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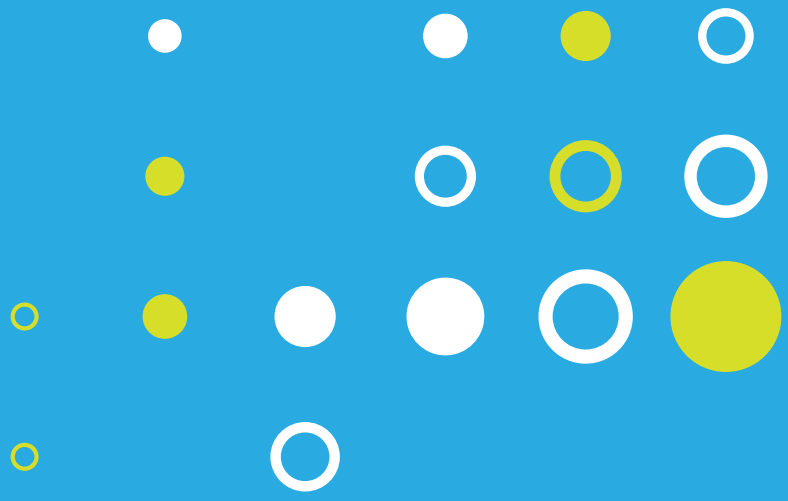

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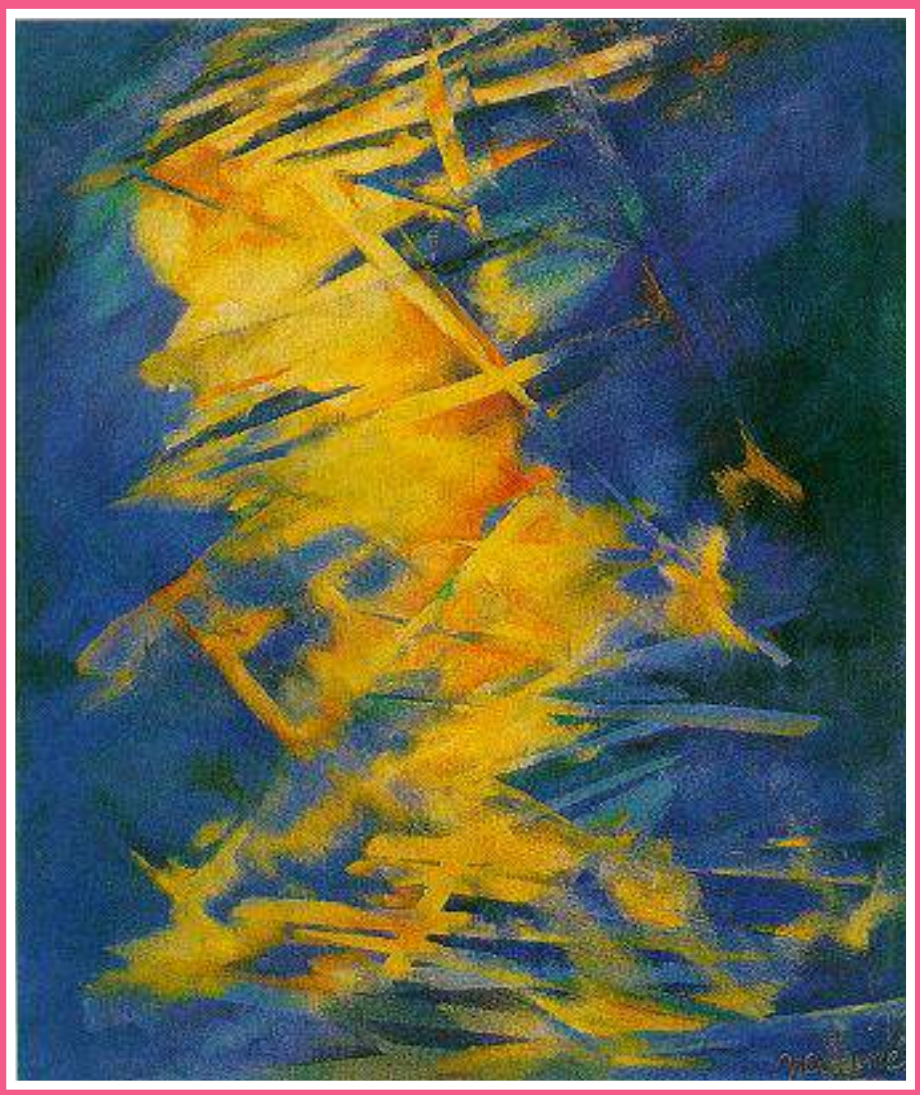

