDARIN PEEL OIL ON LIPID METABOLISM AND TUMOR GROWTH

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LI-P08

2-ARACHIDONOIL GLICEROL IN *CAENORHABDITIS ELEGANS* DAUER DIAPAUSE REGULATION

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LI-P09

EXPLORING THE LINK BETWEEN BRANCHED CHAIN FATTY ACIDS AND ENDOCANNABINOIDS IN*CAENORHABDITIS ELEGANS*

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LI-P10

SPHINGOSINE 1 PHOSPHATE RECEPTOR 2 REGULATES EPITHELIAL CELLS MONOLAYER INTEGRITY

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LI-P 11

SPHINGOMYELIN SYNTHESIS MODULATES E-CADHERIN MATURATION AND RENAL EPITHELIAL CELL DIFFERENTIATION

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LI-P12

THE ROLE OF XBP-1 IN OSMOTIC ACTIVATED-LIPID SYNTHESIS.

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LI-P13

Tl(I) AND Tl(III) INDUCE ALTERATIONS IN LIPID METABOLISM IN DIFFERENTIATED MDCK CELLS

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LI-P14

ETHER-LINKED LIPIDS OF RAT DEVELOPING AND ADULT EPIDIDYMIS

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LI-P15

DISRUPTION OF THE CYTOSKELETON AND ALTERED LIPID METABOLISM IN SERTOLI CELLS

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LI-P16

DECREASED OXLDL UPTAKE AND CHOLESTEROL EFflUX IN THP1 CELLS ELICITED BY CORTISOL

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LI-P17

MOLECULAR CONSEQUENCES OF GPAT2 KNOCK-DOWN IN BREAST CANCER CELLS

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LI-P18

STUDIES ON THE MOLECULAR CLOCK AND THE CIRCADIAN REGULATION OF HEPATIC TUMORAL CELL METABOLISM

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LI-P19

NEUTRAL LIPIDS ARE INDUCED IN THE APPLE SNAIL POMACEA CANALICULATA BY CYPERMETHRIN PESTICIDE

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LI-P20

EMERGING ROLES OF PHOSPHOLIPASES D IN RETINAL PIGMENT EPITHELIUM CELLS EXPOSED TO HIGH GLUCOSE

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LI-P21

PLD1-PKCε PATHWAY PROTECTS FROM LPS-INDUCED CELL DAMAGE IN RETINAL PIGMENT EPITHELIUM CELLS

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LI-P22

UNSATURATED FATTY ACID BIOSYNTHESIS IN*MYCOBACTERIUM SMEGMATIS*

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LI-P23

PHYLOGENETIC ANALYSIS OF FATTY ACID DESATURASES REVEALS CONTRASTING EVOLUTIONARY CLUES IN CILIATES

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LI-P24

ENDOCANNABINOID METABOLISM IN ROD OUTER SEGMENTS DEPENDS ON THE ILLUMINATION STATE OF THE RETINA

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LI-P25

EXPRESSION ANALYSIS OF CYTOCHROME P450 GENES IN PYRETHROID-RESISTANT *TRIATOMA INFESTANS*

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LI-P26

THE CORRECT LOCALIZATION OF PTEN IN EPITHELIAL CELLS DEPENDS ON GLYCOSPHINGOLIPID METABOLISM

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LI-P27

EPATIC CES3/TGH IS DOWNREGULATED IN THE EARLY STAGES OF LIVER CANCER DEVELOPMENT IN THE RAT

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LI-P28

GLUCOSE METABOLISM IN SKELETAL MUSCLE OF RATS FED A FUNCTIONAL MILK FAT AT HIGH LEVELS

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LI-P29

EFFECT OF CONJUGATED LINOLEIC ACID AND HIGH FAT DIETS ON TRIACYLGLYCEROL METABOLISM IN RAT OFFSPRING

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LI-P30

PHOSPHATIDIC ACID SIGNALING PARTICIPATES IN THE NEURODEGENERATION INDUCED BY α-SYNUCLEIN

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LI-P31

