BIOGRAPHICAL SKETCH

Provide the following information for the proposed network coordinators and members
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NAME	POSITION TITLE
RELAÑO, Carlos carlos.relano@cnic.es	PhD student, Centro Nacional de Investigaciones Cardiovasculares (CNIC) Madrid, SPAIN

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Autonomous University of Madrid, Madrid, SPAIN	B.S.	2017-2021	Biochemistry
Polytechnic University of Madrid, Madrid, SPAIN	Master's Degree	2021-2022	Computational Biology

A. PERSONAL STATEMENT:

My project focuses on the application of bioinformatics to research in congenital heart diseases. In particular, I am using genomics data from families affected with hypertrophic cardiomyopathy (HCM) to discover novel non-sarcomeric variants that could drive the disease. This project encompasses genomics, generation of mouse models and single cell transcriptomics to unravel the molecular mechanisms of HCM.

B. POSITIONS AND AWARDS:

Positions

- 2014-09/2015-07. Research intern at Dr. Susana Alemany's group. Instituto de Investigaciones Biomédicas Sols-Morreale (IIBM). Madrid (SPAIN)
- 2015-11/2015-12. Laboratory technician at Dr. Alberto Ferrus' group, Cajal Institute. Madrid (SPAIN)
- 2018-06/2018-07. Laboratory technician at Prof. Philip Cohen's group, Medical Research Council, Protein Phosphorylation and Ubiquitylation Unit (MRC PPU). Dundee (UNITED KINGDOM)
- 2021-06/2021-08. Cicerone program intern, Immunobiology group, National Center for Cardiovascular Research (CNIC). Madrid (SPAIN)
- 2022-01/2022-06. Master's degree intern, Bioinformatics Unit, CNIC. Madrid (SPAIN)
- 2022-09/2023-03. Bioinformatician at Dr. Pedro Majano's group, Instituto de Investigación Sanitaria Hospital de la Princesa. Madrid (SPAIN)
- 2023-4/2024-09. Bioinformatician at Bioinformatics Unit, CNIC. Madrid (SPAIN)
- 2024-10/present. PhD student at the Intercellular Signaling in Cardiovascular Development and Disease group, CNIC. Madrid (SPAIN)

Honors

- 2024. Predoctoral Fellowship, Autonomous Community of Madrid (CAM)

C. PUBLICATIONS:

Google scholar ORCID 0000-0002-1407-9245

a. 5 more important publications. Please insert hyperlink to the online publication

1. Brandi, P., Conejero, L., Cueto, F. J., Martínez-Cano, S., Dunphy, G., Gomez, M. J., ... & Sancho, D. (2022). Trained immunity induction by the inactivated mucosal vaccine MV130 protects against experimental viral respiratory infections. Cell Reports, 38(1).
2. Sánchez, Á., **Relaño, C**., Carrasco, A., Contreras-Jurado, C., Martín-Duce, A., Aranda, A., & Alemany, S. (2017). Map3k8 controls granulocyte colony-stimulating factor production and neutrophil precursor proliferation in lipopolysaccharide-induced emergency granulopoiesis. Scientific reports, 7(1), 5010.
3. Mañanes, D., Rivero-García, I., **Relaño, C**., Torres, M., Sancho, D., Jimenez-Carretero, D., ... & Sánchez-Cabo, F. (2024). SpatialDDLS: an R package to deconvolute spatial transcriptomics data using neural networks. Bioinformatics, 40(2), btae072.
4. Molina-Jiménez, F., Ugalde-Triviño, L., Arias-González, L., Armenteros, E., **Relaño-Rupérez, C**., Casabona, S., ... & Majano, P. (2024). Proton pump inhibitor effect on esophageal protein signature of eosinophilic esophagitis, prediction, and evaluation of treatment response. Allergy.
5. Molina-Jiménez, F., Ugalde-Triviño, L., Arias-González, L., **Relaño-Rupérez, C**., Casabona, S., Pérez-Fernández, M. T., ... & Majano, P. (2023). Proteomic analysis of the esophageal epithelium reveals key features of eosinophilic esophagitis pathophysiology. Allergy, 78(10), 2732-2744.

b. 10 additional publications.

1. Rodrigo-Muñoz, J. M., Naharro-González, S., Callejas, S., **Relaño-Ruperez, C**., Torroja, C., Benguria, A., ... & Del Pozo, V. (2024). Single-cell RNA sequencing of human blood eosinophils reveals plasticity and absence of canonical cell subsets. Allergy

D. CURRENT AND ANTICIPATED GRANT SUPPORT