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XXIX REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE PROTOZOOLOGÍA (SAP)

13-17 de noviembre de 2017
Palais Rouge– Buenos Aires

1 Mensaje de Bienvenida de los Presidentes
2 Conferencias, Simposios y Presentaciones a Premios
92 Resúmenes de las Comunicaciones presentadas en formato E-Póster

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LIII ANNUAL MEETING OF ARGENTINE SOCIETY OF BIOCHEMISTRY AND MOLECULAR BIOLOGY (SAIB)

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November 13 -17, 2017
Palais Rouge– Buenos Aires

1 Welcome Message from Presidents
2 Lectures, Symposia and Award Presentations
92 Abstracts of E-Poster Presentations

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LA TAPA

María Esther Gené, **Imagen ígnea**, 1996.

Acrílico sobre tela, 110 x 95 cm. Cortesía de la Comisión Nacional de Energía Atómica, Predio TANDAR, Centro Atómico Constituyentes. Presidente de la Comisión Organizadora de la Exposición Permanente: Dr. A.J.G.Maroto.

María Esther Gené nació en Buenos Aires. Cursó Historia del Arte y Estética con Blanca Pastor y Nelly Perazo. Se inició en el taller de Centa Bertier y continuó su formación con Miguel Dávila. Participó del grupo de investigación plástica que dirigió Emilio Renart. Integró el Grupo Gen y formó el Grupo Fusión. Realizó numerosas exposiciones colectivas e individuales (Museos Municipal de Bellas Artes de Luján, Fernán Félix de Amador, de Arte Moderno de la Ciudad de Buenos Aires, Fundaciones San Telmo y Banco Mayo, Fundación Andreani, Patio Bullrich, Galería Kristel K., Salón ICCED de Pintura, entre otros). Sus obras se encuentran en colecciones privadas de Argentina, México, Alemania, España, Uruguay y EE.UU.

[1] Comisión Nacional de Energía Atómica. Artistas Plásticos con la CIENCIA, Centro Atómico Constituyentes, Predio TANDAR, Buenos Aires, 1999; En: *http://www2.cnea.gov.ar/xxi/artistas/artistasplasticos.htm*

from cells treated with the hormone markedly increases the migration of endothelial cells. Similar data were obtained using co-culture. In addition, we performed tube formation assays using growth factor-reduced Geltrex. HMEC-1 cells incubated with CM from non-treated Caco-2 or HCT 116 cells formed few tube-like structures on geltrex whereas the CM from colon cancer cells treated with PTHrP increased tube formation of HMEC-1 cells. In contrast, by direct treatment the hormone not stimulated migration neither tube formation of HMEC-1 cells. Finally, studies with neutralizing antibody against VEGF revealed that augmented angiogenic response of endothelial cells exposed to CM from colon cancer cells treated with PTHrP was associated with enhanced production of VEGF. In summary, the results obtained from this study show that PTHrP treatment of colon cancer cells promotes pro-angiogenic signaling.

