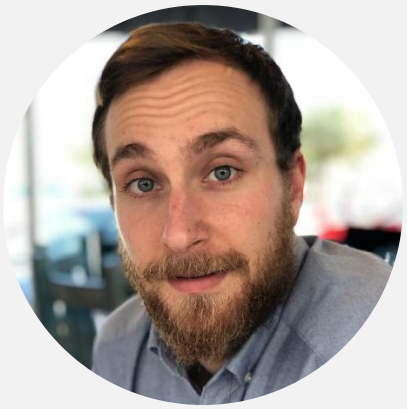
POL CASTELLANO ESCUDER

Ph.D.

I'm a postdoctoral researcher at Duke University and my research focuses on predictive modeling and software development for biological and omics sciences.



EDUCATION

2021 — **Ph.D. in Biomedicine (Bioinformatics area)**
University of Barcelona

Doctoral thesis: Statistical Methods for Intake Prediction and Biological Significance Analysis in Nutrimetabolomic Studies

2017 — **M.S. in Bioinformatics and Biostatistics**
Open University of Barcelona and University of Barcelona

Master thesis: Prediction model of response to a certain treatment in childhood obesity

2016 — **B.S. in Biology**
University of Barcelona

Bachelor thesis: Murine model of caloric restriction during pregnancy: Role of the WNT7A gene on liver proliferation and lipid metabolism

RESEARCH EXPERIENCE

Oct. 2021 | Present — **Postdoctoral Researcher**
Duke University — Durham, North Carolina, US

Feb. 2018 | Sep. 2021 — **Bioinformatician (Ph.D. student)**
University of Barcelona — Barcelona, Spain

Sep. 2016 | Oct. 2017 — **Bioinformatician (M.S. student)**
Sant Joan de Déu Hospital — Barcelona, Spain

Sep. 2015 | Sep. 2016 — **Research Assistant (B.S. student)**
Sant Joan de Déu Hospital — Barcelona, Spain

PROFESSIONAL EXPERIENCE

Nov. 2017 | Dec. 2017 — **Bioinformatician**
Sant Joan de Déu Hospital — Barcelona, Spain

CONTACT INFO

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Durham, North Carolina, US

SKILLS

Experienced in metabolomics, epigenomics, transcriptomics, and proteomics.

Full experience in statistical analysis, statistical learning models, and ontologies.

Highly skilled in R software development, Shiny, LaTeX, with experience in Python, HTML, SQL, CSS, Bash.

Last updated on 2022-04-22.

RESEARCH STAYS

Oct. 2018 | Dec. 2018

Ph.D. Research Stay at Aberystwyth University
Aberystwyth University — Aberystwyth, Wales, UK
Three-month stay at Aberystwyth University working on the Cook2Health EIT-Health project

FUNDING AND AWARDS

2020

200 Years of Florence Nightingale Contest
1st Place
- Source code
- Contest
- Contest organized by RLadies Spain, Spanish Biometric Society and the Catalan Statistical Society

2020

Doctoral Fellowship
1st Place
- Doctoral fellowship by the University of Barcelona to continue my PhD at Biomarkers and Nutritional & Food Metabolomics research group

2019

Novartis Datathon 2nd Edition
5th place

2019

Doctoral Fellowship
1st Place
- Doctoral fellowship by the Bosch i Gimpera Foundation to continue my PhD at Biomarkers and Nutritional & Food Metabolomics research group

2018

Bosch i Gimpera Foundation Fellowship
1st Place
- Collaboration grant to join the Biomarkers and Nutritional & Food Metabolomics research group

ORGANIZATION AND COMMITTEES

2018

Internal Evaluation Committee
Representative of alumni of the Bioinformatics and Biostatistics master's degree (UOC & UB)
Barcelona, Spain

2018

XXIXth International Biometric Conference
Volunteer in the Local Organising Committee — Barcelona, Spain

TRAINING AND COURSES

2018

Data Science Course
University of Barcelona

2017

High-performance Computing for Reproducible Genomics
edX, Harvard University

PATENTS

2018

Markers for predicting weight loss treatment response in children (Num. EP18382873)

