

# VI JORNADAS DE MEDICINA GENÓMICA Y ONCOLOGÍA GENYO 2018

Wednesday, 12<sup>th</sup> December

09.30- 09.45 WELCOME AND INTRODUCTION

**Prof. José Antonio Lorente** Scientific Director GENyO  
**Dr. Sara Rodriguez Heras** Co-PI GENyO / UGR

MASTER STUDENT SESSION

*Session Chair: Juan Elías González*

09.45-10.05 **Ana Soriano Lerma**  
“New approaches to treat ferroperenic anaemia: targeting the intestinal microbiome through the use of fermented goat's milk”

10.05-10.25 **Aitor González Titos**  
“Anti-miRNA conjugated nanoparticles as therapeutic strategy against Cancer Stem Cells”

10.25-10.45 **Noelia Maldonado Pérez**  
“Development of clinical-grade doxycycline-inducible CAR T cells”

10.45-11.00 FLASH TALKS

**Laura Casado Medina**  
**Daniel Jesús García García**  
**Esperanza Muñoz Muela**  
**Alba Navarro Ocón**  
**Elena Povedano Espejo**

11.00-12.00 COFFEE BREAK AND POSTER SESSION (MASTER STUDENT SESSION)

12.00-12.30 TECHNO-SCIENTIFIC SESSION

**Dr. Mirko Vanetti** Integrated DNA Technologies Spain

“Mitigating risk of off-target effects when using CRISPR genome editing”

12.30-13.30 KEYNOTE SPEAKER

**Dr. Pedro Romero** Facultad de Biología y de Medicina, Universidad de Lausana,  
Centro Ludwig de Investigación sobre el Cáncer, Suiza

“Inmunoterapia de cáncer, Premio Nobel de Medicina 2018: avances y desafíos”

13.30-15.00 LUNCH PROVIDED BY ORGANIZERS

15.00-16.00 MESA REDONDA “CARRERA INVESTIGADORA EN ANDALUCIA”

**Prof. Jose Antonio Lorente** Director de la estrategia de Innovación e Investigación  
en Salud de la Consejería de Salud de la Junta de Andalucía

**Daniel Torres-Salinas** Vicerrectorado de Investigación y Transferencia

16.00-17.00 KEYNOTE SPEAKER

**Dr. Nuria López-Bigas** Institute for Research in Biomedicine IRB, Barcelona

“Tumor genomes shed light into somatic mutational processes and cancer  
vulnerabilities”

## Thursday, 13<sup>th</sup> December

### < 5 YEARS RESEARCH EXPERIENCE SESSION

*Session Chair: Pablo Tristán*

09.15-09.35 **María Benítez Guijarro**  
“RNase H2, mutated in Aicardi-Goutières syndrome, promotes LINE-1 retrotransposition”

09.35-09.55 **Juan Elías González Correa**  
“Gene-Cell Therapy for Pompe Disease”

09.55-10.15 **Daniel Toro Domínguez**  
“ImaGEO: Integrative Gene Expression Meta-Analysis from GEO database”

### 10.15-10.45 TECHNO-SCIENTIFIC SESSION

**Dr. Nuria Rodríguez Pérez** Izasa Scientific  
“Avances y soluciones genómicas en medicina oncológica e inmunología”

### 10.45-11.00 FLASH TALKS

**Gonzalo Gómez Hernández**  
**Raúl López Domínguez**  
**Jose Manuel Sánchez Maldonado**  
**Jordi Martorell Marugán**  
**María Tristán Manzano**

11.00-12.00 COFFEE BREAK AND POSTER SESSION (< 5 YEARS RESEARCH EXPERIENCE SESSION, ODD NUMBERS)

### 12.00-12.30 TECHNO-SCIENTIFIC SESSION

**Dr. Xavier Joya** Labclinic  
“A Comparison of Two Liquid Biopsy Approaches in Lung Carcinoma: the use of mass spectrometry in patients with advanced lung cancer.”

12.30-13.30 **KEYNOTE SPEAKER**

**Dr. José María Gómez Reyes** Estación Experimental de Zonas Áridas (EEZA-CSIC),  
Almería  
"Homo hominis lupus: Las raíces evolutivas de la violencia letal en humanos"

13.30-14.45 **LUNCH PROVIDED BY ORGANIZERS**

**5-10 YEARS RESEARCH EXPERIENCE SESSION**

*Session Chair: Dr. Angélica Luque*

14.45-15.05 **Dr. Ana Ariza Cosano**  
"Maternal transmission of retrotransposon derived RNAs might generate donor-free heritable insertions in vivo"

15.05-15.25 **Dr. M. Carmen Garrido Navas**  
"Androgen receptor splicing variants in platelets as new biomarkers for treatment response in prostate cancer"

15.25-15.45 **Dr. Manuel Ruiz Picón**  
"Mammary adipocytes mediate cytokine production and malignant progression of ER+ breast cancer cells through NF- $\kappa$ B activation"

