

The Young Scientists Network: How the European Federation for Medicinal Chemistry (EFMC) Became Young Again

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The European Federation for Medicinal Chemistry (EFMC) created the Young Scientists Network (YSN) to support early-career medicinal chemists and chemical biologists. By doing this, it addressed the rapid changes taking place in the scientific community and in our society, such as the rise of social media, the evolution of the gender balance in the scientific population, and educational needs. Creating the YSN was also a way to ensure that the next generation of scientists would contribute to shaping EFMC's strategy, while recognizing and addressing

their needs. The YSN was set up as a very dynamic concept, and has now developed to the point where its impact is evident. The activities it promotes complement EFMC's community support and scientific opportunities, rejuvenating the Federation and preparing it for the future. It also provides opportunities for many brilliant young scientists, who do not hesitate to invest time and energy in supporting our community and shaping their own future.

Introduction

The European Federation for Medicinal Chemistry (EFMC) is celebrating its 50th birthday. It is a well-established coalition of 26 societies, representing 24 countries and close to 8000 medicinal chemists and chemical biologists.^[1,2] Among many activities, EFMC organizes regular scientific events, including the International Symposium on Medicinal Chemistry (EFMC-ISMC)^[3] and the Young Medicinal Chemists' Symposium (EFMC-YMCS).^[4]

Over the last few years, EFMC's scientific community has changed significantly, as has the environment in which it operates. EFMC has therefore adopted more communication channels, especially those that appeal to younger members, as

the gender ratio in its community has started changing noticeably,^[5] and most recently, the COVID-19 pandemic has forced all scientists to question the way they interact and conduct day-to-day business.

Managing this evolution is a critical mission of EFMC. The federation tries to recognize needs and changes early, and to deal with them in a way that is both decisive and respectful of all individuals in its community, while creating opportunities for its members. The Young Scientist Network (EFMC-YSN, or simply: YSN)^[6] was first proposed in 2018 to address some of these needs, and bring a breath of fresh air into EFMC.

The Young Scientists Network

YSN and the EFMC Communication Team: A joint story

The EFMC Communication Team formed in fall 2017 as a rebirth of the previous "Visibility and Recognition of Medicinal Chemistry" Working Group, but aiming this time at gathering a younger generation of scientists that would master the social media tools, and bring in new ideas to rejuvenate the EFMC.

Selected from many candidates, ten young scientists formed the initial team (Figure 1). Soon afterwards, they established an annual photo competition,^[7] the interview series "I am a Medicinal Chemist",^[8] which helps put a face on medicinal chemistry and chemical biology in Europe, as well as a series of quizzes on social media, mixing science facts and questions about EFMC history. These activities served the purpose of getting people to know the EFMC and its dynamic network of young researchers. Within 18 months of existence, the team had grown into a lively network of early career scientists, with an equal proportion of female and male members. Such a balance offers a preview on how the medicinal chemistry and

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Figure 1. The first EFMC's Communication Team, meeting at the 2018 EFMC-YMCS in Ljubljana, Slovenia. From left to right: Paula Morales, Fabrizio Giordanetto, Tamara Smidlehner, Raisa Haavikko, Piia Kokkonen, Yves P. Auberson (EFMC President), Matt Tozer (Team Sponsor), Briuc Matagne, and Kristina Goncharenko (team leader). Mary Wheldon is not in the picture.

chemical biology community develops, as discussed in more details elsewhere.^[5]

The full concept of the YSN developed in February 2019 during an EFMC workshop in Basel (Figure 2), when the outline of the future network was drafted. Alice Soldà, the chair of the European Chemical Society (EuChemS) Young Chemists Network, shared her experience and helped a lot. It came rather naturally that the first board of the newly created YSN were members of the communication team. At first, both activities were organized separately, but it quickly became obvious that they had too much in common to be kept apart: The YSN and Communication teams had almost the same members, and shared the same goal of helping young scientists discover the EFMC and participate in its activities. The EFMC executive committee therefore decided to merge both teams into the YSN, which would now be in charge of generating new ideas and activities to reinforce EFMC's communication, while sharing both the EFMC and YSN news via its communication channels.



