

Olaya Fernández Gayol

CURRICULUM VITAE

Contact information

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Appointments

Postdoctoral Research Scientist

October 2018-present

Columbia University, New York, NY.

Research technician

January 2017- October 2018

Universitat Autònoma de Barcelona, Bellaterra, Spain
Reporting to Oryzon Genomics S.A., Spain

Academic qualifications

PhD in Neuroscience (Excellent *cum laude*), advised by Juan Hidalgo Pareja

July 2017

Universitat Autònoma de Barcelona, Bellaterra, Spain

Master's Degree in Neuroscience

September 2012

Universitat Autònoma de Barcelona, Bellaterra, Spain

Bachelor's Degree in Biology

Universitat Autònoma de Barcelona

June 2011

University of California – Davis (exchange program)

Fall 2010-Spring 2011

Awards and honors

Scott Smemo Award, Columbia University, NY

2019

For excellence in service to the postdoc community.

Scholarship for the training of university personnel (FPU), Ministry of Education, Science and Sport, Spain

2012-2016

PhD scholarship

Research experience

Interested in the central regulation of feeding, and its alteration in different pathologies, with a focus on the role of glia. Worked on projects ranging from diet-induced obesity to models of anorexia nervosa in mice. Utilized both *in vivo* and *in vitro* techniques, including behavioral tests, glucose and insulin tolerance tests, real time reverse-transcription PCR, Western and Southern blot, immunohistochemistry, *in situ* hybridization, flow cytometry, cell culture, cloning and transfection. In addition, worked extensively with transgenic mice, including the generation of a reversible interleukin-6 knock-out mouse in collaboration with Richard Palmiter (University of Washington, Seattle).

Select publications

For a complete list, see [LinkedIn](#) (under Accomplishments > Publications)

Sanchis P*, Fernández-Gayol O*, Comes G, Aguilar K, Escrig A, Giralt M, Palmiter RD, Hidalgo J. [A new mouse model to study restoration of interleukin-6 \(IL-6\) expression in a Cre-dependent manner: microglial IL-6 regulation of experimental autoimmune encephalomyelitis](#). J Neuroinflammation. 2020 Oct 15;17(1):304. doi: 10.1186/s12974-020-01969-0. PMID: 33059703; PMCID: PMC7565836. (*co-first)

Sanchis P, Fernández-Gayol O, Comes G, Escrig A, Giralt M, Palmiter RD, Hidalgo J. [Interleukin-6 Derived from the Central Nervous System May Influence the Pathogenesis of Experimental Autoimmune Encephalomyelitis in a Cell-Dependent Manner](#). Cells. 2020 Jan 31;9(2):330. doi: 10.3390/cells9020330. PMID: 32023844; PMCID: PMC7072597.

Sanchis P, Fernández-Gayol O, Vizuela J, Comes G, Canal C, Escrig A, Molinero A, Giralt M, Hidalgo J. [Microglial cell-derived interleukin-6 influences behavior and inflammatory response in the brain following traumatic brain injury](#). Glia. 2020 May;68(5):999-1016. doi: 10.1002/glia.23758. Epub 2019 Dec 4. PMID: 31799746.

Fernández-Gayol O, Sanchis P, Aguilar K, Navarro-Sempere A, Comes G, Molinero A, Giralt M, Hidalgo J. [Different Responses to a High-Fat Diet in IL-6 Conditional Knockout Mice Driven by Constitutive GFAP-Cre and Synapsin 1-Cre Expression](#). Neuroendocrinology. 2019;109(2):113-130. doi: 10.1159/000496845. Epub 2019 Jan 13. PMID: 30636247.

Erta M, Giralt M, Esposito FL, Fernández-Gayol O, Hidalgo J. [Astrocytic IL-6 mediates locomotor activity, exploration, anxiety, learning and social behavior](#). Horm Behav. 2015 Jul;73:64-74. doi: 10.1016/j.yhbeh.2015.06.016. Epub 2015 Jul 2. PMID: 26143620.

Conference presentations (presenting author only)

Fernández-Gayol O. *Driving outside of the lane – Issues with promoters driving Cre recombinase expression in the CNS*. Oral communication at 6th Scientific Conferences of the Institute of Neurosciences of Universitat Autònoma de Barcelona in Sant Feliu de Guíxols, Spain (October 2018).