15.45-16.00 **FLASH TALKS**

**Carlos Baliñas Gavira**  
**Meriem Benkaddour**  
**Isabel Fernández Coira**  
**M. Angélica Luque González**

16.00-17.00 **POSTER SESSION (<5 YEARS RESEARCH EXPERIENCE SESSION, PAIR NUMBERS)**

17.00-18.30 **MESA REDONDA "DEL LABORATORIO AL PACIENTE"**

**Asociación Española de Enfermos de Pompe**  
**Fundación Poco Frecuente**  
**Asociación Síndrome 22q Andalucía**  
**AUPA - Asociación de padres y madres de niños oncológicos de Granada**  
**Fundación Instituto INMUNES**

## Friday, 14<sup>th</sup> December

### >10 YEARS RESEARCH EXPERIENCE SESSION

*Session Chair: Dr. Karim Benabdel Iah*

09.15-09.35 **Dr. Manuel Martínez Bueno**  
"The Impact of Rare Variation in Systemic Lupus Erythematosus Revealed Through a Stringent Imputation Approach"

09.35-09.55 **Dr. Laura Vera Ramirez**  
"Survival of dormant breast cancer cells and metastatic tumor recurrence is dependent upon the activation of autophagy"

09.55-10.15 **Dr. Thomas Widmann**  
"Brain somatic mosaicism mediated by LINE retrotransposons targets especially the motoneuron network: insights from a zebrafish model"

### 10.15-10.30 FLASH TALKS

**Dr. Juan Carlos Alvarez Pérez**  
**Dr. Belén Rubio Ruiz**

10.30-11.30 COFFEE BREAK AND POSTER SESSION (5-10 YEARS AND >10 YEARS RESEARCH EXPERIENCE SESSION)

### 11.30-12.30 KEYNOTE SPEAKER

**Dr. Federico Mingozi** Spark Therapeutics. Philadelphia, USA  
"In vivo gene therapy with AAV vectors, progress and challenges"

12.30-13.30 AWARDS AND CLOSING



CENTRO PFIZER-UNIVERSIDAD DE GRANADA-JUNTA DE ANDALUCIA  
DE GENÓMICA E INVESTIGACIÓN ONCOLÓGICA

**Organizer Committee:**

Dr. Concepción Marañón  
Dr. Sara R. Heras  
Dr. Francisco Martín

**Collaborators:**

Alberto Ramirez  
Raffaele Donnabella  
Noemí Dougnac

**Sponsors:**



Genyo



JUNTA DE ANDALUCIA

Universidad de Granada

## POSTERS:

### <5 YEARS RESEARCH EXPERIENCE SESSION

1. Pateamine A. Inhibition of translation process as a treatment for Systemic Lupus Erythematosus. Gonzalo Gómez Hernández, Genyo.
2. Analysis of Transcription Factor activity patterns in Systemic Lupus Erythematosus. Raúl López Domínguez, Genyo.
3. A centralized database for exploring gene expression and methylation data in Systemic Autoimmune Diseases. Jordi Martorell Marugán, Genyo.
4. Steroid hormone-related polymorphisms influence the risk of developing bone erosions in rheumatoid arthritis and improve the prediction of disease progression. Jose Manuel Sánchez Maldonado, Genyo
5. Towards a safer and more efficient universal CD19-CAR T cells against refractory B malignancies. María Tristán Manzano, Genyo.
6. Generation of cellular models to study gene therapy strategies for Pompe disease. Araceli Aguilar González, Genyo.
7. Discovering driver somatic mutations in long non-coding RNAs in lung adenocarcinoma. Alvaro Andrades Delgado, Universidad de Granada/Genyo.
8. Mitochondrial dysfunction is associated to Tay-Sachs and Sandhoff. Beatriz Castejón Vega, Universidad de Sevilla.
9. microRNA, gene and CTC characterization in the diagnosis, prognosis and prediction of early lung adenocarcinoma and squamous cell carcinoma patients. Diego de Miguel Pérez, Universidad de Granada/Genyo.
10. Plakophilin 1: a new oncogene in Non-Small-Cell Lung Cancer. Inés Díaz Cano, Universidad de Granada.
11. Generation of an early model of pediatric acute myeloid leukemia. Joan Domingo Reinés, Genyo.
12. Validation of an in vitro assay for the evaluation of new tetrahydroisoquinoline derivatives as CD44 inhibitors by flow cytometry. Jose Manuel Espejo Román, Universidad de Granada/Genyo.
13. Development of Maghemite Nanotools against Cancer. Fátima Fernández Alvarez, Universidad de Granada.
14. Linking the circadian molecular clock and DNA repair in pluripotent cells. Amador Gallardo de los Reyes, Universidad de Granada/Genyo.
15. Cell-cycle regulation of gene priming in mouse embryonic stem cells. Helena Gómez Asenjo, Universidad de Granada/Genyo.
16. Cancer or cancer stem cells: what is first?. Pablo Hernández Camarero, Universidad de Jaén.
17. Development of a nanodevice for cancer cell detection based on receptor overexpression by mass cytometry. Jose Antonio Laz Ruiz, Genyo.
18. Effect of sodium tungstate on cell proliferation. Azahara Linares Pérez, Universidad de Granada.
19. A PCR-free technology to detect and quantify microRNAs directly from human plasma. Antonio Marín Romero, Universidad de Granada.
20. Designing new gene therapy tools based on CRISPR/Cas9 to treat Bernard-Soulier Syndrome. Gonzalo Martínez Navajas, Genyo.

