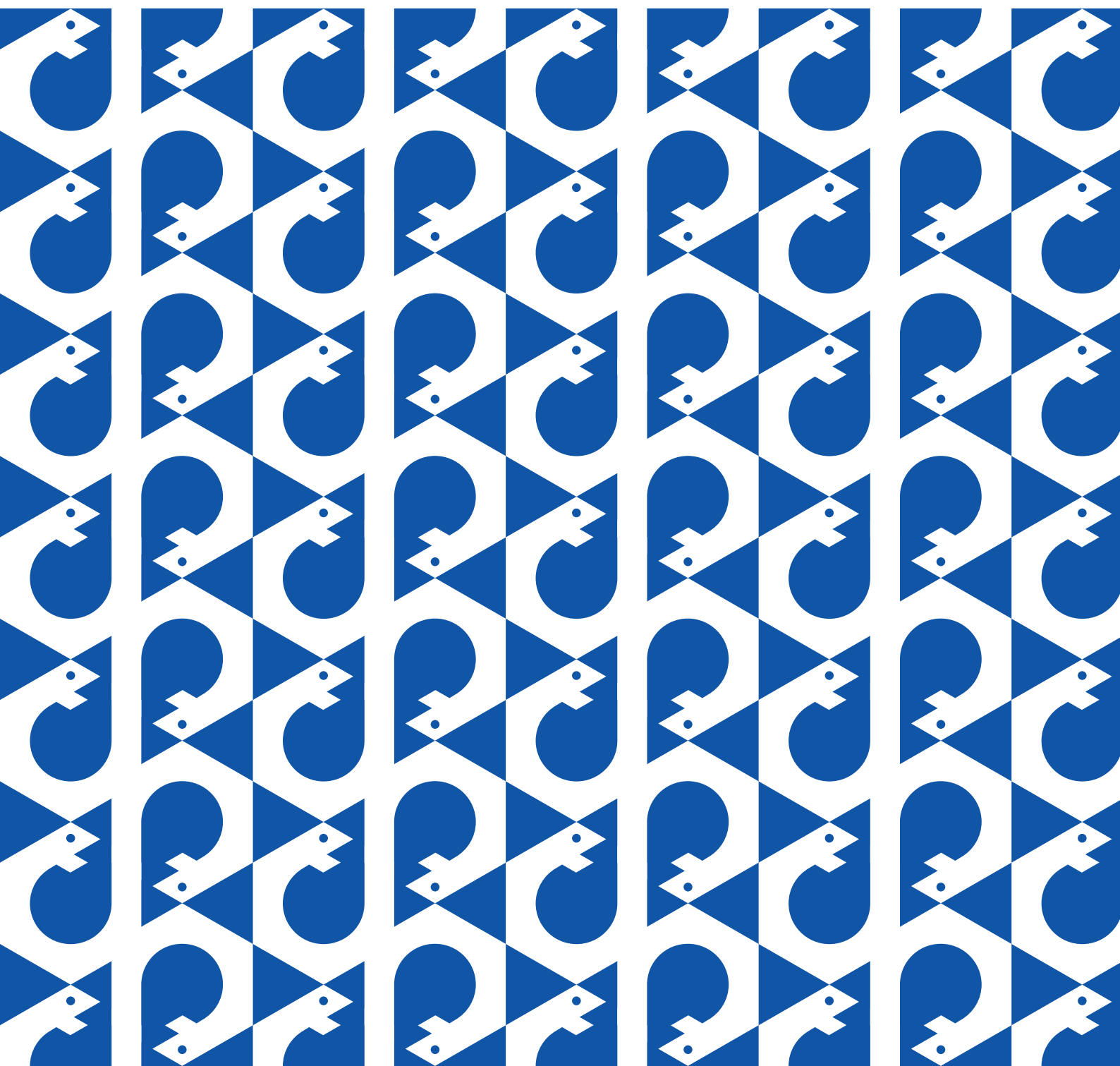
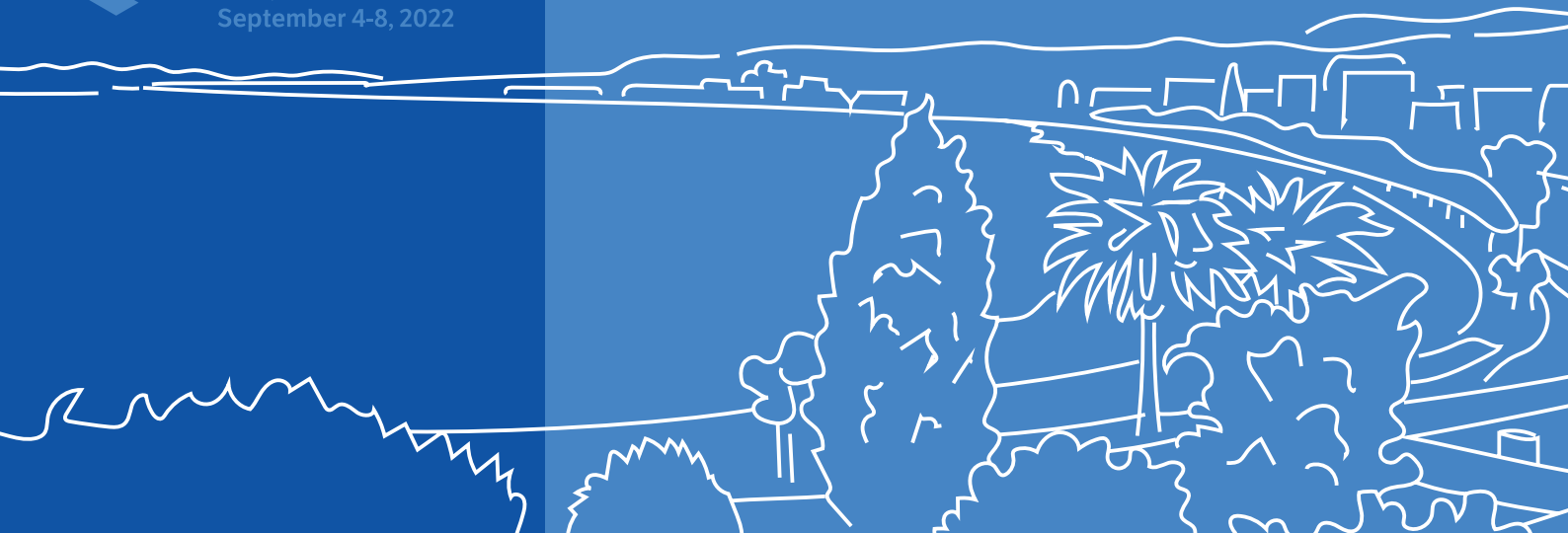


2022

Medicinal Chemistry and
Chemical Biology in Europe





SESSIONS AND SESSION COORDINATORS

CHEMICAL BIOLOGY

ADDRESSING COOPERATIVE LIGAND BINDING IN DRUG DISCOVERY (EUCHEMS SESSION)
Luc Brunsveld (Eindhoven University of Technology, NL)

TARGETING SELF-ASSOCIATING PROTEINS & BIOMOLECULAR CONDENSATES IN DRUG DISCOVERY
Raphaël Frederick (UCLouvain, BE)

BEYOND PROTACS, MONOVALENT AND GLUE DEGRADERS
Laura M. Luh (Bayer, DE)

TARGETING EPIGENETIC MODIFICATIONS IN CANCER THERAPY (ICBS SESSION)
Zaneta Nikolovska-Coleska (University of Michigan, US)

CHEMICAL PROBES FOR TARGET IDENTIFICATION & VALIDATION
Joanna Redmond (GlaxoSmithKline, UK)

IN VIVO CHEMISTRY
Frédéric Taran (CEA/Saclay, FR)

MINING THE PHOSPHOSIGNALING NETWORKS
Nadia Ahmad (Charles River, UK)

DRUG DISCOVERY PROJECTS

DRUG DISCOVERY IN TARGETING NEURODEGENERATIVE DISORDERS (ACS SESSION)
Rong Huang (Purdue University, US)

COVALENT DRUGS
Samir Jegham (Sanofi, FR)

RIISING HORIZONS OF SMALL MOLECULE IMMUNOTHERAPIES AND BEYOND
Antonio Macchiarulo (University of Perugia, IT)

NEW TREATMENTS FOR CURRENT AND FUTURE PANDEMICS
Ana Martinez (CSIC, ES)

TIME TO ACT AGAINST ANTIMICROBIAL RESISTANCE
Maria-Jesus Pérez-Pérez (Instituto de Química Médica, ES)

TARGETING RNA BY SMALL MOLECULES
Hasane Ratni (F. Hoffmann-La Roche, CH)

DRUGGING THE UNDRUGGABLE: TARGETING TRANSCRIPTION FACTORS (ACS SESSION)
Anthony Romero (Oric Pharmaceuticals, US)

RENAISSANCE OF NATURAL-PRODUCT INSPIRED DRUG DISCOVERY IN THE 21ST CENTURY
Boris Vauzeilles (Institut de Chimie des Substances Naturelles, FR)

TECHNOLOGIES

BIOANALYTICS FOR DD: NEW DEVELOPMENTS AND APPLICATIONS OF AFFINITY SELECTION - MASS SPECTROMETRY
Didier Roche (Edelris, FR)

INNOVATIVE SYNTHETIC TECHNOLOGIES FOR DRUG DISCOVERY
Cara Brocklehurst (Novartis, CH)

HIT DISCOVERY WITH DNA-ENCODED LIBRARIES
Andreas Brunschweiler (TU Dortmund, DE)

AI IN DRUG DISCOVERY (CPA SESSION)
Jiang Hualiang (Shanghai Institute of Materia Medica, CN)

