



Build your career around curiosity, rigour and resilience! An interview with the ECM award winner 2025

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Niki Ubags, winner of the ERS Early Career Member award in 2025, shares her career path, her spark for respiratory research and tips for early career members developing their career today
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Every year, the Early Career Member (ECM) Committee of the European Respiratory Society (ERS) honours a promising ECM who has made important contributions to the field and shows future perspectives with the potential to move the field of respiratory medicine forward. During the ERS Congress 2025, in Amsterdam, Niki Ubags received this prestigious award.

Niki Ubags is currently an independent university lecturer holding a habilitation within the division of pulmonology and the faculty of biology and medicine at the University Hospital of Lausanne (CHUV) (Switzerland) where she leads her own research group (figure 1). The title of her PhD thesis, under the supervision of Emiel Wouters (MUMC Maastricht, the Netherlands), Prof Benjamin Suratt (UVM, Burlington, VT, USA) and Juanita Vermooy (MUMC Maastricht, the Netherlands), was “Obesity and pulmonary host defense”. After her PhD (2016), she conducted postdoctoral research at Maastricht University (the Netherlands) and CHUV (Switzerland). Niki has been an active member of the ERS for many years. Between 2019 and 2022 she was the ECM representative of Assembly 3 (Basic and Translational Science) and the chair of the ECM committee. In 2022, she started as the secretary of group 3.03 (Lung injury and repair) and since October 2025 she has been the elected chair of that group.

Niki Ubags was interviewed by Purevsuren Losol and Rita Costa (ECMs from Assembly 3), Theodore Kapellos (ECM representative for Assembly 3) and Heleen Demeyer (ECM representative for Assembly 9 and co-chair of the ECM committee). During the interview Niki shared her career path, her spark for respiratory research and tips for ECMs developing their career today.

Congratulations on receiving the ERS ECM award! To take us back to the beginning, what first inspired your interest in respiratory immunology and how has your research focus developed over the course of your career?

This question really makes me reflect on the path that led me here. I am originally from the Netherlands and completed my studies at Maastricht University, where I did both my Master’s and PhD thesis in collaboration with the University of Vermont in the USA. My interest in respiratory immunology started during my very first





FIGURE 1 Niki Ubags, ECM award winner 2025.

internship during my Masters. The lung is a vital organ, without it, we cannot breathe or exist. I became fascinated by how immune responses in the lung occur and how they change with different exposures. Understanding how disease develops in the lung, as well as its crosstalk with other organs, has been a recurring topic of research in my career. It is intriguing because even when we focus on one organ, we must remember it is part of a larger system, where something as fundamental as oxygen levels can influence other organs.

During my postdoc in Lausanne, I continued this line of research on understanding exposures and their effects on immune responses, but expanded into skin immunology, which was fascinating to explore as another mucosal barrier tissue. Studying the gut, lung and skin has shown me how similar their immune responses can be. Researching more about the microbiome has also highlighted how changes in one tissue, like the skin, can impact another, such as the lung, a concept known as remote tissue priming. Respiratory immunology has remained central to my work throughout my career. What excites me most is that, despite all the research being done, there is still so much we do not know. We keep discovering new, underexplored avenues, and the potential of large-scale omics datasets is particularly thrilling. That is what keeps my interest alive in this field.

Your work explores how early life environmental exposures shape lung immunity. Why is early life immune programming such a critical window for respiratory health?

I think what is very exciting about early life immunity is that the immune system is still being built and matures during this period. It is highly plastic and is strongly shaped by different exposures, such as microbes, nutrition, medication use and stress responses. These factors can shape immune responses in the lung, but also more broadly across the body, and can have long-term effects into adulthood, placing individuals on a trajectory towards building tolerance or, in cases of imbalance or disruption, towards increased disease risk.

For me, what is particularly exciting is that these early encounters can programme immune function rather than simply cause a temporary response. That is why this early window is so important for intervention. A large part of my research focuses on this early life component and on how we can identify additional interventions by better understanding the underlying mechanisms.

Your research spans immunology, environmental sciences and respiratory medicine. How has your interdisciplinary collaboration influenced your discoveries and career development?

This is something that comes naturally to me, but it has been transformative for what I have achieved in the past and how I approach problems now. First, I am a basic scientist, passionate about translational

medicine, and I have always worked closely with clinicians. In respiratory medicine, collaborating with clinicians is often taken for granted, but I believe it is the only way to make a lasting impact. By uncovering basic mechanisms and translating them together with clinicians, we bridge the gap between research and real-world application.

