

EAACI CLINICAL FELLOWSHIP – FINAL REPORT

Project Title	Phenotypic and Trigger Differences in NSAID Hypersensitivity Across Two Countries
Fellow	Dr. Selma Yalçın
Country	Türkiye
Type of Fellowship	EAACI Clinical Fellowship
Fellowship Period	1 May 2026 – 31 July 2026
Location	Málaga, Spain
Host Institution	Allergy Unit, Hospital Regional Universitario de Málaga
Host Supervisor	Dr. María Salas Cassinello

1. Objectives of the Fellowship

The main objective of my EAACI Clinical Fellowship was to improve my clinical knowledge and experience in the diagnosis and management of drug hypersensitivity reactions by observing clinical practice at a highly experienced referral center.

My specific clinical objectives were to gain experience in detailed clinical assessment and risk stratification of patients with suspected drug hypersensitivity, skin testing, drug provocation testing (DPT), selection of safe alternative drugs, and the management of patients requiring drug desensitization. During the fellowship, I particularly focused on hypersensitivity reactions to non-steroidal anti-inflammatory drugs (NSAIDs), beta-lactam antibiotics, local anesthetics, and perioperative drugs.

In addition to these clinical objectives, an important academic objective of my fellowship was to conduct the project entitled “Phenotypic and Trigger Differences in NSAID Hypersensitivity Across Two Countries.” The project was designed as a retrospective, two-center observational study comparing adult patients with NSAID hypersensitivity evaluated at Hospital Regional Universitario de Málaga in Spain and Ankara University in Türkiye. The main objective is to compare NSAID hypersensitivity phenotypes and culprit-drug patterns between the two centers and to explore potential country-specific differences.

2. Clinical Setting, Duration, and Patient Exposure

During the fellowship, I spent approximately 42 hours per week and 6–7 hours per day in clinical activities at the Allergy Unit of Hospital Regional Universitario de Málaga.

I observed the evaluation of approximately 10 patients per day. Overall, including patients undergoing desensitization procedures, I observed the clinical evaluation, diagnostic work-up, and/or treatment of approximately 680 patients during the fellowship period.

My main clinical setting was the Drug Allergy Unit, where I attended outpatient assessments, skin testing procedures, controlled drug provocation tests, and drug desensitization procedures.

This high-volume clinical exposure allowed me to observe a wide spectrum of drug hypersensitivity presentations and to understand how diagnostic and therapeutic decisions were individualized according to the patient's clinical history, reaction phenotype, suspected drug, and risk profile.

3. Clinical Activities and Tasks Observed

A major part of my fellowship involved observing the systematic assessment of patients referred with suspected drug hypersensitivity. I followed how detailed drug allergy histories were obtained, how reactions were classified according to their timing and clinical characteristics, and how this information was used to determine the subsequent diagnostic strategy.

I particularly focused on drug provocation testing. I observed how oral provocation protocols were selected according to individual risk assessment, how incremental doses and observation periods were determined, and how patients were monitored during and after the procedures. I also observed the assessment and management of reactions occurring during provocation tests.

In patients with NSAID hypersensitivity, I observed diagnostic evaluation and provocation testing with aspirin and alternative NSAIDs. This was particularly relevant to my fellowship project and enabled me to better understand the relationship between clinical phenotype, history, and risk-adapted DPT in real-life practice.

I also observed the diagnostic approach to patients with suspected local anesthetic hypersensitivity, including skin testing and controlled drug challenges. In addition, I gained experience in the diagnostic algorithms used for beta-lactam antibiotic hypersensitivity and the selection and evaluation of alternative antibiotics.

Another important area of training was the assessment of perioperative hypersensitivity reactions. I observed how drugs administered during anesthesia were reviewed, how potential culprit agents were identified, and how subsequent allergy investigations were planned.

Drug desensitization was another important component of my clinical exposure. I observed patient selection, protocol planning, monitoring during desensitization, and the management of reactions occurring during the procedure.

As my position at the host institution was observational, I did not independently perform procedures requiring direct responsibility for patient care. However, I actively participated in case discussions, reviewed clinical histories and test results with the team, and followed the diagnostic decision-making process throughout the fellowship.

4. Additional Activities Beyond the Original Fellowship Plan

In addition to the activities initially planned, I had the opportunity to expand my training into other areas of allergy diagnosis.

I observed nasal provocation testing, including the practical aspects of the procedure and interpretation of the results. This broadened my experience with provocation testing beyond drug allergy.

I also spent one day in the laboratory, where I observed the procedures involved in the Basophil Activation Test (BAT) and Lymphocyte Transformation Test (LTT). This provided an opportunity to better understand the laboratory processes behind in vitro diagnostic methods used in the investigation of drug hypersensitivity and their relationship with clinical assessment and in vivo testing.

These activities were not part of my initial fellowship plan. However, they did not represent a change in the principal objectives of the fellowship; rather, they complemented the original program and provided me with a broader understanding of both in vivo and in vitro approaches to allergy diagnosis.

