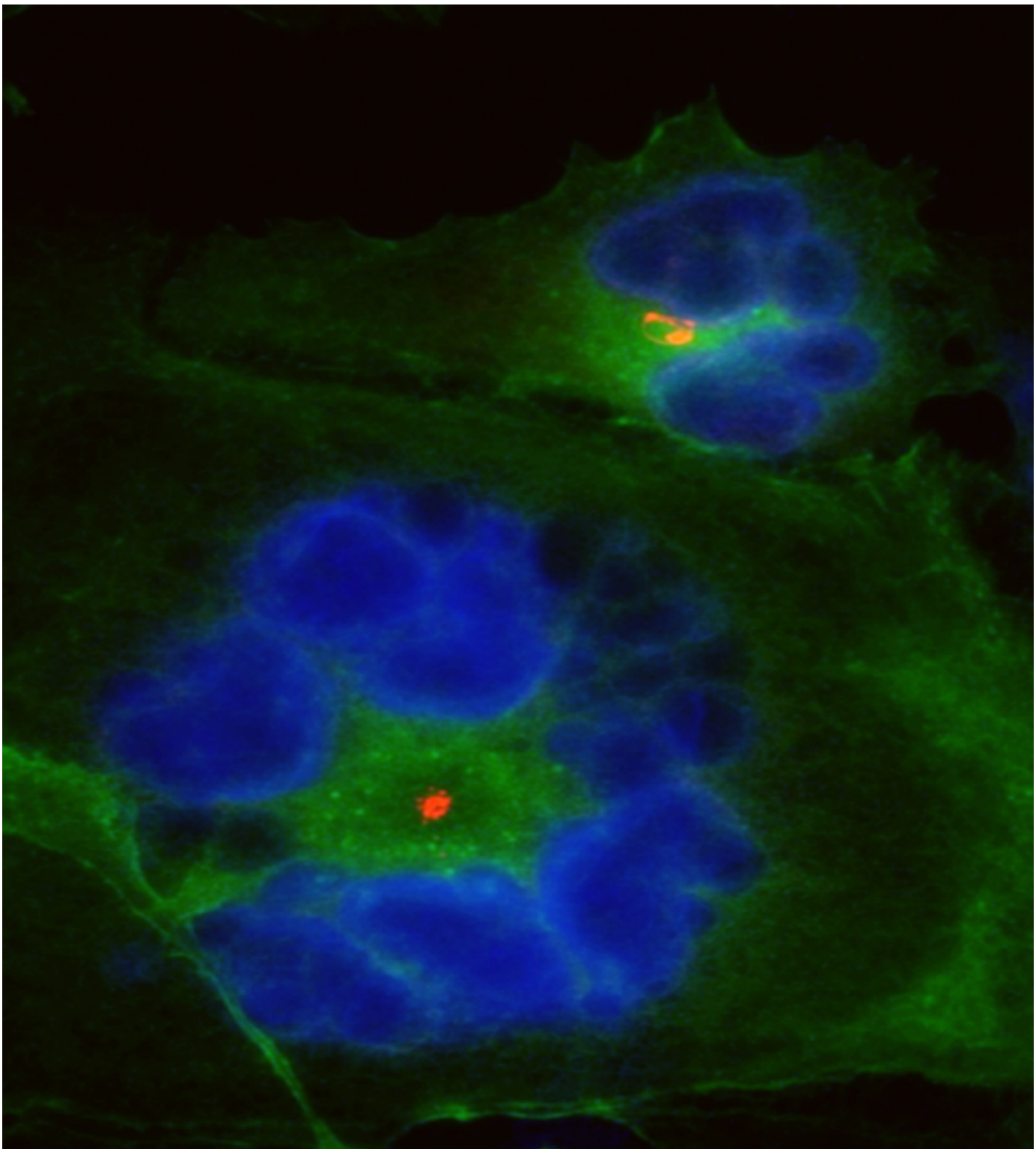
BIOCELL 43 (suppl.5), 2019
ISSN 1667-5746 (online version)



BIOCELL 43 (suppl.5), 2019
ISSN 1667-5746 (online version)

Cover page: The Synthetic Lethal Rosette

Aberrant mitotic phenotype found in BRCA1-deficient cells treated with the PLK1 inhibitor Volasertib. Cells become giant and multinucleated and acquire a flower shape, with nuclei arranging in a circular disposition around a cluster of centrosomes. Blue (DAPI: nuclei), Green (FITC-phalloidin: actin cytoskeleton), Red (γ-Tubulin: centrosomes).