***HALAMPHORA COFFEAEFORMIS*: A SOURCE OF LIPIDS FOR BIODIESEL AND VALUE-ADDED CO-PRODUCTS**

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LI-P32

***Halamphora coffeaeformis*: A SOURCE OF LIPIDS FOR BIODIESEL AND VALUE-ADDED CO-PRODUCTS**

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LI-P33

GANGLIOSIDE SYNTHESIS BY PLASMA MEMBRANE-ASSOCIATED ECTOSIALYLTRANSFERASE IN MACROPHAGES

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LI-P34

LIPID METABOLISM IN CANCER CELLS: ROLE OF FABP5

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LI-P35

CELLULAR FATE OF PHOSPHOLIPIDS (PL) SYNTHESIZED DURING G2/M

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LI-P36

STUDY OF THE INTERACTION OF L-PHE WITH LIPID MEMBRANES AND ITS IMPLICATIONS IN BIOLOGICAL MEMBRANES

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MICROBIOLOGY

MI-P01

PROTEOME TURNOVER ANALYSIS IDENTIFIES PHYTOENE SYNTHASE AS A LON SUBSTRATE IN *Haloferax volcanii*

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MI-P02

IDENTIFICATION OF POTENTIAL TARGETS OF PROTEASE RhoII IN *Haloferax volcanii*

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MI-P03

EXPRESSION OF NOS FROM MARINE MICROORGANISMS IMPROVES GROWTH AND NITROGEN METABOLISM IN *E.coli*

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MI-P04

LOW LEVELS OF POLAR FLAGELLIN EXPRESSION IN MATURE BIOFILMS FROM *Azospirillum brasilense*

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MI-P05

POLYPHOSPHATE ROLE IN *Gluconacetobacter diazotrophicus* ABIOTIC STRESS RESISTANCE AND BIOFILM FORMATION

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MI-P06

BEHAVIOR OF *Bradyrhizobium* SEMIA6144 MEMBRANE DURING ADAPTATION TO WATER DEFICIT

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MI-P07

IMPACT OF ARSENIC IN *Bradyrhizobia* STRAINS AND IN THE SYMBIOTIC INTERACTION WITH PEANUT PLANT

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MI-P08

MESORHIZOBIUM LOTI TYPE VI SECRETION SYSTEM, A RELEVANT PLAYER IN THE LOTUS NODULATION

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MI-P09

ANALYSIS OF FUNCTIONAL REDUNDANCY OF RIESKE SUBUNIT IN CYTOCHROME BC OF *Mesorhizobium loti*

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MI-P10

LIPID SIGNALLING IN RESPONSE TO HYDRIC DEFICIT IN *Azospirullum*-INOCULATED BARLEY SEEDLING

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MI-P11

VOLATILE COMPOUNDS FROM *Klebsiella oxytoca* KD70 PROMOTE GROWTH OF ARABIDOPSIS SEEDLINGS

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MI-P12

ROLES OF RHIZOBIAL SURFACE COMPONENTS ON PROTECTION AGAINST ENVIRONMENTAL STRESSES

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MI-P13

PYROSEQUENCING REVEALS CHANGES IN FUNGAL SOIL COMMUNITIES UNDER *Lotus tenuis* MONOCULTURE

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MI-P14

MutS-DEPENDENT REGULATION OF THE ERROR-PRONE Pol IV ACTION: DNA STRUCTURES AS KEY MODULATORS

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MI-P15

A TWO-COMPONENT SYSTEM AFFECTS THE LOCALIZATION OF A DIVISOME PROTEIN IN *Streptococcus pneumoniae*

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MI-P16

AN ALLOSTERIC TRIGGER IN THE REGULATION OF ADP-GLUCOSE PYROPHOSPHORYLASE FROM ACTINOBACTERIA

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MI-P17

STUDY OF EUKARYOTE-LIKE ACETYL-CoA CARBOXYLASES OF ACTINOBACTERIA

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MI-P18

MUTAGENIC-MEDIATED DIFFERENTIATION IN *Bacillus subtilis* AFTER INTERACTION WITH *Setophoma terrestris*