Figure 2. Brainstorming on the future of the YSN at the February 2019 workshop in Basel, Switzerland. From left to right: Rui Moreira, Paula Morales, Briuc Matagne, Kristina Goncharenko, Alice Soldà.

Table 1 lists the current composition of the YSN board members. Any young medicinal chemist or chemical biologist interested in actively participating in the YSN can contact them through the EFMC secretariat.^[9]

The activities of the YSN

Technical expertise and a PhD in hand are the starting point of a scientific career. The development of soft skills such as presenting well, becoming a good team player and developing a strong network are however equally important for the career of young researchers.

The YSN was launched officially in May 2019. What was to become a pan-European networking platform started simply, with "Meet & Greet" events, whose objective was to facilitate the networking of young participants arriving at conferences. These often lack the connections of more established community members, and need to build strong personal relationships. The first "Meet & Greet" took place at the occasion of the EFMC|ACSMEDI Medicinal Chemistry Frontiers,^[10] held in Krakow (Poland) on June 10–13, 2019. Held during the welcome reception, it gathered around 15 participants who then spent their evening together over snacks and a few drinks. Although small, this event had a tangible impact in creating a strong bond among the members of this group, and many of them proceeded to organize activities together on the following days of the conference. Their feedback was very encouraging, leading to similar activities organized at various EFMC symposia in 2019. "Meet & Greet" events have since then created a positive impact on the overall conference experience, and a close network among young participants, who benefit from it at both personal and professional levels.

The need for a network for young scientists was obvious, but it had to bring more to the community than just a way to make friends during a conference. Among many wishes expressed by the members of the community, the most prominent was additional training and presentation opportunities. The EFMC had partially addressed this by creating the EFMC Young Medicinal Chemists' Symposium in 2014, providing a chance for the best young scientists to present their research. The event was however at first limited to scientific exchange,

Table 1. YSN board members as of October 2020. In addition, Matt Tozer, is the YSN sponsor in EFMC's executive committee.

| Name | Affiliation |
|------------------------------|-------------------------------|
| Kristina Goncharenko (chair) | Spirochem |
| Chiara Borsari | University of Basel |
| Piia Kokkonen | University of Eastern Finland |
| Caroline Lanthier | University of Caen Normandy |
| Leire Lorente | University of Siena |
| Michele Mari | University of Urbino Carlo Bo |
| Briuc Matagne | EFMC & LD Organisation |
| Matic Proj | University of Ljubljana |
| Filipa Ramilo Gomes | University of Lisbon |
| Pauline Zipfel | University of Caen Normandy |
| Clemens Zwergel | Sapienza University of Rome |

while early career researchers also need soft-skills training, career advice, as well as to develop their professional network by interacting with more established researchers. Members of the organizing committee therefore included additional topics at the 2018 EFMC-YMCS in Ljubljana, Slovenia, where Dr Dave Alker (Dave Alker Associates, UK) talked about “How to pass an interview successfully” (Figure 3), and Dr Kristina Goncharenko (Spirochem, CH) gave a presentation on “Boosting presentation skills”.



Figure 3. How to pass an interview successfully: Dave Alker at the 2018 EFMC-YMCS in Ljubljana, Slovenia.



Figure 4. Top, Michele Mari presents the YSN to the participants of the 2019 ESMEC school; bottom, group picture at the closure of the 2019 EFMC-YMCS in Athens, in the courtyard of the historical Zappeion building.

The YSN members developed this idea further and established a program of “soft-skills trainings” for the EFMC-YMCS 2019 in Athens, Greece (Figure 4). They also continued networking aperitifs to encourage interactions with established scientists from universities, pharma, biotech companies and contract research organizations (CROs). From this point on, soft-skills training had become an established part of the EFMC-YMCS program.

In addition to the travel grants offered by EFMC, the YSN provides direct support to its members, to facilitate their participation in the EFMC-YMCS. For instance, the EFMC-YSN Prize for the best PhD student in the field of medicinal chemistry and chemical biology consists of a free registration and travel grant to attend an EFMC meeting.

