

# Diego Quintana Torres

PhD Student

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## Brief summary

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As a dedicated **fourth-year PhD student** in the Genomics, Cancer and Aging group led by **Prof. Carlos López Otín**, I am deeply interested in harnessing computational approaches and employing omics technologies to extract meaningful insights from biological data. Over the past five years, I have honed a comprehensive skill set encompassing both dry lab (computational) and wet lab (experimental) techniques, with a particular emphasis on the research areas of **immunology and aging**. My current research endeavors are centered around an in-depth exploration of the immune system in the context of **accelerated aging**, with a specific focus on **Hutchinson Gilford Progeria Syndrome (HGPS)**, thereby contributing to the broader understanding of aging (both premature and physiological) and age-related diseases.

## Education

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**Ph.D. Biomedicine and Molecular Oncology** 2021 - 2025

Thesis: Analysis of immune function and its relevance in mouse models of premature aging

Advisors: Prof. Alicia Rodríguez Folgueras, Prof. Alejandro López Soto.

Prof. Carlos López Otín's Laboratory, University of Oviedo, Spain

**M.S. Biomedicine and Molecular Oncology (First-Class Honors)** 2020 - 2021

Master's Thesis: Characterization and Functional Analysis of the Immune Response in Accelerated Aging

Prof. Carlos López Otín's Laboratory, University of Oviedo, Spain

**B.S. Computer Science (Distance learning)** 2020 - present

University of Burgos, Spain

**B.S. Biology (First-Class Honors)** 2016 - 2020

Senior Thesis: Study of Immunomodulatory Mechanisms in Physiological and Accelerated Aging (with Honors)

Prof. Carlos López Otín's Laboratory, University of Oviedo, Spain

## Publications

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**Diego Quintana-Torres\***, Alejandra Valle-Cao\*, Pablo Bousquets-Muñoz\*, Sandra Freitas-Rodríguez, Francisco Rodríguez, Alejandro Lucia, Carlos López-Otín, Alejandro López-Soto, Alicia R. Folgueras. "The secretome atlas of two mouse models of progeria". *Aging Cell* (2023) [[link](#)] (\* denotes equal contribution)

## Research projects

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**Functional and therapeutic exploration of the immune system in aging (IMMaging).** 2022 -

Principal Investigators: Alicia Rodríguez Folgueras, Alejandro López Soto

Spanish Ministry of Science, Innovation and Universities

**Determination of the specific contribution of organs and tissues to the systemic regulation of aging (ORGANAGING).** 2019 - 2022

Principal Investigator: Alicia Rodríguez Folgueras

Spanish Ministry of Science, Innovation and Universities

## Internships

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**Prof. Mario Fernández Fraga Group. Cancer Epigenetics and Nanomedicine** 2019

Instituto Universitario de Oncología del Principado de Asturias (IUOPA)

Fundación para la Investigación y la Innovación Biosanitaria del Principado de Asturias (FINBA), Instituto de Investigación Sanitaria del Principado de Asturias (ISPA)

Center for Research in Nanomaterials and Nanotechnology, Spanish National Research Council (CINN - CSIC)

**Biotechnological and Biomedical Assays and Photonic Microscopy and Image Processing Units, Biological Analysis Section** 2018

Scientific-Technical Services, University of Oviedo

## University service

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**Representative of the group of PhD students in the Biochemistry and Molecular Biology Department Council** 2023 -

University of Oviedo, Spain

**Collaborator in the European Researchers' Night** Sept 2022

Oviedo, Spain

**Student Representative of the Quality Commission of the Faculty of Medicine and Health Sciences** 2020 - 2021

University of Oviedo, Spain

## Grants, honors & awards

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**University Faculty Training Grant / Ayuda para la Formación de Profesorado Universitario (FPU)** 2021 - 2025

National Program to Develop, Attract and Retain Talent

Spanish Ministry of Science, Innovation and Universities

**Collaboration grant to carry out research tasks in university departments** 2020 - 2021

Secretary of State for Education, Spanish Ministry of Education and Vocational Training

Biochemistry and Molecular Biology Department, University of Oviedo

**María Cristina Masaveu Peterson Bachelor's Degree Scholarship for Academic Excellence** 2018/2019, 2019/2020

María Cristina Masaveu Peterson Foundation, Spain

**Collaboration Scholarship in University Services** 2018

Biological Analysis Section, Scientific-Technical Services, University of Oviedo

## Teaching experience

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**Incorporation of a virtual laboratory simulator as a case-based learning tool for Molecular Biology students.** 2022 - 2023

Coordinators: Alicia Rodríguez Folgueras, Alejandro López Soto

Teaching innovation project, University of Oviedo

**Biochemistry (GBIOL001-2-001)** 2023 - 2024, 2021 - 2022

Graduate Teaching Assistant, B.S. in Biology, University of Oviedo

**Analysis and Biosanitary Evaluation (GBIOL001-4-004)** 2022 - 2023

Graduate Teaching Assistant, B.S. in Biology, University of Oviedo

## Skills & Activities

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- **Dry lab:** single-cell (RNA|TCR|BCR)-seq, single-cell immune profiling, aptamer-based proteomics, transcriptomics.
- **Programming languages:** R, Python, Bash, Java, with beginner skill in MATLAB, C, HTML\*, CSS\* and Javascript. (\*Although not programming languages)
- **Tools:** Git, Jupyter, GitHub.
- **Wet lab:** Cell culture, broad range of experiments with mouse models (mouse colony handling, surgery, drug administration, carcinogenic protocols, calorimetry, animal care and handling, sample collection, behavioral tests...), *in vitro* and *in vivo* assays, PCR, RT-qPCR, flow cytometry, immunofluorescence, SA- $\beta$ -gal. assays, metabolic assays (Seahorse).
- **Spoken languages:**
  - **Spanish:** Native.
  - **English:** Professional proficiency (C1 - Official Language School of Oviedo, B2 - University of Cambridge FCE)
  - **German:** Intermediate proficiency (B2 - Goethe-Institut)
  - **French:** Intermediate proficiency (A2 - Alliance Française)
- **Certificate of recognition of training for animal experimentation.** Animal Health and Production Service, Regional Ministry of Rural Environment and Agrarian Policy of the Principality of Asturias, Spain.
- **Revolutions in Biomedicine Summer School.** Presentation of a seminar and a poster, presentation of results of laboratory practices, and attendance at seminars and poster presentations by other summer school attendees. Imperial College London, London, UK. Jul 2019