

medicina

BUENOS AIRES Vol. 81 Supl. III - 2021



medicina

BUENOS AIRES, VOL. 81 Supl. III - 2021

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MEDICINA (Buenos Aires) - Revista bimestral – ISSN 1669-9106 (En línea)

Registro de la Propiedad Intelectual N° 02683675
Personería Jurídica N° C-7497

Publicación de la Fundación Revista Medicina (Buenos Aires) Propietario de la publicación: Fundación Revista Medicina
Queda hecho el depósito que establece la Ley 11723

Publicada con el apoyo del Ministerio de Ciencia, Tecnología e Innovación Productiva.
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Vol. 81, Supl. III, Noviembre 2021

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Daniela Kantor. Médanos, 2018

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Daniela Kantor nació el 23 de marzo de 1970. Es diseñadora gráfica (FADU-UBA), pintora, dibujante, historietista e ilustradora. Autora de la novela gráfica *Mujer Primeriza* (Ed. Burlesque, 2014), *Aprendiza* (2019) y *Naturella* (con guión de Arekasadaro, 2017) publicada en *Dis-Tinta* (Ed. Sudamericana, coordinado por Liniers y Martín Pérez). Con guión de Alejandro Farías dibujó *Las moradas de Santa Teresa de Jesús* en historietas (Ed. Loco rabia + CCEBA Centro Cultural de España en Buenos Aires) y *Marilyn* (*Tren en movimiento*, 2019). Es miembro de la revista de historietas "El Tripero" fundada en 1993 junto al grupo de alumnos de Alberto Breccia. En el ámbito de la enseñanza es Jefa de Trabajos Prácticos en la materia Ilustración inicial, y docente en Ilustración Editorial en la Facultad de Arquitectura, Diseño y Urbanismo FADU/UBA. Dicta talleres sobre pintura e ilustración (C C Recoleta, 2019/ Quinta Trabucco, 2020/ taller particular junto a Daniel Roldan, 2019). Es maestra de niños y niñas en Dibujo e Historieta en Escuelas primarias, talleres (Filbita, Festival de literatura de Buenos Aires, 2018-9/ CCK, 2018/ taller propio desde 2014). Estudió Dibujo de Historieta con Alberto Breccia, Técnicas de Acuarela y Pastel con Carlos Nine, charlas sobre Historieta con José Muñoz, Curso de Color con Carlos Gorriarena, Clínica de Pintura con Mariano Sapia y Tulio de Sagastizábal, y Sumi-e en el Centro Okinawense. Trabaja para editoriales y revistas con ilustraciones e historietas (Ed. Troquel, Abran Cancha, Ed. Norma, Unicef, Barcelona, Crisis, Suplemento Ñ/ Clarín, Borges en la Biblioteca Nacional- Lectores de Borges). Fue invitada a la Feria del libro de los Universitarios de UNAM para presentar el libro "Palabra de ilustrador", y en 2019 ganó la Beca UBA Internacional en el marco de un programa de intercambio docente con la Universidad Regiomontana, Monterrey, México.

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able. Growing evidence suggests that chemotherapy-resistant BC cells with stem-like properties (CSC) may repopulate the tumor. Therefore, therapies that target the CSC in combination with chemotherapy might prevent tumor recurrence. Androgen Receptor (AR) is expressed in at least half of all TNBC. AR inhibition decreases CSC *in vitro* and tumor initiation *in vivo*. RUNX1 is regulated by AR in prostate cancer. In TNBC patients, RUNX1 protein levels correlate with poor prognosis. Our group has shown that RUNX1 promotes TNBC cell migration and regulates tumor gene expression, such as the oncogene *RSPO3*. Also, by RUNX1 ChIP assays, we found SOX4 as a potential target gene. We hypothesized that RUNX1 is regulated by AR and that both may work together in TNBC CSCs to promote persistence and disease recurrence following chemotherapy. Here we show that, in MDA-MB-453 cells, RUNX1 expression is upregulated by dihydrotestosterone, an AR agonist, and that this effect is blocked in the presence of Enzalutamide (AR antagonist). ChIP-seq experiments revealed AR binding to RUNX1 regulatory regions, suggesting direct regulation. RUNX1 expression is increased in a CSC-like experimental model and responds to AR activity. Inhibition of RUNX1 transcriptional activity by AI-10-104 (a synthetic drug) reduced the expression of the CSC marker SOX4. Interestingly, this inhibition drives a reduction of MDA-MB-453 and BT-549 cell proliferation and enhanced paclitaxel sensitivity. It was reported that AR inhibition combined with chemotherapy results in a more effective outcome than chemotherapy alone *in vitro* and *in vivo*. In sum, RUNX1 inhibition may also be an attractive target to potentiate the anti-tumor effect of AR inhibition, specifically in the slow growing CSC-like populations that resist chemotherapy and lead to metastatic disease.