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MI-P19

DNA RECOMBINATION IN *Escherichia coli* AND *Pseudomonas aeruginosa*

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MI-P20

THE RcsB-DEPENDENT MOTILITY BEHAVIOR REQUIRES THE LONG AND SHORT O-ANTIGEN CHAIN LENGTH DETERMINANTS

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MI-P21

IDENTIFICATION AND CHARACTERIZATION OF A NEW ADHESIN IN *Brucella.*

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MI-P22

EXPRESSION ANALYSIS OF THE *sua* GENE IN BIOFILM *Streptococus uberis* STRAINS

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MI-P23

CHARACTERIZATION OF A *Streptococcus uberis* MUTANT STRAIN DEFICIENT IN THE *sua* GENE

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MI-P24

MONOCLONAL ANTIBODIES TO DISTINGUISH BETWEEN SHIGA TOXIN-PRODUCING *E. coli* O157 AND O145 SEROGROUPS

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MI-P25

USE OF A TAT–DEPENDANT SYSTEM TO STUDY PEDIOCIN PA–1 MECHANISM OF ACTION AGAINST *E. coli*

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MI-P26

RNA POLYMERASE IS THE PRIMARY TARGET OF MICROCIN J25 IN *Salmonella enterica* serovar Newport

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MI-P27

THE *prtR* GENE INDIRECTLY ACTIVATES THE BACTERIOCIN PRODUCTION IN *P. fluorescens* SF4C

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MI-P28

NEW HYBRID BACTERIOCIN WITH ACTIVITY AGAIST FOODBORNE PATHOGENS

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MI-P29

TbRRM1, A SR-RELATED PROTEIN, REGULATES TRANSCRIPTION RATES IN *Trypanosoma brucei* PROCYCLIC CELLS

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MI-P30

ISOTRETINOIN INHIBITS ESSENTIAL METABOLITES TRANSPORT AND EXERTS TRYPANOCIDAL ACTIVITY

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MI-P31

CHARACTERIZATION OF MUTATIONS IN THE β-LACTAMASE AmpC FROM *Pseudomonas aeruginosa* CF ISOLATES

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MI-P32

Proteus mirabilis SECRETES FACTORS THAT AFFECT _Klebsiella pneumoniae_ GROWTH AND SURVIVAL IN URINE

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MI-P33

COMMUNITY-ASSOCIATED METHICILLIN RESISTANT _S. aureus_ HOSPITAL ACQUIRED, ARGENTINA

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MI-P34

SURVIVAL AND GENES EXPRESSION OF MRSA EPIDEMIC CLONES ON AN ENVIRONMENTAL INERT SURFACE

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MI-P35

KTCF20: A KILLER AGENT AGAINST _Candida_

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MI-P36

A NOVEL AND RAPID METHOD FOR THE PURIFICATION OF KILLER TOXINS

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MI-P37

THE KILLER EFFECT OF LACTOFERRIN IN _Giardia lamblia_ INVOLVES CRITICAL MORPHOLOGICAL DEFECTS

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MI-P38

EFFECT OF DICHLOROACETATE ON _S. cerevisisae_ RESISTANCE TO FLUCONAZOLE

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MI-P39

ANALYSIS OF _Giardia Lamblia_ PROTEIN-S-ACYLTRANSFERASES USING COMPLEMENTATION ANALYSIS IN YEAST

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MI-P40

GENOMICS AND PROTEOMICS OF BACTERIOCIN-PRODUCING STRAIN _Pseudomonas fluorescens_ SF4C

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MI-P41

OMICS APPROACH FOR SAFETY AND INDUSTRIAL POTENTIAL ASSESSMENT OF FOOD ISOLATED ENTEROCOCCI

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MI-P42

ISOLATION AND CHARACTERIZATION OF PATHOGENS CAUSING FOODBORNE DISEASES

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MI-P43

ISOLATION OF POTENTIAL BENEFICIAL BACTERIA WITH PROTEOLYTIC ACTIVITY FROM POULTRY FEED

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MI-P44

GENOME-SCALE METABOLIC MODEL OF _Lb. casei_ BL23 REVEALS THE ROLE OF REDOX BALANCE IN FLAVOR FORMATION

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MI-P45

ACCUMULATION OF POLYPHOSPHATE IN LACTIC ACID BACTERIA AND ITS INVOLVEMENT IN STRESS RESISTANCE

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MI-P46

EFFECTS OF LACTIC ACID BACTERIA ON INFLAMMATORY CYTOKINES PRODUCTION BY ARPE-19 CELLS

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MI-P47

S-LAYER PROTEINS OF *Lactobacillus sp.* AS POTENTIAL TREATMENT FOR BACTERIAL AND VIRUS PATHOGENS

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MI-P48

INTRA-STRAIN VARIABILITY IN THE AMINO ACID SEQUENCE OF S-LAYER PROTEINS FROM *Lactobacillus kefiri*