METHODS FOR LATE-STAGE FUNCTIONALIZATION
Tobias Ritter (MPI für Kohlenforschung, DE)

GUT SPECIFIC TARGETING STRATEGIES OF DRUG CANDIDATES
Jan Willem Thuring (Janssen, BE)

RADIOCHEMISTRY (AFMC SESSION)
Norio Matsuki (University of Tokyo & AFMC President, JP)

NEXT GENERATION MEDICINAL CHEMISTRY - AN EFMC² SESSION
Session Chair to be announced

OPEN SESSIONS

FIRST TIME DISCLOSURES (I & II)

RECENT HIGHLIGHTS IN MEDICINAL CHEMISTRY

CONFIRMED PLENARY LECTURES

Benoit DEPRez
(Institut Pasteur of Lille, FR)
Eric Miska
(University of Cambridge, UK)
Sarah E. REISMAN
(California Institute of Technology, US)
Outi VARAALA
(Orion Corporation, FI)

EFMC AWARD LECTURES

- The Nauta Pharmacology Award
- The UCB-Ehrlich Award for Excellence in Medicinal Chemistry
- The Prous Institute-Overton and Meyer Award for New Technologies in Drug Discovery

EFMC PARTNER PRIZES

- The IUPAC-Richter Prize in Medicinal Chemistry
- The Klaus Grohe Prize

EFMC PRIZE LECTURES

- EFMC Prize for a Young Medicinal Chemist or Chemical Biologist in Industry
- EFMC Prize for a Young Medicinal Chemist or Chemical Biologist in Academia

INTERNATIONAL ORGANISING COMMITTEE

Symposium Chairman

Dr Luc VAN HIJFTE
(Symeres, NL)

Members

Karl-Heinz ALTMANN
(ETH Zürich, CH)
Roberto DI SANTO
(Sapienza University of Rome, IT)
Maria DUCA
(University of Côte d'Azur, FR)
Pilar MANZANO-CHINCHON
(GlaxoSmithKline, ES)
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(University of Lisbon, PT)
Leena OTSOMAA
(Orion Pharma, FI)
Tatjana ROSS
(Merck Healthcare KGaA, DE)

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Mail: secretariat@efmc-ismc.org
Web: www.efmc-ismc.org

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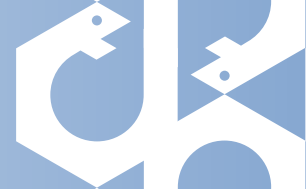


On behalf of



Content

Editorial	2
Corporate Members	4
Executive Committee	5
Council	6
Advisory Board	8
Additional EC partners	8
Influencing EU-Policy	9
Chemical Biology Initiative	10
Best Practices	11
EFMC ²	12
EFMC Young Scientists Network	14
MedChemBioWatch	16
Website	16
EFMC-ISMC 2021 – Report	17
EFMC Honorary Fellows 2020 & 2021 - Ceremony	18
EFMC Awards 2020 - Ceremony	20
EFMC Prizes 2021	22
EFMC-YMCS 2021 - Report	24
EFMC Photo Contest 2021	26
Report on Exchanges with Partner Societies	27
National Adhering Organisations	28



Editorial

Dear colleagues,

At the end of 2021, I would like to highlight some of EFMC activities that helped to strengthen the medicinal chemistry and chemical biology community across Europe, and to reflect on the challenges lying ahead.

Before moving on, I would like to take the opportunity to welcome **Christa Müller** as new member of the EFMC Executive Committee (EC). I am very much looking forward to working with Christa and the other EC members in the upcoming year: Yves P. Auberson (Past President), Anders Karlén (Secretary), Antoni Torrens (Treasurer), Luc Van Hijfte and Gianluca Sbardella, with the support of Henk Timmerman as EFMC Advisor and Kristina Goncharenko as representative of the EFMC Young Scientists Network (YSN). I also want to express my gratitude to Franz von Nussbaum, now leaving the EC, for his extraordinary and unique contribution to EFMC.

My thank you also goes to Danijel Kikelj (Slovenia) and Eylon Yavin (Israel) for their years-long contribution to the EFMC Council and I'm pleased to welcome their successors, Marko Anderluh and Nir London, respectively. I extend a warm welcome to the representatives of our new adhering organisations: Martin Kondza (Bosnia & Herzegovina), Sam Butterworth (Society for Medicines Research – UK) and Boris Vauzeille (Chemical Biology group of the French Chemical Society – France).

Let's now have an overview of the most important events of 2021 and the activities planned by our Federation for 2022.

A REVIEW OF 2021

As you will read throughout this Yearbook, the EFMC had – once again – to adapt its activities in light of the lasting coronavirus pandemic. Alike you all, we had big hopes for a return to presential meetings – and despite the progress of the vaccination – we had no choice but to use again a virtual stage to offer our community a chance to network and share science.

The **XXVIEFMC International Symposium on Medicinal Chemistry** (EFMC-ISMC 2021) took place on August 29-September 2 and gathered hundreds of participants who listened to an extraordinary programme composed by our colleagues of the Division for Medicinal Chemistry & Chemical Biology (DMCCB) of the Swiss Chemical Society.

The **8th EFMC Young Medicinal Chemists' Symposium** (EFMC YMCS 2021) gathered around 200 young investigators around a programme mixing keynote lectures by leaders in the fields, oral communications by national prize winners and poster sessions open to all.

2021 saw again the success of the **EFMC-YSN MedChemBioOnline**, a series of webinars mixing science, soft-skills trainings, and round-table discussions. The success story of the initiative, that comprised four webinars with an average of 500 participants, clearly shows the spirit of endeavour of the younger community. I can only encourage everyone to support our younger generation in their activities and mentor them to always reach greater goals.

EFMC is most grateful to Prof. Karl-Heinz Altmann (EFMC-ISMC 2021 Chair), Yves P. Auberson (EFMC Past-President), Dennis Gillingham & Kristina Goncharenko (EFMC-YMCS 2021 Chairs) as well as all the other committee members and members of the EFMC-Young Scientists Network for their continuous support.

The EFMC working groups provided again valuable contributions in diverse areas, with the appreciated help from many participants. I invite you to have a closer look at the report on their activities on pages 9 to 12 of this Yearbook.

A STRONGER COMMUNITY...

The pandemic showed us the importance of a strong and connected community, and it is moved by this belief that EFMC engaged in several activities aiming at strengthening the links between European researchers, and with the world.

Firstly, I am proud to welcome three new adhering organisations in our Federation: The Society for Medicines Research (UK), the Chemical Biology group of the French Chemical Society (FR) and the Organisation Pharmaceutical Research Institute of Bosnia & Herzegovina. We look forward to fruitful exchanges between communities and to create a strong European network.

The EFMC continued its effort to gather medicinal chemists, chemical biologists, and computational chemists under one roof. By rebranding our newsletter, launching the International Symposium on Chemical Biology (starting from 2023), and encouraging initiatives aiming to show-



case each community, we are reinforcing our idea that all these fields are part of a continuum.

Lastly, we continued and intensified our contacts with partner organisations: Renewed Memorandum of Understanding were signed with the Chinese Pharmaceutical Association, the International Chemical Biology Society and the Division of Medicinal Chemistry of the Brazilian Chemical Society; Joint initiatives were planned with EuChemS and its Life Science Division, and scientific exchanges continued with our colleagues of the Asian Federation for Medicinal Chemistry. Finally, we pleasantly looked at joint initiatives between the EFMC-Young Scientists Network and the ACSMEDI Young Medicinal Chemists Committee, first stones towards a strong collaboration – alike their respective mother societies.

...FACING THE CHALLENGES OF TOMORROW...

Again, the pandemic reminded us that our future is full of challenges, and that scientists and investigators need to be appropriately tooled to overcome them; and deliver the bright future we are all aiming forward to.

EFMC, as a learned society, has to play a role in promoting research at every level, and encourage youngster to embrace the way of science. Inside our community, with **symposia, courses and webinars**, as well as initiatives such as **travel grants, mentoring programmes** or the release of teaching material on **best practices in medicinal chemistry**, we are making sure to always have up-to-date researchers and qualified young investigators. We are welcoming you all to the XXVII EFMC International Symposium on Medicinal Chemistry ([EFMC-ISMC 2022](#)) and the 9th EFMC Young Medicinal Chemists' Symposium ([EFMC YMCS 2022](#)), scheduled to take place in Nice, France on September 4-8 and 8-9, 2022 respectively – or at the 16th [EFMC Short Course on Medicinal Chemistry](#), dedicated to New Opportunities in GPCR Drug Discovery, on May 8-11, 2022 in The Netherlands.

As part of our objective to advance the science of medicinal chemistry and chemical biology, EFMC has decided to launch a programme of certification for chemical biology and medicinal chemistry schools organised in Europe by EFMC National Adhering Organisations (NAO). The call will be launched next January and we invite our members to visit our website for more information.

Supporting our community is of course not the responsibility of EFMC alone. We encourage all the medicinal chem-

istry and chemical biology community to support these efforts, starting in their own professional environment.

...AND RECOGNISING ITS CHAMPIONS.

Because it is important to recognise excellence, in 2022, the EFMC will confer again three awards: The [Nauta Pharmacochimistry Award for Medicinal Chemistry](#) and Chemical Biology, the [UCB-Ehrlich Award for Excellence in Medicinal Chemistry](#) and the [Prous Institute - Overton and Meyer Award for New Technologies in Drug Discovery](#).

We are also proud to, once again, welcome our partner prizes, the **IUPAC Richer Prize** and the **Klaus Grohe Prize**, at the occasion of the XXVII EFMC International Symposium on Medicinal Chemistry (EFMC-ISMC 2022) in Nice.