501. (507) VITAMIN D RECEPTOR AND PACLITAXEL IN TRIPLE NEGATIVE BREAST CANCER: IS THERE A LINK BETWEEN THEM?

Josefina Alejandra Guevara¹, Agustina Ibarra¹, Alfredo Quevedo², Eliana Noelia Alonso¹, Georgina Pamela Coló¹, María Marta Facchinetti¹, María Julia Ferronato^{1*}, Alejandro Carlos Curino¹

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Paclitaxel (PTX) is an antitumor agent employed in the treatment of Triple-Negative Breast Cancer (TNBC). TNBC expresses Vitamin D Receptor (VDR), a member of the nuclear receptor superfamily. The aim of this work was to investigate the involvement of VDR in the antitumor action of PTX in TNBC cells. To this end, viability assays by crystal violet staining were performed in murine 4T1 TNBC cells and in 4T1 stably expressing a shRNA against VDR (4T1 shVDR), treated with PTX (10 nM) or vehicle. Also, cell cycle was studied by flow cytometry. Cellular studies were complemented with *in silico* analyses including molecular docking and molecular dynamics (MD) simulations to describe the pharmacodynamic interaction between PTX and VDR. The results show that PTX reduced the viability of 4T1 wild type cells ($p < 0.001$). These viability effects were lost in 4T1 shVDR cells which display approximately 53% of VDR levels with respect to control cells. Cell cycle analysis of 4T1 wild type and 4T1 shVDR cells treated with PTX showed that the chemotherapy causes an increase in the percentage of cells in sub G0/G1 phase compared to vehicle-treated cells. However, this PTX effect was significantly higher in wild type than in VDR-silenced cells ($13.72 \pm 2.37\%$ vs $6.18 \pm 1.07\%$, $p < 0.001$). Docking and MD studies showed that PTX was not able to bind to the classical ligand-binding pocket of VDR. However, an exhaustive search of allosteric sites identified its stable binding to a cavity adjacent to the activating factor 2 (AF-2) region. MD studies verified a conformational restraint on AF-2, which triggers transcriptional and antitumor effects. Furthermore, a potential cooperativity in the interaction with VDR between PTX and

the natural ligand of the receptor was observed. Altogether, these results suggest that PTX could interact with VDR to display its antitumor effects in TNBC by its binding in an alternative site to that of the classical VDR agonists.

502. (509) NOVEL HISTAMINE H₃ RECEPTOR ANTAGONISTS WITH POTENT ANTINEOPLASTIC PROPERTIES AS TARGETED DRUG THERAPY FOR BREAST CANCER

Mónica A. Táquez Delgado¹, Melisa B. Nicoud¹, Ignacio Ospital¹, Michelle F. Corrêa², Gustavo A. B. Fernandes², Diego Martinel Lamas¹, João P. S. Fernandes², Vanina A. Medina¹.

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We have reported the expression of the histamine H₃ receptor (H₃R) in human benign and malignant lesions, and cell lines derived from human mammary glands. Its expression is highly correlated with proliferation in breast cancer specimens.

In this work, we aimed at investigating the potential antitumoral activity of 4 novel H₃R antagonists, 1-(2,3-dihydro-1-benzofuran-2-yl)methylpiperazines (LINS01 compounds), which showed excellent selectivity and high affinity for the human H₃R.^{1,2} Cell viability and proliferation were assessed by cell titer blue assay and colony formation in human MDA-MB-231 and murine 4T1 triple negative breast cancer cells. Cell apoptosis was assessed by Annexin V staining and flow cytometry, while cell migration was evaluated by wound-healing assay and transwell system. The lipid accumulation was assayed by flow cytometry using Nile-red staining.

Results indicate that compounds LINS01022, LINS01023, LINS01009, LINS01010 (0.1-100 μM) produced a concentration-dependent inhibition on cell growth. The highest responses were observed for LINS01022 and LINS01023, showing an IC₅₀ in the cell viability assay of 82.7 and 78.2 μM for MDA-MB-231 cells, and 87.0 and 59.2 μM for 4T1 cells. LINS01022 and LINS01023 (25-50 μM) induced cell apoptosis (4 to 7 fold-increase) and differentiation (2 to 3 fold-increase), while suppressed cell migration in both cell lines ($P < 0.01$).