Keywords: PTHrP, colon cancer, angiogenesis, VEGF

(1263) **ACYL-COA SYNTHETASE 4 LEVELS ARE DEPENDENT ON PROTEASOME ACTIVITY AND MODULATE MITOCHONDRIAL METABOLISM REGULATORY PROTEINS EXPRESSION IN BREAST CANCER CELLS.**

Yanina Benzo, Melina Dattilo, Katia Helfenberger, Lucía Herrera, Cecilia Poderoso, Paula Maloberti
Departamento de Bioquímica Humana. INBIOMED (UBA-CONICET). Facultad de Medicina. Universidad de Buenos Aires

Acyl-CoA synthetase 4 (ACSL4) is an enzyme that catalyzes acyl-CoA synthesis from long chain fatty acid, being arachidonic acid its preferred substrate. ACSL4 is overexpressed in triple negative breast cancer cells correlating with tumor aggressiveness. We demonstrated that ACSL4 expression is regulated by transcriptional mechanisms in breast cancer cells. But other mechanisms involved in regulating ACSL4 levels might be taken place. It is known that in cancers exists a strong mitochondrial metabolism deregulation. Computational data showed that ACSL4 is a possible candidate for modulating mitochondrial master regulatory genes. Then, our goal is to study stability of ACSL4 by post translational mechanisms and to study the role of ACSL4 in the regulation of mitochondrial function. ACSL4 stability was tested on MDA-MB-231 breast cancer cell line with cycloheximide (CHX) treatment. Immunoblot showed a time-dependent decrease in ACSL4 levels after CHX treatment, significant at 4h of CHX (without vs. with CHX 4h: 1 vs 0.5, relativized to control *p<0.05). The treatment with MG-132 (a potent proteasome inhibitor) promoted a clear increase of ACSL4 levels. Finally, we used a stable and inducible MCF-7 breast cancer cell line overexpressing ACSL4 (MCF-7tet-off/ACSL4) and MCF-7tet-off as control. Levels of mitochondrial proteins as Complex III and VDAC1 and nuclear factor NRF1 were evaluated. A slight increase in Complex III and a marked increase of NRF1 levels was observed in MCF-7tet-off/ACSL4 respect to control, meanwhile VDAC1 levels were unaffected. Downregulation of ACSL4 expression by Doxycycline treatment decreased NFR1 levels. These results demonstrate that, in breast cancer cells, half-life of ACSL4 is regulated post-translationally and degraded by the proteasome and that ACSL4 expression positively regulates NRF1, which induces some key nuclear genes required for mitochondrial respiration, DNA transcription and replication.

(164) **ANTINEOPLASCTIC EFFECTS OF BORTEZOMIB IN CELLULAR SPHEROIDS FROM ENDOTHELIAL CELLS TRANSFORMED BY KAPOSI SARCOMA-ASSOCIATED HERPES VIRUS G PROTEIN COUPLED RECEPTOR**

Alejandra Suares (1), Cinthya Tapia (1), Cristina Paz, Veronica Gonzalez Pardo (1), (2)
(1) INBIOSUR-DBByF-Universidad Nacional del Sur, AR. (2) INBIOMED-Depto de Bioquímica Humana, Fac. de Medicina, UBA, AR.

