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La Tapa
Mi hermana
Francis Dosne

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LA TAPA

Francis Dosne. Mi hermana
Técnica: Serigrafia

Fue realizada a partir de una fotografía de la Dra. Christiane Dosne Pasqualini, a quien está dedicado este Suplemento. Francis Dosne es el hermano menor de Christiane, que luego de jubilarse como ingeniero químico se dedicó a pintar y a "jugar" con impresiones de colores de imágenes. Vive actualmente en Nueva York. Sus obras se han expuesto en galerías de Brasil y Estados Unidos.

Gentileza de Belén Pasqualini

Francis Dosne. My sister
Technique: Silkscreen

It was made from a photograph of Dr. Christaine Dosne Pasqualini, to whom this Supplement is dedicated. Francis Dosne is the younger brother of Christiane, who after retiring as a chemical engineer dedicated himself to painting and "playing" with color prints of images. He currently lives in New York. His works have been exhibited in galleries in Brazil and the United States.

Courtesy of Belén Pasqualini

BUENOS AIRES BREAST CANCER SYMPOSIUM
BA-BCS 2021

May, 17-21, 2021

Tribute to Dr. Christiane Dosne Pasqualini in her 101 birthday

RESPONSIBLE EDITORS
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BUENOS AIRES BREAST CANCER SYMPOSIUM
BA-BCS 2021

Mayo, 17-21, 2021

Homenaje a la Dra. Christiane Dosne Pasqualini en su 101 aniversario

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PROGRAM

14:00 **Welcome/Bienvenida**
Claudia Lanari, IBYME-CONICET, Buenos Aires, Argentina
Tribute to doctor Christiane Dosne Pasqualini
Raúl Ruggiero, Academia Nacional de Medicina, Buenos Aires, Argentina

Opening Conference
Chairs: Santiago Bella, Sanatorio Allende y Clínica Universitaria Reina Fabiola, Córdoba, Argentina and José Luis Bocco, CIBICI-CONICET, Córdoba, Argentina
14:15-15:15 **Geoffrey Greene**, University of Chicago, Chicago, USA
"Advances in ER Targeted Approaches to Breast Cancer Management"

Session 1: Tumor heterogeneity and breast cancer therapy
Chairs: Isabel Frahm, Sanatorio Mater Dei, CABA, Argentina and Albana Gattelli, IFIBYNE-UBA-CONICET, CABA, Argentina, Marina Simian, INS-CONICET, San Martín, Argentina
15:30-16:00 **Mohamed Bentires-Alj**, University of Basel, Basel, Switzerland
"Cancer targeted therapy and tumor heterogeneity: Act locally, think globally"
16:00-16:30 **Jorge Reis Filho**, Memorial Sloan Kettering Cancer Center, New York City, USA
"Triple-negative breast cancer subtyping: why bother?"
16:30-16:45 **Catalina Lodillinsky**, Instituto de Oncología Ángel H. Roffo, CABA, Argentina
"Metastasis-suppressor NME1 controls the invasive switch of breast cancer by regulating MT1-MMP surface clearance" (Selected from poster presentations)
16:45-17:00 **Discussion**

Session 2: From hormone receptors to the immune system: the evolution of therapeutic targets in breast cancer
Chairs: Caroline Lamb, IBYME-CONICET, CABA, Argentina; Fernando Petracci, Instituto Alexander Fleming, CABA, Argentina and Cecilia Jazmín Proietti, IBYME-CONICET, CABA, Argentina
17:15-17:45 **Carol Lange**, University of Minnesota, Minneapolis, USA
"Tracking steroid receptor-driven changes in breast cancer cell fate"
17:45-18:15 **Jennifer Richer**, University of Colorado, Aurora, USA
"Breast cancer hijacks a trophoblast-like program of immune suppression"
18:15-18:45 **Mariana Salatino**, IBYME-CONICET, Buenos Aires, Argentina
"Mifepristone primes antitumor immunity in selected luminal mammary carcinomas opening the door to immune therapies"
18:45-19:00 **Andrés Marcos Castellaro**, CIQUIBIC-UNC, Córdoba, Argentina
"Tumor-associated macrophages induce endocrine therapy resistance in ER+ breast cancer cells" (Selected from poster presentations)
19:00-19:15 **Discussion**