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MI-P49 BIOSYNTHESIS OF 5-HALOGENATED NUCLEOSIDES USING NANOSTABILIZED LACTIC ACID BACTERIA

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MI-P50 ANTIVIRAL COMPOUND BIOSYNTHESIS BY A STABILIZED MULTI-ENZYMATIC SYSTEM

De Benedetti EC[1,2], Rivero CW[1,2], Zinni MA[1], Trelles J.A[1,2]. [1]Laboratorio de Investigaciones en Biotecnología Sustentable, UNQ. [2]CONICET.

MI-P51

NEMATODE M01F1.3 AND C45G3.3 FUNCTIONALLY COMPLEMENT MICROBIAL MUTANTS IN LIPOYLATION PATHWAYS

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NEUROSCIENCE

NS-P01

HIPPOCAMPAL BDNF IN RESERPINE-TREATED ADOLESCENT WISTAR RATS

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NS-P02

ROLE OF C-FOS IN NEURONAL DIFFERENTIATION

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NS-P03

NEUROINFLAMMATORY RESPONSES IN A MOUSE MODEL OF AUTISM SPECTRUM DISORDER (ASD)

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NS-P04

DEFICITS OF HIPPOCAMPAL STRUCTURAL PLASTICITY IN A MOUSE MODEL OF MECP2 DEFICIENCY

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NS-P05

PKD1 REGULATION OF TRK RECEPTORS' TRAFFICKING: EFFECT ON NEURONAL DEVELOPMENT AND FUNCTIONALITY

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NS-P06

IGF-1R AND PI3K-AKT SIGNALLING PATHWAY ARE ESSENTIAL FOR FORMATION OF BRAIN CORTEX

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NS-P07

DIETARY SOY-BASED PROTEIN MODULATES THE OXIDATIVE AND INFLAMMATORY EFFECTS OF CADMIUM IN HIPPOCAMPUS

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NS-P08

STUDY ON VISUAL AND NON-VISUAL OPSINS IN A MODEL OF RETINAL DEGENERATION CAUSED BY LED LIGHTS

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NS-P09

NOVEL PHOTORECEPTORS IN THE AVIAN INNER RETINA: HORIZONTAL CELLS EXPRESSING MELANOPSIN X

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NS-P10

ADULT HIPPOCAMPAL NOTCH ACTIVATION IMPAIRS Aβ CLEARANCE AND COGNITION IN A RAT MODEL OF ALZHEIMER

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NS-P11

EXPERIMENTAL GUILLAIN-BARRE SYNDROME: ROLE OF THE CARRIER PROTEIN KLH

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NS-P12

IMPAIRED AUTOPHAGY FLUX IN MÜLLER GLIAL CELLS EXPOSED TO HYPOXIA: IN VITRO AND IN VIVO MODELS

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PLANT BIOCHEMISTRY AND MOLECULAR BIOLOGY

PL-P01

MOLECULAR ANALYSIS AND SUBCELLULAR LOCALIZATION OF PEPTIDASE SILPEPSIN 2 FROM *Silybum marianum*

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PL-P02

MITOCHONDRIAL PPR-CONTAINING PROTEINS ARE ESSENTIAL TO SUSTAIN EMBRYOGENESIS IN *ARABIDOPSIS THALIANA*

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PL-P03

TOWARDS UNDERSTANDING THE INTERPLAY BETWEEN PRODH AND ROS BURST IN PLANT HYPERSENSITIVE RESPONSE

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PL-P04

USE OF NON-THERMAL PLASMA FOR PATHOGEN CONTROL AND IMPROVEMENT ON THE BIOCHEMICAL QUALITY OF SEEDS

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PL-P05

POLYAMINES REDUCED GROWTH BY MODULATING REACTIVE OXYGEN SPECIES AND NITRIC OXIDE FORMATION IN WHEAT

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PL-P06

EFFECT OF MAGNETITE NANOPARTICLES ON ALFALFA (*Medicago sativa* l.) PLANTS

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PL-P07

DROUGHT STRESS EFFECTS ON CARBON AND NITROGEN METABOLISM IN THE PEANUT-RHIZOBIA INTERACTION

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PL-P08

