PROJECT TITLE: ORAL IMMUNOTHERAPY TO PEANUT

NAME AND COUNTRY: PATRICIA BIGAS; BARCELONA (SPAIN)

TYPE, DURATION AND LOCATION OF FELLOWSHIP: CLINICAL FELLOWSHIP; 3 MONTHS; LONDON

HOST INSTITUTION AND SUPERVISOR NAME: ST MARY'S HOSPITAL; DR PAUL J TURNER

For three months, I daily attended the Children's Clinic Research Facility (CCRF) at St. Mary's Hospital. The CCRF conducts both investigator-led and commercial clinical trials aimed at evaluating the diagnosis and management, including oral and epicutaneous desensitization, of food-allergic children, particularly those with allergies to peanuts and cow's milk.

The team operates out of St. Mary's Hospital in Paddington, affiliated with Imperial College London where I spent approximately 8 hours each day conducting oral food challenges and oral immunotherapy. Additionally, I dedicated around 10 hours per week to clinical follow-up of allergic patients in outpatient settings.

I have conducted anamnesis and physical examinations of patients prior to oral food challenges, performed complementary tests such as spirometry and prick tests to assess patient suitability for immunotherapy and learned and ensuring data integrity in the clinical challenge setting according to Good Clinical Practice standards.

I have also participated in discussions regarding immunotherapy protocols and strategies for managing anaphylaxis reactions, and also I have seen and learnt how to manage acute reactions during the baseline and exit food challenges.

Moreover, I had the opportunity to be engaged in clinical follow-up of allergic patients, monitoring their progress and adjusting treatment plans as necessary.

The clinical fellowship has achieved all the original objectives: Gain hands-on experience in conducting oral food challenges and oral immunotherapy, understand the clinical management of allergic patients and the intricacies of immunotherapy protocols, participate in discussions and activities related to anaphylaxis management, enhance skills in patient assessment, including history-taking, physical examination, and interpretation of diagnostic tests and contributing to research activities aimed at advancing the field of allergy and immunotherapy.

During my time in the CCRF, I conducted a retrospective study using in vitro data from 1515 patients from the Mediterranean area (Barcelona) to identify the predominant nut sensitization in my home hospital, as well as the sensitization profile to nuts and peanuts in paediatric patients and compare them with the adult population. I found

that the majority of paediatric patients in our hospital identified peanuts as the second most common allergen after walnut, and that for both nuts and peanuts, sensitization profiles were primarily due to storage proteins. When compared to the adult population, all adult patients sensitized to peanuts recognized the LTP peanut protein (Ara h 9). This data analysis led me to realize that peanut immunotherapy should start being considered in the paediatric population in our Mediterranean area, and following the completion of the clinical fellowship at St. Mary's Hospital, it could become a feasible option.

My fellowship experience at St. Mary's Hospital has been profoundly rewarding, allowing me to acquire valuable clinical skills and knowledge in the field of allergy and immunotherapy. I am grateful for the guidance and mentorship provided by Dr. Paul J. Turner and Dr. Nandinee Patel, whose expertise and support were the key of my professional development.

Being able to undertake a clinical fellowship at the Immunotherapy Unit of St. Mary's Hospital has shown me the pressing need to delve into areas of research where evidence is still lacking, particularly regarding the effectiveness of treatments such as oral immunotherapy for food allergies and exploring concepts like sustained unresponsiveness and long-term safety. Moreover, acquiring knowledge about designing protocols and conducting clinical trials in the field of food allergy will enable me to implement it in my hospital, where we extensively practice food immunotherapy in our daily routines, yet still grapple with unanswered questions regarding sustained unresponsiveness and safety.

This fellowship has reinforced my passion for allergy and immunology and affirmed my commitment to providing high-quality care to patients. Moving forward, I aim to continue learning and growing in this field, striving for excellence in patient care, research, and education

Finally, I would like to extend again my gratitude to Dr. Paul J. Turner and Dr. Nandinee Patel for their unwavering support and mentorship throughout my fellowship and also thank to the nursery staff and all the colleagues at St. Mary's Hospital for their collaboration and contributions to my learning experience.