Tuesday, May 18th

10:30-13:00 **Poster Session 1**

Session 3: Cancer stem cells and de-differentiated phenotype
Chairs: Gonzalo Gómez Abuin, Hospital Alemán, CABA, Argentina; Mauricio Menacho Márquez, IDICER, CCT-CONICET, Rosario, Argentina and Gastón Soria, CIBICI-CONICET, Córdoba, Argentina
14:00-14:30 **Jochen Maurer**, University Hospital RWTH, Aachen, Germany
"Cancer stem cells as disease models in research-opportunities and challenges"
14:30-15:00 **Paolo Ceppi**, University of Southern Denmark, Odense, Denmark
"The activity of thymidylate synthase shapes the de-differentiated phenotype of aggressive breast cancers"
15:00-15:30 **Robert Clarke**, University of Manchester, Manchester, UK
"Cytokine regulation of stem cell activity, endocrine resistance and metastasis"
15:30-15:45 **Martín Emilio García Solá**, IFIBYNE-UBA-CONICET, CABA, Argentina
"An integrative single-cell transcriptomic atlas of the post-natal mouse mammary gland allows discovery of new developmental trajectories in the luminal compartment" (Selected from poster presentations)
15:45-16:00 **Discussion**

Session 4: Mouse models for studying breast cancer initiation and progression
Chairs: María Marta Facchinetti, INIBIBB-UNS, Bahía Blanca, Argentina and Edith Kordon, IFIBYNE-UBA-CONICET, Buenos Aires, Argentina
16:15-16:45 **D. Joseph Jerry**, University of Massachusetts, Amherst, USA
"Consequences of estrogen exposure among strains of mice: a model for gene and environment interactions"
16:45-17:15 **Fariba Behbod**, University of Kansas, Kansas City, USA
"DCIS progression in the MIND model"
17:15-17:45 **William Muller**, Rosalind and Morris Goodman Cancer Center, Montreal, Canada
"Oncogene-mediated signal transduction in transgenic mouse models of human breast cancer"

17:45-18:00 **Diego Yair Grinman**, Yale School of Medicine, New Haven, USA
"PTHrP overexpression in mammary tumors increases tumorigenesis and causes anorexia" (Selected from poster presentations)
18:00-18:15 **Discussion**

Session 5: Round Table 1 - Genomics Platforms
Chair: Aníbal Nuñez de Pierro, Hospital Fernández, CABA, Argentina; **Co-chairs**: Gustavo Helguera, IBYME-CONICET, CABA, Argentina, Ignacio Mc Lean, Hospital Universitario Austral, Pilar, Argentina
18:30-19:30 **Ernesto Korbenfeld**, Hospital Británico, CABA, Argentina
Fernando Petracci, Instituto Alexander Fleming, CABA, Argentina

Wednesday, May 19th

10:30-13:00 **Poster Session 2**

Session 6: Genetics and Epigenetics of Breast Cancer
Chairs: Martín Abba, UNLP, La Plata, Argentina; Laura Kass, UNL, Santa Fe, Argentina and María Roque Moreno, IHEM-CONICET, Mendoza, Argentina
14:00-14:30 **Adrian Lee**, University of Pittsburgh, Pittsburgh, USA
"Genomics of breast cancer progression"
14:30-15:00 **Sophie Lelievre**, Purdue University College of Veterinary Medicine, West Lafayette, USA
"Environmental epigenetics to fight breast cancer risk and development"
15:00-15:30 **Guenter Vollmer**, Technische Universität Dresden, Dresden, Germany
"Polypharmacology of botanical extracts: Is there a link to breast cancer prevention?"
15:30-15:45 **Santiago Madera**, IBYME-CONICET, CABA, Argentina
"Targeting ErbB-2 nuclear function induces the interferon signalling pathway in breast cancer" (Selected from poster presentations)
15:45-16:00 **Discussion**