CONTRIBUTION OF TOMATO ELECTROPHILE COMPOUNDS TO THE THERMO TOLERANCE IN *C. elegans*

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PL-P09

CLONING AND SEQUENCING OF A NEW CYSTEINE PEPTIDASE FROM FRUITS OF *Bromelia hieronymi* mez

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PL-P10

ANALYSIS OF METABOLIC INTEGRATORS FROM *Nannochloropsis gaditana*

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PL-P11

FUNCTIONAL CHARACTERIZATION OF PEACH FRUIT PPZAT12 AND *Arabidopsis* ATZAT12 TRANSCRIPTION FACTORS

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PL-P12

ATTRAF: A NOVEL RNA CHAPERONE INVOLVED INTEMPERATURE STRESS RESPONSES IN Arabidopsis

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PL-P13

CHARACTERIZATION OF STONE HARDENING DURING THE PEACH FRUIT DEVELOPMENT

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PL-P14

THE TRANSCRIPTION FACTOR ATHB5 IS A NEGATIVE REGULATOR OF LIGNIN ACCUMULATION

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PL-P15

IMPROVEMENT OF STRESS TOLERANCE IN TOBACCO PLANTS BY EXPRESSING CYANOBACTERIAL FLAVODIIRON PROTEINS

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PL-P16

THE SUNFLOWER TRANSCRIPTION FACTOR HAHB11 INTERACTS WITH A KINESIN IN ARABIDOPSIS TRANSGENIC PLANTS

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PL-P17

THE HOMEODOMAIN-LEUCINE ZIPPER TRANSCRIPTION FACTOR ATHB23 PLAYS A ROLE IN ROOT DEVELOPMENT

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PL-P18

PLEIOTROPIC EFFECTS INDUCED BY LIHSP83-SAG1 VACCINE ANTIGEN EXPRESSION IN TRANSPLASTOMIC PLANTS

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PL-P19

ROLE OF 90 KDA HEAT SHOCK PROTEIN IN PLANT IMMUNITY

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PL-P20

***COLLETOTRICHUM ACUTATUM* PRODUCES A LOW MOLECULAR WEIGHT COMPOUND THAT SUPPRESSES-INDUCED DEFENSE**

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PL-P21

SOFT MECHANICAL STIMULUS INDUCES RESISTANCE AGAINST *BOTRYTIS CINEREA* IN CULTIVATED STRAWBERRY

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PL-P22

ASES INDUCES PHYSIOLOGICAL AND BIOCHEMICAL CHANGES OF AVOCADO FRUIT DURING RIPENING

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PL-P23

HET ELLAGITANNIN ALTERS CELL REDOX STATUS AND ROS ACCUMULATION IN STRAWBERRY PLANTS

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PL-P24

EFFECT OF BRASSINOSTEROIDS TREATMENT IN STRAWBERRY DEFENSE MARKERS

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PL-P25

STRUCTURAL DETERMINANTS INVOLVED IN THE REDOX REGULATION OF THE ARABIDOPSIS FUMARASES ENZYMES

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PL-P26

DIFFERENTIAL METABOLIC REARRANGEMENTS AFTER COLD STORAGE OF DIFFERENT PEACH FRUIT VARIETIES

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PL-P27

FIRST ANALYSIS OF THE WHOLE PUTATIVE THIOREDOXIN FAMILY MEMBERS IN *ZEA MAYS*

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PL-P28

FUNCTIONAL CHARACTERIZATION OF A DC1-DOMAIN PROTEIN ESSENTIAL FOR EARLY GAMETOPHYTIC DEVELOPMENT

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PL-P29

OPTIMIZATION OF RECOMBINANT MAIZE CDKA PRODUCTION IN *ESCHERICHIA COLI*: A STATISTICAL APPROACH

Mendez AA[1], Pena LB[1], Garza Aguilar SM[2], Vazquez Ramos JM[2], Gallego SM[1]. [1]Dto Qca Biológica, FFYB, UBA-IQUIFIB, CONICET. [2]Dto Bioquímica, Fac Química, UNAM-CONACYT, México. E-mail: amendez@ffyb.uba.ar