Author: María Laura Guantay (CONICET fellow; Director: Gaston Soria)

Centro de Investigaciones en Bioquímica Clínica e Inmunología (CIBICI-CONICET), Facultad de Ciencias Químicas (Universidad Nacional de Córdoba).

BIOCELL 43 (suppl.5), 2019
ISSN 1667-5746 (online version)

MEMBERS OF THE SAIB BOARD

Silvia Belmonte
Auditor
IHEM CONICET
Facultad de Ciencias Médicas
Universidad Nacional de Cuyo - Mendoza

Romina Uranga
Auditor
INIBIBB CONICET
Universidad Nacional del Sur

DELEGATES OF SCIENTIFIC SESSIONS

Cell Biology
Javier Valdez Taubas
CIQUIBIC CONICET
Facultad de Ciencias Químicas
Universidad Nacional de Córdoba

Lipids
Nicolas Favale
IQUIFIB
Facultad de Farmacia y Bioquímica
Universidad de Buenos Aires

Plants
José M Estevez
FIL-IIBBA CONICET

Microbiology
Augusto Bellomio
INSIBIO-CONICET
Facultad de Bioquímica, Química y Farmacia.
Universidad Nacional de Tucumán

Signal Transduction
Vanesa Gottifredi
FIL-IIBBA CONICET

BIOCELL 43 (suppl.5), 2019
ISSN 1667-5746 (online version)

PABMB EXECUTIVE COMMITTEE

BIOCELL 43 (suppl.5), 2019
ISSN 1667-5746 (online version)

IN MEMORIAM

HORACIO G. PONTIS
(1928–2019)

Horacio Guillermo Pontis, born in Mendoza (1928), graduated in chemistry and obtained the Ph.D. (1953; Dir.: V. Deulofeu) from the University of Buenos Aires. After working for three years with Dr Luis F. Leloir—where he approached to carbohydrate metabolism—he stayed successively at King College (UK), Durham University (UK) and finally at Karolinska Institutet and University of Stockholm—where his attention turned to enzymology studies. After returning to Leloir´s lab (1960), he embarked on plant biochemistry studies. In his search for clues about fructans, Dr. Pontis´ lab synthesized not only UDP-fructose but also fructose-2-phosphate, which two decades later cleared the way for the chemical synthesis of fructose-2,6-bisphosphate (a key glycolysis modulator).

From 1968 to1977, he was the director of Dept. of Biology – Fundación Bariloche. In Nov. 1971, Bariloche hosted the SAIB Annual Meeting, being elected Dr. Pontis the President of SAIB (1972).

This reunion was followed by the Symposium "*Biochemistry of the glycosidic linkage*" with the presence of four Nobel Prizes (C. Cori (1947), G. Cori (1947), F. Lynen (1964), L. F. Leloir (1970)). However, his "*mi mejor experimento y experiencia de formación"* came to a halt-in when the Bariloche lab was closed (1977).

In 1979, Dr. Pontis moved to Mar del Plata where over time his outstanding capacity for innovation launched Instituto de Investigaciones Biológicas (IIB) – U. N. Mar del Plata, Fundación de Investigaciones Científicas (FIBA) and Centro de Investigaciones Biológicas (CIB).

In any site, Dr. Pontis maintained active research groups that trained graduate and post-graduate students generating a steady flow of important contributions to plant biochemistry. The research international community acknowledged these accomplishments, such as American Society of Plant Biologists that named him Correspondent Member. In his scientific activities, Dr. Pontis has been member of the National Research Council of Argentina (1961; CONICET), and Biochemistry Professor –at the UBA and at Universidad Nacional de Mar del Plata. The former and the later institutions recognized his academic performance designating him Emeritus Investigator and Emeritus Professor, respectively.

Dr. Pontis' story rose from limited beginnings—in Deulofeu´s and Leloir´s labs—to international scientific prestige. In this context, the challenge to overcome adversity during shameful periods in Argentine history honors not only his willingness but also his enthusiasm.