The allylpiperazines LINS01022 and LINS01023 exhibited better antiproliferative and proapoptotic effects together with a higher affinity constant for the H₃R than their corresponding methylpiperazine analogues LINS01009 and LINS01010, respectively.

These effects were not observed with the selective H₃R agonist, (R)-alpha-methylhistamine.

In conclusion, this study demonstrates that the H₃R is involved in the regulation of cell growth and progression, offering novel therapeutic potentials for H₃R antagonists.

¹Correa et al. *Front Pharmacol* **2017**, *8*,825

²Correa et al. *Bioorg Med Chem* **2021**, *30*,115924

503. (510) HIF-1α REGULATES TUMOR PROGRESSION IN A HUMAN EPITHELIAL OVARIAN CANCER MODEL

España De Marco María José¹, Iruستا Griselda¹, Tesone Marta¹, Pérez Piñero Cecilia².

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Ovarian cancer is the seventh most common cancer in women and the eighth cause of cancer death. The treatment of this disease has been the same for the past decades, and the development of new drugs is needed. Hypoxia is a common characteristic of solid tumors, usually associated with a more aggressive phenotype. The main transcriptional factor involved in this process is Hypoxia Inducible Factor 1 alpha (HIF-1α).

The present work aimed to study the effect of Acriflavine (ACR), a specific HIF-1α inhibitor, on a human epithelial ovarian cancer model (SKOV3), both *in vivo* and *in vitro*. For the *in vitro* experiments, we

performed cell proliferation and wound healing assays to assess cell migration with different ACR concentrations. Cell proliferation was significantly diminished with ACR 1 μ M after 72 hours of treatment as compared with control cells (1 μ M ACR: 22.69 % \pm 0.66 vs Control 100,00% \pm 10,40 , $p < 0.0001$), and migration was reduced with ACR 1 μ M after 18 h of incubation (Control, 85,75% wound closure \pm 5,12 vs ACR 1 μ M, 52,40 % wound closure \pm 3,90, $p < 0.0001$).

For the *in vivo* experiments, 5 x 10⁶ cells were s.c. injected into the flank of immunosuppressed NSG mice. The treatment with ACR daily injections (5 mg/kg, 15 days) started when tumors reached 25 mm². ACR-treated tumors were significantly smaller than control tumors ($p < 0.001$), showed a lower proliferation index (*Ki67*) and a lower VEGF and GLUT1 expression through immunohistochemistry as compared with control tumor samples. VEGF and GLUT1 expression are used to evaluate the transcriptional activity of HIF-1 α , as both proteins are HIF-1 α downstream targets.

Our results show that HIF-1 α plays an important role in the proliferation, migration, and tumor growth of the SKOV3 ovarian cancer model. We conclude that ACR could be a potential drug for the treatment of ovarian cancer, alone or in combination with standard therapy.

504. (514) CLINICAL FEATURES IN PATIENTS WITH CANCER AND COVID-19 IN SANTA FE AND BUENOS AIRES

Gastiazoro Maria Paula¹, Cardozo María Alejandra¹, Ramos Jorge Guillermo¹, Ballina Ariele², Mailló Martín², Bernal María Florencia³, Bergero Miguel³, Calafell Gabriela³, Cayol Federico⁴, Bossio Juan Carlos⁵, Varayoud Jorgelina¹.

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Patients with cancer are high-risk population in the COVID-19 pandemic. We aimed to describe clinical characteristics of patients with cancer and COVID-19 in city of Santa Fe and Buenos Aires. We did a cross-sectional study of 80 patients with laboratory-confirmed severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and with a pathological diagnosis of a malignant tumor from hospitals of city of Santa Fe and from Hospital Italiano (Buenos Aires). Clinical characteristics and cancer histories were investigated and analyzed.

