

POSITION

1. Project Title/ Job Position title: The causality evaluation of serious adverse drug reactions: utility of the algorithms, *in vitro* tests, toxicology and genetics.

2. Area of Knowledge: Life Sciences

3. Group of disciplines:

Human Biology, Microbiology, Molecular Biology, Genetics, Cellular Biology, Genomics and Proteomics, Biochemistry

4. Research project/ Research Group description

Serious adverse drug reactions (SADRs) have been increasing in prevalence in the last decades due to the introduction into the market of a large number of new medicines. They are a cause of great morbidity and mortality and long-term hospitalizations in many countries. SADRs occur when the medication is administered correctly, therefore, the effects cannot be predicted, since all drugs have benefits and, at the same time, potential to trigger adverse reactions.

The project aims to evaluate different diagnostic tools for SADRs causality: assessment through the Prospective Pharmacovigilance Program from Laboratory Signals at Hospital and clinical consultation services and *in vitro* test (toxicological tests, lymphocyte transformation test, cytokine and cytotoxic granule secretion, analysis of cellular activation markers, specific antibodies and platelet function). Possible pharmacogenetics / genomics / metabolomics factors associated with these entities will be also evaluated.

Predictable results may provide valuable information on underlying mechanisms of SADRs and, consequently, the results may contribute to the state of the art diagnosis in SADRs.

The project will be addressed by a multidisciplinary approach involving Clinical Pharmacology, Immunology, Hematology and Molecular Genetics Services from the La Paz University Hospital (HULP). The proposing mentor, Dr. González-Muñoz, is a member of the Clinical Pharmacology research group. The HULP is integrated in the accredited centre Hospital La Paz Institute for Health Research (IdiPAZ) which is a leading Spanish organization in biomedical research that includes both academic and non-academic centres. Furthermore, IdiPAZ is an entity endorsing the European Charter & Code for Researchers.

5. Job position description

Role: The candidate will address the assessment of SADR causality through the Prospective Pharmacovigilance Program from Laboratory Signals at Hospital, analyzing the genetics of SADRs and developing hematological- and immunological-based approaches (analysis of cellular proliferation, quantification of inflammatory mediators by multiplex approaches, immunophenotyping by flow cytometry, analysis of platelet function and detection of drug-induced antibodies).

Responsibilities

Set up and perform experiments, maintain experimental resources (as cell lines, reagents, etc.) according to protocols, analyze & interpret results and contribute to the development of experimental strategies with accuracy and honesty.

Keep updated the laboratory notebook and properly store and manage the data produced during the project.

Collaborate with colleagues and participate in team activities (such as meetings, seminars, workshops, etc.) across the research group and wider scientific community while keeping up to date with current knowledge and recent advances.

Participate in knowledge exchange with both society and industry, to promote the value of research in public health and to contribute to the dissemination of his/her research results in the principles of EU's Open Science policy.

Undertake any other duties of equivalent standing as assigned to him/her.

Skills

Degree in Life Sciences: Biology, Medicine or Pharmacy.

Experience in flow cytometry is desirable.

Motivation, critical thinking and problem-solving oriented skills.

Good interpersonal skills, including team working.

Good communication skills, willingness to engage in public presentations and ability to transmit complex concepts in a clear way.

Good time and workload management skills, including both initiative and flexibility.

Group Leader

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<http://www.idipaz.es/PaginaDinamica.aspx?IdPag=318&Lang=EN>