Sant Joan de Déu Hospital and Polytechnic University of Catalonia

Barcelona, Spain

Pol Castellano Escuder, Maria Maqueda, Ruben Díaz Naderi, Marta Ramon Krauel, Carles Lerin Martinez, Alexandre Perera Lluna, José Carlos Jiménez Chillarón

- Request number: EP18382873
- Priority country: Spain
- Request date: Nov 30, 2018

PUBLICATIONS

2022

A polyphenol-rich diet causes increase in the gut microbiota metabolite indole 3-propionic acid in older adults with preserved kidney function: a randomized, controlled, crossover trial

Molecular Nutrition & Food Research, 2100349.

Gregorio Peron, Tomás Meroño, Giorgio Gargari, Nicole Hidalgo-Liberona, Antonio Miñarro, Esteban Vegas Lozano, **Pol Castellano-Escuder**, Cristian Del Bo', Stefano Bernardi, Paul A. Kroon, Antonio Cherubini, Patrizia Riso, Simone Guglielmetti, Cristina Andrés-Lacueva

2022

Assessing adherence to healthy dietary habits through the urinary food metabolome

Under review

Pol Castellano-Escuder, Raúl González-Domínguez, Marie-France Vaillant, Patricia Casas-Agustench, Nicole Hidalgo-Liberona, Núria Estanyol-Torres, Thomas Wilson, Manfred Beckmann, Amanda J Lloyd, Marion Oberli, Christophe Moinard, Christophe Pison, Jean-Christian Borel, Marie Joyeux-Faure, Mariette Sicard, Svetlana Artemova, Hugo Terrisse, Paul Dancer, John Draper, Alex Sánchez-Pla, Cristina Andres-Lacueva

2022

A mixture of four dietary fibres ameliorates adiposity and improves metabolic profile and intestinal health in cafeteria-fed obese rats: an integrative multi-omics approach

Submitted

Núria Estanyol-Torres, Cristina Domenech-Coca, Raúl González-Domínguez, Antonio Miñarro, Ferran Reverter, Jose Antonio Moreno-Muñoz, Jesús Jiménez, Manel Martín-Palomas, **Pol Castellano-Escuder**, Hamza Mostafa, Santi García-Vallvé, Nerea Abasolo, Miguel A. Rodríguez, Helena Torrell, Josep M del Bas, Alex Sanchez-Pla, Antoni Caimari, Anna Mas-Capdevila, Cristina Andres-Lacueva, Anna Crescenti

2022 **Apolipoprotein E and sex modulate fatty acid metabolism in a prospective observational study of cognitive decline**
Alzheimer's Research & Therapy, 14(1):1. doi: 10.1186/s13195-021-00948-8.
Raúl González-Domínguez, **Pol Castellano-Escuder**, Sophie Lefèvre-Arbogast, Dorrain Y. Low, Andrea Du Preez, Silvie R. Ruigrok, Hyunah Lee, Catherine Helmer, Mercè Pallàs, Mireia Urpi-Sarda, Alex Sánchez-Pla, Aniko Korosi, Paul J. Lucassen, Ludwig Aigner, Claudine Manach, Sandrine Thuret, Cécilia Samieri, Cristina Andres-Lacueva

2021 **The food-related serum metabolome associates with later cognitive decline in older subjects: A twelve-year prospective observational study**
Molecular Nutrition & Food Research, 2100606.
Raúl González-Domínguez, **Pol Castellano-Escuder**, Francisco Carmona, Sophie Lefèvre-Arbogast, Dorrain Y. Low, Andrea Du Preez, Silvie R. Ruigrok, Claudine Manach, Mireia Urpi-Sarda, Aniko Korosi, Paul J. Lucassen, Ludwig Aigner, Mercè Pallàs, Sandrine Thuret, Cécilia Samieri, Alex Sánchez-Pla, Cristina Andres-Lacueva

