Predoctoral Researcher

PhD student position

The Pharmacogenetics and Pharmacogenomics Group of the Pharmacology Unit at the Department of Clinical Foundations, University of Barcelona, is seeking motivated students to apply for a PhD grant (Ajuts per a la contractació de personal investigador predoctoral en formació per a l'any 2022 (FI-DGR)(AGAUR)). The Pharmacogenetics and Pharmacogenomics Group is a consolidated research group, researcher of the August Pí i Sunyer Biomedical Research Institute (IDIBAPS) and the CIBERSAM (Center for Biomedical Research in Mental Health Network).

Project Description

"Fenomenology and neuroimmune pathways of repetitive and restrictive behaviours". To study the clinical characteristics and the neuro-immunologic mechanisms of the repetitive and restrictive behaviors (RRBs) in child and adolescent population diagnosed of early onset obsessivecompulsive disorder (OCD), Tourette disorder (TD) and autism spectrum disorder (ASD). Integrative and translational study of the neuroimmunologic mechanisms beyond RRBs in neurodevelopmental disorders, based on the integration of clinical data, immunologic and omics data from primary cell models and data from public database to develop a genetic association study of RRBs pleiotropy in OCD, TD and ASD. The project is funded by the Instituto de Salud Carlos III.

Requirements

We are looking for candidates with a master's degree in life sciences or a master's degree in medicine with a good academic background (> 8; 1 to 10 scale). Although NOT required, Cell culture knowledge, Knowledge of statistical methodologies and of bioinformatics will be considered.

Main tasks

The candidate will be actively involved in: purification and primary cell culture of monocytes; identification of blood cells subpopulations using FACS; determination of interleukins; analysis of microarray gene expression data using several bioinformatic tools and construction and analysis of protein-protein interaction networks; analysis of genome wide association studies.

How to apply:

Applicants should submit a full Curriculum Vitae and a cover letter to Natalia Rodríguez (sergimash@ub.edu) and/or Sergi Mas (sergimash@ub.edu).

Selected Publications

Martínez-Pinteño A, Gassó P, Prohens L, Segura AG, Parellada M, Saiz-Ruiz J, Cuesta MJ, Bernardo M, Lafuente A, Mas S, Rodríguez N. Identification of EP300 as a Key Gene Involved in Antipsychotic-Induced Metabolic Dysregulation Based on Integrative Bioinformatics Analysis of Multi-Tissue Gene Expression Data. Front Pharmacol. 2021 Aug 13;12:729474. doi: 10.3389/fphar.2021.729474. PMID: 34483940; PMCID: PMC8414590. (Impact factor: 5.810)

Martínez-Pinteño A, García-Cerro S, Mas S, Torres T, Boloc D, Rodríguez N, Lafuente A, Gassó P, Arnaiz JA, Parellada E. The positive allosteric modulator of the mGlu2 receptor JNJ-46356479 partially improves neuropathological deficits and schizophrenia-like behaviors in a postnatal ketamine mice model. J Psychiatr Res. 2020 Jul;126:8-18. doi: 10.1016/j.jpsychires.2020.04.005. Epub 2020 Apr 26. PMID: 32407891. (Impact factor: 4.791)

Mas S, Boloc D, Rodríguez N, Mezquida G, Amoretti S, Cuesta MJ, González-Peñas J, García-Alcón A, Lobo A, González-Pinto A, Corripio I, Vieta E, Castro-Fornieles J, Mané A, Saiz-Ruiz J, Gassó P, Bioque M, Bernardo M; PEPs Group. Examining Gene-Environment Interactions Using Aggregate Scores in a First-Episode Psychosis Cohort. Schizophr Bull. 2020 Jul 8;46(4):1019-1025 (Impact factor: 7.958)

Mas S, Gassó P, Rodríguez N, Cabrera B, Mezquida G, Lobo A, González-Pinto A, Parellada M, Corripio I, Vieta E, Castro-Fornieles J, Bobes J, Usall J, Saiz-Ruiz J, Contreras F, Parellada E, Bernardo M; PEPs group. Personalized medicine begins with the phenotype: identifying antipsychotic response phenotypes in a first-episode psychosis cohort. Acta Psychiatr Scand. 2020 Jun;141(6):541-552. (Impact factor: 5.362)

Rodríguez N, Morer A, González-Navarro EA, Serra-Pages C, Boloc D, Torres T, Martinez-Pinteño A, Mas S, Lafuente A, Gassó P, Lázaro L. Altered frequencies of Th17 and Treg cells in children and adolescents with obsessive-compulsive disorder. Brain Behav Immun. 2019 Oct;81:608-616. (Impact factor: 6.633)

Rodriguez N, Morer A, González-Navarro EA, Gassó P, Boloc D, Serra-Pagès C, Lafuente A, Lazaro L, Mas S. Human-leukocyte antigen class II genes in early-onset obsessive-compulsive disorder. World J Biol Psychiatry. 2019 Jun;20(5):352-358. doi: 10.1080/15622975.2017.1327669. Epub 2017 May 31. PMID: 28562177. (Impact factor: 4.132)

Boloc D, Gortat A, Cheng-Zhang JQ, García-Cerro S, Rodríguez N, Parellada M, Saiz-Ruiz J, Cuesta MJ, Gassó P, Lafuente A, Bernardo M, Mas S. Improving pharmacogenetic prediction of extrapyramidal symptoms induced by antipsychotics. Transl Psychiatry. 2018 Dec 13;8(1):276. (Impact factor: 5.182)

Gassó P, Mas S, Bioque M, Cabrera B, Lobo A, González-Pinto A, Díaz-Caneja CM, Corripio I, Vieta E, Castro-Fornieles J, Sarró S, Mané A, Sanjuan J, Llerena A, Lafuente A, Saiz-Ruiz J, Bernardo M; PEPs Group. Impact of NTRK2, DRD2 and ACE polymorphisms on prolactin levels in antipsychotic-treated patients with first-episode psychosis. J Psychopharmacol. 2018 Jun;32(6):702-710. (Impact factor:4.221)

Boloc D, Rodríguez N, Gassó P, Abril JF, Bernardo M, Lafuente A, Mas S. SiNoPsis: Single Nucleotide Polymorphisms selection and promoter profiling. Bioinformatics. 2018 Jan 15;34(2):303-305. (Impact factor: 5.610)

Rodríguez N, Morer A, González-Navarro EA, Serra-Pages C, Boloc D, Torres T, García-Cerro S, Mas S, Gassó P, Lázaro L. Inflammatory dysregulation of monocytes in pediatric patients with obsessive-compulsive disorder. J Neuroinflammation. 2017 Dec 28;14(1):261. (Impact factor: 5.193)