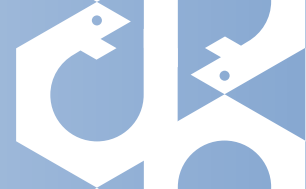
EFMC will furthermore confer the [EFMC Prizes for Young Medicinal Chemists or Chemical Biologist in Academia and Industry](#), to acknowledge the scientific accomplishments of established scientists or rising stars. The [EFMC-YSN PhD Prize](#) on its side, will reward a promising PhD student. The various calls are open until **January 31, 2022** and I encourage everyone to submit nominations.

We will as well continue providing updates on EFMC activities through our monthly newsletter [MedChemBioWatch](#), via the [EFMC LinkedIn group](#), our [Twitter](#), [Facebook](#) and [Instagram](#) accounts (talk to us as [@euromedchem](#)). Our website [www.efmc.info](#) is always updated with the latest information, including a meeting calendar and a job portal.

Let me close by wishing you all the best for a healthy, successful and happy 2022, both in your professional and personal life.

With my best personal regards,

Rui Moreira
EFMC President



Corporate Members

EFMC offers any company the opportunity to become an official Corporate Sponsor. Corporate membership will help the EFMC with its objective of advancing the science of medicinal chemistry and chemical biology and can be achieved by paying an annual fee of 2.000€ to the EFMC.

Companies interested in becoming a Corporate Member should contact the Administrative Secretariat at administration@efmc.info.

CURRENT EFMC CORPORATE MEMBERS



AWARD SPONSORS

EFMC is thankful to the organisations below for helping in its mission to advance the science of medicinal chemistry and chemical biology in acknowledging and supporting excellence in the fields.

The EFMC Awards are distributed biennially at the occasion of EFMC's flagship meeting, the EFMC International Symposium on Medicinal Chemistry.





Executive Committee

The EFMC Executive Committee (EC) consists of seven members: the President, the President Elect or the Past President, the Secretary, the Treasurer and three additional members.

All members of the EC, except the President and the Past President, are elected via secret ballot by the EFMC Council during a Council meeting. After a term of one year, the President Elect will automatically become President. The members of the EC aren't delegates of their respective countries.

All details about the election process can be found in the statutes of the EFMC on the EFMC official website: www.efmc.info

President



Prof. Rui MOREIRA
University of Lisbon
Faculty of Pharmacy
Av. Prof. Gama Pinto
1649-019 Lisbon, Portugal

Past President



Dr Yves P. AUBERSON
Novartis
Global Discovery Chemistry, WKL-136.6.82
Klybeckstrasse 141
4002 Basel, Switzerland

Secretary



Prof. Anders KARLÉN
Uppsala University
Department of Medicinal Chemistry
BMC Box 574
751 23 Uppsala, Sweden

Treasurer



Dr Antoni TORRENS
Welab
Parc Científic Barcelona
C/ Baldiri Reixach 4-8
08028 Barcelona, Spain

Member



Prof. Christa MÜLLER
Pharmazeutisches Institut University of Bonn
An der Immenburg 4
53121 Bonn, Germany

Member

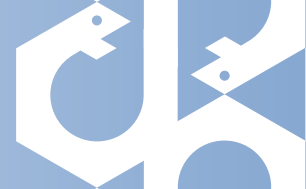


Prof. Gianluca SBARDELLA
University of Salerno
Via Giovanni Paolo II, 132
84084 Fisciano (SA), Italy

Member



Dr Luc VAN HIJFTE
Symeres
Kerkenbos 1013
6546 BB – Nijmegen, The Netherlands



Council

The Council consists of the members of the EC and one delegate of each National Adhering Organisation.

According to the statutes, updated on August 28, 2021, the voting rights are allotted according to the following rules:

- *members of the EC: 1 vote*
- *countries with up to 99 members: 2 votes*
- *countries with 100-199 members: 3 votes*
- *countries with 200-399 members: 4 votes*
- *countries with 400-599 members: 5 votes*
- *countries with 600-899 members: 6 votes*
- *countries with 900-1199 members: 7 votes*
- *countries with 1200-1599 members: 8 votes*
- *countries with 1600-1999 members: 9 votes*
- *countries with 2000-2499 members: 10 votes*
- *countries with 2500-2999 members: 11 votes*
- *countries with more than 3000 members: 12 votes*

As for countries with more than one Adhering Organisation, votes will be proportionally distributed among them, taking into account their respective memberships. The resulting number will be rounded off to the closest digit. In the distribution process, each NAO will receive at least one vote.

CURRENT COUNCIL MEMBERSHIP

Dr David ALKER

David Alker Associates, United Kingdom

The Biological and Medicinal Chemistry Sector (BMCS) of the Royal Society of Chemistry (RSC)

Prof. Marko ANDERLUH

University of Ljubljana, Slovenia

Section for Medicinal Chemistry of the Slovenian Pharmaceutical Society

Dr Yves AUBERSON

Novartis, Switzerland

EFMC Executive Committee

Prof. Sergey BACHURIN

Institute of Physiologically Active Compounds, Russia

The D.I. Mendeleev Russian Chemical Society, Medicinal Chemistry Section

Prof. Ayla BALKAN

Hacettepe University, Turkey

Turkish Association of Medicinal and Pharmaceutical Chemistry

Dr Sam BUTTERWORTH

University of Manchester, United Kingdom

Society for Medicines Research

Prof. Rasmus P. CLAUSEN

University of Copenhagen, Denmark

The Danish Society for Medicinal Chemistry and Chemical Biology

Prof. Bernd CLEMENT

University of Kiel, Germany

German Pharmaceutical Society, Section of Pharmaceutical/Medicinal Chemistry

Prof. Gabriele COSTANTINO

University of Parma, Italy

Division of Medicinal Chemistry of the Italian Chemical Society (DCF-SCI)

Prof. Iwan DE ESCH

VU University Amsterdam, The Netherlands

Section Medicinal Chemistry, Royal Netherlands Chemical Society (KNCV)

Prof. Beatriz DE PASCUAL-TERESA

CEU San Pablo University, Spain

Sociedad Española de Química Terapéutica

Prof. Martin DOLEZAL

Charles University, Czech Republic

Section of Synthetic Drug of the Czech Pharmaceutical Society

Dr Vesna GABELICA MARKOVIC

Croatian Chemical Society, Croatia

Section of Medicinal/Pharmaceutical Chemistry

Prof. Anna K. H. HIRSCH

Helmholtz Institute

for Pharmaceutical Research Saarland, Germany

Division of Medicinal Chemistry of the German Chemical Society (GDCh)



Dr Georg JAESCHKE

F. Hoffmann-La Roche Ltd., Switzerland

Division for Medicinal Chemistry & Chemical Biology (DMCCB) of the Swiss Chemical Society (SCS)

Dr Annika Jenmalm JENSEN

Karolinska Institutet, Sweden

Swedish Pharmaceutical Society

Prof. Anders KARLÉN

Uppsala University, Sweden

EFMC Executive Committee

Prof. György Miklós KESERU

Hungarian Academy of Sciences, Hungary

Organic and Medicinal Chemistry Division (OMCD) of the Hungarian Chemical Society (HCS)

Prof. Katarzyna KIEC-KONONOWICZ

Jagiellonian University, Poland

Polish Society of Medicinal Chemistry

Dr Martin KONDZA

University of Mostar, Bosnia-Herzegovina

Organization Pharmaceutical Research Institute

Prof. Thierry LANGER

University of Vienna, Austria

Austrian Chemical Society, Medicinal Chemistry Section

Dr Nir LONDON

The Weizmann Institute of Science, Israel

The Medicinal Chemistry Section of the Israel Chemical Society

Prof. Emmanuel MIKROS

University of Athens, Greece

Hellenic Society of Medicinal Chemistry

Prof. Rui MOREIRA

University of Lisbon, Portugal

EFMC Executive Committee

Prof. Christa MÜLLER

University of Bonn, Germany

EFMC Executive Committee

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University of Belgrade, Serbia

Serbian Chemical Society, Division of Medicinal Chemistry

Prof. Sebastien PAPOT

University of Poitiers, France

Société de Chimie Thérapeutique (SCT)

Dr Laurent PROVINS

UCB, Belgium

Société Royale de Chimie (SRC), Medicinal Chemistry Division

Prof. Jarkko RAUTIO

University of Eastern Finland, Finland

Finnish Pharmaceutical Society

Prof. Gianluca SBARDELLA

University of Salerno, Italy

EFMC Executive Committee

Prof. Maria Emilia SOUSA

University of Porto, Portugal

Division of Medicinal Chemistry of the Portuguese Chemical Society

Dr Antoni TORRENS

Welab, Spain

EFMC Executive Committee

Prof. Serge VAN CALENBERGH

Ghent University, Belgium

Medicinal and Bioorganic Chemistry Division of Royal Flemish Chemical Society (KVCV)

Dr Luc VAN HIJFTE

Symeres, The Netherlands

EFMC Executive Committee

Dr Boris VAUZEILLES

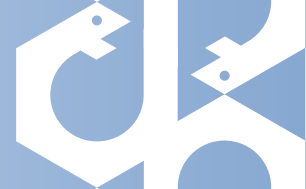
CNRS, France

Chemical Biology Group of the French Chemical Society (SCF-ChemBio)

Prof. Raivis ZALUBOVSKIS

Latvian Institute of Organic Synthesis, Latvia

Latvian Association for Medicinal Chemistry



Advisory Board

The Advisory Board is a consulting body for the EFMC Executive Committee (EC) and provides advice on EFMC's policies, strategies and main initiatives. It is composed of well-recognised scientists in medicinal chemistry and chemical biology, and is chaired by the EFMC Past-President.

