

Q&A

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Q&A with Professor Gisbert Schneider and Dr Francesca Grisoni

The importance of collaboration and good working relationships is unquestionable in chemistry, and is vital for the effective publication of research articles. In this series of Q&A's we talk to people involved in all aspects of the process and explore the relationships between them. Here we discuss the mentor-mentee relationship with Professor Gisbert Schneider and Dr Francesca Grisoni (both ETH Zurich).

Image credit: Gisbert Schneider



Gisbert is Professor of Computer-Assisted Drug Design, working on adaptive intelligent systems for molecular de novo design. Francesca is a post-doctoral researcher also working on artificial intelligence for drug discovery and design. They have worked together in Gisbert's lab since 2014 and published during this period, among other research, two papers in *Communications Chemistry*, [Tuning artificial intelligence on the de novo design of natural-product-inspired retinoid X receptor modulators](#) and [Scaffold hopping from natural products to synthetic mimetics by holistic molecular similarity](#). In this interview we talk about their experiences of working and publishing together.

Image credit: Francesca Grisoni



The nature of academic relationships between PIs and their students or post-docs is increasingly criticised on social media and in print. What, in your view, is needed for a healthy and productive academic relationship?

[Both] Healthy and productive academic relationships grow based on trust, open dialogue and mutual respect. In the mentor-mentee relationship, students should aim to become as independent as possible, by learning to take responsibility for their own work, without forgetting transparency and communication with their supervisors. At the same time, the mentors should accept (and foster) being challenged by the students and offer dialogue and conversation, along with the necessary support to

allow for growth. The sometimes exacerbated image provided by the press and social media does not faithfully describe the reality but only extreme cases of problematic relationships. Such a distorted image makes it harder to create a healthy and safe space for trust and dialogue by insinuating preconceptions on both sides. A positive way of ensuring healthy academic relationships is to provide balanced information and educate both the students and their supervisors about the key aspects of beneficial and productive mentor-mentee relationships.

During your time working together, how did you find a balance between continuing well-established projects in the lab and encouraging the pursuit of independent research?

[Both] Our time working together has been based on reciprocal trust, communication and openness to opportunities on both sides. To be clear about one's expectations and to openly communicate these has been key. It ensured the optimal trade-off between continuing well-established projects and pursuing independent research.

How do you feel the nature of academic relationships has changed during your career?

[G.S.] The nature of academic relationship has not changed during my career. Good mentor-student relationships have always been and will always be based on trust, honesty, transparency and communication. My mentors were always patient with me. Importantly, the mentor must be willing to "let go" of pet projects and own ideas at some point, and the mentee should not take everything for granted.

How would you like to see academic relationships change in the future?

[F.G.] My main hope regarding future academic relationships, and the academic environment in general, is that we will be able, as group and community members, to address inequalities in the workplace. I hope in the future we'll work towards more inclusivity and equality in academia, in terms of (but not limited to) gender, nationality and wealth. At the same time, I hope we will be able to collectively work to eliminate the unconscious biases that still too often shape our academic and interpersonal relationships.

In your collaboration, how did you decide where to publish?

[Both] When selecting the most suitable journal for publication, we generally aim to find a trade-off between a journal's "reputation" and the audience we intend to reach. To us, pro-

fessional and fair peer-review and support by the editor are the most important criteria. Importantly, we are convinced that a scientifically solid, well written article will always reach the interested community, no matter the chosen journal.

What advice would you give to others to ensure a strong relationship between mentors and early career researchers?

[Both] Mentees should trust their mentors when it comes to envisioning the potential of a project, future aim setting and long-term planning. At the same time, mentors should provide support and accountability, and they should trust the mentees and acknowledge their contribution to the success of the research group. Recognizing, and being grateful to, the contribution of the respective other person to one's own accomplishments is one of the key aspects to building a healthy mentor-mentee relationship.

What was the highlight of your time working together?

[Both] Since we started collaborating in 2014, we have found a safe space to have a peer-to-peer dialogue, where our (usually different) vantage points would meet and confront. Projects have flourished based on respectful dialogue and hard scientific debate. This situation has sparked unconventional ideas and allowed us to come up with different ways of looking at our scientific questions.

This interview was conducted by the editors at Communications Chemistry.

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