

## EAACI Fellowship 2026 Report

**Title of Project:** Postgraduate Medical Education in Advanced Clinical Immunology and Allergy: Utility of Cellular Functional, and Genetic Tests

**Name and Country:** Sevgi Çolak, Turkey

**Type, Duration, and Location:** Clinical Fellowship, Three Months (May 1, 2026 – July 31, 2026), London, UK

**Host Institution and Supervisor:** King's College Hospital NHS Trust, Department of Clinical Immunology & Allergy, London, UK; Supervisor: Dr. Mohammad Ibrahim

**Approximate Hours and Settings:** I spent approximately 40 hours per week distributed across allergy clinics, immunology clinics, multidisciplinary team (MDT) meetings, laboratory observations, and individual academic reading and writing.

**Approximate Number of Patients Observed:** Throughout the 3-month clinical fellowship, I observed an estimated 300 patients across various clinical settings.

### Project Summary & Objectives

The primary objective of this fellowship was to increase my professional knowledge and experience in Clinical Immunology and Allergy. I was honoured to have the opportunity of observing clinical practices and academic activities at a highly prestigious institution during my stay at King's College Hospital. I acquired distinct and highly valuable perspectives and strategies in the management of inborn errors of immunity, secondary immunodeficiencies, and allergic diseases. In particular, it was enlightening to be involved in the discussion and resolution of complex cases during multidisciplinary meetings. Furthermore, as reflected in the project title, I had the opportunity to understand the critical role of cellular functional, and genetic testing in diagnostic and therapeutic approaches. An additional core goal was to foster opportunities for academic collaboration with leading clinical experts and researchers in the field.

### Clinical Settings and Observed Activities

Throughout the fellowship, my activities were primarily observational, with active engagement in clinical discussions and case evaluations.

- **Immunology clinics:** Attending immunology clinics three times a week throughout my entire observership, I was actively involved in the investigation and diagnostic workup of patients referred with suspected immunodeficiencies. I observed the management of patients across the spectrum of immunodeficiencies, specifically noting how laboratory analyses of signaling pathways and genetic results are integrated into clinical decision-making. I extensively observed the follow-up and complication management of a large cohort of patients with Common Variable Immunodeficiency, alongside the management

of various monogenic immunodeficiencies. Furthermore, for complex cases, I gained experience evaluating advanced immunological parameters, including Type 1 cytokine analysis, STAT pathway evaluations, and lymphocyte subsets alongside B and T-cell immunophenotyping. In the context of assessing specific vaccine responses, I also gained valuable experience interpreting serotype-specific pneumococcal and *Salmonella typhi* antibodies. I observed the frequent preference for subcutaneous applications for immunoglobulin replacement therapy in antibody deficiencies. Regarding protective antimicrobial prophylaxis, I noted a strong clinical emphasis on establishing a microbiologically proven infectious burden; it was highly instructive to observe rational, evidence-based approaches, such as modulating prophylaxis or back-up antibiotic therapies based strictly on culture and antibiogram results, rather than relying on empirical treatments. I also evaluated current strategies for the clinical follow-up and management of various secondary immunodeficiency cases.

- **Allergy clinics:** During the first half of my observership, I attended allergy clinics three times a week, obtaining practical insights into advanced clinical approaches such as anaphylaxis management, the application of biological agents, and various immunotherapy modalities. I actively observed the management of complex food allergies, with a particular emphasis on tree nut and seafood allergies, and noted how the routine clinical use of component-resolved molecular diagnostics significantly contributes to clinical decision-making. In addition, I was involved in the evaluation of both newly diagnosed and existing patients with hereditary and acquired angioedema, where I had the opportunity to learn the practical clinical application of next-generation agents for long-term prophylaxis.
- **Challenge Clinic:** I consistently participated in the challenge clinics every Friday, where I gained valuable observational experience in food and drug provocation tests. Specifically, I observed penicillin skin tests and provocations, general anesthetic agent testing, as well as provocations for NSAIDs, various antibiotics, and a wide range of other medications.
- **Joint Respiratory Clinic:** I had the opportunity to observe the joint respiratory and immunology clinic, which is held every three months. This specialized setting provided highly valuable insights into the targeted clinical follow-up and management of immunodeficiency patients complicated by pulmonary involvement.
- **Joint Hematology, Genetics, and Immunology Clinic:** It was particularly impressive to witness the collaborative clinical environment where the hematology, genetics, and immunology departments jointly evaluated patients. This integrated approach highlighted the critical importance of interdisciplinary cooperation in the precise diagnosis and management of complex conditions.
- **Transitional Care Meetings:** I had the opportunity to participate in monthly joint transitional care meetings conducted in collaboration with the pediatric allergy team. These sessions were dedicated to the seamless handover of patients transferring from

pediatric to adult services, involving a comprehensive review of clinical milestones and ongoing treatment plans.