During the study, 80 patients with cancer and laboratory-confirmed SARS-CoV-2 infection were included (median age 65 years). 45 (56,2%) patients were women and 34 (42,5%) were men. 72 patients had solid tumours and 3 patients had haematological malignancies. The most frequently symptoms were fever (29 [40,28%] patients) and cough (28 [38,89%] patients); then dyspnoea (18 [25%] patients) and fatigue (19 [26,36%] patients). The most common solid tumor types were breast (20 [26,7%] patients) and lung cancer (8 [10,7%] patients). 33 (41,25%) of 80 patients had comorbidities: 11 (20,37%) had coronary disease, 10 (18,52%) had diabetes, 7 (12,96%) had chronic kidney disease and 5 (9,26%) chronic obstructive pulmonary disease. The rate of mortality was of 18.75%. In addition, if we analyze how many patients did not survive among the cases with severe pneumonia (41,86%) and compare them with non-severe pneumonia (16,28%), it gives an OR of 20.25 (2.32, 176.6, $p = 0.0028$), indicating that severe pneumonia could be a risk factor of mortality. Current statistics data from Argentina indicate that the rate of mortality of COVID-19 patients was 2% (114000 of 5240000). The data from our analysis indicates that cancer and COVID-19 patients have an 8 times higher risk of death than patients with only COVID-19.

Cancer patients have deteriorating conditions and together with a

high frequency of comorbidities, these patients become a vulnerable population. It would be a priority that patients with cancer and COVID-19 infection receiving regular screening and preventives therapies.

505. (516) DENDRITIC CELL PROFILE IN TUMORAL MICRO-ENVIRONMENT OF HUMAN BREAST CARCINOMAS

Clara Garcia Samartino¹, Cintia Celina Vaquer¹, Rodrigo Militello^{1,2}, Diego Santoni¹, Leandro Sarrio³, Ignacio Cebrían^{1,2}, Emanuel Martín Campoy^{1,2}.

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Argentina has the second highest mortality rate for breast cancer (BC) in South America. The immune cells present in the tumor microenvironment (TME) performs dual functions, being able to eliminate or promote malignancy according to the signals present. We believe that the dendritic cells (DCs) found in the TME play a fundamental role in the development of the mammary tumor. Our hypothesis is that there are different subpopulations and maturation profiles of DCs in the TME, and these profiles are associated with tumor traits of mammary carcinomas. Initially, we propose as a general **objective** to study the different types of DCs present in the TME and to determine the profile of these different subtypes in human breast carcinomas. **Methodology**: Once the tumors were obtained by surgery, breast carcinoma-derived fractions were mechanically and enzymatically disaggregated. Tumoral (EpCAM+) and non-tumoral (EpCAM-) populations of each fraction were isolated using cell sorting flow cytometry. DC populations were characterized by flow cytometry using the HLA-DR, CD14, CD11c, CD138 cell surface markers to perform the gating strategy. **Results**: We obtained tumoral and non-tumoral populations derived from eight human breast carcinomas fractions. We defined four different DC subpopulations present in the TME: pDCs, inflammatory DCs, cCD1 and cCD2 DCs. Interestingly, we observed that each tumoral fraction has a unique DC profile, according to the high heterogeneity already described for this type of tumor. Based on the tumor cohort analysis, we evidenced a negative correlation between tumor cell and cDC2 DC populations ($r = -0.76$, $p < 0.027$). **Conclusion**: Breast TME contains different DC profiles associated with tumoral cell proportions in human breast carcinoma fractions. Ongoing and future experiments will allow us to determine the maturation profiles of these DCs and analyze their relationship with genomic/epigenomic and clinicopathological tumor characteristics.

506. (525) ENZALUTAMIDE AND NOTCH PATHWAY INHIBITION RESTRAIN PROSTATE CANCER CELL GROWTH AND MIGRATION

Agustina Chimento¹, Nadia Bonadeo¹, Sofía Perrone¹, María Lucía Romano¹, Ana Laura Fontanazza², Kurt Villalba³, Licina Tessone⁴; Fernanda Parente⁵, Carolina Cristina¹.

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Prostate cancer (PCa) remains among the leading causes of cancer-related deaths in men. Standard therapies for castration resistant prostate cancer (CRPC) include second-generation anti-androgens, such as Enzalutamide (Enz), which prolong patient lifespan. Emerging evidence indicates a regulatory role of Notch signaling in prostate development and growth.

In this work, we aimed to study the Notch and AR pathway involvement and their interaction in prostate cancer.

We first determined the expression of Notch receptors (1/2/4) and the proliferation marker PCNA by IHQ in prostate tumor samples obtained by surgery and its association with Gleason score.

In prostate cancer PC3 cells, we demonstrated AR expression by RT-qPCR. Instead, PSA expression was absent when evaluated culture cell supernatants by chemiluminescence. Moreover, under