EAACI Clinical Fellowship Final Report

Descriptive Characterization of Patients with Hereditary Alpha-Tryptasemia

Fellowship Winner: Merve Hormet Igde, Türkiye
Fellowship Type: EAACI Clinical Fellowship – 3 months
Fellowship Period: 1 May 2026 – 1 August 2026
Main Host Institution: Allergy Unit, Vicenza General Hospital (Ospedale San Bortolo), Vicenza, Italy
Additional Clinical Site: Borgo Roma Hospital, Verona, Italy
Host Supervisor: Prof. Patrizia Bonadonna

1. Background and Adaptation of the Original Project

The project originally proposed for the fellowship was entitled **"Delabeling of Beta-Lactam Allergy: Evaluation of the Impact of an Accurate Diagnosis on Antimicrobial Resistance."**

During the fellowship, I had the opportunity to contribute both to this project and to a second study focused on hereditary alpha-tryptasemia. Following discussions with my host supervisor, Prof. Patrizia Bonadonna, the study entitled **"Descriptive Characterization of Patients with hereditary alpha-tryptasemia in the non-clonal group"** was selected as the main fellowship project because it was expected to reach a more advanced stage and allow analysis of the available data within the fellowship period.

Nevertheless, I continued to contribute to the original beta-lactam allergy delabeling project throughout the fellowship.

2. Objectives

The primary objective was to describe the demographic and clinical characteristics of patients with hereditary alpha-tryptasemia in the non-clonal group evaluated at the Vicenza and Verona centres, investigate the frequency of anaphylaxis and potentially associated factors, and observe the clinical use of **TPSAB1 copy-number analysis**.

The clinical objectives of the fellowship were to gain knowledge and practical experience in drug allergy, skin testing, drug and food provocation procedures, mast cell disorders, multidisciplinary patient assessment, and desensitization.

3. Clinical Setting, Duration, and Working Hours

The fellowship was conducted from 1 May 2026 to 1 August 2026. My main clinical activities took place at the Allergy Unit of Vicenza General Hospital, where I attended on weekdays, generally from 08:30 to 16:00.

Approximately one day per week, I participated in multidisciplinary clinical assessments at Borgo Roma Hospital in Verona. I also attended monthly multidisciplinary evaluations of patients with mastocytosis and related mast cell disorders in Vicenza.

4. Approximate Number of Patients Observed

During the three-month fellowship, I observed or participated in the evaluation of approximately **500 patients** across general allergy clinics, drug allergy assessments, skin testing, drug and food provocation procedures, immunotherapy-related evaluations, mastocytosis clinics, and multidisciplinary consultations.

The hereditary alpha-tryptasemia study group included a total of **24 patients** followed at the Vicenza and Verona centres.

5. Clinical Activities

I had the opportunity to assess the medical histories, differential diagnoses, test results, and management plans of patients attending the general allergy outpatient clinic together with the clinical team. Being able to ask questions during patient consultations and case meetings and participate in clinical decision-making significantly improved my clinical reasoning.

I participated in the evaluation of hypersensitivity reactions to antibiotics, radiocontrast media, other medications. I assisted the clinical team during drug allergy skin tests and drug and food provocation procedures. I also observed the evaluation of severe immediate and delayed drug reactions and hypersensitivity reactions related to immunotherapy.

6. Drug Allergy and Desensitization Experience

Drug allergy represented a major component of the fellowship. Participating in skin testing and provocation procedures for different drug groups improved my knowledge of appropriate test selection, interpretation of results in relation to the clinical history, risk assessment, and decision-making between alternative treatment and desensitization.

One of my most important clinical experiences involved the evaluation and management of an adult patient who developed anaphylaxis to a factor complex preparation. Because no suitable alternative medication was available, desensitization was considered necessary. Together with the clinical team, we performed the relevant skin tests and developed an individualized **10-step desensitization protocol**. The procedure was completed successfully. I contributed to drafting and organizing the protocol and followed its implementation closely. This case is currently being prepared for publication.

7. Hereditary Alpha-Tryptasemia Project

The main research project evaluated the demographic characteristics, clinical findings, frequency of anaphylaxis, and potentially associated variables in 24 patients with hereditary alpha-tryptasemia in the non-clonal group from the Vicenza and Verona centres.

I contributed to collecting patient data, organizing the dataset, and preparing it for statistical analysis. I also observed the implementation and interpretation of **TPSAB1 copy-number analysis**. This experience improved my understanding of the relationship between genetic findings, baseline serum tryptase levels, mast cell-related symptoms, and recurrent anaphylaxis.

