

## POSITION

### 1. Project Title/ Job Position title:

Clinical and Virological studies of Respiratory Syncytial Virus (RSV): Implementation of new vaccines and their global impact on the infection.

### 2. Area of Knowledge:

Life Sciences

### 3. Group of disciplines:

Medicine, Public Health, Sport Sciences, Nutrition, Clinical Psychology, Health Management

### 4. Research project/ Research Group description

The topic: high prevalent and complicated RSV infections.

RSV is the leading cause of acute bronchiolitis and one of the most common causes of infant viral death worldwide. Clinical manifestations range from coryza to bronchiolitis and pneumonia which can lead to hospitalization/respiratory failure, particularly severe in high risk pediatric populations. Two RSV antigenic groups, A and B, serologically and genetically distinguishable, and multiple genotypes coexist during epidemic seasons. Novel strains spread rapidly.

The control of infection: the era of the forthcoming RSV vaccines and surveillance.

Several vaccine candidates are in preclinical studies, including live-attenuated and live-vectored, protein based vaccines (whole-inactivated virus, subunit antigens in aggregate particles, and non-particle based subunit antigens), nucleic acid and gene-based vectors. A promising strategy is the immunization of pregnant women, as antibodies are efficiently placenta-transferred with protective titers that will protect the newborn during the first months of life. The surveillance is needed to meet specific Public Health objectives.

The current gaps: research project objectives.

Virological and clinical variables, with potential utility in the development of more effective preventive strategies will be estimated.

1. To estimate the clinical impact of RSV disease due to different virulent genotypes and define strain-specific phenotypes to be included in future therapeutic options and vaccine development.

1.1 Using and applying the metagenomics, to study the RSV molecular epidemiology, evolution and transmission.

1.2 Relative frequency of high-throughput sequenced viruses with the severity of the infections to understand the role of RSV.

2. To study the antigenic variation to evaluate changes in RSV proteins that help the virus to alter the antigenic characteristics and different degree of virulence.

### 5. Job position description

**Role:** The main research is the interconnecting several aspects of the clinical and the virological characteristics of RSV infections with focus on the global new RSV vaccines and their effects at the National and European level. The candidate will be enrolled in a coordinated project, starting in 2019, with two Institutions involved: Instituto de Salud Carlos III and La Paz University Hospital.

The candidate's main activity will be to conduct and develop the specific research to obtain results that will cover the objectives of the project, to establish research-based actions for improving the management of RSV infections.

## 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 several stakeholders, 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

MSc degree in Life Sciences who are interested in viruses and infectious diseases.

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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