Session 7: Understanding the metastatic cascade to learn how to inhibit tumor progression
Chairs: Daniel Alonso, Universidad Nacional de Quilmes, Bernal, Argentina; Enrique Díaz Cantón, CEMIC, CABA, Argentina and Mario Rossi, Universidad Austral, Pilar, Argentina
16:15-16:45 **Valerie Weaver**, University of California, San Francisco, USA
"Tissue force promotes metabolic reprogramming to drive breast tumor aggression and metastasis"
16:45-17:15 **John Condeelis**, Albert Einstein Cancer Center, Bronx, USA
"The mechanism of metastasis during breast cancer progression and how to inhibit it"
17:15-17:45 **Julio Aguirre Ghiso**, Icahn School of Medicine at Mount Sinai, New York, USA.
"The impact of disseminated cancer cell dormancy on the paradigm of metastasis"
17:45-18:00 **Juan Garona**, Universidad Nacional de Quilmes, Bernal, Argentina
"Drug repurposing of hemostatic compound desmopressin (dDAVP) in triple-negative breast cancer (TNBC): Preclinical antitumor activity on 2D/3D cell growth, chemotaxis, tumor progression and metastatic spread" (Selected from poster presentations)
18:00-18:15 **Virginia Judith Wolos**, Instituto de Oncología Ángel H. Roffo, CABA, Argentina
"Hypoxic microenvironment is associated with acquired resistance to HER2+ breast cancer immunotherapies" (Selected from poster presentations)
18:15-18:45 **Discussion**

Session 8: Round Table 2 - Biorepositories and sample management
Chair: Eduardo Sandes, Instituto de Oncología Ángel H. Roffo, CABA, Argentina; **Co-chair**: Fabiana Lubieniecki, Hospital Juan P. Garrahan, CABA, Argentina
19:00-20:30 **Andrea Bosaleh**, Hospital Juan P. Garrahan, CABA, Argentina
Liliana Virginia Siede, UBA-UMSA, CABA, Argentina
Alfredo Molinolo, Moores Cancer Center, UCSD, San Diego, USA
Gonzalo Ardao, Hospital Central de las Fuerzas Armadas (HCFFAA), Montevideo, Uruguay
Ana Palmero, Ministerio de Salud de la Nación, CABA, Argentina

Thursday, May 20th

10:30-13:00 **Poster Session 3**

Session 9: Estrogen receptors: their involvement in endocrine resistance and dormancy
Chairs: Luisa A. Helguero, Institute of Biomedicine (iBiMED), University of Aveiro, Portugal; Isabel Lüthy, IBYME-CONICET, CABA, Argentina
14:00-14:30 **Steffi Oesterreich**, University of Pittsburgh, Pittsburgh, USA
"ER mutations in breast cancer"
14:30-15:00 **Todd Miller**, University of Dartmouth, Lebanon, USA
"Targeting dormancy in ER+ breast cancer"
15:00-15:15 **Discussion**

Session 10: Novel targets in the era of precision medicine
Chairs: Vanesa Gottifredi, Instituto Leloir, CABA, Argentina; Adrián Nervo, Instituto Alexander Fleming, Buenos Aires, Argentina and Virginia Novaro, IBYME-CONICET, CABA, Argentina
15:30-16:00 **Violeta Serra**, Vall d'Hebron Institut d'Oncologia (VHIO), Barcelona, Spain
"CDKs and PARP inhibition in breast cancer"
16:00-16:15 **Santiago Bella**, Sanatorio Allende y Clínica Universitaria Reina Fabiola, Córdoba, Argentina
"Use of CDK inhibitors in South America"
16:15-16:45 **Dejan Juric**, Massachusetts General Hospital, Boston, USA
"News on PI3K inhibitors in clinical practice"
16:45-17:00 **Andrés Elia**, IBYME-CONICET, CABA, Argentina
"Antiproliferative effect of mifepristone in breast cancer patients with higher levels of progesterone receptor A than B: results from the MIPRA trial" (Selected from poster presentations)
17:00-17:15 **Fabiana A. Rossi**, IIMT-CONICET-Univ. Austral, Pilar, Argentina
"USP19 modulates cancer cell migration and invasion and acts as a novel prognostic marker in patients with early breast cancer" (Selected from poster presentations)

17:15-17:30 **Discussion**

Session 11: Round Table 3 - Interaction among government, non-government agencies, and industry for funding and promoting breast cancer translational research
Chair: Omar Coso, IFIBYNE-UBA-CONICET, CABA, Argentina; **Co-chairs**: Edith Kordon, IFIBYNE-UBA-CONICET, CABA, Argentina and Marina Simian, INS-CONICET, San Martín, Argentina
17:45-19:00 **Judith Naidorf**, Facultad de Filosofía y Letras, UBA-CONICET, CABA, Argentina
Rosana Felice, GlaxoSmithKline (GSK), CABA, Argentina
Andrea Llera, Instituto Leloir-CONICET, CABA, Argentina
Daniel Gómez, Universidad Nacional de Quilmes-CONICET, Bernal, Argentina