Second, to look at the microbiota I also collaborate with microbiologists and microbial ecologists to gain more ecological perspectives, and they bring a completely different viewpoint. They deal with very different samples and fieldwork, but it is exciting to see how they approach their field and try to apply those insights to ours. The lung ecology is a niche environment, but if you look at nature, there are many niche environments too, we just tend to dismiss this fact, as clinical and translational scientists. There is so much to learn about how things interact and how we can apply those lessons to our own systems.

On top of that, there is immunology. We can learn a lot from pure immunologists by bridging our different approaches. And then there is bioinformatics. We cannot move the field forward without strong bioinformaticians who truly understand the biology, which is not always part of their training. It is crucial that we learn to communicate effectively across disciplines. These interdisciplinary elements are also something we need to emphasise in training: biologists should understand and apply bioinformatics, while bioinformaticians need to grasp the biology and clinical relevance of their work. That way, when they are analysing data or developing tools, they can see the real-world impact and tailor their work to benefit clinical medicine.

This is also how I like to build my team. Over the past few years, I have brought in people with diverse backgrounds, sometimes not the most obvious hires, but they help bridge gaps and foster mutual learning. For example, we now have a full-time bioinformatician on the team, which is essential for the work we are doing.

You have been very active within the ERS. How and why did you start your active engagement with the society? Has ERS been an important part of your scientific journey, and what has this community given you that shaped who you are as a researcher and leader?

My first ERS conference was in 2011. I presented a poster discussion on my Master's thesis work, which was extremely rewarding. Next, I attended the Lung Science Conference, which is also an extremely valuable opportunity for early career scientists. When I was 2 years into my PhD, I received a bursary to attend and won a poster prize during that conference. I made many new connections, and my supervisors at that time really helped introduce me the ERS and what it could mean for my career.

At that point, the ECM committee was just being established. It was very interesting to see how junior researchers could become involved, and the ECM chair at that time (Agnes Boots) strongly encouraged me to get involved. I also met Sabine Bartel, who was already involved in Assembly work and who was my predecessor as Assembly 3 ECM representative. We interacted frequently and worked together on developing articles and contributed where possible. This gradually led to deeper involvement.

In 2019, I was elected Assembly 3 representative for the ECM committee and in March 2020, just before the COVID-19 shutdown, I became chair of the ECM committee. During that time, I was involved in several committees. It was challenging, because throughout my mandate as chair, we did not meet in person at all. We had to adapt all activities to an online format and rethink how to network and engage ECMs. Despite these challenges, it was a very rewarding time. I learned a great deal, particularly about leadership, and it opened many opportunities for personal and professional development.

I think early in our career, leadership is not something that we are focused on, and not something we are formally taught. Moreover, mentors are often hesitant as it may eat a lot of your research time. What I really appreciated within ERS was how inclusive the leadership is. Executive committee meetings can be overwhelming, but I never felt out of place. As a junior researcher, you can sometimes experience self-doubt and question whether what you say really matters. However, people were very considerate, and your voice was heard and valued. I thanked them afterwards, because it is so important to realise that our voice matters. This also enabled us to advocate for ECMs, to create activities and increase their involvement across committees. The previous chair, Lieuwe Bos, had already done a lot of work in this area, and I was able to build further on his achievements. During my time as ECM chair, one of my children was born, which added some complexity, but I never felt that it was a problem.

In terms of how this shaped me as a researcher, this is always the most challenging aspect. While it is an invaluable experience for developing leadership skills, it does require trade-offs, you cannot do everything. This is something mentors often highlight, that at certain points, these roles may not maximise research

output. However, I gained many skills through serving on different ERS committees that I now apply within my own team. For example, I learned how committees evaluate candidates and conduct interviews. Reviewing abstracts improved how to write and refine my own work. You are constantly learning, which is incredibly valuable. So, although you give up a little on one side, you gain a lot on the other. As you transition towards leadership roles, this balance becomes increasingly important. From a mentor's perspective, it may not always seem ideal, and I recognise this myself when working with my team, but it is equally important to support people in developing these skills. It is also very encouraging to see how ERS supports early career researchers in a genuinely reciprocal way. It is not a one-way process, it goes both ways, which makes the experience particularly meaningful.

Looking back, what were the most pivotal moments or decisions in shaping your research career so far?

The most pivotal moments in my career have been those where I put myself, or where I was placed, in a position I did not expect to be in. During my PhD, I decided to be involved in an international project and divided my work time between two countries. It sounds like a lot of fun, and it was, but on a personal level, it was extremely challenging. I was going back and forth and did not have a home for 4 years. It shaped my reference framework by exposing me to different research environments and working with people from diverse cultural backgrounds.