The Kaposi's Sarcoma-associated Herpes virus G Protein-Coupled Receptor (vGPCR) is a key molecule in the pathogenesis of Kaposi sarcoma. Persistent expression and activity of vGPCR is required for NFκB pathway activation and tumor maintenance in endothelial cells. We have previously demonstrated that Bortezomib (BTZ, 0.5 nM) inhibits vGPCR cell growth by MKP-3 accumulation, a specific phosphatase that attenuates ERK1/2 signaling. The activity of this phosphatase reduces ERK1/2 and FOXO1 phosphorylation. In turn, ERK1/2 inhibition reduces VEGF expression and FOXO1 activation promotes p21 induction. All these events converge in the inhibition of cell proliferation. Many types of mammalian cells can aggregate and differentiate into 3-D multicellular spheroids (MCS) when cultured in suspension or in a non-adhesive environment. Compared to conventional mono-layer cultures (2D-cultures), MCS resemble real tissues better in terms of structural and functional properties. Multicellular spheroids formed by transformed cells are widely used as avascular tumor models for metastasis and invasion research and for therapeutic screening. In the present work, we develop the technique to obtain MCS from vGPCR cells in order to test whether MCS respond similar to 2D-cultures. To that end, MCS were treated with BTZ (0-2.5 nM) for 48 h. Results from Western blot analysis showed that BTZ decreases ERK1/2 protein phosphorylation, while MKP-3 protein levels are increased. Moreover, qRT-PCR studies revealed that p21 gene expression is also increased. All together, these results suggest that MCS of vGPCR cells treated with BTZ respond likewise those treated in 2D-cultures of vGPCR cells, but a higher dose.

Keywords: Spheroids, vGPCR cells, Bortezomib, antiproliferative effects.

(1764) **CYCLOOXYGENASE-2 MEDIATES KSHV G PROTEIN COUPLED RECEPTOR *vGPCR* ANGIOGENESIS AND IT IS EXPRESSED IN KAPOSI'S SARCOMA.**

María Victoria Medina (1), Agata Mutlu (2), Julian Naipauer (2), Daiana A Sapochnik (1), Martín E García Solá (1), Enrique A Mesri (2), Omar A Coso (1)
(1) Instituto de Fisiología, Biología Molecular y Neurociencias (IFIBYNE-FCEN- UBA-CONICET). (2) University of Miami School of Medicine Miami, USA.

Kaposi's sarcoma associated herpesvirus (KSHV) vGPCR is a constitutively active G protein-coupled receptor that subverts proliferative and inflammatory signaling pathways to induce cell transformation and angiogenesis in Kaposi' s sarcoma. For this reason, identifying and targeting pathways leading to vGPCR angiogenesis could have therapeutic significance. Cyclooxygenase-2 (COX-2) is an inflammatory mediator involved in tumor angiogenesis that can be targeted by non-steroidal anti-inflammatory drugs. Our aim is to determine if COX-2 could be a target for KS therapy. We demonstrate by an enzyme immunoassay that vGPCR upregulates COX-2 activity and expression, and we show that COX-2 activity is critical for vGPCR pathogenicity *in vivo*. Using an intradermal angiogenesis assay, we found that treatment with NS398 before inoculation with vGPCR-transformed NIH3T3 abolished the angiogenic response induced by vGPCR expression ($P<0.01$). We also observed that treatment with the COX-2-selective inhibitory drug Celecoxib produced a significant retardation in tumor growth ($P<0.05$). Tumors from animals treated with Celecoxib showed a significant decrease in tumor cell VEGF production ($P<0.001$). We conclude that vGPCR regulates angiogenicity and tumorigenicity via COX-2 activation. Consistent with a role in KS pathogenesis, we found that vGPCR upregulates COX-2 activity in endothelial cells and that COX-2 is overexpressed in KSHV-infected KS lesions. Based on these results we are currently committed to identify COX-2 gene expression regulators at the molecular level. We conclude that these facts pinpoint COX-2 as one of the molecular components of the vGPCR angiogenic switch and a potential target for KS chemoprevention and therapy.

Keywords: Cyclooxygenase-2, KSHV, vGPCR, angiogenesis, tumorigenicity.

(1060) **ACYL-COA SYNTHETASE 4 INHIBITION DECREASES ADRENOCORTICAL HUMAN CELL PROLIFERATION SUSTAINED BY ANGIOTENSIN II.**

Katia Helfenberger, Ana Fiore, Lucía Herrera, Yanina Benzo, Paula Maloberti, Cecilia Poderoso
Departamento de Bioquímica Humana. INBIOMED (UBA-CONICET). Facultad de Medicina. Universidad de Buenos Aires.