



Biologist · Translational Medicine

Arnau Mussons Argemí

EDUCATION

MSc in Translational Medicine

2025 – 2026

Universitat de Barcelona

- Research internship within the master's programme at the NeuroPharma group, PRBB
- Supervisor: Dr. Elena Martín García
- Focus: behavioural neuroscience, cannabinoid addiction models, chemogenetics (DREADDs)

BSc in Biology

2020 – 2025

Universitat Autònoma de Barcelona, Facultat de Biociències

- Bachelor's Thesis: Intermittent Theta Burst Stimulation as a possible therapy for frontotemporal dementia: behavioural and molecular evaluation in a murine model. Grade: 9.0/10 (Excellent)
- Curricular internship, Dept. of Pharmacology, Therapeutics and Toxicology. Grade: 9.4/10 (Excellent)
- Elective courses: Comparative and Environmental Animal Physiology, Pharmacology, Primatology, Immunology of Infectious Diseases

Academic Exchange

2024

Pontificia Universidad Católica de Chile

- Courses: Clinical and Applied Aspects of Cancer, Toxicological Chemistry, Applied Biochemical Laboratory
- First Class Honours in Toxicological Chemistry

RESEARCH EXPERIENCE

Research Intern — NeuroPharma Group

2025 – 2026

PRBB, Barcelona Biomedical Research Park · Supervisor: Dr. Elena Martín García

- Cannabinoid addiction model using WIN 55,212-2 in rodents
- Stereotaxic surgery: viral vector injection for DREADD expression in specific brain regions
- Pre- and post-operative care for catheterisation surgeries
- Operant conditioning paradigms: fixed ratio (FR1, FR2) and progressive ratio (PR) schedules in self-administration boxes
- Translational approach: comparison of behavioural data from animal models with validated clinical questionnaires used in human addiction studies
- Perfusion and brain extraction for histological verification of viral vector expression
- Immunofluorescence to confirm DREADD expression and assess neuroanatomical targets

Research Intern — Pharmacology & Toxicology

2024 – 2025

Universitat Autònoma de Barcelona · Supervisor: Dr. Francesc Jiménez-Altayó

- Research on the protective role of perivascular adipose tissue in Marfan syndrome and its impact on aortic aneurysms and infarcts
- Vascular pharmacology: myograph assembly and arterial contraction/relaxation assays with K⁺, U46619, acetylcholine, phenylephrine, NPS and papaverine
- Histology: cryostat sectioning and orcein staining for elastin fenestrae quantification
- Immunofluorescence: eNOS expression in murine perivascular adipose tissue models
- Image processing with ImageJ and statistical analysis with GraphPad Prism

RESEARCH INTERESTS & GOALS

I am interested in pursuing doctoral research at the intersection of neuroscience and technology. My background is in biology and translational medicine, with current research experience in behavioural neuroscience. I have also long been interested in electronics and programming, which I explore through personal projects outside the lab. That side of my work has shaped how I approach experimental problems, and is what draws me to groups developing new tools to probe or modulate neural function.

CONTACT

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PROFILE

Biologist with research experience in behavioural neuroscience and vascular pharmacology. Former elite waterpolo athlete and voluntary theatre instructor, experiences that have shaped my discipline, resilience and capacity to work in demanding team environments.

LANGUAGES

Catalan: Native

Spanish: Native

English: C1 CAE

TECHNICAL SKILLS

Laboratory

Stereotaxic surgery, cannula implantation and viral vector injection, pre/post-operative care, self-administration boxes, perfusion, brain extraction, immunofluorescence, vascular myography, cryostat sectioning, orcein staining, ImageJ, GraphPad Prism

Computational

Python, data analysis, scientific programming.

Hardware

Microcontrollers (ESP32, Arduino), circuit design, 3D design and printing

CERTIFICATIONS

Laboratory Animal Science

Functions a, b, c, d · Rodents and fish CCIIT, Universitat de Barcelona · 2026

PERSONAL PROJECTS

For a full overview of personal projects in electronics, hardware and software, visit arnaumussons.com or scan:

