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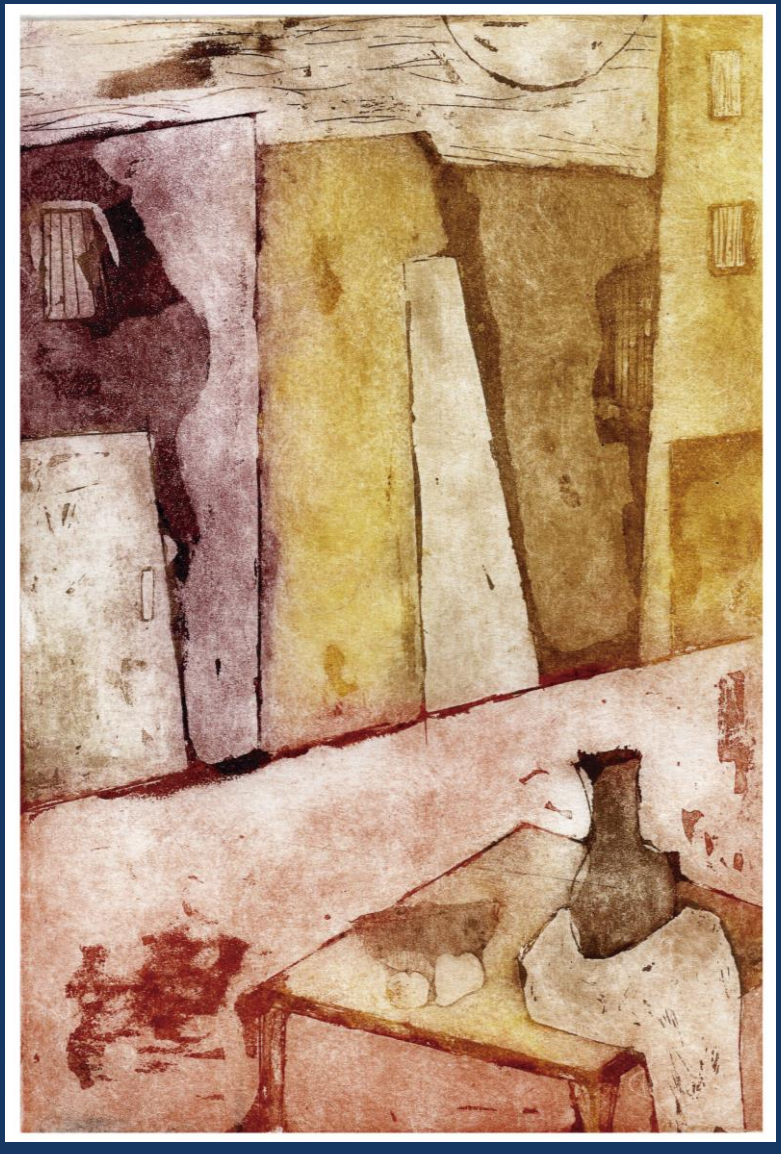

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La Tapa (Ver pág. 4)
Atardecer en la tarde
Antonella Ricagni

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LXIV Reunión Anual de la
Sociedad Argentina de Investigación Clínica (SAIC)

LI Reunión Anual de la
Asociación Argentina de Farmacología Experimental (SAFE)

XXI Reunión Anual de la
Sociedad Argentina de Biología (SAB)

XXXI Reunión Anual de la
Sociedad Argentina de Protozoología (SAP)

IX Reunión Anual de la
Asociación Argentina de Nanomedicinas
(NANOMED-ar)

VI Reunión Científica Regional de la Asociación Argentina de Ciencia y Tecnología de Animales de Laboratorio (AACyTAL)

con la participación de
The Histochemical Society

13 - 16 de noviembre de 2019
Hotel 13 de Julio - Mar del Plata

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Note: EC cells provided by Dr. Colas et al. (Vall d'Hebron Research Institute; Barcelona, Spain. European Comm - 7th Framework Project-IRSES).

0730 - TRIPLE NEGATIVE BREAST CANCER MOLECULAR MARKERS IN MCF7 CELLS OVEREXPRESSING A HUMAN EPITHELIAL CADHERIN SPLICE VARIANT

Jorge QUEVEDO CUENCA | Marina ROSSO | María José BESSO | Lara LAPYCKYJ | María Laura MATOS | **Monica VAZQUEZ DE LEVIN**

INSTITUTO DE BIOLOGÍA Y MEDICINA EXPERIMENTAL (IBYME-CONICET)

Abstract/Resumen: Breast cancer (BC) is the most common cancer in women worldwide and in Argentina. Alterations in Epithelial cadherin (Ecad) expression/functions are associated with BC progression. We identified a novel human Ecad alternative splice variant (Ecadvar) (delta34DEL-Exon14). MCF7-Ecadvar stable transfectants showed epithelial-to-mesenchymal transition (EMT) changes, and a triple negative (TNBC) profile. Objective: Characterize transcript expression of MCF7-Ecadvar cells and determine similarities with TNBC molecular subtypes. Prospective basic research study using cell culture, molecular biology and bioinformatics approaches. MCF7-Ecadvar and control (MCF7-pcDNA3) cell culture; RNA extraction; end-point and Q-RT PCR. DisGeNET (text mining), STRING (network analysis), GEO database (data mining). MCF7-Ecadvar cells mRNA analysis confirmed an EMT molecular phenotype, with lower ($p<0.05$) levels of wild type E-cadherin, and higher ($p<0.05$) levels of Twist, Slug, Snail, Zeb1 transcriptional repressors, Vimentin and N-cadherin mesenchymal markers than control. MCF7-Ecadvar cells also had lower ($p<0.05$) levels of ER(alpha), PR and HER-2 receptor mRNA, but high ER(beta) levels. Moreover, they showed increased ($p<0.05$) levels of FXYD5/Dys, ACSL4, LDHB, MCT1, MCT4 and Anx2 mRNA TNBC markers, but lack mRNA of MUC1 and Kaiso TNBC-basal like subtype markers. Also, they displayed lower ($p<0.05$) levels of Claudin-3, -4 and -7 TNBC-Claudin-Low markers. All 22 evaluated genes were listed in DisGeNET (term "breast cancer"; CUI=C0006142 & C067822) and 12 in TNBC. STRING identified genes involved in BC, adherent/tight junctions, cell-cell adhesion. 12/22 genes depicted same expression changes found in Claudin-low TNBC samples (GSE18229 database; Prat et al, 2010). Conclusions: MCF7-Ecadvar cells express markers of Claudin-Low TNBC. We propose the use of this cell model to identify TNBC novel biomarkers and therapeutic targets.