Fernández-Gayol O, Aguilar K, Navarro-Sempere A, Hidalgo J. *Microarray study of the effects of a chronic high-fat diet on a brain-specific interleukin-6-deficient mouse*. Poster (award) at the 31st European College of Neuropsychopharmacology Congress in Barcelona, Spain (October 2018)

Fernández-Gayol O, Giralt M, Comes G, Molinero A and Hidalgo J. *Lack of neuronal IL-6 impairs growth and hinders high-fat diet-induced obesity*. Poster at the 16th Congress of the Spanish Society of Neuroscience in Granada, Spain (September 2015)

Fernández-Gayol O. *Using the wrMTrck plugin to analyze the Morris Water Maze in mice*. Poster at the 5th ImageJ User and Developer conference in Madison, WI (September 2015)

Fernández Gayol O, Giralt M, Comes G, Molinero A, Carrasco J, Hidalgo J. *Role of interleukin-6 produced in the central nervous system in the control of body weight and metabolism*. Oral communication at the Universitat Autònoma de Barcelona Annual Meeting of the Department of Cellular Biology, Immunology and Physiology in Bellaterra, Spain (June 2014)

Fernández-Gayol O, Giralt M, Molinero A, Ferrer B, Comes G and Hidalgo J. *Lack of astrocytic interleukin-6 enhances high-fat diet-induced obesity in mice*. Poster at the 11th European Meeting on Glial Cells in Health and Disease in Berlin, Germany (July 2013)

Teaching

Instructor, R-club, Zeltser lab, Columbia University, NY 2019-present

Developed an interactive introduction to R for other members of the Zeltser lab and led the sessions, both in person and online.

Mentor, organizer, WISC-CUPS mentorship program, Columbia University, NY 2019-2020

Co-organized the mentorship, advertised to postdocs and presented in the initial orientation. Mentored a Neuroscience PhD student by scheduling Zoom calls during the COVID-19 lockdown and discussing non-academic career options.

Mentor, STEM Barcelona, Spain 2016-2017

Developed science presentations for high schoolers to pair with the provided materials (designed by the New York Academy of Sciences). Guided students during the experiments.

Mentor, Master students at Universitat Autònoma de Barcelona, Spain 2015-2018

Coordinated the students' project and trained them in laboratory procedures, data analysis and interpretation. Proof-read and edited their dissertation.

Assistant instructor, Universitat Autònoma de Barcelona, Spain 2011-2017

Undergraduate courses: Animal Physiology, Endocrinology, Neurobiology and Physiology of Behavior. Adapted pre-existing teaching materials. Prepared the laboratories with equipment and materials. Facilitated the sessions in collaboration with the professor or other student assistants.

Service

Co-President, Columbia University Postdoctoral Society (CUPS), NY 2019-present

Set annual goals for events and social media. Oversaw committees and facilitated in-person/virtual meetings. Coordinated with the Office of Postdoctoral Affairs and other external organizations. Organized events, both in person and online, sometimes requiring external catering.

Non-senator member, Columbia University's Senate Research Officers Committee, NY 2019-present

Attended meetings and provided input regarding postdocs. Presented results of independently organized survey concerning postdocs. Edited proposals by Senator members.

Data Manager, Columbia University Advanced Tissue Pathology Core, NY 2020-present

Developed a centralized service request system using Google Forms, Sheets and App Scripts. Utilized auto population to simplify data input by users. Implemented automated confirmation emails and summary tables. Continued to provide tech support.

Organizer, Zeltser/Emiliano/Nectow/Diano lab meeting, Columbia University, NY 2019-present

Coordinated the different groups to schedule speakers for the weekly internal seminar. Managed the calendar and Zoom.

Coordinator, shared resources for Zeltser lab, Columbia University, NY 2019-present

Trained new users of microscopes and real time thermal cycler. Created documentation for technical aspects of usage. Coordinated with company representatives to schedule set-up and maintenance.

Organizer, Universitat Autònoma de Barcelona Annual Meeting of the Department of Cellular Biology, Immunology and Physiology, Spain 2014-2015

Worked with the rest of the Organizing Committee to schedule speakers, select posters, create advertising materials, provide catering and set up the venue.

Other skills

Design, intermediate level of Photoshop and Lightroom and experience with BioRender; amateur photographer. Interest in color theory and design principles.

Online communications, email campaign and audience management on Mailchimp, Columbia Sites website editing, event management with Eventbrite and Columbia University's Bedework, group engagement through Slack.

MS Office Suite, highly proficient use of Word, Excel, Power Point, Outlook and Teams.

Google Suite, advanced use of Forms, Sheets, GMail and Apps Script.

Data analysis and visualization, RStudio and ImageJ (scripting).

Languages, proficiency in English and Catalan, native Spanish, advanced French and basic German.

References

Ericka Peterson, PhD - *Director, Office of Postdoctoral Affairs, Columbia University, NY*

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Mercè Martí, PhD – *Senior Lecturer, Universitat Autònoma de Barcelona, Spain*

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Paula Sanchis, PhD - *Postdoc, Centre for Physical Activity Research, Rigshospitalet, Copenhagen, Denmark*

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