5. Fellowship Project and Current Outcomes

My fellowship project, "Phenotypic and Trigger Differences in NSAID Hypersensitivity Across Two Countries," was designed to compare real-world NSAID hypersensitivity patterns between two tertiary allergy centers in Spain and Türkiye.

The study includes adult patients evaluated between 2020 and 2024 at Hospital Regional Universitario de Málaga and Ankara University. The planned variables include demographic characteristics, atopy, comorbid chronic urticaria and asthma, NSAID hypersensitivity phenotype, culprit drugs, reaction timing and severity, and the diagnostic approach, including risk-stratified drug provocation testing when indicated.

During my fellowship in Málaga, I collected the data of patients with NSAID hypersensitivity from the Málaga center according to the predefined study protocol.

Following completion of the fellowship, I continued the project at my home institution, Ankara University, where data collection from the Turkish cohort is currently ongoing. Once data collection is completed, the two cohorts will be combined and analyzed comparatively.

The study aims to determine whether NSAID hypersensitivity phenotype distributions and culprit-drug profiles differ between the two countries. Differences in prescribing practices, drug availability, and exposure patterns may contribute to variation between the two populations. The final analysis will also evaluate selective versus cross-intolerant reaction patterns and relevant clinical characteristics.

As the Turkish data collection is still ongoing, final study results are not yet available. Following completion of data collection and statistical analysis, we plan to prepare the findings for presentation and scientific publication.

6. Achievement of the Original Objectives

The principal clinical objectives defined before the fellowship were achieved. I gained substantial exposure to contemporary approaches to drug hypersensitivity diagnosis, particularly risk assessment, skin testing, drug provocation testing, and desensitization.

One of the most valuable aspects of the fellowship was observing how diagnostic protocols are adapted to individual patients rather than applied uniformly. Exposure to a large and diverse patient population allowed me to integrate theoretical knowledge with real-world clinical decision-making.

The fellowship also enabled me to compare practices at my home institution with those used in Málaga. Observing differences and similarities in diagnostic algorithms, organization of drug allergy services, and patient management provided an important international perspective on drug allergy practice.

Furthermore, the additional exposure to nasal provocation testing, BAT, and LTT extended my training beyond the initially defined objectives.

From an academic perspective, collection of the Málaga cohort for the planned NSAID hypersensitivity project represented an important achievement of the fellowship. The continuation of data collection in Türkiye after my return demonstrates that the project has developed into an ongoing collaboration between the two centers.

7. Impact on My Future Clinical Practice and Research

This fellowship has significantly broadened my perspective on the clinical evaluation of drug hypersensitivity. In particular, the experience gained in risk-stratified drug provocation testing, individualized diagnostic decision-making, and desensitization will contribute directly to my clinical practice at the Division of Allergy and Clinical Immunology at Ankara University.

The fellowship has also had an important impact on my academic development. The ongoing two-center NSAID hypersensitivity study provides a framework for comparing clinical characteristics and diagnostic practices across different populations and healthcare settings.

Following completion of data collection in Türkiye, we plan to analyze the two cohorts and prepare the results for scientific publication. The project therefore extends beyond the fellowship period and represents a sustainable academic outcome of the exchange.

More broadly, the collaboration established between Málaga and Ankara during this fellowship provides a foundation for future multicenter studies in drug allergy and may contribute to greater harmonization of clinical and research approaches between the two centers.

8. Conclusion and Personal Reflection

The EAACI Clinical Fellowship was a highly valuable experience for both my professional and personal development. Working in a different healthcare system and observing clinical practice at a center with

extensive expertise in drug allergy allowed me not only to learn specific diagnostic protocols but also to view the entire process of drug allergy assessment from a different perspective.

The fellowship helped me critically reflect on my own clinical practice and identify areas in which I can further improve. In particular, the experience I gained in individualized risk assessment, drug provocation testing, and desensitization will influence how I approach patients with suspected drug hypersensitivity in my future clinical practice.

Being part of an international clinical and academic environment also strengthened my confidence in international collaboration and encouraged me to pursue further research in drug allergy. The continuation of our two-center NSAID hypersensitivity project after completion of the fellowship is particularly meaningful to me, as it transforms the fellowship experience into an ongoing scientific collaboration.

In the future, I aim to transfer the knowledge and experience acquired in Málaga to my clinical practice at Ankara University, complete and publish our collaborative NSAID hypersensitivity study, and continue developing joint research projects with the Málaga team.

9. Acknowledgements

I would like to express my sincere gratitude to my host supervisor, Dr. María Salas Cassinello, for her guidance, support, and for generously sharing her clinical knowledge and experience throughout my fellowship.

I would also like to thank all physicians, nurses, laboratory staff, and other members of the Allergy Unit at Hospital Regional Universitario de Málaga for welcoming me into their team and contributing to my clinical and academic training.

Finally, I am sincerely grateful to the European Academy of Allergy and Clinical Immunology (EAACI) for awarding me this Clinical Fellowship and providing me with the opportunity to undertake this valuable international training experience. The fellowship has made an important and lasting contribution to my clinical and academic development.