Moreover, early in my career I found myself in a situation where I needed to take over ownership of a project under circumstances that were not entirely within my control. I had to step up quickly and navigate a fair amount of uncertainty, both professionally and personally. In hindsight, that experience became a real turning point. Although it was an intense challenge at the time, it pushed me to develop a strong sense of ownership, resilience and adaptability. It ultimately opened the door to a leadership opportunity – something I could not have anticipated in the moment. Looking back, it reinforced for me that challenging situations can evolve into meaningful opportunities, often with an element of serendipity, and that perseverance is key to navigating uncertainty.

I think that is important to recognise, it is not just about the science. As early career researchers, a lot is changing in our lives generally, so we need to take that into account. It is about making the best of a situation and going for it, even when you do not know what is going to happen at the end. It is important to see past your decision, which, as an early career researcher, can be really challenging. You see the decision, you see this massive wall in front of you, but trying to see over the wall or just get past that point where you can imagine how things might turn out in the long-term is sometimes better. Waiting it out can help, though it really depends on the situation. For me, that approach has been transformative. And it is also about taking into account not just myself and my research, but the whole picture, including family life.

What advice would you give to early career scientists who are beginning a career in respiratory research today, also considering that we are living with global instability, rising publication pressure, and rapid advances in artificial intelligence (AI) that are reshaping the scientific landscape?

I will start with AI. I think we need to use it as an amplifier of our knowledge, not as our knowledge base. In the long run, the strongest researchers will be those who can use these tools to their advantage, those who can amplify their work and their thinking, but you cannot rely on AI for critical thinking, scientific judgment or creativity. These are things you still need to develop yourself. One thing I am increasingly aware of is that we were trained before the internet became such a dominant part of daily life. It is quite striking how quickly things have changed. We still know how to go to a library, search for information and build understanding from the ground up, rather than letting AI become that foundation.

For early career scientists, I would strongly advise building your career around curiosity, rigour and resilience, and being prepared to work hard. That does not change. You can define your own limits, but hard work will always be part of the equation. It is rarely a strict 9-to-5 role, it often requires extra effort, doing difficult tasks, and having challenging conversations. This means you need intrinsic motivation. You can teach knowledge, but you cannot teach motivation. That is also something I look for when building a team. It is less about the highest grades and more about whether someone is genuinely motivated to learn.

Another important point is to be selective about what you say yes to. I often emphasise this when I give talks, even though I am not always the best example myself. It is important to ask: Does this give me energy? Is it important? Do I actually have the time to commit? Will it benefit my development or contribute to the enjoyment of my work? Or is it something that is essential that needs to be done? If the answer is yes to at least one of these, then it may be worth taking on. But you should not do things simply

to please others. It should benefit you either in terms of your work and research output, energy, personal growth, or career development. Of course, there are always tasks you have to do, but overall, being selective is key. This also links to publication pressure. While maintaining output is important, it is equally important to think long-term. Ideally, you should have at least one major project that contributes to building your long-term research identity, alongside smaller projects that help maintain a steady publication trajectory. Balancing these is important for sustainable career development.

Regarding the global instability, we need to pay close attention to what is happening in the world, as it is already strongly affecting research funding. This is a widespread issue. It means we need to think carefully about how to make our research impactful, particularly in terms of contributing to clinical decision making and improving patient outcomes. Increasingly, funding bodies are looking for clear and meaningful impact, especially in areas like respiratory medicine, and we need to align our work with these expectations.

From your perspective as a scientific leader, what do you see as the key ingredients for building a successful and fulfilling research career today?

It is essential to have a solid scientific foundation or medical foundation and then being willing to go into scientific depth. It is important to be able to adapt to rapidly changing environments and rapidly changing needs from the communities, while keeping a sense of purpose. You also need to feel that you are in the right position doing the right thing. Otherwise, it is very challenging to keep doing it. I think we probably all see that if we are not enjoying what we are doing, it becomes difficult to keep going.

My advice for early career scientists is to build your career not only on short-term questions but also on a long-term vision, because it will make it more fun to have that long-term direction. It will also make it easier to explain what the long-term outlook is. Try to find a good number of things that you enjoy in your career! That is the most important part, and to keep doing those.

What is it that you enjoy most about working in respiratory research, and what continues to inspire you in your day-to-day scientific work?