Ricardo Wolosiuk

Schedule	Tuesday November 5			Wednesday November 6	Thursday November 7	Friday November 8
8:30-9:00	**WORKSHOPS** **Workshop Accreditation**					
9:00-11:00	**Biochemistry Education Workshop**	**1st Workshop On Drug Discovery**		**Oral Communications** **Room Jacaranda** PL-C01, PL-C02, PL-C04 to PL-C06, PL-C09, PL-C12, ST-02, BT-C02 **Room Los Ceibos** CB-C01 to CB-C04, CB-C07 to CB-C10, ST-C01	**Conferences** ***Ro*om Lapacho** *Robert Gennis* *Francisco Barrantes*	**Oral Communications** **Room Jacaranda** PL-C03, PL-C07, PL-C08, PL-C10, PL-C11, PL-C13, PL-C14, PL-C15 **Room Los Ceibos** MI-C01 a MI-C06, BT-C01, CB-C06 **Room Lapacho** LI-C01 to LI-C05, ST-C03, CB-C11, CB-C05
11:00-11:30				**COFFEE-BREAK**		
11:30-12:30				**Plenary lecture** *Bruno Amati* **Room Lapacho**	**IUBMB Jubilee Lecture** *Philip D. Stahl* **Room Lapacho**	**"Hector Torres" Plenary Lecture** *Alejandro Colman Lerner* **Room Lapacho**
12:30-14:30				**LUNCH TIME**		
14:30-16:30			**Congress Accreditation**	**Symposia** *Lipids* **Room Jacaranda** *Plants* **Room Los Ceibos** *Signal Transduction* **Room Lapacho**	**Symposia** *Cell Biology* **Room Jacaranda** *RNA* **Room Los Ceibos**	**Symposia** *Microbiology* **Room Los Ceibos** *PABMB Young Investigators* **Room Jacaramda**
16:30-17:00				**COFFEE –BREAK**		
16:30-18:30			**Opening Ceremony** **Room Lapacho** ***In memoriam* of** Horacio Pontis **Room Lapacho**	**POSTERS** BT-P01 to BT-P06 CB-P01 to CB-P15 MI-P01 to MI-P18 PL-P01 to PL-P15 ST-P01 to ST-P13	**POSTERS** BT-P07 to BT-P12 CB-P16 to CB-P31 EN-P01 to EN-P11 MI-P19 to MI-P37 PL-P16 to PL-P32	**POSTERS** BT-P13 to BT-P19 CB-P32 to CB-P47 LI-P01 to LI-P15 MI-P38 to MI-P49 PL-P33 to PL-P48
18:30-19:30			**"Alberto Sols" Plenary Lecture** **Room Lapacho** *Encarnación Martinez Salas*	**EMBO Keynote Lecture** *F. Gisou van der Goot* **Room Lapacho**	**"Ranwel Caputto" Plenary Lecture** *Maria Elena Alvarez* **Room Lapacho**	**Closing Ceremony** **Room Lapacho**
			Cocktail 20:00 hs		**SAIB Assembly 19:45 hs**	**Dinner 20:00 hs**

and salt stresses. Altogether, these data suggest that ERF-SR regulates the expression of genes involved in ABA- and JA- signal-transduction pathways.

SIGNAL TRANSDUCTION

ST-C01
ROLE OF THE P53 TARGET ICMT IN METASTASIS: POST-PRENYLATION PROCESSING AT THE CENTER OF THERAPEUTIC STRATEGIES IN CANCER

Borini Etichetti C[1,4], Cerri A [2], Arel Zalazar E[2], Larocca MC[1,4], Menacho-Márquez M[2], Porta E [3,4], Labadie, G[3,4] Girardini J[2,4].
[1] IFISE-CONICET. [2] IDICER-CONICET. [3] IQUIR-CONICET. [4] FCByF, Universidad Nacional de Rosario.
E-mail: girardini@idicer-conicet.gob.ar