PL-P30

CITRATE METABOLISM IN OIL SEEDS

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PL-P31

PHOSPHATE DEFICIENCY IN PLANTS: THE ROLE OF EXTRACELLULAR AND INTRACELLULAR RIBONUCLEASES

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PL-P32

THE CYSTEINE DESULFURASE ATNFS1 IS INVOLVED IN FE-S CLUSTER ASSEMBLY AND IRON METABOLISM

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PL-P33

TWO MITOCHONDRIAL SCO PROTEINS DIFFERENTIALLY AFFECT SALT STRESS RESPONSES IN *A. THALIANA*

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PL-P34

TCP14 AND TCP15 PARTICIPATE IN TEMPERATURE-DEPENDENT DEVELOPMENTAL RESPONSES IN *ARABIDOPSIS THALIANA*

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PL-P35

SURF-1 MODULATES HYPOCOTYL GROWTH BY INFLUENCING AUXIN AND GIBBERELLIN ACTION IN *Arabidopsis*

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PL-P36

OVEREXPRESSION OF STAP-PSIDOMAIN IN *ARABIDOPSIS THALIANA* INCREASES RESISTANCE TO *B. CINEREA*

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PL-P37

STUDYING THE CYTOSOLIC GA3PDHASE IN AUTOTROPHIC AND HETEROTROPHIC *CHLORELLA* CELLS

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PL-P38

ALTERNATIVE SPLICING REGULATION AND RNA POLYMERASE II ELONGATION MEDIATED BY LIGHT

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PL-P39

STUDY OF CALMODULIN BINDING PROTEIN IQ67-DOMAIN CLASS IV (IQD) IN *ARABIDOPSIS THALIANA*

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PL-P40

LIPID PROFILING OF PEACH LEAVES FROM GENOTYPES WITH CONTRASTING SUSCEPTIBILITY TO *TAPHRINA DEFORMANS*

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PL-P41

REGULATION OF PLANT DEVELOPMENT BY A NON-CODING RNA TRANSCRIBED BY THE BIDIRECTIONAL HAWRKY6 PROMOTER

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PL-P42

MECHANISMS OF LOADING, SELECTION AND RETENTION OF THE MICRO RNAS STRANDS IN PLANTS

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PL-P43

FINDING NEW COMPONENTS OF THE MIRNA BIOGENESIS IN *ARABIDOPSIS*

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PL-P44

RELATIONSHIP BETWEEN PII PROTEIN AND ENVIRONMENTAL STRESSES IN *ARABIDOPSIS*

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PL-P45

TEMPERATURE STRESS TOLERANCE IN *ARABIDOPSIS THALIANA*: A ROLE FOR ALTERNATIVE SPLICING

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PL-P46

CONTROL OF BRASSINO STEROID SIGNALING BY SHADE AND TEMPERATURE CUES

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PL-P47

NEW GENES FROM *XANTHOMONAS CITRI* SUBSP. *CITRI* INVOLVED IN BACTERIAL EPIPHYTIC SURVIVAL

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PL-P48

FRATAXIN OLIGOMERIZATION AND METAL BINDING PROPERTIES IN PLANTS

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PL-P49

GATA* TRANSCRIPTION FACTORS DURING HEATSTRESS IN *ARABIDOPSIS THALIANA

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PL-P50

CONTROL OF PLANT DEVELOPMENT BY THE TRANSCRIPTIONAL COACTIVATOR AN3

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PL-P51

INTERACTIONS BETWEEN GROWTH REGULATING SYSTEMS IN *ARABIDOPSIS THALIANA*

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PL-P52

BIOCHEMICAL AND MOLECULAR CHARACTERIZATION OF TWO *CITRUS RETICULATA* VARIETIES: MURCOTT AND ELLENDALE

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PL-P53

UV-B LIGHT ENHANCES ANTIMICROBIAL ACTIVITY OF POSTHARVEST LEMON PEEL AGAINST *PENICILLIUM DIGITATUM*

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PL-P54