- **Multidisciplinary Team (MDT) Meetings:** I regularly attended multidisciplinary meetings every Monday, engaging in discussions regarding the presentation and management of highly complex immunology and allergy cases.
- **Joint Respiratory, Immunology, and Infectious Diseases Meetings:** Every two weeks, I participated in joint clinical meetings bringing together the respiratory medicine, immunology, and infectious diseases departments. These collaborative sessions were dedicated to the in-depth discussion and multidisciplinary management of complex immunodeficiency cases.
- **Educational Meetings & Quality Improvement Programs:** I actively attended the department's educational meetings every two weeks. These sessions featured broad participation from both clinicians and scientists, fostering a rich and multidisciplinary academic environment. The meetings encompassed not only clinical case discussions but also comprehensive literature reviews and Quality Improvement (QI) programs specifically designed to enhance intra-clinic standards and patient care. During one of these academic sessions, I had the pleasure of presenting the research article titled "Immunologic biomarkers of noninfectious complications and overall survival in common variable immunodeficiency" (Torres-Valle A, et al. J Allergy Clin Immunol, 2026).
- **Laboratory observations:** I had the opportunity to observe the operational techniques of novel automated platforms used in routine flow cytometry, the fundamental principles of protein analysis and specific antibody responses, and the technical details of comprehensive complement assays at the Synnovis clinical immunology laboratory. Within the research laboratory setting, I gained valuable insights into the infrastructure and setup required for long-term research, as well as the coordination and communication strategies essential for conducting multi-center collaborative studies. Observing the progression of research conducted within the research lab over the years and analyzing their scientific outcomes significantly broadened my academic vision. Furthermore, it was highly impressive to observe the national network for advanced immunological testing. I noted that highly specialized tests are distributed across various designated reference centers nationwide. Witnessing the process of dispatching patient samples to these specific centers and subsequently interpreting their results highlighted a highly efficient and rational utilization of national health resources. I had the invaluable opportunity to learn the technical details of these advanced tests performed across different national laboratories and observe how their results are systematically integrated and interpreted in clinical practice.

## Tasks Personally Developed and Research Outputs

Beyond my clinical observations, my fellowship period was highly productive in terms of scholarly activities and research outputs. During my time at King's College Hospital, I actively engaged in the following academic initiatives:

- **Presentations:** As mentioned above, I actively participated in the clinic's educational meetings and personally presented a research topic titled: *"Immunologic biomarkers of noninfectious complications and overall survival in common variable immunodeficiency"* (Torres-Valle A, et al. *J Allergy Clin Immunol*, 2026).
- **Publications & Ongoing Projects:** I am currently serving as the principal author on an ongoing hypothesis article, a project that is being developed under the expert mentorship and valuable contributions of Dr. Mohammad Ibrahim. In addition to this primary initiative, I am actively assisting in the drafting of a clinical case report and contributing as a co-author to a systematic review, all of which are currently in the writing phase and have laid the essential groundwork for our future, long-term multi-center collaborative studies.

## Conclusion and Personal Reflection

This fellowship provided an exceptional opportunity to closely observe patient follow-up and management alongside advanced clinical practices at an internationally esteemed medical center. It allowed me to directly experience the operational framework of the UK National Health Service (NHS), including sophisticated patient referral algorithms and highly effective clinical applications. My participation in multidisciplinary meetings deeply reinforced the value of interdisciplinary evaluation principles for complex cases and highlighted the critical diagnostic accuracy provided by advanced laboratory diagnostics. Ultimately, I gained valuable insights into how these approaches can be used to further strengthen the established, high-quality clinical practices within my own home department. Additionally, the scientific vision and international perspectives I acquired will continue to shape my future research and academic journey.

## Acknowledgements

I would like to extend my deepest gratitude to the entire Department of Clinical Immunology and Allergy at King's College Hospital for welcoming me into their team.

I am especially grateful to my supervisor, Dr. Mohammad Ibrahim, for his guidance and mentorship over my research projects, and his continuous support during my stay. Every piece

of knowledge I have gained from his profound experience will hold an invaluable place in my professional life. Furthermore, his consistently understanding and warm demeanor, along with his willingness to actively include me in every aspect of both clinical and research operations, were deeply appreciated. I offer him my endless thanks.

I also want to express my sincere thanks to the consultant physicians, Dr. Zoe Adhya and Dr. Rohit Ghurye. I am truly grateful for their kindness in generously sharing their expertise with me during the clinics, their patience in answering my numerous questions, and their consistently friendly and welcoming attitudes.

To the clinical resident and fellow team, thank you for the opportunity to learn collaboratively by discussing diverse cases together. I formed truly wonderful friendships with all of you from different countries, and I am so happy that we are still in touch today. I will always deeply value our strong bonds and the cheerful lunchtime conversations you so warmly included me in.

I extend my appreciation to the nursing staff and laboratory team for their sincere and friendly approach. Thanks for sharing experiences with me and for answering all my questions with such patience.

A special thanks goes to the administrative and secretarial team, particularly Dorota Parsons. Her assistance began with our email correspondence long before my arrival and continued as she unfailingly helped me navigate every minor issue throughout my stay. I am incredibly happy to have shared long, sincere chats over coffee, to have had the chance to spend time with her outside the clinic, and to have met her wonderful family.

I am deeply appreciative of everyone's invaluable contributions to my clinical observation process and their incredibly warm welcome. The experiences and insights I have gained here hold immense value for my professional journey and will be highly beneficial in advancing the clinical practice and patient care at my home institution.

I would also like to extend my heartfelt gratitude to my esteemed professor, Prof. Dr. Gülfem Elif Çelik, who graciously supported me by writing a reference letter to connect with my host supervisor and provided unwavering encouragement throughout this journey. Furthermore, I am deeply thankful to my home supervisor, Prof. Dr. Göksal Keskin, and my dear colleague, Assist. Prof. Seda Altiner, for their endless support and assistance in making my departure and participation in this fellowship possible.

Finally, I would like to express my profound gratitude to the EAACI for awarding me this prestigious clinical fellowship. This extraordinary opportunity has significantly broadened my clinical and academic horizons, and I am deeply honored to be supported by, and be a part of, the EAACI community.