Friday, May 21st

10:30-13:00 **Poster Session 4**

Session 12: Local and systemic therapies
Chairs: Elisa Bal de Kier Joffe, Instituto Ángel H. Roffo, CABA, Argentina; Pablo Mandó, CEMIC, CABA, Argentina; Roxana Schillaci, IBYME-CONICET, CABA, Argentina
14:00-14:30 **Catherine Park**, University of California, San Francisco, USA
"Radiation oncology-Oligometastasis: The impact of local therapy on systemic disease"
14:30-14:45 **Victoria Costanzo**, Instituto A. Fleming, CABA, Argentina
"Treatment of HER2+ tumors"
14:45-15:00 **Florencia Perazzo**, CEMIC, CABA, Argentina
"Immunotherapy for triple negative breast cancer"
15:00-15:15 **Matthew Winder**, CRUK Beatson Institute, Glasgow, United Kingdom.
"MCL-1 is a clinically targetable vulnerability in breast cancer" (Selected from poster presentations)
15:15-15:30 **Discussion**

Session 13: New developments in diagnosis and epidemiology of breast cancer
Chairs: Roberto Meiss, Academia Nacional de Medicina, CABA, Argentina and Ángela Solano, Facultad de Medicina-UBA, CABA, Argentina
15:45-16:15 **Pedram Razavi**, Memorial Sloan Kettering Cancer Center, New York City, USA.
"cfDNA analysis for breast cancer patients: fact checking"
16:15-16:45 **Osvaldo Podhajcer**. Instituto Leloir, CABA, Argentina
"The Latin American Cancer Research Network: first precision medicine study in human breast cancer in Latin America"
16:45-17:15 **Stephen N Birrell**, The Breast and Endocrine Center, Adelaide, Australia
"Mammographic breast density - the biological and clinical consequences of an opaque breast?"
17:15-17:30 **Gabriela Pataccini**, IBYME-CONICET, CABA, Argentina
"A breast cancer patient-derived xenograft biobank for precision medicine studies in Argentina" (Selected from poster presentations)
17:30-17:45 **Discussion**

Closing Conference
Chairs: J. Silvio Gutkind, UCSD, Moores Cancer Center, San Diego, USA and Pablo Mandó, CEMIC, CABA, Argentina

18:00-19:00 **Charles Perou**, UNC Lineberger Comprehensive Cancer Center, Chapel Hill, USA
"Quantitative Medicine for Breast Cancer Patients"

Closing words
19:00-19:15 **Edith Kordon**, IFIBYNE-UBA-CONICET, CABA, Argentina

PS4-65 / Targeting androgen receptor and WNT pathway in endocrine-resistant mammary carcinomas with high AR and low ER and PR levels

Virginia Figueroa[1], Gabriela Pataccini[1], Martín C. Abba[2], Silvia Vanzulli[3], Ana Sahores[1], Claudia Lanari[1], Caroline A. Lamb[1]

[1]Instituto de Biología y Medicina Experimental (IBYME-CONICET), Buenos Aires, Argentina, [2]CINIBA-CONICET, Facultad de Medicina, UNLP, La Plata, Buenos Aires, Argentina, [3]Academia Nacional de Medicina de Buenos Aires, Buenos Aires, Argentina

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Endocrine resistance remains a major drawback in the treatment of luminal breast cancer (BC). The mechanisms that contribute to hormone resistance may include deregulation of hormone receptors and growth factor signaling pathways. We previously demonstrated that overexpression of fibroblast growth factor (FGF2) in endocrine responsive T47D cell line, induced tumor progression. To explore the mechanisms underlying endocrine resistance we performed RNAseq analysis that revealed a deregulated WNT signaling pathway in T47D-FGF2-overexpressing cells compared with control T47D cells. We also detected decreased estrogen receptor α (ER) and progesterone receptor (PR) along with an increase in androgen receptor (AR) expression, both at mRNA and protein levels. Hence, FGF2-overexpressing cells have higher AR/ER and AR/PR ratios than control cells. Thus, we tested the effect of targeting the AR and/or WNT signaling pathways on cell proliferation and tumor growth. In endocrine resistant cells, dihydrotestosterone (DHT; AR agonist) induced cell proliferation while the combined treatment with enzalutamide (AR antagonist) and LGK974 (WNT inhibitor) inhibited tumor growth and reduced the number of large metastasis. Conversely, DHT inhibited control T47D cell proliferation and AR blockage had no significant effects on tumor growth. Our results suggest that targeting AR and/or WNT pathways may be a therapeutic alternative for endocrine resistant BC with high AR and low ER and PR levels.