2021 **Crosstalk among intestinal barrier, gut microbiota and serum metabolome after a polyphenol-rich diet in older subjects with "leaky gut": The MaPLE trial**
Clinical Nutrition, 40(10), 5288-5297.
Gregorio Peron, Giorgio Gargari, Tomás Meroño, Antonio Miñarro, Esteban Vegas Lozano, **Pol Castellano-Escuder**, Raúl González-Domínguez, Nicole Hidalgo-Liberona, Cristian Del Bo', Stefano Bernardi, Paul Antony Kroon, Barbara Carrieri, Antonio Cherubini, Patrizia Riso, Simone Guglielmetti, Cristina Andrés-Lacueva

2021 **The fobitools framework: The first steps towards food enrichment analysis**
Bioinformatics. DOI: btab626
Pol Castellano-Escuder, Cristina Andrés-Lacueva, Alex Sánchez-Pla

2021 **POMAShiny: A user-friendly web-based workflow for metabolomics and proteomics data analysis**
PLOS Computational Biology, 17(7): e1009148.
Pol Castellano-Escuder, Raúl González-Domínguez, Francesc Carmona-Pontaque, Cristina Andrés-Lacueva, Alex Sánchez-Pla

2020 **FOBI: an ontology to represent food intake data and associate it with metabolomic data**
Database, Volume 2020, 2020, baaa033.
Pol Castellano-Escuder, Raúl González-Domínguez, David S. Wishart, Cristina Andrés-Lacueva, Alex Sánchez-Pla

2018 **Lifestyle intervention decreases urine trimethylamine N-oxide levels in prepubertal children with obesity**
Obesity, 26(10), 1603-1610.
María Leal-Witt, Marina Llobet, Sara Samino, **Pol Castellano**, Daniel Cuadras, Josep Jiménez-Chillarón, ÓscarvYanes, Marta Ramon-Krauel, Carles Lerin

CONFERENCE PRESENTATIONS

2021 **POMA: A user-friendly workflow for metabolomics and proteomics data analysis**
Bioconductor Conference 2021 (BioC2021) Virtual Conference
Selected talk

2020 **POMA: An User-friendly Workflow for Pre-processing and Statistical Analysis of Mass Spectrometry Data**
European Bioconductor Meeting 2020 Virtual Conference
Selected talk

2020 **FOBI: An ontology to represent food intake data and associate it with metabolomic data**
16th Annual Conference of the Metabolomics Society
Virtual Conference
Poster

2020 **POMAShiny: An User-friendly Web-based Workflow for Statistical Analysis of Mass Spectrometry Data**
BioC Asia 2020 Virtual Conference
Selected talk

2020 **FOBI: An ontology to represent food intake data and associate it with metabolomic data**
11th International Conference on Biomedical Ontologies
Virtual Conference
Selected talk

2020 **FOBI: An ontology to represent food intake data and associate it with metabolomic data**
European RFMF-Metabomeeting 2020 Toulouse, France
Poster

2019 **FOBI: An ontology to represent food intake data and associate it with metabolomic data**
VII Bioinformatics and Genomics Symposium Barcelona, Spain
Poster

2019 **POMA: Shiny Framework Statistical analysis tool for targeted metabolomic data**
useR!2019 Toulouse, France
Selected talk

2019 **POMA: Shiny Framework Statistical analysis tool for targeted metabolomic data**
BIOSTATNET 2019 Santiago de Compostela, Spain
Selected talk

2019 **Epigenome-wide association study in Childhood Obesity: Searching for early markers of late disease risk**
Advances at the interface between metabolism and epigenetics
Cambridge, UK
Poster

2018 **FBOnto: An ontology to represent food intake data and associate it with metabolomic data**
VI Bioinformatics and Genomics Symposium Barcelona, Spain
Poster

2018 **Epigenome-wide association study in childhood obesity**
MetNet Meeting Barcelona, Spain
Selected talk

2017 **Epigenome-wide association study in childhood obesity**
V Bioinformatics and Genomics Symposium Barcelona, Spain
Poster

2017 **Epigenome-wide association study in childhood obesity**
1st FEBS3+ Joint Meeting of the French- Portuguese-Spanish Biochemical and Molecular Biology Societies
Barcelona, Spain
Poster