CHAIR

Dr Yves P. AUBERSON

Novartis, Switzerland

ADVISORY BOARD MEMBERS

Prof. Maria Laura BOLOGNESI

University of Bologna, Italy

Dr Karin BRINER

Novartis, United States

Dr Ingo HARTUNG

Merck, Germany

Prof. Hermen OVERKLEEF

Leiden University, The Netherlands

Prof. Herbert WALDMANN

Max Planck Institute of Molecular Physiology, Germany

To see the current and previous composition of the Advisory Board, please [click here](#).

Additional EC partners

Non-members of the Advisory Board, but supporting the Executive Committee in managing EFMC. They are invited to EC meetings and provide advice in their areas of expertise:

Prof. Henk TIMMERMAN

VU Amsterdam, The Netherlands

Advisor to the EC

Dr Kristina GONCHARENKO

Zifo RnD Solutions, Switzerland

Delegate of the EFMC Young Scientists Network



Influencing EU-Policy

The EU-Policy working group aims to highlight the role of Medicinal Chemistry and Chemical Biology as a key players for addressing global health issues, as well as to position the EFMC as an expert organisation in the discipline.

Two specific goals have been identified:

- *To increase visibility, awareness and funding of Medicinal Chemistry and Chemical Biology*
- *To identify and recommend lobbying strategies at the EU, regional and national levels*

During the year, the EFMC EU Policy group has continued to work with EufEps, EuChemS, APV, EPhAR, EuroTox and FEBS, that together represent close to 200.000 researchers, to establish the European Science for Health (EurSci4Health) platform. EurSci4Health aims to promote innovative research and technologies, enabling affordable and transformational changes in healthcare, by mobilizing scientists and citizens. Its objectives are to advise scientific policies for health, within European institutions, in order to facilitate the integrated development, regulation and use of diagnostics, therapeutics and other health technologies.

To follow up on the meeting held in 2020 and to continue to promote the mission of EurSci4Health we planned to hold a one-day workshop during 2021. However, due to unforeseen circumstances this workshop has been postponed to 2022 and we are now in the planning process for this event.

CURRENT MEMBERSHIP

Anders KARLÉN (Chair)

Uppsala University, Sweden

Phil JONES

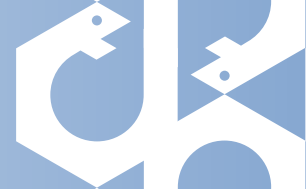
BioAscent Discovery, United Kingdom

Peter SJÖ

Drugs for Neglected Diseases initiative (DNDi), Switzerland

Franz VON NUSSBAUM

Nuvisan, Germany



Chemical Biology Initiative

Chemical Biology has long been an important part of EFMC activities and events. To further emphasize the importance of the chemical biology – medicinal chemistry continuum, EFMC recently changed its name to European Federation of Medicinal chemistry and Chemical biology. The long-lasting activities of EFMC in the field of chemical biology are underlined not only by displaying this field in the name of the Federation but more importantly by increasing dedicated activities, reinforcing the chemical biology network in Europe and abroad, and also creating the Chemical Biology Initiative. The latter is represented by a working group currently including eight scientists representing the large field of chemical biology, belonging to different member societies and working in different countries. Members of this initiative are working on the engagement of EFMC toward the chemical biology community in Europe and toward the best representation possible of all the different facets of this dynamic and interdisciplinary field.

During this year, the working group published an Editorial piece in the journal ChemBioChem (Wiley) to describe chemical biology as currently understood by EFMC, including all activities dealing with the design and synthesis of biologically active chemical tools and their use to probe, characterise, or influence biological systems. Furthermore, it organised an e-symposium in collaboration with ChemBioChem (Chemistry Europe) on October 19 in the presence of Ed Tate (Imperial College London, UK), Sascha Hoogendoorn (University of Geneva, Switzerland) and Thomas Carell (Ludwig-Maximilians-Universität München, Germany).

Finally, as the name of MedChemWatch changed to MedChemBioWatch to reflect the evolution and inclusiveness of EFMC activities, the Chemical Biology Initiative members actively participate to this publication with literature highlights, institutes and teams' presentations, to keep the community updated on chemical biology activities, events and awards.

This is just the beginning and many new activities are coming: in 2022, chemical biology will be one of the themes of the EFMC-ISMC in Nice, and 2023 will see the first edition of the EFMC International Symposium on Chemical Biology (EFMC-ISCB), organised for the first time by EFMC in collaboration with the Swiss chemical Society, and which will take place in Basel, Switzerland.

CURRENT MEMBERSHIP

Maria DUCA (Chair)

University of Côte d'Azur, France

Yves AUBERSON

Novartis, Switzerland

Dennis GILLINGHAM

University of Basel, Switzerland

Christian Adam OLSEN

University of Copenhagen, Denmark

Gianluca SBARDELLA

University of Salerno, Italy

Mario VAN DER STELT

University of Leiden, The Netherlands

Boris VAUZEILLES

*Institut de Chimie des Substances Naturelles (ICSN),
France*

Olalla VAZQUEZ

Marburg University, Germany



Best Practices

Have you ever wondered how medicinal chemists work in other companies or in academia? Are there important trends or new technologies that you may have missed?

Our group is working on creating educational material on best practices in Medicinal Chemistry to help answer these questions. The main target audiences are students and early career chemists but we hope it will also be valuable for experienced practitioners.

As medicinal chemistry is a rather large field, we decided to first focus on the early phase of drug discovery: **generating high quality chemical starting points for optimization**. This is a critical part of our drug discovery effort since the speed and success of a programme highly depends on the quality of the starting points we find and select. Medicinal chemists have a key role to play in this early phase so the more we know about it, the more we can have an impact.

This year, we released our 3rd topic: **“Hit Generation”**. Hit Generation is a crucial step in the drug discovery process. Accessing high quality hits will greatly increase the speed and chance of success to identify drug candidates. We present current approaches to generate hits covering high throughput, focused or in silico screening as well as fragment based screening or DNA encoded libraries. We then detail the strategies and techniques to validate hits to confirm their relevance to the target of interest. Finally, we highlight the importance of having an integrated strategy combining several approaches.

The material is available as a set of slides containing the best practices as well a case study. These are also available as webinars for you to watch. You can find all of this on the [EFMC Youtube channel](#) and [website](#). We hope this will help students, early career professionals as well as experienced researchers to get an overview of possible approaches and how to design a successful hit generation campaign. In addition, this may serve to enrich teaching material at universities and companies.

CURRENT MEMBERSHIP

Jean QUANCARD (Chair)

Novartis, Switzerland

Anders BACH

University of Copenhagen, Denmark

Brian COX

University of Sussex, United Kingdom

Russel CRAFT

Symeres, Netherlands

Stephanie GUERET

AstraZeneca, Sweden

Ingo HARTUNG

Merck, Germany

Hannes KOOLMAN

Boehringer Ingelheim, Germany

Stefan LAUFER

University of Tübingen, Germany

Josef MESSINGER

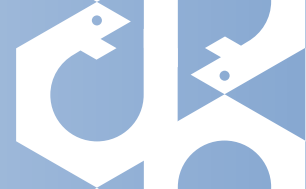
Orion Corporation, Finland

Gianluca SBARDELLA

University of Salerno, Italy

Anna VULPETTI (Guest contributor)

Novartis, Switzerland



EFMC²

The **Computational Chemistry Initiative** (EFMC²) is a newly created EFMC working group aiming at representing and showcasing the modelling/digital/informatics community in Europe, advocating on digital techniques across Europe and connecting industry and academia.

Integrated in the EFMC's fields of expertise, such as medicinal chemistry and chemical biology, the EFMC² will work towards better defining the scope of computational chemistry, better uniting the various communities, and follow the evolution of this scientific discipline.

Various topics will be addressed:

→ Retrosynthesis

- *What can these tools be used for?*
- *What are the possible advances to be made?*

→ Computational-related Case Studies

- *How can in silico methods aid project teams?*

→ Digital in the Lab (AI/Digital-LabInterface)

- *How do digitally enabled project teams work (socially, design meetings)?*
- *Digital in the lab*

→ Crystal structure prediction

- *Can predictions of crystal structures help with solubility issues?*
- *What is available to project teams?*

→ Modelling of in vivo/ex vivo assays

- *What is the state of the art? What is a reliable model?*

→ Generative Chemistry in Drug Discovery

- *What is real and what is hype?*

MEMBERS

Franz VON NUSSBAUM (Chair)

Nuvisan, Germany

Xavier BARRIL

Barcelona University, Spain

Andreas BENDER

University Cambridge, United Kingdom

Nathan BROWN,

BenevolentAI, United Kingdom

Clara CHRIST

Bayer, Germany

Zoe COURNIA

Biomedical Research Foundation Academy of Athens, Greece

Gerhard HESSLER

Sanofi, Germany

Richard LEWIS

Novartis, Switzerland

Klaus LIEDL

University of Innsbruck, Austria

Sereina RINIKER

ETH Zürich, Switzerland

Zara SANDS

Confotherapeutics, Belgium

SHORT COURSE

16th EFMC Short Course on Medicinal Chemistry

NEW OPPORTUNITIES IN GPCR DRUG DISCOVERY

May 8-11, 2022
Oegstgeest, The Netherlands

Scope

This intensive course is intended for scientists working in the field, and the presentations will be given by senior scientists from industry and academia. The number of participants is limited to 35, to allow in depth discussion.

Course Outline

G-protein coupled receptors represent the largest class of drug targets, as they serve for about 30% of the known drugs, but many of them are still orphan.

In the last 15 years, however, we witnessed dramatic developments in the structural biology and pharmacology of GPCRs. High resolution X-ray and cryo-EM structures made the design of the GPCR ligands more rational. The widening knowledge on their signalling resulted in new concepts such as allosteric modulation, GPCR residence time and biased signalling currently tested in clinical trials.

