

# Rheumatology residency in a European Reference Network on Rare and Complex Connective Tissue and Musculoskeletal Diseases centre: opportunities and challenges

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## ABSTRACT

*Rheumatology is a growing medical speciality with many attractive points to young doctors. Residency is a demanding period of a physician's life, and choosing the right hospital for one's residency may not be easy. We report on our personal experience as Rheumatology residents in European Reference Network on Rare and Complex Connective Tissue and Musculoskeletal Diseases (ERN-ReCONNET) centres.*

## Rheumatology residency in an ERN ReCONNET centre

The choice of Rheumatology as one's speciality may seem like an easy task for anyone working in the field, as it certainly seems for us. However, the Rheumatology residency presents its own set of opportunities and challenges, and these may vary significantly according to the setting of the residency. Rheumatology is an exciting and growing medical speciality with a strong clinical character and a very active and meaningful research component. Major advances in the fields of Immunology and Rheumatology occurred in recent decades, bringing new and powerful therapeutics from bench to bedside. This has deeply increased the physician's ability to control the activity and progression of inflammatory rheumatic diseases and has nurtured even more interest in developing innovative drugs and treatment strategies. Considering that most rheumatic diseases are both chronic and disabling, the patients' quality of life is critical for the Rheumatologist. Treating rheumatic patients in 2021 is, therefore, challenging but also rewarding. As Rheumatologists, we work with patients from all age groups, from children to the elderly.

Patients receive personalised care, such as adolescents transitioning from paediatric to adult care or childbearing women managing their rheumatic disease throughout pregnancy. With a few notable exceptions, such as osteoporosis and osteoarthritis, rheumatic diseases are rare or very rare. Inflammatory arthropathies and connective tissue diseases are intriguing illnesses with complex pathogeneses that remain incompletely understood, challenging clinicians and scientists alike.

As Rheumatology becomes increasingly attractive to young doctors, many may ask where the right place for their Rheumatology residency to take part is. Choosing where to be a Rheumatology resident will shape one's career and future self. Choosing between a tertiary-care university hospital and a secondary-care local hospital is often the crossroad we find at the beginning of our paths. No path is free from risks, and no route is suitable for everyone. To help young doctors find their path as they pursue a career in Rheumatology, we will give them some insight into the opportunities and challenges they can find in tertiary-care university hospitals affiliated with the European Reference Network on Rare and Complex Connective Tissue and Musculoskeletal Diseases (ERN-ReCONNET).

ERN-ReCONNET is a virtual network involving healthcare providers from reference centres across Europe aiming to improve the highly specialised patient-centred care of rare rheumatic diseases (1). The central concept is promoting knowledge exchange rather than patient mobility (2). The network fosters advanced patient management, clinical practice guidelines (2), and health economy discussions (3), contributing to the homogenisation of

specialised Rheumatology care across Europe.

We chose ERN-ReCONNET centres for our residencies because we wanted to make learning from the most specialised in the field part of our everyday lives. The exposure to experts in different Rheumatology fields is maximised in tertiary-care centres. The fact that organised subspecialty clinics exist within the Rheumatology Departments promotes more standardised conduct and up-to-date state-of-the-art care, shaped by the dedicated Rheumatologists that have the opportunity to focus their clinical care, research and teaching on a single group of rare disease entities. By attending and leading these complex appointments, one gets exposed to a substantial number of patients with rare diseases, getting to observe and manage both common and rare manifestations of these diseases. Despite seeing the management of complex patients as something positive, we acknowledge that the right mindset is necessary to deal with the most severe and rare manifestations of rheumatic disease. Randomised controlled trials with reliable data are rare for many manifestations, and expert opinion is often the best evidence available. In our centres, this is especially true for the diseases covered by the ERN-ReCONNET, such as systemic lupus erythematosus, Sjögren's syndrome, undifferentiated and mixed connective tissue diseases, systemic sclerosis, inflammatory myopathies, or immunoglobulin G4-related disease. Additionally, in reference centres, one gets more easily involved in clinical trials and may offer the patients innovative treatments before being commercially available.

