From good intentions to best practices with the FBM's 3R coordinator

Since 2018, Stéphanie Claudinot has been the 3R coordinator at UNIL's Faculty of Biology and Medicine. She explains what this position entails and how it has evolved over time.

"The 3Rs" is a key expression when talking about animal research. Behind this abbreviation are three principles aimed at enhancing lab animal welfare: **R**eplacement, **R**eduction, and **R**efinement. Turning these intentions into concrete actions requires active, dedicated individuals.

Dr Stéphanie Claudinot is one of them. As 3R coordinator of the Faculty of Biology and Medicine (FBM) at UNIL for six years, the developmental biologist is committed to create actionable plans, in collaboration with the faculty's animal experimentation and facility directors. She accompanies researchers, animal facility staff, as well as university management in adopting responsible practices, ensuring they align with scientific excellence. Interview.

"3R coordinator" sounds great on paper, but might seem a bit abstract in practice. What do you actually do day-to-day at the FBM?

It's true that in the beginning, my role was not always clear for everyone. When I started in 2018, it was as much a discovery process for me as for my colleagues. Today, my main tasks revolve around three core areas. First, I maintain the relationship between UNIL and the Swiss 3R Competence Center (3RCC) on an administrative level. This means representing UNIL on the 3RCC executive board, and the other way around, bringing the 3R perspective into strategic decisions at the FBM Dean's Office and the University Rectorate. For example, I am part of the "Animal Experimentation" task force, a group that brings together UNIL, CHUV, and EPFL, and meets regularly to coordinate different efforts.

Second, I advise the FBM's scientists on resources to improve their practices, acting as a direct link to the 3RCC. This may include project funding or training in alternative research methods. Simultaneously, I support the animal facility teams in implementing the 3Rs in animal care. A recent example is the integration of gentle handling techniques* in all our husbandries. It's important to me to involve not only scientists but also animal caretakers, as they are in daily contact with the animals.

Third, I am part of several internal working groups at the 3RCC, where we lead projects to advance research and education *on* the 3Rs. This includes developing 3R-focused education programs from secondary school all the way to PhD level, creating funding instruments, and organizing trainings and events.

What motivated you to take on this role?

To begin with, you have to know that I've always loved animals. I'm one of those people who helps a hedgehog or a salamander cross the road. My early studies in Paris were in marine biology, later I shifted to developmental biology for my doctoral work, which brought me to Lausanne when my research group relocated. Over the years, I've worked with animals in various contexts, and have always been interested in the ethical questions that research on and with living beings implies.

This curiosity led me to get more training on the legal and ethical aspects of animal experimentation alongside my work as a lab researcher. I obtained the Swiss "Module 2"

certification, which is mandatory for everyone directing animal experiments. I then was responsible for all animal experiment authorizations in the research group at CHUV and later in Épalinges, where I continued working after my PhD. This experience helped me build solid expertise in animal experimentation law, ethics, and practices. I closely followed how standards evolved, including the strengthening of the 3Rs concept.

When the FBM created the 3R coordinator role, I was drawn to the idea of actively contributing to a culture shift in animal research. For five years, I held this position in parallel to a 50% research activity, as well as the responsibility of setting up a germ-free mouse facility at FBM. This means housing mice in a highly controlled environment to prevent exposure to germs or microbes. Today, I no longer conduct research, but I still wear both hats as 3R coordinator and germ-free facility manager – a challenge, but the two roles generally complement each other well. What motivates me daily is working with scientists, animal caretakers, students, administrative staff, and regulatory authorities, while being closely embedded in the 3RCC network. I'm also very grateful for the strong institutional support for this cause at the FBM Dean's Office and UNIL's leadership.

Could you share specific examples of projects you're currently leading at the FBM and activities you'd like to expand in the future?

My main focus at the moment is optimizing our mouse colony management. As Isabelle Grandjean, head of the Agora animal facility, pointed out in <u>a recent interview</u>, the number of rodents being bred often exceeds those used in experiments. This is especially true for genetically modified mice, which make up a significant proportion. One of my major missions is adapting and refining breeding strategies across all our research groups to improve this ratio. I regularly take inventory of the animals housed by each research team and meet with them to discuss improvement measures. Then, we work together with animal facility managers to put these action plans into practice.

Another priority is promoting a "Culture of Care". This is a charter, established by the 3RCC and signed by UNIL, that aims to improve the well-being not only of the animals, but also of the people taking care of them, particularly the animal facility staff. Their role is crucial in research they interact daily with the animals, yet are often overlooked. This is why in French, instead of "animalier-ère", I prefer using terms like "soigneur-euse animalier-ère" or "gardien-ne d'animaux", which better reflect their role. I really like the English term animal caretaker, because it captures the caring, attentive nature of their work. Another essential but underdiscussed issue for me is compassion fatigue: a physical and emotional exhaustion related to caregiving. It's a feeling they don't always express. This is why it's important to me to address this and to see their work better recognized and valued. With this in mind, in 2024 we established the "Animal Caretakers 3Rs Award" at the FBM, in collaboration with the Dean's Office and animal facility leadership. It honors individuals or teams who have carried out exemplary 3Rs-related projects.

In the future, I'd also like to increase visibility and support for 3R projects led by our faculty's scientists. On the one hand, we have 3RCC-funded projects that I'd love to see more of at the FBM. My goal is to expand my advisory role for researchers that have ideas for 3Rs research projects, meaning projects aimed at developing new tools or techniques for replacement, reduction, or refinement. Currently, we have three excellent examples at the Department of Fundamental Neurosciences, each illustrating an aspect of the 3Rs. On the other hand, many ongoing faculty projects already embody the 3Rs but lack visibility. For instance, some researchers use only replacement methods like organoids or stem cells. To better highlight their work, I encourage them to reach out to me.

And to not get bored, I'd love to increase my teaching activities in biology and medicine! (Laughs.) I already contribute to student training, both pre- and post-graduate, on all things related to the 3Rs. But I'd like to develop more trainings and organize more 3R-focused events open to diverse audiences: students, researchers, animal caretakers, but also the general public.

* Gentle animal handling involves techniques to minimize stress and discomfort for animals during experiments. One recommended method is "tunnel handling," allowing researchers to guide rodents without picking them up by the tail. Instead, animals are led into a tube or gently cupped with hands, ensuring a more natural and less invasive handling experience. Practiced by animal facility staff and researchers at the FBM, these techniques benefit not only animal welfare but also scientific data quality, as they contribute to reduce stress-related bias.

To learn more:

- <u>Legal training requirements</u> for persons performing animal experiments in Switzerland (OSAV)
- The Swiss <u>«Culture of care» charter</u>, signed by UNIL in 2023
- Public event (in French): «L'utilisation des animaux et de leurs alternatives en recherche: Exemple de l'oncologie» (20.11.2024, CHUV Lausanne)
- More information about animal experimentation at UNIL: FBM website

In an upcoming article (winter 2024), discover more about the daily work and projects led by animal caretakers at the FBM.