0925 - ANTITUMOR PROPERTIES OF TWO COPPER BASED COMPOUNDS AGAINST 2D AND 3D HUMAN COLORECTAL CANCER CELL MODELS.

Maria Carolina RUIZ(1) | Karen PERELMUTER(2) | Mariela BOLLATI-FOGOLIN(2) | Ana Laura DI VIRGILIO(1) | **Ignacio Esteban LEÓN** (1)

CEQUINOR (1); INSTITUT PASTEUR MONTEVIDEO (2)

Abstract/Resumen: Many functions of metal ion have stimulated the development of new metallodrugs. The synthesis of new copper complexes is potentially attractive as anticancer agents; whose properties are determined by the nature of ligands bound to the metal ion. This study evaluates the action of two cooper complexes, CuII(dmp)2(CH3CN)](ClO4)2 (1) and CuII(phen)2](ClO4) (2), against human colorectal cancer cells. An in vitro cytotoxicity assay was carried out on cultured HT29, Caco-2 and LS174T cell line monolayers. To get insight over the mechanism of action, we studied the role of ROS generation, using DHR123 probe and the mitochondrial membrane potential (MMP) with DiOC6. The migration process was investigated with gelatin zymography as well. Moreover, apoptosis was studied with anexinV/IP and caspase 3 assays by flow cytometry, adding studies of morphological changes with fluorescent microscopy. Furthermore, the cytotoxicity was studied with IP on 3D cell model derived from HT29 cells. In addition, NF-κB pathway suppression was investigated. Both complexes caused significant cytotoxicity in all cell lines, proving that 1 is more active (IC50 values for HT29 are 1.45 vs. 2.76 μM, for Caco-2 2.32 vs. 6.48 μM, for LS174T 1.44 vs. 2.54 μM for 1 and 2, respectively). It can be noticed that 1 increased ROS in all cell lines and the MMP decreased with the 24 h-treatment. Flow cytometric analysis revealed that theses complexes induce apoptosis in a dose and time dependent manner. These results are validated by microscopy. Complex 1 also attenuated the secretion of the metalloproteinases 2 and 9. On cell spheroids the IC50 values were 18.32 μM for 1 and 19.12 μM for 2. Interestingly, both complexes decrease the NF-κB expression in cell monolayer and spheroids, showing an inhibition of this pathway. In conclusion, both compounds display antitumor activity; however 1 was more effective in monolayer and 3D model than 2, being a candidate for in vivo experiments.

Metabolismo y Nutrición/ Metabolism and Nutrition IV

Chairs: Luz Andreone | Mariana Tellechea

0121 - RAT MATERNAL INSULIN RESISTANCE IS ASSOCIATED WITH ABNORMAL NEUROBEHAVIORAL RESPONSE IN OFFSPRING

Marié CUERVO SANCHEZ(1) | Facundo PRADO SPALM(1) | María Marta BONAVENTURA(2) | Ana Sofía VALLÉS(1) | **Natalia Edith FURLAND** (1)

INIBIBB-CONICET, DEPTO. BIOLOGÍA, BIOQUÍMICA Y FARMACIA-UNS (1); IBYME-CONICET (2)

Abstract/Resumen: It is well established that maternal diet and metabolic state during pregnancy contributes to the risk of metabolic disease in offspring. Furthermore, recent epidemiological evidence suggests that gestational factors such as increased maternal obesity and impaired glucose metabolism can likewise affect offspring neurodevelopment, increasing the risk of neuropsychiatric disorders. We aimed to investigate the influence of long-term maternal fructose intake during preconception, gestation and lactation periods on neurobehavioral development of rat offspring. Wistar rats received either 10 % fructose enriched water or regular tap water for 20 weeks before and during gestation and through lactation. On P21, all littermates were separated and housed with ad libitum access to standard food and tap water. Control and fructose-fed mother's blood samples were collected for biochemical analysis. Offspring behavior was evaluated using open field, social interaction, marble burying and T-Maze task performance tests. Data analyses were carried independently on male and female rats. Dams fed with a 10 % (w/v) beverage containing fructose showed a moderated body weight gain and significant increments in fasting glucose level, oral glucose tolerance test (OGTT) and Homeostatic Model Assessment for Insulin Resistance (HOMA-IR) index. Behavioral evaluation of the offspring revealed that females exposed to maternal fructose intake were prone to have increased number of marble buried and reduced learning performance in a T-maze compared to control-diet offspring. Our findings indicate that chronic maternal metabolic stress induced by a fructose-rich diet during pre-gestational, gestational and lactational periods showed a gender-specific increase in stereotyped repetitive behavior and working memory tasks in the offspring.

0351 - CONTRIBUTION OF SPECIFIC RISK FACTORS IN ELDERLY: A COMMUNITY EXPERIENCE