21. Setting up a reversible system to study epigenetic plasticity during epithelial to mesenchymal transition in lung cancer. Aldara Molina Sánchez, Universidad de Granada.
22. Desing of nanosystems conjugated with antibody fragments to treat the neurological stage of African trypanosomiasis. Matilde Ortiz González, Genyo.
23. Vulnerabilities of Non-Small Cell Lung Cancer to the inhibition of ARID1A, an important epigenetic player in cancer. Paola Peinado Fernández, Genyo.
24. ADAMTS1 promotes tumour development in melanoma. Carlos Peris Torres, Genyo.
25. New specific transfection reagents based on polyethyleneimine and hyaluronic acid for targeting to CD44 receptor. Simona Plesselova, Universidad de Granada.
26. Human embryonic cell models to study the 22q deletion syndrome. María Esther Prada Sánchez, Genyo.
27. Theranostics in breast cancer: a new versatile strategy. Francisco José Reche Pérez, Universidad de Granada.
28. Evaluating the impact of the ADAMTS1 protease during anti-angiogenic treatment. Silvia Redondo García, Genyo.
29. Dynamic Chemistry and nanotechnology for in situ detection of nucleic acids (Chem-FISH) in HT-29 colon cancer cell line. Agustín Robles Remacho, Genyo.
30. Mass cytometry identifies Circulating Tumor Cell subpopulations in Prostate Cancer patients. Alba Rodríguez Martínez, Universidad de Granada/Genyo.
31. Methods for whole blood immunomonitoring of clinical samples for flow and mass cytometry studies. Paulina Rybakowska, Genyo.
32. The IS2 Element Improves Transcription Efficiency of Integration-Deficient Lentiviral Vector Episomes. Sabina Sánchez Hernández, Genyo.
33. The tumor suppressor microRNA let-7 inhibits human LINE-1 retrotransposition. Pablo Tristán Ramos, Genyo.

## MASTER STUDENT SESSION

34. Gene Dysregulation and Mutational state of SWI/SNF Chromatin Remodeling Complex Subunits in Lung Adenocarcinoma. Daniel Jesús García García, Genyo.
35. Evaluation of a combined targeted therapy against the TGF-induced ATF4 expression in triple negative breast cancer. Esperanza Muñoz Muela, Genyo.
36. Analysis of Human Leukocyte Antigen I (HLA-I) alterations in tumour derived exosomes. Alba Navarro Ocón, Universidad de Granada.
37. Integrative genome and epigenome study of mixed connective tissue disease. Elena Povedano Espejo, Universidad de Granada.
38. Molecular and Functional Analysis of Androgen Receptor Splice Variants (AR-V7 and AR-V9) during the Development of Drug Resistances in Prostate Cancer: Prognostic and predictive markers. Laura Casado Medina, Universidad de Granada.
39. Characterization of dysregulated lncRNA in lung adenocarcinoma. Alberto Manuel Arenas Molina, Universidad de Granada/Genyo.
40. RBM10 characterization in lung adenocarcinoma and its implications in regulating tumorigenic circular RNAs. María de los Angeles Becerra Rodríguez, Universidad de Granada.
41. Improving Integrative Deficient Lentiviral Vectors (IDLVs) or gene therapy applications. Marina Cortijo Gutiérrez. Genyo.



42. Role of the protease ADAMTS1 in melanoma cell lines in normoxia and hypoxia conditions. Silvia Domínguez García, Genyo.
43. Magnetic poly (butylcyanoacrylate) nanoparticles exhibit potential antitumor capabilities. Silvia Fuerte Rodríguez, Universidad de Granada.
44. Magnetite Nanocrystals to be used in Anticancer Strategies. Gracia García García, Universidad de Granada.

#### 5-10 YEARS RESEARCH EXPERIENCE SESSION

45. The inhibition of zebrafish LINE-2 retrotransposition impacts locomotor activity. Meriem Benkaddour, Genyo.
46. Recurrent mutations on amino-terminal domain of BCL7A promote diffuse large B-cell lymphoma. Carlos Baliñas, Genyo.
47. Flow Chem-NAT technology for KRAS single nucleotide mutation detection. M. Angélica Luque González, Universidad de Granada/Genyo.
48. Suicide gene therapy directed by microRNA activity. Isabel Fernandez Coira, Universidad de Granada/Genyo.
49. Antibody-conjugated polymeric nanoparticles for targeted drug delivery. Victoria Cano-Cortés, Universidad de Granada/Genyo.
50. Role of nuclear ADAMTS1 in normal and tumoral cells. Suely Vieira da Silva, Genyo.

#### >10 YEARS RESEARCH EXPERIENCE SESSION

51. Development of new lung cancer therapies based on gene-editing technologies. Juan Carlos Alvarez Pérez, Universidad de Granada/Genyo.
52. Development of palladium-labile prodrugs for bioorthogonally activated chemotherapy. Belén Rubio Ruiz, Centre for Genomics and Oncological Research