IMIBIC MAIMONIDES BIOMEDICAL RESEARCH INSTITUTE OF CORDOBA

The GROUP: GC-06 "Nuevas terapias en cáncer"

Look for CANDIDATES to apply to MINECO Program "Sara Borrell" (2016)

POSTDOCTORAL CONTRACT

Place: Maimonides Biomedical Research Institute of Cordoba (IMIBIC)

Link of Group: http://www.imibic.org/site/grupo/13/gc-06-nuevas-terapias-en-cancer

Topic:

The group is interested in the development of reliable clinical biomarkers to help predict which patients will respond to targeted therapies in cancer. The studies carried out are aimed to establish the mechanisms involved in the *de novo* or secondary resistance to these treatments, and to identify predictor biomarkers of response to therapy. One line of research is one addressed to study the role of nitric oxide (NO) and nitrosative stress in cancer. Induced NO modifications such as protein nitrosylation, can be a key regulatory factor, both in tumorigenesis and tumor progression and anti-tumor therapy. In fact, the emerging role of the nitrosylation of proteins in tumor biology, including its participation in regulatory epigenetic mechanisms also extends to routes of specific cell signaling in cancer stem cells, or fundamental processes of progression tumor as angiogenesis. Therefore, the dissection of these interconnections may provide prognostic markers and response to treatment in colon, breast cancer and other neoplastic pathologies, and to identify new therapeutic approaches. This line of research is funded by several research projects granted in both regional and national public calls. During the last years, the group has broadened and consolidated its capacity to implement innovative technologies in the study of cellular and molecular oncology, through the incorporation of novel methodologies, including liquid biopsy and also preclinic experimental models.

Recent publications:

Cañas A, López-Sánchez LM, Peñarando J, Valverde A, Conde F, Hernández V, Fuentes E, López-Pedrera C, de la Haba-Rodríguez JR, Aranda E, Rodríguez-Ariza A. Altered S-nitrosothiol homeostasis provides a survival advantage to breast cancer cells in HER2 tumors and reduces their sensitivity to trastuzumab. Biochim Biophys Acta. 2016 Apr;1862(4):601-10.

Moreno-Muñoz D, de la Haba-Rodríguez JR, Conde F, López-Sánchez LM, Valverde A, Hernández V, Martínez A, Villar C, Gómez-España A, Porras I, Rodríguez-Ariza A, Aranda E. Genetic variants in the renin-angiotensin system predict response to bevacizumab in cancer patients. Eur J Clin Invest. 2015 Dec;45(12):1325-32.

Valverde A, Peñarando J, Cañas A, López-Sánchez LM, Conde F, Hernández V, Peralbo E, López-Pedrera C, de la Haba-Rodríguez J, Aranda E, Rodríguez-Ariza A. Simultaneous inhibition of EGFR/VEGFR and cyclooxygenase-2 targets stemness-related pathways in colorectal cancer cells. PLoS One. 2015 Jun 24;10(6):e0131363.

Lopez-Sánchez LM, Jimenez C, Valverde A, Hernandez V, Peñarando J, Martinez A, Lopez-Pedrera C, Muñoz-Castañeda JR, De la Haba-Rodríguez JR, Aranda E, Rodriguez-Ariza A. CoCl2,

a mimic of hypoxia, induces formation of polyploid giant cells with stem characteristics in colon cancer. PLoS One. 2014 Jun 16;9(6):e99143.

López-Sánchez LM, López-Pedrera C, Rodríguez-Ariza A. Proteomic approaches to evaluate protein S-nitrosylation in disease. Mass Spectrom Rev. 2014 Jan-Feb;33(1):7-20

BOE: http://www.isciii.es/ISCIII/es/contenidos/fd-investigacion/fd-financiacion/fd-convocatorias-ayudas-accion-estrategica-salud/2016/RESOLUCION-AES-2016.pdf

Candidates' requirements:

- PhD obtained after 1st January 2012.

Evaluation:

- Candidate CV: 50 points (publications on peer-reviewed journals are required)

- Research Project: 15 points

- Research Group: 35 points.

Send CV to: antonio.rodriguez.exts@juntadeandalucia.es