The biggest challenges for the resident in such an environment are (i) avoiding skipping on General Rheumatology experience and (ii) managing to conciliate several subspecialties experiences when numerous activities may be happening simultaneously due to overlapping schedules. An organised and finely designed residence plan is essential to achieve these goals, and having one's own General Rheumatology clinic throughout the full extension of the

residency helps keep in touch with the more common issues in our discipline. Even when we have a clear idea of what we want to focus on, we are expected to be proficient in a plenitude of subjects. In addition, different specialists will counsel us differently and ask for our support in their clinical work. Therefore, we frequently have to work extra hours to participate not only in what we have to but also in what we want to explore further.

The opportunity to regularly practise rheumatological techniques and participate in complex procedures, such as mini arthroscopy, ultrasound-guided intra-articular injections, capillaroscopy, subcutaneous fatty tissue, synovial or salivary gland biopsies, and musculoskeletal, temporal artery or salivary glands ultrasonography is another clear advantage of specialised centres. Although we are expected to perform them autonomously sooner rather than later, we must recognise our limitations and request supervision until we feel confident performing the techniques.

The high number of selected patients followed at these Departments and the proximity of many of its professionals with organised clinical and basic research teams ensures the right environment for the production of high-quality scientific work. Ideas fly around, and the number of ongoing projects seems to be ever-growing. We get to learn how to properly design research projects, gather and organise data, and analyse and interpret it. Most importantly, one can learn how that piece of information may influence clinical reasoning and share any new ideas with the medical community. As reference hospitals, ERN-ReCONNET centres are rarely excluded from multicentric efforts, and many opportunities to participate present during the course of the residency. This comprises both national and international collaborations, including those emerging from the ERN-ReCONNET network, such as this Supplement.

Recently, a short-term exchange program was designed to enhance knowledge sharing and stimulate collaboration between health care professionals

from different countries within the network (4). We believe this represents yet another excellent opportunity for Rheumatology residents to expand their clinical and research skills in a Hospital of excellence other than the one they initially chose. Some of the authors already had the privilege of experiencing working in another ERN-ReCONNET centre as visiting residents, and we can only recommend these experiences. The intense clinical and research activities are transversal to the different ERN-ReCONNET centres, and new opportunities arise regularly.

However, it all comes with a price. The scientific standards are very high, and the learning curve may be steep. Among so many experts with solid ideas and project plans, our initial role in research can feel somewhat limited and underwhelming. We usually start as data gatherers, and one's proactivity and motivation are essential to further developing our own set of skills and assuming a different position in the research team. A considerable amount of time needs to be invested in each project, and some projects may not have the greatest of outcomes. Participating in multicentre studies is frequently challenging since collecting information on the Department's patients usually means gathering data from hundreds of patients, even in projects related to rare diseases. Getting co-authorships may also be tough, considering there are multiple eligible collaborators and, frequently, a restricted number of co-authorships is dictated by journals.

The academic milieu promotes not only learning but also teaching opportunities. University hospitals are a source of constantly flowing information. One day you learn it; the next day, you teach it. Without even noticing it, we become a source of technical information for students, primary-care physicians, residents from other specialities and even younger Rheumatology residents. Teaching starts as something casual and informal and may gradually become more regular and organised. The more time gets invested, the greater are the chances that it becomes something

relevant in our career. It is up to the resident and its tutors to define one's path in Rheumatology, and tertiary care hospitals can grab the highest number of paths.

As is probably apparent from what we have shared, being a resident in an ERN-ReCONNET centre is a day-by-day challenge and growing process. The workload makes it sometimes difficult to conciliate the clinical and scientific work with a healthy and fulfilling personal life. Self-discipline is mandatory. All things considered, we would undoubtedly recommend ERN-ReCONNET centres to any future Rheumatology resident looking for excellence and willing to work hard to get a full-on Rheumatology experience during residency.



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