**PROJECT CO-FUNDED BY EUROPEAN REGIONAL DEVELOPMENT FUNDS (ERDF)**

**Lead Researcher:** Dr. Domingo Barber Hernández

**Reference**: PI16/00249

**Title**: ‘Search for biomarkers and development of new diagnostic and treatment strategies for severe allergic phenotype patients’ (Búsqueda de biomarcadores y desarrollo de nuevas estrategias de diagnóstico y tratamiento de pacientes alérgicos de fenotipo grave).

**Financing Entity:** Spanish Ministry of Economy, Industry and Competitivity (Ministerio de Industria, Economía y Competitividad); Carlos III Health Institute (Instituto de Salud Carlos III).

**Total amount**: 92. 565 €

**Start date**: 01/01/2017

**End date**: 31/12/2019

**Summary:**

The project focuses on understanding the underlying causes of the evolution from respiratory allergy to food allergy, focusing on allergic populations living in areas of high allergenic pressure to mites, olive pollen and grass pollen, which represent the most frequent allergic diseases in our country. Recently, the group has published a paper in the Journal of Allergy and Clinical Immunology, the first publication in the field with an impact index of 13.1, which shows for the first time the existence of a remodelling of the oral mucosa in allergic patients. This remodelling is particularly intense in patients with severe profilin-mediated food reactions. Integrated analysis of metabolomics and transcriptomic data has identified new biomarkers associated with the development of severe phenotypes. The research team includes basic researchers from Universidad San Pablo-CEU and four clinical research teams from Hospital Virgen del Puerto in Plasencia, Hospital La Princesa and Hospital Clínico in Madrid, and Hospital Dr. Negrín in Gran Canaria.