ALEJANDRO M CARRASCO

I am a bioinformatician and deep learning enthusiast with a strong background in biotechnology and genetics

View this CV online with links at https://amcalejandro.github.io/cv/

WORK EXPERIENCE

present | 2025

Postdoctoral Fellow

Boston, USA

- Working with microscopy images, running inferences from deep learning models to uncover shared biologically relevant features
- Working on large scale analyses of common and rare variants across phenotypes in the All of Us biobank
- Working on leveraging deep learning techniques for downstream fine-tuning to achieve state of the art effect prediction as well as to enable other applications such protein engineering

2024 | 2021

GP2 Cohort Integration Working Group member

Remote

- Working group[1] to collect and harmonise clinical data from of sporadic PD cohorts from all around the world
- My role was to help collecting sample manifest from contributors as well as to perform the clinical data harmonization
- I developed an app[2] deployed in Google Cloud Platform to ease the sample manifest as well as the clinical data collection process

EDUCATION

2024 | 2021

PhD. in Bioinformatics

University College London

London, United Kingdom

- Thesis: Using genomics to understand Parkinson's disease progression
- Developed and applied multiple pipelines to understand the biological impact of variants nominated in genetic studies

2023 | 2023

NIH visiting fellow

NIH

Washington DC

- Conducted research at the NIH for 5 months
- Continued undertaking my research projects under the supervision of Dr Cornelis Blauwendraat and Dr Hirotaka Iwaki

CONTACT

alejandro.mc.carrasco@gmail.com
Github
LinkedIn
Google Scholar

LANGUAGES

- Python
- R
- Bash

TECHNOLOGIES

- Git/GitHub
- nextflow
- docker
- SQL

Made with the R package pagedown.

The source code is available GitHub.

Last updated on 2025-08-19.

2020 | 2019

MSc in Bioinformatics

University of Murcia — Murcia, Spain

- Thesis: Use of community detection algorithms to create co-expression and co-occurrence networks
- Tested the proposed pipeline over transcriptomics and genomics data sets from AMP-PD project

2018 | 2014

BSc in Biotechnology

University of Murcia — Murcia, Spain

- Thesis: Review on the key role of inflammation in diabetes' disease etiology
- Internship: Studying the role of peritoneal macrophages in endometriosis
- Internship: Measuring the anti-inflammatory and antitumour activity of dif- ferent drugs obtained by chemical synthesis

TEACHING EXPERIENCE

2022

Introduction to Nextflow and longgwas tool

Virtual event — London, United Kingdom

- Developed the content and the presentation
- Lectured a group of GP2 Trainees on Nextflow fundamentals, how to use the main Nextflow elements, and introduced longgwas tool[3]

2022

Bioinformatic analyses in Terra platform

Universidad Nacional Autónoma de México — Queretaro

- Developed content and served as teaching assistant for this two day workshop[4]
- We covered Terra platform basic concepts as well as hot to perform several analyses using GP2 data
- I tought on longitudinal GWAS and performing a cognitive decline PRS from GP2 Latino population data

SELECTED PUBLICATIONS

2023

Genome-wide Analysis of Motor Progression in Parkinson Disease

Neurology Genetics

- Alejandro Martínez-Carrasco, Raquel Real, Michael Lawton, Regina Hertfelder Reynolds, Manuela Tan, Lesley Wu, Nigel Williams, Camille Carroll, Jean-Christophe Corvol, Michele Hu, Donald Grosset, John Hardy, Mina Ryten, Yoav Ben-Shlomo, Maryam Shoai, Huw R Morris
- Role: First author
- DOI: https://doi.org/10.1212/NXG.0000000000200092

2023

Genetic meta-analysis of levodopa induced dyskinesia in Parkinson's disease

NPJ parkinson's disease

- Alejandro Martinez-Carrasco, Raquel Real, Michael Lawton, Hirotaka Iwaki, Manuela M. X. Tan, Lesley Wu, Nigel M. Williams, Camille Carroll, Michele T. M. Hu, Donald G. Grosset, John Hardy, Mina Ryten, Tom Foltynie, Yoav Ben-Shlomo, Maryam Shoai & Huw R. Morris
- Role: First author
- DOI: https://doi.org/10.1038/s41531-023-00573-2

2023

Association between the LRP1B and APOE loci and the development of Parkinson's disease dementiaris

Brain

- Raquel Real, Alejandro Martinez-Carrasco, Regina H Reynolds, Michael A Lawton, Manuela MX Tan, Maryam Shoai, Jean-Christophe Corvol, Mina Ryten, Catherine Bresner, Leon Hubbard, Alexis Brice, Suzanne Lesage, Johann Faouzi, Alexis Elbaz, Fanny Artaud, Nigel Williams, Michele TM Hu, Yoav Ben-Shlomo, Donald G Grosset, John Hardy, Huw R Morris
- Role: Data analyst
- DOI: https://doi.org/10.1093/brain/awac414

LINKS

1: https://gp2.org/working-groups/complex-disease-cohort-integration-working-group/
2: https://github.com/AMCalejandro/gp2-manifest-checkupload
3: https://github.com/michael-ta/longitudinal-GWAS-pipeline
4: https://docs.google.com/spreadsheets/d/1dNs8KRdoIens2KDg2zKhXwDj8cKYaS88/edit#gid=940143440