This course will provide an introduction for medicinal chemists to this important target class including:

- concepts and methods applied in the structural biology, modelling, systems biology, pharmacology and medicinal chemistry of GPCRs;
 - a series of medicinal chemistry case studies, including the discovery of molecular probes, tool compounds, clinical candidates and marketed drugs.
-

Course Organisers

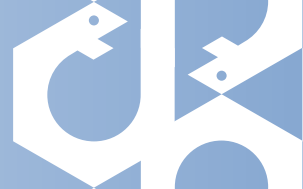
György Miklós Keserü
Research Centre for Natural Sciences, Hungarian Academy of Sciences, Hungary

Rob Leurs
Vrije Universiteit Amsterdam, The Netherlands

Local Organiser

Henk Timmerman
Vrije Universiteit Amsterdam, The Netherlands

Laura Heitman
University of Leiden, The Netherlands



EFMC Young Scientists Network

As the global pandemic continued impacting the physical events, the EFMC-Young Scientist Network (EFMC-YSN) continued its series of **MedChemBioOnline** webinars, with the aim of meeting the current needs of our scientific community to continue interacting and sharing ideas and innovation, as well as providing early career scientists with opportunities to listen to outstanding scientists and expand their knowledge.

Four editions took place in 2021, each time mixing keynote lecture, soft-skills training, and round table discussions. The thematic were as diverse as interesting and gathered each time hundreds of attendees. For those of you who might have missed one or more webinars, most of the content is now available as replay on the [EFMC YouTube Channel](#).

The webinars will of course come back in 2022 and we invite you to regularly browse www.efmc.info/efmc-ysn-med-chembioonline for updated information.

The EFMC-YSN also partnered with the ACS MEDI Young Medicinal Chemists Committee to organise the **1st Medicinal Chemistry: A Global Perspective** webinar during which the audience was familiarised with key concepts of Medicinal Chemistry and Chemical Biology and got the opportunity to hear the stories of successful scientists. In addition, the EFMC-YSN was invited to host another round table discussion at the occasion of the GDCh's **MedChemCASE #11**. This panel discussion gathered various foreign scientists who shared their experience of living and working in Germany.

Virtual events were not the only activities of the network, who announced the second edition of the **EFMC-YSN PhD Prize**, aiming at rewarding excellence from the very early stage. This initiative will be continued in 2022 and we invite you to apply on www.efmc.info/ysn-phd-prize.

Grants also made an awaited return, and while it was not possible for students to attend presential meetings in 2021, the lower registration fees for the virtual format of both the XXVI EFMC International Symposium on Medicinal Chemistry (EFMC-ISM 2021) & 8th EFMC Young Medicinal Chemists' Symposium (EFMC-YMCS 2021) allowed to fund twice as many grants.

Finally, the team launched a **mentoring programme** with the goal of connecting motivated students (up to 18 months before the end PhD) and Post-docs with high-pro-

file mentors. The main goal being to broaden the perspectives of the mentees and better prepare them to enter the job market. Encouraged by the success of this initiative, the programme will be launched again in 2022.

Interested in learning more? Visit www.efmc.info/ysn.

EFMC COMMUNICATION TEAM

In these troubled times of coronavirus outbreak, the team focused their efforts in sharing important news as well as lighter messages on the various social media of the EFMC: LinkedIn, Twitter (@EuroMedChem), Facebook and Instagram. We invite all of those who are not yet following us to do so quickly, this is the place to be!

The 4th edition of the **Annual Photo Competition** was held virtually at the occasion of XXVI EFMC International Symposium on Medicinal Chemistry (EFMC-ISM 2021). Contestant were asked to share their best pictures of "Bridging MedChem & ChemBio" and meeting attendees could vote via the EFMC Virtual Booth.

At the occasion of the 8th EFMC Young Medicinal Chemists' Symposium (EFMC-YMCS 2021), the communication team attempted to recreate **networking opportunities** between early career scientists by hosting a **virtual networking evening**. Participants gathered around a glass of a characteristic drink of their home region, a few snacks and joined for an evening of informal chat and quizzes.

The team continued the series of interviews of Medicinal Chemists and Chemical Biologists, and also welcomed Computational Chemists to share their stories and views on the future of their research field. These portraits aim to show all the various faces behind our community, and can be seen on www.efmc.info/iamamedicinalchemist.

For the year to come, the team will be back with plenty of activities – so stay tuned on our social media channels or on the website www.efmc.info/activities!

FOLLOW THE EFMC ON SOCIAL MEDIA



FOLLOW THE EFMC YOUNG SCIENTISTS NETWORK ON SOCIAL MEDIA





MEET THE TEAM



Kristina GONCHARENKO
Zifo RnD Solutions, Switzerland (Chair)



Nadia AHMAD
Charles River, United Kingdom



Piia BARTOS
University of Eastern Finland, Finland



Chiara BORSARI
University of Basel, Switzerland



Laia JOSA-CULLERE
Institute for Advanced Chemistry of Catalonia (IQAC-CSIC), Spain



Etienne J. DONCKELE
Monte Rosa Therapeutics, Switzerland



Caroline LANTHIER
University of Antwerp, Belgium



Michele MARI
University of Urbino Carlo Bo, Italy



Brieuc MATAGNE
EFMC & LD Organisation, Belgium



Marta PIQUERO
University of Basel, Switzerland



Matic PROJ
University of Ljubljana, Slovenia



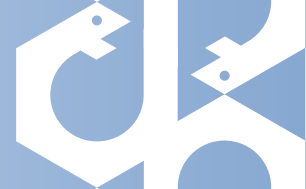
Filipa RAMILO GOMES
F. Hoffmann-La Roche, Switzerland



Luc Van HIJFTE
Symeres, The Netherlands (EFMC EC Sponsor)



Clemens ZWERGEL
Sapienza University of Rome, Italy



MedChemBioWatch

Established in 2007 as the official newsletter of the EFMC, MedChemBioWatch has evolved throughout the years to reach its current form: a **monthly e-newsletter** providing readers with updates on the activities of the EFMC, its committees and working groups, literature spotlights, news from the National Adhering Organisations and partners, and with information on EFMC meetings and approved events.

As of June 2021, the newsletter has been rebranded “MedChemBioWatch” to match the EFMC long-term vision for its role in representing both the medicinal chemistry and the chemical biology community.

Eager to provide enriched content, the Editorial Committee always welcomes suggestions and ideas from the community, and invites all readers to send feedback to administration@efmc.info.

EDITORIAL COMMITTEE

Nadia AHMAD

Charles River & EFMC-YSN, United Kingdom

Brieuc MATAGNE

LD Organisation & EFMC, Belgium

Website

The EFMC website (www.efmc.info) is the one-stop-shop to learn about all the activities of the European Federation for Medicinal Chemistry and Chemical Biology, and of its National Adhering Organisations.

Whether you want to read the latest news or learn about the recent activities, learn more about the EFMC and its committees, consult the job portal, apply for a grant or submit a nomination for an award or a prize, the EFMC website will allow you to easily find the information.

The website also lists all the EFMC organised, sponsored and certified events, as well as the meetings from National Adhering Organisations and other partners. The regularly updated “[meeting calendar](#)” is thus the perfect tool to rapidly find the most important meetings related to Medicinal Chemistry and Chemical Biology.

SOCIAL MEDIA

Find and follow the EFMC on social media!





EFMC-ISMIC 2021 – Report



The virtual edition of the XXVI EFMC International Symposium on Medicinal Chemistry (EFMC-ISMIC 2021) took place on August 29-September 2, 2021. More than 850 scientists from all over the globe virtually connected to listen to the cutting-edge science presented by the 78 invited speakers, 38 Oral Communications and 267 poster presenters over the five days of the conference.

The scientific programme covered **advances in drug discovery in major therapeutic areas**, including bacterial and viral infections, diseases of the brain, heart, and respiratory system, fibrotic diseases, and cancer. EFMC-ISMIC 2021 presented the most recent advances in new technologies such as, artificial intelligence in drug discovery and chemical synthesis, the role carbohydrates in disease pathology and carbohydrate-based drug discovery, the exploitation of RNA as drug target, small molecule-induced stem cell differentiation, or the impact of cryo-EM on drug discovery and design. In a series of dedicated sessions, **the interface between chemical biology and drug discovery** has been highlighted, including topics such the use of chemical probes for target discovery, molecular imaging, and photochemical approaches. In response to frequent requests by attendees of previous conferences, two sessions have been dedicated to advances in **synthetic methodology for drug discovery**.

The opening ceremony was chaired by the EFMC Past-President, **Dr Yves P. Auberson** (Novartis, Switzerland) and the Symposium Chair, **Prof. Karl-Heinz Altmann** (ETH Zürich, Switzerland). Hosted at the Novartis Campus in Basel, it provided an ideal stage to host the 2020 EFMC Awards' Ceremonies, as well as the "EFMC Honorary Fellows" Ceremonies of both 2020 and 2021. The introductory talk by **Dr Karin Briner** (Novartis, United States) on "Creating the Next Generation of Therapeutics - Medicinal Chemistry Unleashed" set the tone for an inspiring meeting. **Prof. Ad P. IJzerman** (Leiden University, The Netherlands), winner of the Nauta Pharmacochimistry Award for Medicinal Chemistry and Chemical Biology, delivered a lecture on "Partial Agonism in the Picture".