CONTRIBUTION OF *GLUCONACETOBACTER DIAZOTROPHICUS* PAL5 TO PHOSPHORUS NUTRITION IN STRAWBERRY PLANTS

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PL-P55

DIFFERENTIAL SENSITIVITY OF *MENDICAGO SATIVA, ZEA MAYS* AND *RAPHANUS SATIVUS* TOOLIVE CAKE AND SOIL

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PL-P56

IDENTIFICATION OF CELL CYCLE REGULATORS IN PLANTS

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PL-P57

PROTEOMICS OF THE CHLOROPLAST STROMA OF *LOTUS JAPONICUS* UNDER COLD STRESS

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PL-P58

MULTIPLE MYB TRANSCRIPTIONAL FACTORS ARE INVOLVED INTO CONDENSED TANNIN BIOSYNTHESIS REGULATION

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PL-P59

REGULATION OF PHOTOSYNTHETIC MALIC ENZYMES IN C_4 MILLETS

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PL-P60

ANALYSIS OF MITOCHONDRIAL ALKALINE/NEUTRAL INVERTASE MUTANTS

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PL-P61

EFFECTS OF PHENOL TREATMENT ON CLOCK GENES EXPRESSION IN TOBACCO HAIRY ROOTS

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PL-P62

EFFECT OF ZINC STRESS ON PLANT MISMATCH REPAIR

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PL-P63

METABOLOMIC RESPONSE OF SOYBEAN LEAVES TO *FUSARIUM TUCUMANIAE*

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PL-P64

ENDOGENOUS NO MODULATES SPATIAL DISTRIBUTION OF PIN2 DURING GRAVITROPISM IN ARABIDOPSIS

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PL-P65

TIR1 S-NITROSYLATION IS A REGULATORY COMPONENT IN TEMPERATURE-DEPENDENT *ARABIDOPSIS* SEEDLING GROWTH

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PL-P66

BDIRCN4 REGULATES MERISTEM FATE IN *BRACHYPODIUM DISTACHYON*

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PL-P67

IDENTIFICATION OF DOWNSTREAM TARGETS OF ATERF019 TRANSCRIPTION FACTOR IN DROUGHT STRESS

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PL-P68

PLD/PA MODULATES PROLINE AND H_2O_2 LEVELS IN BARLEY EXPOSED TO SHORT-AND LONG-TERM CHILLING STRESS

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PL-P69

THE TCP DOMAIN MEDIATES THE ANTAGONISTIC ACTION OF TCP8 AND TCP23 ON FLOWERING IN *ARABIDOPSIS*

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PL-P70

STUDY OF MITOCHONDRIAL PROTEINS ENGAGED IN GROWTH AND DEFENSE IN *ARABIDOSPSIS THALIANA*

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PL-P71

PLANT GAMMA-CARBONIC ANHYDRASES AND THEIR ROLE IN GROWTH AND EMBRYOGENESIS: THE IMPORTANCE OF CA3 PR

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STRUCTURAL BIOLOGY

SB-P01

3D-STRUCTURE PREDICTION AND STUDY ON THE INTERACTION BETWEEN RAT CALTRIN AND MODEL MEMBRANES

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SB-P02

A TACHYLECTIN AND A PORE-FORMING MACPF PROTEINS COMBINED INTO A SNAIL EGG NEUROTOXIN

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SB-P03

LECTINS AS DEFENSES. CHARACTERIZATION OF THE MAJOR EGG PROTEIN OF THE SNAIL P*omacea diffusa*

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SIGNAL TRANSDUCTION

ST-P01

ACSL4 PROMOTER CHARACTERIZATION AND REGULATION BY SHP2 IN BREAST CANCER CELLS

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ST-P02

SEXUAL PHEROMONE MODULATES THE FREQUENCY OF CYTOSOLIC CA 2+ BURSTS IN SACCHAROMYCES CEREVISIAE

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ST-P03

A NOVEL PHOSPHATASE REGULATES STRESS GRANULES DYNAMICS

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ST-P04

IGF 1 MODULATES ZEB1 STABILITY DURING EPITHELIAL MESENCHYMAL TRANSITION (EMT)