8. Multidisciplinary Activities

One day per week, I attended a multidisciplinary clinic at Borgo Roma Hospital in Verona, where patients with complex mast cell disorders were jointly evaluated by allergy, hematology, and dermatology specialists. I observed how clinical findings, cutaneous manifestations, hematological assessments, laboratory results, and allergy-related symptoms were integrated into a unified diagnostic and management plan.

Once a month, I attended mastocytosis meetings in Vicenza, where patients' histories of anaphylaxis, baseline serum tryptase levels, possible triggers, cutaneous and hematological findings, individual risks, follow-up strategies, and treatment options were discussed.

9. Contributions to Clinical and Research Activities

Throughout the fellowship, I actively participated in allergy history assessment, clinical case discussions, skin testing, and drug and food provocation procedures. I observed the evaluation of patients with severe drug hypersensitivity and the interpretation of complex allergy test results.

I contributed to the collection and organization of clinical and demographic data from patients with hereditary alpha-tryptasemia and assisted with the statistical analysis process. I also observed the clinical application of TPSAB1 analysis, multidisciplinary decision-making in mast cell disorders, and long-term risk assessment.

In addition, I contributed to the preparation of the desensitization protocol, the development of the successful case into a scientific publication, and the ongoing beta-lactam allergy delabeling project.

10. Results and Outcomes

Clinical and demographic data from 24 patients with hereditary alpha-tryptasemia were collected and organized. Their clinical features, frequency of anaphylaxis, and potentially associated factors were evaluated, and I contributed to the statistical analysis.

An individualized desensitization protocol was successfully administered to an adult patient with hypersensitivity to a factor complex preparation. The case is currently being prepared as a scientific manuscript.

The beta-lactam allergy delabeling project also remains ongoing, and our collaboration will continue beyond the fellowship period.

Clinically, I gained extensive experience in drug allergy, skin testing, drug and food provocation procedures, radiocontrast media reactions, venom immunotherapy, mastocytosis, hereditary alpha-tryptasemia, and multidisciplinary patient management.

11. Publications and Future Studies

A manuscript describing the successful 10-step desensitization procedure in a patient with hemophilia who experienced anaphylaxis to a factor complex preparation is currently in preparation.

Following completion of the analyses of the hereditary alpha-tryptasemia dataset, the results are planned to be presented at a scientific meeting and submitted for publication. I also continue to contribute to the beta-lactam allergy delabeling project.

The scientific collaboration established during the fellowship is expected to continue, with plans to develop new joint studies in hereditary alpha-tryptasemia, mast cell disorders, drug allergy, and desensitization.

12. Personal Reflection and Conclusion

This fellowship was an extremely valuable experience for both my clinical practice and academic career. My training was not limited to research projects; through active involvement in daily clinical practice, I had the opportunity to evaluate different patient groups, discuss my questions, and improve my clinical decision-making skills.

I strengthened my theoretical knowledge and practical experience in drug allergy diagnosis, skin testing, provocation testing, desensitization, mastocytosis, and hereditary alpha-tryptasemia. The multidisciplinary working environment also helped me better understand the importance of collaboration among different specialties in the management of complex patients.

I plan to apply the knowledge and experience gained during the fellowship at my home institution and to contribute to future projects aimed at improving the diagnosis and treatment of allergic and mast cell-related disorders. I believe that the continuation of our scientific collaboration will support both my academic development and the creation of productive international research partnerships.

13. Acknowledgments

I would like to express my deepest gratitude to **Prof. Patrizia Bonadonna**, who has played a highly significant role in my professional and academic development. Her scientific perspective, guidance, valuable recommendations, and support illuminated my path and provided important opportunities for me to pursue my professional goals.

Her encouragement throughout the fellowship increased my confidence and helped me move towards my academic goals with greater determination. Her support extended far beyond the research projects; she created a supportive environment in which I could discuss every patient encountered in the clinic, share my questions, and improve my clinical reasoning. I believe that her generous sharing of knowledge and experience will have a lasting influence on my career. I am also very pleased that our scientific and professional communication will continue after the fellowship.

I sincerely thank all my physician colleagues in Vicenza, particularly **Dr. Francesca Nalin** and **Dr. Ilaria Lazzarato**, for sharing their support, experience, and knowledge with me throughout the fellowship. Their clinical contributions, warm approach, and willingness to help made this experience both more productive and more meaningful.

Finally, I gratefully acknowledge the **European Academy of Allergy and Clinical Immunology** for awarding me the 2026 EAACI Clinical Fellowship and making this valuable educational and professional development opportunity possible.