Désirée Kunkel | BIH Cytometry Core Facility

My journey in flow cytometry began in 1996 during an internship as part of my biology studies at the University of Cologne, working with a one-laser, three-parameter instrument. What was a technical curiosity for me at the time became the main tool for my research when I started working on my diploma thesis a year later, and it continued to be the central technology throughout my PhD. I was fortunate to have flow cytometry experts around me who trained and supported me, and who embraced the implementation of new technologies and methods with the same enthusiasm as I did. Being a member of a flow cytometry-driven research group introduced me early in my career to the wider flow cytometry community, and I attended my first ISAC meeting as a PhD student in 2000 in Montpellier.

After completing my PhD in 2002, I moved on as a postdoctoral researcher, pursuing research at the interface of immunology and virology, analysing the mechanisms of immune tolerance in SIV infection of African green monkeys and rhesus macaques. While this was a fascinating topic, I realized that I wanted to apply my skills in flow cytometry in a more technically oriented environment. I was fortunate to be recruited to build a new core facility at a translational research center in Berlin in 2008.

Setting up this core facility literally meant building it from scratch—starting with an empty room in a blueprint of a not-yet-functional research building. Even with my extensive experience in flow cytometry, I knew would need expert support and reached out to other core facilities for advice. I received amazing support from the community, and I came to greatly appreciate the large “family” I had joined.

Becoming an ISAC member and attending the Cyto conferences as an SRL scientist allowed me to expand my network even further. I have become very passionate about sharing experiences and organizing meetings that bring together the SRL community. I am co-founder of the annual virtual European Flow Core Meeting and the annual German Flow Core Summit, both aimed at those who run or work in an SRL. Together with my team, we also host other SRL members to share experiences in lab infrastructure, integrating new technologies into the SRL setting, and administrative tasks such as cost calculation and personnel planning. I contributed to the publication on ISAC Best Practices in an SRL, which helped shaping the SRL recognition program.

Serving on the ISAC Council would be an opportunity to give back to the community that has supported me throughout my career. I would like to contribute by engaging my network to increase the visibility of the Society, particularly within the German and European community, and by highlighting what it has to offer, as well as pointing out opportunities for members to actively participate in the Society. At the same time, I hope to bring back visions and perspectives from the community to the Society, helping to shape its future direction and goals.

Désirée Kunkel

BIH Cytometry Core Facility | Core Facility Manager

BIH at Charité - Universitätsmedizin Berlin | Germany
desiree.kunkel@bih-charite.de

EXPERIENCE & EDUCATION

Flow & Mass Cytometry Core Facility

Present @BIH at Charité - Universitätsmedizin Berlin

- Oversee facility operations, including quality management and best practices, budget, staff management, biosafety and sample material risk assessment, user training and scheduling of services
- Implement and scout for new technologies
- Consult with users to ensure efficient use of available technologies and to advise on experiment planning
- Organize open days and events to increase visibility

2019 @Charité - Universitätsmedizin Berlin

- Integrated the BCRT Flow Cytometry Lab into the larger umbrella of the Charité and finally into the Berlin Institute of Health (BIH)
- Established quality management procedures to ensure compliance for clinical studies
- Established a second site of the core facility

2008-2019 @BCRT, Berlin, Germany

- Built up a new flow cytometry core facility (BCRT Flow Cytometry Lab) from scratch, including selection of instrumentation, implementation of best practices, user training, policy development, and cost calculation
- Integrated mass cytometry and imaging mass cytometry as new technologies into the service portfolio
- Expanded the core facility from a one-woman SRL to a team of four

Research

08/2002 - 08/2008 @UKBF, Berlin & Institut Pasteur, Paris
Post-Doc (Immunology / SIV in AGM and rhesus macaques)

01/1998 - 05/2002 | PhD (Dr. rer. nat.) - Biology/Immunology

KEY ACHIEVEMENTS

- Co-founded and continue to organize the annual Virtual European Flow Core Meeting (first meeting in 2023, 300+ participants)
- Co-founded and continue to organize the German Flow Core Summit as an in-person, annual meeting for flow cytometry core facilities in Germany (first meeting in 2024, 100+ participants)
- Co-author of the ISAC Flow Cytometry Best Practices publication
- Expanded from a small, one-person SRL to a team of 5, with two sites and up-to-date technologies

ABOUT ME

I am the Head of the BIH Cytometry Core Facility at the Berlin Institute of Health (BIH). Together with my team, we provide expert support and access to state-of-the-art equipment for high-parameter single-cell analysis by flow and mass cytometry.

I have many years of experience in flow and mass cytometry and have worked in an SRL for over 15 years. A particular focus of my work has been the implementation of emerging technologies and their integration into the SRL setting, including the establishment of best practices and comprehensive user training.

I am passionate about networking, sharing experience, and organizing meetings that bring together the SRL community.

<u>Publications / SRL related</u>

* Setting Up Mass Cytometry in a Shared Resource Lab Environment. Methods Mol Biol, 2019
* Guidelines for the use of flow cytometry and cell sorting in immunological studies. Eur J Immunol, 2017/2019
* International Society for Advancement of Cytometry (ISAC) flow cytometry shared resource laboratory (SRL) best practices. Cytometry Part A, 2016

<u>Current committee involvement</u>
German Society for Cytometry
German Mass Cytometry Network