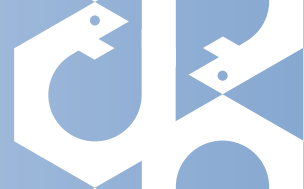
Dr Malin Lemurell (AstraZeneca, Sweden), winner of the UCB-Ehrlich Award for Excellence in Medicinal Chemistry, spoke about "Experiences & Future Direction for Medicinal Chemistry in Cardiovascular, Renal and Metabolism Diseases". The last lecture of the day was delivered by **Prof. Gisbert Schneider** (ETH Zürich, Switzerland), winner of the Prous Institute - Overton and Meyer Award for New technologies in Drug Discovery. The talk focused on "de novo Drug Design with Machine Intelligence". Concluding the day, the "[EFMC Honorary Fellows](#)" Ceremony enabled the EFMC to thank the individuals who have provided outstanding support to the EFMC and contributed in strengthening the position of medicinal chemistry, chemical biology, or related fields in Europe.

In the following four days, the participants attended a busy programme of 4 plenary lectures, 6 prize lectures, 25 themed sessions, two plenary first-time disclosures sessions, company workshops, and poster sessions. Among the posters presented, ten were awarded an EFMC Best Poster Prize. Twenty young scientists were also awarded a free subscription to the event by the EFMC.

Amongst many highlights of the programme were the plenary lectures by **Dr Jean-Paul Clozel** (Idorsia Pharmaceuticals, Switzerland), **Prof. Phil Baran** (The Scripps Research Institute, United States), **Prof. Stefan Knapp** (Goethe University Frankfurt, Germany), and the 2020 IUPAC-Richter Prize Lecture by **Dr John E. Macor** (Sanofi, United States). The closing lecture was delivered by **Prof. Stephan Seiber** (Technical University Munich, Germany), who received the 2020 Klaus Grohe Award.

Despite the virtual format, the organisers put all their efforts into ensuring as many networking opportunities among participants as possible, with a virtual conference centre offering a chat system, one-to-one video calls, interactive poster sessions and virtual exhibition gathering 32 exhibitors – to whom we are thankful for their support throughout these uncertain times.

We would like to thank again all our committee members, speakers, sponsors, exhibitors, and of course participants for their support – and we look forward to warmly meeting you all under the bright sun of the French Riviera for the **XXVII EFMC International Symposium on Medicinal Chemistry (EFMC-ISMIC 2022)**, which will take place on September 4-8, 2022 in Nice, France.



EFMC Honorary Fellows 2020 & 2021 - Ceremony

To mark its jubilee, the EFMC established a recognition programme, consisting of a **life-long title and associated medal**, to recognise the individuals who have provided outstanding support to the EFMC and contributed in strengthening the position of medicinal chemistry, chemical biology or related fields in Europe.

Due to the coronavirus pandemic, the official ceremonies for both the 2020 and 2021 editions of the **EFMC Honorary Fellows** took place during the XXVI EFMC International Symposium on Medicinal Chemistry (EFMC-ISMC 2021), held on August 29-September 2, 2021 in a hybrid format: virtually and from the Novartis Campus in Basel, Switzerland.



More information about the awardees and nomination for the 2022 call can be found [here](#).

The ceremony was hosted by **Dr Yves P. Auberson** (Past EFMC President) and **Prof. Rui Moreira** (EFMC President).

The EFMC Honorary Fellows ceremony was an important moment to take time to recognise the people who have forged EFMC, who have developed it, who have kept our community moving regarding how we are organised, how we communicate, how medicinal chemistry and chemical biology are encouraged and come together. These awardees have dedicated many years of efforts to support our community at large, and this recognition is only a small token of the way we perceive and appreciate their contribution. We would like to name the following EFMC members as Honorary Fellows:

- **Prof. Henk Timmerman**
VU University, The Netherlands
- **Prof. Ferran Sanz**
University Pompeu Fabra, Spain
- **Prof. Roberto Pellicciari**
TES Pharma, Italy
- **Prof. Gerhard Ecker**
University of Vienna, Austria
- **Prof. Uli Stilz**
Novo Nordisk, United States
- **Prof. Koen Augustyns**
University of Antwerp, Belgium
- **Prof. Chris De Graaf**
Sosei Heptares, United Kingdom
- **Prof. Bernd Clement**
University of Kiel, Germany
- **Mrs Ly Differding LD Organisation, Belgium and Dr Edmond Differding Differding Consulting, Belgium**
- **Prof. Wijbe Nauta (d. 1986)**, whose medal was received by Prof. Henk Timmerman on behalf of Dr Andele Nauta
- **Dr Emilio Kyburz (d. 2005)**, whose medal was received by Dr Georg Jaeschke on behalf of the Swiss Chemical Society

HONORARY FELLOWS 2022

Call for Nominations

Deadline: January 31, 2022

The award ceremony will take place during the opening of the XXVII EFMC International Symposium on Medicinal Chemistry (EFMC-ISMC 2022), scheduled to take place in Nice, France on September 4-8, 2022. Appointed Honorary Fellows will be invited to attend the meeting and receive their recognition on stage.

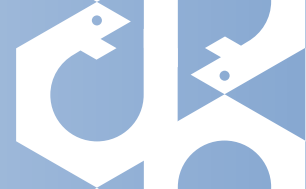
This life-long title and associated medal aim to recognise the individuals who have provided outstanding support to the EFMC and contributed in strengthening the position of medicinal chemistry, chemical biology or related fields in Europe.

Nomination can be submitted **until January 31, 2022** via the EFMC website and should include:

- Brief curriculum of the nominee
- Statement of the documented facts supporting the nomination, summarizing scientific achievements and support of EFMC activities (maximum two pages).
- Two seconding nomination letters.

Self-nominations are not accepted. There are no age restrictions, and nominees may have an academic or industrial background. Nominees should be European resident or have spent a considerable proportion of their career in Europe.

Please visit www.efmc.info/honorary-fellows
for more information and nominations



EFMC Awards 2020 - Ceremony

The [*Nauta Pharmacochemistry Award for Medicinal Chemistry and Chemical Biology*](#), The [*UCB-Ehrlich Award for Excellence in Medicinal Chemistry*](#) and the [*Prous Institute - Overton and Meyer Award for New Technologies in Drug Discovery*](#) have been awarded in 2020.

Due to the coronavirus pandemic, the 2020 ceremony has been postponed and the awards have been conferred at the occasion of the opening ceremony of the XXVI EFMC International Symposium on Medicinal Chemistry (EFMC-ISMC 2021), which took place in a hybrid format on August 29, 2021: virtually and from the Novartis Campus in Basel, Switzerland.

THE NAUTA PHARMACOCHEMISTRY AWARD FOR MEDICINAL CHEMISTRY AND CHEMICAL BIOLOGY

The *Nauta Pharmacochemistry Award for Medicinal Chemistry and Chemical Biology* was established to honour the memory of Prof. Dr. W. Th. Nauta, whose activities have been very important for the advancement of medicinal chemistry in general, and the development of international organisational structures for this discipline.



Prof. Adriaan Ijzerman

Leiden University, The Netherlands

received his award from both Dr Yves P. Auberson (EFMC President in 2020) and Prof. Henk Timmerman (W. Th. Nauta Foundation for Pharmacochemistry), before delivering a lecture entitled **Partial Agonism in the Picture**.

THE UCB-EHRLICH AWARD FOR EXCELLENCE IN MEDICINAL CHEMISTRY

The *UCB-Ehrlich Award for Excellence in Medicinal Chemistry* was established to acknowledge and recognise outstanding research in the field of Medicinal Chemistry in its broadest sense.



Dr Malin Lemurell

AstraZeneca, Sweden

virtually received her award from both Dr Yves P. Auberson (EFMC President in 2020) and Dr Adrian Hall (UCB), before delivering a lecture entitled **Experiences & Future Direction for Medicinal Chemistry in Cardiovascular, Renal and Metabolism Diseases**.

THE PROUS INSTITUTE - OVERTON AND MEYER AWARD FOR NEW TECHNOLOGIES IN DRUG DISCOVERY

The *Prous Institute-Overton and Meyer Award for New Technologies in Drug Discovery* was established to encourage innovation and investigation in technologies related to drug discovery.



Prof. Gisbert Schneider

ETH Zürich, Switzerland

received his award from both Dr Yves P. Auberson (EFMC President in 2020) and Dr Josep Jr. Prous (Prous Institute), before delivering a lecture entitled **de novo Drug Design with Machine Intelligence**.

AWARDS 2022

Call for Nominations **Deadline: January 31, 2022**

The awards will be conferred on the occasion of the XXVII EFMC International Symposium on Medicinal Chemistry (EFMC-ISMC 2022) to be held in Nice, France on September 4-8, 2022.

THE NAUTA PHARMACOCHEMISTRY AWARD FOR MEDICINAL CHEMISTRY AND CHEMICAL BIOLOGY

For outstanding achievements in scientific research, together with a contribution to the development of international organisational structures in Medicinal Chemistry and Chemical Biology.

THE UCB-EHRLICH AWARD FOR EXCELLENCE IN MEDICINAL CHEMISTRY

To acknowledge and recognize outstanding research in the field of Medicinal Chemistry in its broadest sense by a young scientist. This Award has been established with the support of UCB Pharma.

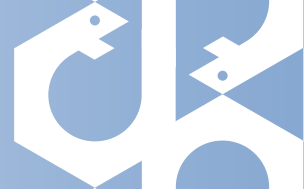
THE PROUS INSTITUTE-OVERTON AND MEYER AWARD FOR NEW TECHNOLOGIES IN DRUG DISCOVERY

To encourage innovation and investigation in technological development related to drug discovery, this Award established with the support of Prous Institute will be given for the discovery, evaluation or use of new technologies.

Nominations for these Awards consist of a nomination letter, a brief CV, including a list of selected publications and two supporting letters. Self-nominations are also accepted. The nominations should be submitted to Prof. Rui Moreira, President of the EFMC, via the EFMC website (www.efmc.info/awards).