The mevalonate pathway catalyzes the *de novo* synthesis of cholesterol, but also provides isoprenoids that may be used for protein modification through a complex process known as prenylation. Some proteins involved in oncogenic processes, such as Ras and Rho GTPases are among the targets of this modification. Pioneering studies with statins have suggested that mevalonate pathway alteration cooperates with tumor aggressiveness. More recently, other evidence has confirmed that alteration of this pathway may promote aggressive phenotypes and pointed out at enhanced protein prenylation as a possible mechanism underlying this effect. ICMT plays a central role in this posttranslational modification process by catalyzing the last step, carboxymethylation of the prenylated C-terminus in target proteins. We have recently unveiled a link between post-prenylation processing and the p53 pathway by showing that *ICMT* expression is repressed by wt p53, but enhanced by cancer-associated p53 point mutants. Moreover, our analysis of Breast and Lung cancer databases showed a negative correlation between *ICMT* expression and wt p53 status. Moreover, we found a significantly decreased metastasis-free survival frequency in patients with high *ICMT* expression. Basing on these results, we wondered if alteration of ICMT levels enhances metastasis development. To answer this question, we studied the effect of ICMT overexpression on metastasis *in vivo*, using Triple Negative Breast Cancer cells in an immunocompetent mouse model. We extended our previous analysis on breast cancer patients and we found that p53 status affects the impact of ICMT overexpression on clinical outcomes. Besides, our studies on the regulation of *ICMT* expression showed that other p53 family members affect its transcription. Our results suggest that ICMT levels are affected by alterations in the functional equilibrium between different members of this family during tumor progression. To explore the potential of pharmacological manipulation of ICMT function, we analyzed the impact of the ICMT inhibitor Cysmethynil to affect tumor-associated phenotypes. We found that ICMT inhibition affects clonogenic potential, as well as phenotypes associated with metastatic cells, such as migration and invasion *in vitro*. In an effort to develop novel ICMT inhibitors and inspired on Salirasib (*S*-trans-trans-farnesylthiosalicylic acid) we synthesized novel thiosalicylic acid derivatives. As a preliminary characterization, we analyzed the antiproliferative activity of our compounds *in vitro* on MDA-MB-231 cells. Our results suggest that ICMT overexpression affects tumor progression and that molecules interfering with the function of prenylated proteins are potentially useful in therapeutic strategies.

ST-C02
NITRIC OXIDE AND AUXIN REGULATE ROOT MERISTEM DURING GRAVITROPISM IN *ARABIDOPSIS THALIANA*

Vazquez MM[1], Goldy C[2], Rodríguez R[2,3], Casalongué C[1], París R[1].
[1] IIB-CONICET-UNMdP, Funes 3250, 4to nivel, Mar del Plata, Argentina, [2] Instituto de Biología Molecular y Celular de Rosario (CONICET-UNR), [3] Centro de Estudios Interdisciplinarios (UNR). E-mail: vazquezmaguie@gmail.com

Nitric oxide (NO) is a gaseous redox-active molecule with a role in different physiological auxin-mediated processes including gravitropism. Roots bend in response to gravity by the formation of an asymmetric distribution auxin pattern between the upper and the lower sides of elongation and meristematic zones of the root. However, the mechanisms by which auxin and NO interplay during the gravitropic response are not still fully understood. In this work, we focus on deciphering the spatio-temporal pattern of auxin and the functional contribution of NO in the meristematic cells during early events of gravitropism in *Arabidopsis* roots. In *Arabidopsis thaliana,* the meristematic root zone comprises all the cells that undergo mitotic divisions and stretches longitudinally up to 350 µm from the quiescent center (QC). By using the auxin sensor DII-VENUS we demonstrated that within the first 30 min of a 90º gravity stimulus, the hormone was distributed asymmetrically between the upper and lower sides in lateral root cap, epidermal and cortical cells extending up to 120 µm from the QC in the meristematic region of the root. In addition, we demonstrated that NO is accumulated asymmetrically between the lower and upper sides of the root meristem. Next, we measured the length of individual epidermal cells along the meristematic zone. Scavenging of endogenous NO affects the characteristic epidermal cell length observed during the gravitropic response. Therefore, we hypothesize that the disturbance of the interaction between auxin and NO signals could affect the meristematic cell size pattern which leads to an agravitropic response in *Arabidopsis* roots. Since cyclins play a vital role in controlling cell cycle progress, one of our current challenges is to investigate how auxin- and NO-mediated regulation affects the dynamic and functionality of root meristem during gravitropism. *Supported by UNMdP, CONICET, ANPCyT.*

ST-C03