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ST-P05

EVOLUTION OF CELL CYCLE MEDIATED REGULATION OF YEAST SEX

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ST-P06

AN IMAGE-PROCESSING PROTOCOL TO QUANTIFY AKT LOCALIZATION IN DIFFERENT SUBCELLULAR COMPARTMENTS

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ST-P07

THE GPCR STE2 MEASURES FRACTION OF OCCUPIED RECEPTORS BY BOTH ACTIVATING AND INHIBITING G PROTEIN

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ST-P08

ANTIGENIC VARIATION IN GIARDIA LAMBLIA: ROLE OF VSPS TRANSMEMBRANE DOMAIN IN SENSING AND SIGNALING

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ST-P09

ANTINEOPLASTIC EFFECT OF ERK 1/2 AND AKT INHIBITION BY VDR AGONISTS IN VGPCR ENDOTHELIAL CELLS

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ST-P10

QUERCETIN DECREASES THE PROLIFERATION OF ENDOTHELIAL CELLS TRANSFORMED BY KAPOSI SARCOMA HERPESVIRUS

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ST-P11,

COMPARATIVE ACTIONS OF 1α,25(OH)2D3-GLYCOSIDES AND SYNTHETIC 1α,25(OH)2D3 DURING MYOGENESIS

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ST-P12

A FLUORIMETRIC POPULATION ASSAY SHOWS THAT MEMBRANE POTENTIAL OF HUMAN SPERM DEPEND ON PKA A

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ST-P13

IN VIVO OLIGOMERIC STRUCTURE AND PARTNERS OF YEAST PKA-R SUBUNIT THROUGH PULL-DOWN PROTEOMICS

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ST-P14,

SEQUENTIAL ERK PHOSPHORYLATION IN TYROSINE AND THREONINE DETERMINES ITS CELLULAR DISTRIBUTION

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ST-P15

ERK-SPECIFIC PHOSPHATASE MKP-3 SPLICE VARIANTS DIFFER IN REGULATION AND SUBCELLULAR LOCALIZATION

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ST-P16

CENTRAL SIGNALING ROLE FOR THE CONSERVED GLYCINE HINGE OF BACTERIAL CHEMORECEPTORS

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ST-P17

PKA ROLE IN TRANSLATIONAL RESPONSE TO HEAT STRESS IN SACCHAROMYCES CEREVISIAE

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ST-P18

TRANSCRIPTIONAL AND POST-TRANSCRIPTIONAL REGULATION OF PKA SUBUNITS IN SACCHAROMYCES CEREVISIAE

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ST-P19

CHROMATIN REMODELING REGULATION OF PROTEIN KINASE A TPK1 SUBUNIT IN SACCHAROMYCES CEREVISIAE BY STRESS.

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ST-P20

INVOLVEMENT OF HISTONE METHYLTRANSFERASE-1 IN GIARDIA LAMBLIA DIFFERENTIATION

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ST-P21

TOLL CONTROL: IMPORTINS AS SENTINELS OF NUCLEAR/CYTOPLASMIC SHUTTLE IN GIARDIA LAMBLIA

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ST-P22

INDOMETHACIN MODULATES BMMC MIGRATION THROUGH PROSTAGLANDIN AND/OR PPARγ AFTER SCIATIC NERVE INJURY

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ST-P23

A SIGNAL TRANSDUCTION PATHWAY RELATED TO VIRULENCE REGULATION IN LEPTOSPIRA

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ST-P24

ADAPTATION MECHANISMS REGULATING THE SECRETORY PATHWAY IN RESPONSE TO A SECRETORY STIMULUS.

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ST-P25

INVOLVEMENT OF BOX2 IN THE REGULATION OF CHKA EXPRESSION IN NEURO-2A CELLS AND IN HUMAN TUMOR CELLS.

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ST-P26

STUDYING THE ROLE OF CPSF6 AS A MUTANT P53 EFFECTOR IN TUMOR AGGRESSIVENESS

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ST-P27

BMP5 INDUCES IN VITRO MIGRATION OF BOVINE OVIDUCTAL EPITHELIAL CELLS

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