**Please visit www.efmc.info/awards for more
information and Award regulations**





EFMC Prizes 2021

EFMC PRIZES FOR A YOUNG MEDICINAL CHEMIST OR CHEMICAL BIOLOGIST IN ACADEMIA/INDUSTRY

The [EFMC Prize for a Young Medicinal Chemist or Chemical Biologist in Academia](#) and the [EFMC Prize for a Young Medicinal Chemist or Chemical Biologist in Industry](#) have been established by the European Federation for Medicinal Chemistry and Chemical Biology to acknowledge and recognise an outstanding young medicinal chemist working in academia or in industry within Europe. The prizes are given annually and consist of a diploma, €1.000 and an invitation for a short presentation at an EFMC Symposium. Two nominees are also identified and acknowledged.



The selection committee designated **Dr Niall Anderson** (*GlaxoSmithKline, United Kingdom*) as the winner of the *2021 EFMC Prize for a Young Medicinal Chemist or Chemical Biologist in Industry*.

Dr Stephanie Gueret (*AstraZeneca, Sweden*) and **Dr Christian Kramer** (*F. Hoffmann-La Roche, Switzerland*) have been recognised as the most meritorious runners-up.



Prof. Nir London (*Weizmann Institute of Science, Israel*) won the *2021 EFMC Prize for a Young Medicinal Chemist or Chemical Biologist in Academia*.

Prof. Finn Hansen (*University of Bonn, Germany*) and **Prof. Markus Muttenthaler** (*University of Vienna, Austria*) have been recognised as the most meritorious runners-up.

Due to the coronavirus pandemic, both the 2020 and 2021 Prize ceremonies have been hosted virtually at the occasion of the XXVI EFMC International Symposium on Medicinal Chemistry (EFMC-ISMC 2021), which took place on August 29-September 2, 2021.

More information about the 2022 Prizes
is available on www.efmc.info/prizes.

EFMC-YSN PHD PRIZE

The EFMC-YSN PhD Prize, created in 2020 as an initiative of the EFMC Young Scientists Network to recognise excellence and merits at the early stage, was again awarded in 2021.



The selection committee designated **Dr Nikolaj Sten Troelsen** (*ALK-Abelló, Denmark*) as the winner of the *2021 EFMC-YSN PhD Prize*.

The 2020 and 2021 Prize ceremonies for the EFMC-YSN PhD Prize will be hosted together with the 2022 ceremony at the occasion of the XXVII EFMC International Symposium on Medicinal Chemistry ([EFMC-ISMC 2022](#)) and EFMC Young Medicinal Chemists' Symposium (EFMC-YMCS 2022) which will take place in Nice, France on September 4-8 & September 8-9, 2022.

More information about the 2022 EFMC-YSN PhD Prize
is available on www.efmc.info/ysn-phd-prize.

PRIZES

FOR A YOUNG MEDICINAL CHEMIST OR CHEMICAL BIOLOGIST IN ACADEMIA

To acknowledge and recognize an outstanding young medicinal chemist or chemical biologist working in Academia within Europe.

The **Prize** is given annually to a young medicinal chemist or chemical biologist (≤ 12 years after PhD), and consists of a diploma, €1.000 and an invitation to give a short presentation at the XXVII EFMC International Symposium on Medicinal Chemistry (EFMC-ISM 2022) | September 4-8, 2022.

Two additional nominees will also be identified and acknowledged.

Applications should be done via the application form on www.efmc.info/prizes and should consist of:

- a one-page letter by the candidate including a short rationale for their application
- one page with his/her most important publications
- a brief cv of the candidate
- abstract of potential oral presentation

FOR A YOUNG MEDICINAL CHEMIST OR CHEMICAL BIOLOGIST IN INDUSTRY

To acknowledge and recognize an outstanding young medicinal chemist or chemical biologist working in Industry within Europe.

The **Prize** is given annually to a young medicinal chemist or chemical biologist (≤ 12 years after PhD), and consists of a diploma, €1.000 and an invitation to give a short presentation at XXVII EFMC International Symposium on Medicinal Chemistry (EFMC-ISM 2022) | September 4-8, 2022.

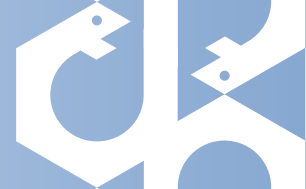
Two additional nominees will also be identified and acknowledged.

Nominations should be submitted by the candidate's supervisor via the submission tool on www.efmc.info/prizes and should consist of:

- a letter by the supervisor
- a brief cv of the candidate
- abstract of potential oral presentation

Deadline for Nominations is January 31, 2022

See www.efmc.info/prizes for full details



EFMC-YMCS 2021 - Report

Aiming to continue its mission of promoting interactions between young scientists, sharing scientific work with peers and rewarding excellence, the organising committee took the decision to run a fully virtual edition of the **8th EFMC Young Medicinal Chemists' Symposium on September 9-10, 2021**.

The virtual EFMC-YMCS 2021 was chaired by **Prof. Dennis Gillingham** (University of Basel, Switzerland) and **Dr Kristina Goncharenko** (Zifo RnD Solutions, Switzerland). After the opening ceremony by the EFMC President, **Prof. Rui Moreira** (University of Lisbon, Portugal), the programme started with the first keynote lecture on "Powerful New Tools for Augmented Medicinal Chemistry", given by **Dr Werngard Czechtizky** (AstraZeneca, Sweden). The rest of the morning went on with the first part of the competition, with oral communications by the winners of the young medicinal chemist meetings of Turkey, France, Belgium, Portugal, Croatia and Germany. A series of ten Flash Poster Presentations also had the opportunity to showcase their science in 90 seconds before drawing participants to the poster session, which took place over lunch time. The scientific programme started again in the afternoon with the second part of the competition and oral communications by the winners of the young medicinal chemist meetings of United Kingdom, Hungary, The Netherlands, and Switzerland.

The second day was opened by **Dr Hasane Ratni** (Roche, Switzerland) who gave an inspiring talk on "Discovery of Risdiplam (Evrysdi): A Medicine for the Treatment of Spinal Muscular Atrophy". The programme moved afterwards to the third part of the competition with lectures of national winners from Slovenia, Italy, Denmark, Serbia, Greece and Spain. The morning session was, once again, closed by 10 Flash Poster Presentations. The afternoon saw the fourth and final part of the competition, with oral communications from candidates of Germany, Poland – and the partnered lecture given by the winner of the Trainee Pre-Conference Forum at the virtual 9th Annual Conference of the International Chemical Biology Society. **Dr Nir London** (Weizmann Institute of Science, Israel) closed the scientific programme with a keynote lecture on "Covalent Inhibitors - From Discovery to Functionalization".

Praised by the participants in the previous editions, the soft-skills trainings of the EFMC Young Scientists Networks (EFMC-YSN) were also part of the virtual programme: **Dr Kaycie Butler** (Butler Scientific Communications,

Switzerland) shared tips on "Preparing a Funding Proposal: Setting Yourself up for Success" and a lively **round table** was organised around the thematic "The Stories Behind the Medicinal Chemists in Industry", where early career scientists in industry shared their views on how to successfully enter the job market.

At the end of the event, the traditional Award ceremony was held, and several prizes were conferred to promising young scientists: **Luc Farrera Soler** (University of Geneva, Switzerland) received the 2021 EFMC-YMCS Presentation Prize sponsored by the EFMC and Idorsia for his presentation on the "*Mating Mechanism to Generate Diversity for the Darwinian Selection of DNA-Encoded Synthetic Molecules*". The following scientists received an **EFMC Best Poster Prize**, sponsored by ChemMedChem/ ChemBioChem & Molecules (MDPI):

- **FP04 - Piermichele Kobauri**
University of Groningen, The Netherlands
- **FP11 - Carlotta Cecchini**
University of Geneva, Switzerland
- **P020 - Karina Chan**
University of Strathclyde, United Kingdom
- **P036 - Kate Gilbert**
GSK, United Kingdom
- **P052 - Laia Josa-Culleré**
Institute for Advanced Chemistry of Catalonia, Spain

Finally, **Francesco Calzaferri** (CNRS Montpellier, France) won the EFMC-YMCS Public's choice prize for his lecture on "*ITH15004, A Novel Blood-Brain Barrier-Permeable P2X7 Antagonist: From Drug Design to Pharmacological Applications*".

A total of 256 scientists gathered for the event. Many questions were asked, and great science was shared during these two days, showing that the aims of the EFMC Young Medicinal Chemists' Symposium are still alive and shared by the younger scientific community. We take the opportunity to – once again – praise the organising committee for its amazing work and acknowledge the kind support of the EFMC and Industrial Sponsors, to which we are thankful. The 9th edition of the EFMC-YMCS is scheduled to take place in Nice, France on September 8-9, 2022, following the XXVII EFMC International Symposium on Medicinal Chemistry (EFMC-ISMC 2022).

More information available on the regularly updated website www.efmc-ymcs.org.