I think it is the combination of interdisciplinary work and the ability to do something that may have immediate clinical relevance. Because I work in a university hospital, I am able to collaborate closely with clinicians, while also exploring biological complexity in depth. So, it is really about having both components together. In the end, the lung sits at the interface of many different fields. We have defence mechanisms, environmental exposures and chronic diseases, all interacting. This means that different research approaches can directly contribute to understanding and addressing chronic lung diseases.

Another aspect, separate from the research itself, is the mentoring component. Early on, I did not realise how much I would enjoy this. It involves talking to people, helping them understand where they want to go, even if that path is very different from my own. For me, it is not about guiding someone towards a specific trajectory, but about understanding what works best for them, connecting them with the right people, and identifying relevant training or opportunities.

Within ERS, we have also tried to build structures to support this by creating opportunities and helping people move forward in their careers. For me, this gives a lot of energy. It may not directly advance my own work, but it is incredibly motivating. There is also something very rewarding about supporting others through challenging moments. For example, when a project has been difficult for a long time, and then suddenly you get that one piece of data that changes everything, it is incredibly exciting. Helping people to maintain motivation, regain confidence, and find that energy again is very fulfilling.

Having been a student myself not too long ago, and now being in a position where I support and motivate others, is something I find particularly meaningful. Mentoring can be challenging, but it is also deeply rewarding. Every person is different, and being able to tailor support to each individual is what makes it so inspiring for me.

This year marks 10 years since you defended your PhD. Looking back, did you imagine you would be where you are today? And in what ways has your career unfolded differently from what you once envisioned?

Short answer: absolutely not. I did not envision being where I am today. I envisioned myself going into industry after obtaining my Master's degree. However, I enjoyed my research so much that I continued in the academic environment. Now, if I picture myself in other positions, I do not think I would be doing something very different from what I am doing today. I still enjoy what I do. Running a lab is similar to having your own startup, you have to manage the budget, the team and the science. It is quite fun because

you get to decide where you are heading, which is rewarding. I also enjoy collaborating with industry partners because I think that is very important, especially if we want to make a change in the medical field, understanding how clinical trials work, what the needs are, and how it functions from a business perspective. I love what I do, but you never know what the future holds as even stable positions or personal circumstances can suddenly change. If I had to do it again, I probably would not have done it any differently, even though it is completely different from what I had in mind when I started my studies.

Regarding living abroad, I was never afraid to move because, as a child, I had also lived outside the Netherlands with my parents. During my studies, I did some internships in Germany, which was only 10 km away from where I lived at the time. The biggest step was going to the USA for my Master's thesis. Although it was scary, I really felt that it was one of the most important moments in my life, not just for the science but also for personal development. It was a chance to grow as a person outside of my comfort zone. I did not expect that I would continue living abroad, but I also was not afraid when I applied for a position in Switzerland. In the end, distance is relative nowadays. The challenges for me lie in moments when there are family emergencies for instance. In addition, not having any family members living close by when raising a family can be challenging too, so it is important to keep in mind and may not be the ideal situation for everyone.

I know that for many grants, you have to show mobility. It is a noble thing for funders to encourage because it does help people develop a certain perspective. On the other hand, you cannot force everybody to have that mobility. Everybody's situation is different, and I think that is something we cannot change. From a policy perspective, when reviewing grants and other applications, it makes sense to keep this in mind. For instance, if somebody only wants to go somewhere for 3 months, why not? It might not be ideal, but if that is what they can do given their situation, I think we need to keep that in mind too. I find living abroad rewarding. It broadens my horizons and has led me to personal and professional growth.

Take-home messages

- Step into the unknown: pushing beyond the comfort zone, whether through unexpected challenges, international collaborations or taking on unfamiliar roles, often leads to the most transformative growth, both personally and professionally.
- Embrace trade-offs: giving up a little in one area often leads to substantial gains in others, particularly in skills, perspective and long-term growth.
- Champion interdisciplinary work: true innovation happens at the intersection of fields. Collaborating across disciplines bridges gaps, deepens understanding and creates lasting impact in science.
- Prioritise motivation: genuine motivation matters more than perfect grades, it is the foundation of resilience, creativity and sustained success.
- Design a career you love: long-term vision and curiosity form the foundation of meaningful progress. Aligning roles and projects with purpose creates impact, while balance and personal fulfilment remain essential alongside professional achievements.
- Value mentorship: mentoring is both challenging and deeply rewarding. Recognising that each individual is different and tailoring support accordingly is what makes it truly impactful and inspiring.

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