PS4-66 / Low Oct4 expression in mesenchymal stem cells contributes to the development of the bone marrow pre-metastatic niche in advanced breast cancer patients

Cecilia Sanmartin*[1], Francisco Borzone[2], Ricardo Malvicini[1], Leandro Marcelo Martínez[2], Leonardo Feldman[2], Emilio Batagelj[2], Natalia Pacienza[1], Norma Alejandra Chasseing[2], Gustavo Yannarelli[1]

[1]Instituto de Medicina Traslacional, Trasplante y Bioingeniería, Universidad Favaloro-CONICET, Buenos Aires, Argentina, [2]Instituto de Biología y Medicina Experimental-CONICET, Buenos Aires, Argentina

**: mceciliasanmartin@outlook.com*

The imbalance between osteogenesis and osteoclastogenesis in the bone marrow (BM) microenvironment seems to play an essential role in the establishment of bone metastasis in untreated advanced breast cancer patients (BCP). We have previously found that this lack of balance is produced, among other factors, by a lower self-renewal, proliferation, and osteogenic differentiation capacity of BM-mesenchymal stem cells (MSCs). Mechanisms mediating these characteristic changes remain elusive. Here, we evaluated the expression of the osteoprogenitor marker CD146 (Flow cytometry), telomerase activity (qPCR), telomere length (qPCR), as well as the expression of the pluripotency factors Oct4 and Sox2 (qPCR) in BM-MSCs from clinical stage IIIb BCP (n = 8) vs. healthy volunteers (HV; n = 8). We found that MSCs from BCP had lower percentage of CD146+ cells ($p = 0.04$), decreased CD146 relative fluorescence index ($p = 0.002$), lower telomerase activity ($p = 0.04$), and shortened telomere length ($p = 0.002$) compared with HV. Moreover, Oct4 and Sox2 expression decreased by 54% ($p = 0.03$) and 72% ($p = 0.009$) in BCP-MSCs, respectively. Interestingly, Oct4 silencing impaired the ability of BM-MSCs to differentiate into osteoblasts ($p < 0.0001$). In conclusion, we found that a low Oct4 expression characterizes the altered BM-MSC phenotype in BCP. This change may explain the loss of osteoprogenitors and the impairment of MSC osteogenic processes, which create an ideal environment for BM metastatic development.

PS4-67 / CIN-independent cell death in S phase induced by pol eta depletion

Sebastián Omar Siri*[1], Yiovana Veronica Okraine[1], Maria Belén Federico[1], Vanesa Gottifredi[1]

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Defects in DDR lead to genomic instability that may trigger tumorigenesis. Genomic instability can manifest as a higher rate of acquisition of gross numerical or structural changes in the chromosomes, known as chromosomal instability (CIN). CIN is associated with the development of resistance to treatments, it is clear that it is recurrently elevated after DDR components' inhibition. That is why, although it is challenging, to think of strategies that induce cell death without generating abrupt and acute changes in CIN levels. When evaluating the mechanisms of cell death after the elimination of a DNA polymerase (pol eta), we found that the depletion of pol exacerbates the cell death caused by DNA damaging agents without causing a concomitant increase in CIN. This response happens because, in the absence of pol eta, cells cannot complete DNA replication and are more efficiently arrested in S phase. Soon after the DNA damaging challenge, cells depleted from pol eta display augmented DSBs that persist over time. DSBs are followed by the accumulation of massive regions of ssDNA and pan-nuclear phosphorylation of histone H2AX, which has been shown to correlate with a commitment to cell death. We also found evidence of RPA exhaustion, a marker that characterizes cell death in S phase. Such results suggest that the modulation of specific DDR effectors could selectively promote cell death in S phase, preventing CIN augmentation, a concept that may be relevant in clinical settings.

PS4-68 / Unveiling the mechanism of regulation of excessive fork elongation by Polymerase Iota

Sofía Venerus Arbilla[1]*, Sabrina Mansilla[1]*, Agostina Bertolin[1], María Belén de la Vega[1], Vanesa Gottifredi[1]

[1]Fundación Instituto Leloir-CONICET, Buenos Aires, Argentina

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To preserve the integrity of genetic information, cells must count with mechanisms-englobed by the term DNA Damage Response (DDR)-to protect cellular fitness when