EFMC-YMCS

Young Medicinal Chemists' Symposium

Nice, France

September 8-9, 2022



9th EFMC Young Medicinal Chemists' Symposium

The EFMC Young Medicinal Chemists' Symposium is an initiative of the European Federation for Medicinal Chemistry and Chemical Biology (EFMC). This Symposium, organised in connection with EFMC-ISMIC 2022, has the aim of:

- Creating a network of young European investigators in medicinal chemistry and chemical biology
- Stimulating young investigators to share their scientific work with peers and inspiring leaders in the field
- Encouraging competition and excellence in the fields by selecting the European champion in medicinal chemistry and chemical biology

Programme

The Programme of the 9th EFMC Young Medicinal Chemists' Symposium will include:

- opening and closing lectures by inspiring leaders in the field
- oral communications by invited prize winners from national young medicinal chemist's and chemical biologists' meetings in Europe
- flash poster presentations selected from submitted abstracts
- a poster session open to any young researcher submitting an abstract
- prizes
- an optional programme of soft-skills training sessions will be given by the EFMC Young Scientists Network (EFMC-YSN)

Deadlines

May 5, 2022
Deadline for Oral Communication Submissions & Early Bird Registration

June 9, 2022
Deadline for Poster Submissions

International Organising Committee

SYMPOSIUM CHAIR

Maria Duca
University of Côte d'Azur, France

MEMBERS

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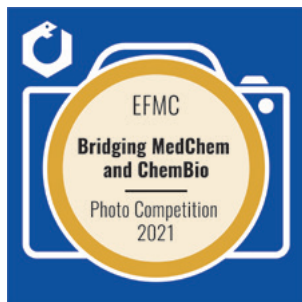
Luc van Hijfte
Symeres, The Netherlands

More information and on-line registration available on www.efmc-ymcs.org

Spread the word on social media using [#EFMC_YMCS](https://twitter.com/EFMC_YMCS)



EFMC Photo Contest 2021



To support the EFMC efforts in showcasing the continuum between medicinal chemistry and chemical biology, the EFMC Communication Team decided once again to host their annual photo competition and seek the help of the community with a picture representing their vision of "**Bridging MedChem and ChemBio**".

Thirty candidates met the challenge, submitting their picture to public voting at the occasion of the **XXVI EFMC International Symposium on Medicinal Chemistry (EFMC-ISMC 2021)**. Conference attendees were directed to the EFMC virtual booth and invited to vote for their preferred picture.

GRABBING MOST OF THE VOTES, THE WINNER IS:



Translational Science: Medchem to Drug Development
Souvik Sarkar (Umeå University, Sweden)

THE TWO RUNNERS-UP ARE:



Drops of life; save the green
Pallabi Sengupta (Bose Institute, India)

Congratulations to them, and to all our contestants. Browse all submitted pictures under this [link](#).

What about 2022? A new contest will be back this spring, so stay tuned to www.efmc.info/photo-competition.



Coral Reef in a Flask
The PharmaChemistry Team of the Italian Institute of Technology (Italy)



Report on Exchanges with Partner Societies

The European Federation for Medicinal Chemistry and Chemical Biology (EFMC), as a learned society, is actively interacting with other organisations in the field. Those interactions are ruled by Memoranda of Understanding and are meant to supervise exchanges of information, hosting of bilateral scientific sessions at symposia and attendance to annual board meetings.

The list of **EFMC Partner Societies** can be found below:

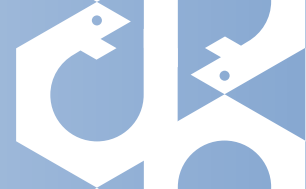
- [ACS Division of Medicinal Chemistry \(ACSMEDI\)](#)
- [Asian Federation for Medicinal Chemistry \(AFMC\)](#)
- [Chinese Pharmaceutical Association \(CPA\)](#)
- [International Chemical Biology Society \(ICBS\)](#)
- [European Chemical Society \(EuChemS\)](#)
- [European Federation for Pharmaceutical Sciences \(Eufeps\)](#)
- [International Union of Pure and Applied Chemistry \(IUPAC\)](#)
- [Chemistry Division of the Brazilian Society of Chemistry \(SBQ\)](#)

This year, the EFMC was invited to organise a session on *Advances in Medicinal Chemistry and Chemical Biology* at the CPA National Medicinal Chemistry Symposium (CMCS 2021). Chaired by **Rui Moreira** (EFMC President & University of Lisbon, PT), it gathered four talks given by **Frederic Berst** (Novartis, CH), **Maria Duca** (University of Côte d'Azur, FR), **Laura Heitman** (Leiden University, NL) and **Wei Zhu** (Roche, CN). The event, held virtually in September 2021 was also the occasion to renew the Memorandum of Understanding with our Chinese colleagues.

EFMC contributed to the 13th AFMC International Medicinal Chemistry Symposium (AIMECS 2021) with a joint session chaired by **Luc Van Hijfte** (Symeres, NL), offering two talks delivered by **Harrie M. Gijzen** (Janssen, BE) and **Hilal A. Lashuel** (Swiss Federal Institute of Technology Lausanne, CH).

Finally, a session on *Next Generation Drug Targets for Cancer Therapy* was organised by **Rui Moreira** at the occasion of the International Chemical Biology Symposium in November 2021. The speaker line-up included **Yimon Aye** (EPFL, CH), **Stefan Hacker** (Leiden University, NL) and **Tiago Rodrigues** (University of Lisbon, PT). A renewed Memorandum of Understanding was also signed, aiming towards an extended partnership, especially at the occasion of the future EFMC International Symposium on Chemical Biology (EFMC-ISCB 2023).

In 2022, the EFMC will host a session on *Solute Carrier Protein (SLC) Transporters as Targets for Drug Discovery* at the 263rd ACS National Meeting & Exposition. The session will be chaired by **Gianluca Sbardella** (University of Salerno, IT).

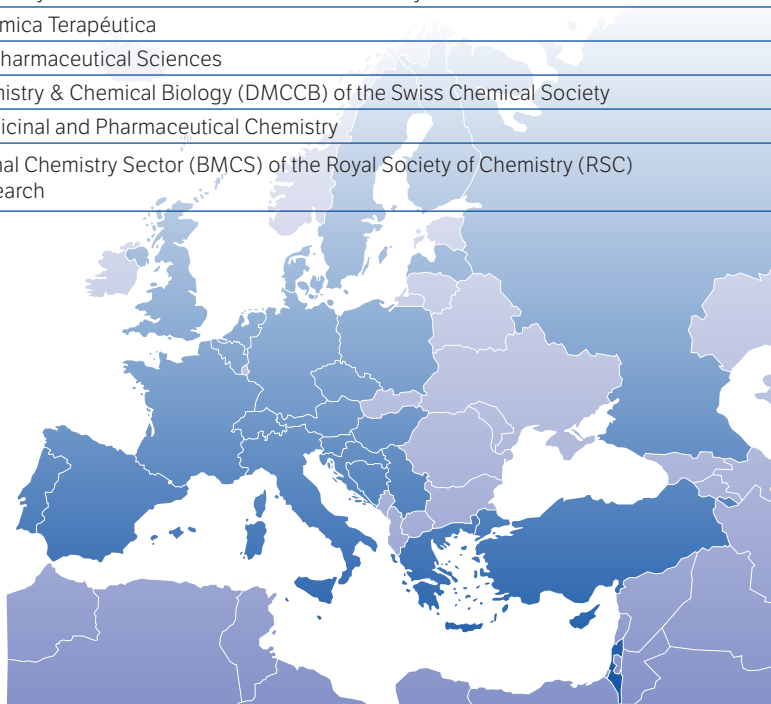


National Adhering Organisations

Below you can find the list of the 29 National Adhering Organisations composing the European Federation for Medicinal Chemistry and Chemical Biology (EFMC). More information can be found on the EFMC website:

<http://www.efmc.info/adhering-organisations-european-medicinal-chemistry>

Austria	Medicinal Chemistry Section of the Austrian Chemical Society
Belgium	Medicinal and Bioorganic Chemistry Division of the Royal Flemish Chemical Society (KVCV) Medicinal Chemistry Section of the Société Royale de Chimie (SRC)
Bosnia & Herzegovina	Organisation Pharmaceutical Research Institute of Bosnia & Herzegovina
Croatia	Section of Medicinal/Pharmaceutical Chemistry of the Croatian Chemical Society
Czech Republic	Section of Synthetic Drug of the Czech Pharmaceutical Society
Denmark	The Danish Society for Medicinal Chemistry and Chemical Biology
Finland	Finnish Pharmaceutical Society
France	Société de Chimie Thérapeutique (SCT) Chemical Biology Group of the French Chemical Society (SCF-ChemBio)
Germany	Division of Medicinal Chemistry of the German Chemical Society (GDCh) Section of Pharmaceutical/Medicinal Chemistry of the German Pharmaceutical Society (DPhG)
Greece	Hellenic Society of Medicinal Chemistry
Hungaria	Organic and Medicinal Chemistry Division (OMCD) of the Hungarian Chemical Society (HCS)
Israel	The Medicinal Chemistry Section of the Israel Chemical Society
Italy	Division of Medicinal Chemistry of the Italian Chemical Society (Società Chimica Italiana)
Latvia	Division of Chemical, Biological and Medical Sciences Section of Medicinal Chemistry of the Latvian Academy of Sciences
Netherlands	Section Medicinal Chemistry of the Royal Netherlands Chemical Society (KNCV)
Poland	Polish Society of Medicinal Chemistry
Portugal	Division of Medicinal Chemistry of the Portuguese Chemical Society
Russia	Medicinal Chemistry Section of The D.I. Mendeleev Russian Chemical Society
Serbia	Division of Medicinal Chemistry of the Serbian Chemical Society
Slovenia	Section for Medicinal Chemistry of the Slovenian Pharmaceutical Society
Spain	Sociedad Española de Química Terapéutica
Sweden	The Swedish Academy of Pharmaceutical Sciences
Switzerland	Division of Medicinal Chemistry & Chemical Biology (DMCCB) of the Swiss Chemical Society
Turkey	Turkish Association of Medicinal and Pharmaceutical Chemistry
United Kingdom	The Biological and Medicinal Chemistry Sector (BMCS) of the Royal Society of Chemistry (RSC) Society for Medicines Research





EFMC-ISM
International Symposium
on Medicinal Chemistry
Acropolis Nice
Nice, France
September 4-8, 2022

**See you
in Nice
2022!**

www.efmc-ismc2022.org

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LOCAL ORGANISING COMMITTEE

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