At the beginning of 2020, the coronavirus outbreak forced the YSN to review all its activities. The team decided to jump into the universe of virtual events, with the help of a few ambitious and entrepreneurial PhD students. It decided to hold the annual EFMC-YMCS meeting as a completely virtual conference, while maintaining its program of science and soft-skill trainings. This created the opportunity to open up to a larger audience, while offering it, with the support of the EFMC, for free. These efforts were very successful and the 2020 virtual edition reached almost one thousand participants, mainly from Europe, but also from all around the world.

In parallel, the YSN team decided to organize a virtual poster session. Their initial plans were relatively modest but the idea of an online poster session made its way, to become finally a joint EFMC-ISMC and EFMC-YMCS event, which gathered more than 200 poster presenters in a virtual format.

By May 2020, the YSN had also launched a series of free webinars, the EFMC-YSN MedChemBioOnline.^[11] Its aim was to meet the needs of a scientific community in lockdown, allowing it to continue interacting and sharing ideas. It also aimed to provide early career scientists with opportunities to listen to outstanding scientific talks. They followed the recipe that made the success of the EFMC-YMCS and brought together a keynote lecture by a renowned scientist, and soft-skill training sessions on varying topics. The themes were selected based on the interests expressed by YSN members, with the presentations followed by a round-table discussion.

The development of virtual activities addressed yet another need of the community: facilitating scientific exchange. Many young scientists or early career researchers face limited funding within their institution, making their attendance to conferences around the world difficult. With these recent activities, the YSN is building a library of soft skills training videos, which EFMC aims to make accessible to all. It also plans to develop a freely available e-learning platform on this basis.

YSN is not only supporting career development by facilitating networking and soft-skills training. It will also launch in 2021, together with EFMC, a dedicated “EFMC Mentoring Program” for students, available during the 18 months before the end of their PhDs, and for post-docs. The format will be defined by e-learning and a one-to-one mentoring program, where senior fellows from academia, industry, CROs or biotech companies will mentor 20 selected young researchers, for a

period of up to 12 months. During this time, the mentees will get a chance to evolve and learn from top specialists in the field where they see their future career development.

Most recently, EFMC initiated the EuroMedChem Talents Collection^[12] in collaboration with *ChemMedChem*. This exciting project will highlight the work of promising young career scientists across Europe, and present them in more detail via their biographies. Scientists based in Europe at the time of nomination and who received their PhDs only within the last 12 years are eligible. EFMC, with the *ChemMedChem* editors and board members, will select and invite contributors based on their potential to shape the future of research in medicinal chemistry and chemical biology. All articles will initially be free to read at bit.ly/euromedchem, beginning in 2021.

With these initiatives, the initial dream of the YSN is taking shape: The idea of a platform that would be available for researchers around the world to learn, exchange ideas in a virtual forum, receive mentoring from senior scientists, look for a job and coordinate joint attendance to physical meetings, is getting closer to reality.

Conclusion

The creation of the Young Scientists Network was a defining event in EFMC's recent history. It led to an increased focus on the future of the medicinal chemistry and chemical biology community, by involving early career scientists in EFMC's activities, communication and scientific events. The framework provided by more experienced scientists from both academia and industry made it possible to grow the YSN rapidly, providing support and coaching along the way, while leaving enough space for experimentation and exploration of new ideas. Overall, it is extremely encouraging to see the commitment and dedication of all actors in this adventure. As it celebrates its 50th anniversary, EFMC has become a dynamic and flexible organization, efficiently supporting its mission to advance the science of medicinal chemistry and chemical

biology, and promoting cooperation between the members of its community.

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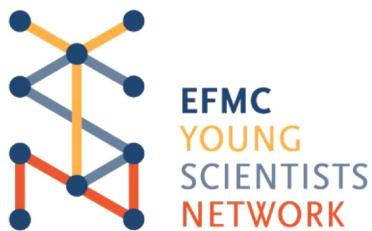
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EDITORIAL

A shot of energy: EFMC's Young Scientists Network (YSN) is barely two years old, but it has already made its mark on the Federation. Driven by a group of dynamic early-career scientists, it nicely complements EFMC's activities. The YSN addresses the needs of young medicinal chemists and chemical biologists, and creates many opportunities for interactions, scientific exchange and networking.



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