



SCS  
Swiss Chemical  
Society

## Community News

[www.scg.ch](http://www.scg.ch)

[www.chemanager-online.com](http://www.chemanager-online.com)

### SWISS CHEMICAL SOCIETY NEWS

#### Invitation to the SCS General Assembly 2020



The SCS General Assembly 2020 that was initially planned on April 3, 2020 at FHNW Muttensz, had to be rescheduled due to the COVID-19 restriction. It will be organized as a Video Conference and takes place on June 24, 2020, 16.30h - 17.00h. You can participate *via* Zoom video conference platform, meeting-ID: 990 262 974, Password: 031034.

In 2021 we hopefully can go back to normal and organize the General Assembly again as part of the SCS Spring Meeting at FHNW Muttensz on April 15, 2021.

The annual report 2019 of the SCS was published in CHIMIA 1-2/2020 and is also available on the SCS website.

[scg.ch/about](http://scg.ch/about)

#### SCS on Social Media (Twitter and LinkedIn)



The Swiss Chemical Society completed its social media portfolio and implemented a public profile on LinkedIn. Up to the present there only existed a group forum with exclusive access for our members, which will be complemented with the new profile. We would like to invite all our members to follow us. Prospective posts will be published from

now on on the new LinkedIn page, on our Twitter accounts and on the SCS website.

Overview of our social media channels:

LinkedIn pages and groups:

- [linkedin.com/company/swiss-chemical-society-scs/](https://www.linkedin.com/company/swiss-chemical-society-scs/)
- [linkedin.com/groups/8470232/](https://www.linkedin.com/groups/8470232/) (DMCCB)

Twitter accounts:

- @SwissChemistry
- @CHIMIA\_journal
- @SCS\_DMCCB
- @SwissWomenChem
- @DasChemistry

#### SCS Awards 2021: Call for Nominations



As one of our four strategic pillars, SCS awards excellence in science and chemistry respectively and is proud of its renowned award program that goes back to 1936 with the ceremony of the first Werner Prizes to Dr. T. Posternak, Genève, and Prof. G. Schwarzenbach, Zurich.

The society hereby calls for nominations for the 2021 SCS Awards. Nominations have to be submitted electronically to [info@scg.ch](mailto:info@scg.ch). The deadline for all documents to reach the Swiss Chemical Society is September 30, 2020. For specific award information and a list of required documents please visit our website: [scg.ch/awards](http://scg.ch/awards)

##### Werner Prize

CHF 10'000 and medal in bronze

The Werner Prize is awarded to promising young Swiss scientists or young foreign scientists working in Switzerland for outstanding research in the field of chemistry. Selection of the winners is not restricted to candidates working at a university. On the deadline for submission of nominations, the candidate must be under 40 years old (*i.e.* 40<sup>th</sup> birthday after the deadline) and may not be a tenured professor or hold a managerial position in industry. The prize is awarded annually.

##### Grammaticakis-Neumann Prize

CHF 5'000

The Prize is awarded to a promising young scientist for outstanding accomplishments in the field of experimental or theoretical photochemistry. The prize is announced internationally and is not restricted to persons affiliated with academic institutions. On the deadline for submission of nominations, the candidate must be under 40 years old (*i.e.* 40<sup>th</sup> birthday after the deadline) and may not be a tenured professor or hold a managerial position in industry.

The prize is awarded every two years.

### Mass Spectrometry for Chemists with the expression CMS



Fast reaction  
monitoring through  
analysis in seconds



Direct mass  
analysis from  
TLC-plates



With transfer unit  
for air-sensitive  
samples

## Advion

For more information:  
[central-europe@advion.com](mailto:central-europe@advion.com)  
[www.expressioncms.com](http://www.expressioncms.com)

**METAS Award**

CHF 5'000

METAS honors with this award a promising scientist working in Switzerland for an outstanding contribution to the field of metrology in chemistry and/or biology. The price is announced nationally and is restricted to persons who are, at the time of the submission deadline, affiliated with Swiss academic or research institutions.

The prize is awarded annually.

**Balmer Prize**

CHF 2'000 for individuals and CHF 2'000 for the school's chemistry department or CHF 3'000 for a group and CHF 1'000 for the school's chemistry department and medal in bronze

The Balmer Prize is awarded for innovation in chemistry teaching to a teacher working in Switzerland or to a team of teachers working at the same school at the high school level. The innovation must consist of an original didactic approach, experimental method or teaching practice and be readily applicable to everyday teaching at the high school level. The costs for materials must be modest. The prize is awarded annually.

**Dr. Max Lüthi Award**

CHF 1'000 and medal in bronze

The Dr. Max Lüthi Award is presented for outstanding degree thesis completed in the chemistry department of a Swiss University of Applied Sciences. Nominations must be submitted by the respective chemistry department heads. The prize is awarded annually.

**Sandmeyer Award**

CHF 10'000 for individuals or CHF 20'000 for groups

The Sandmeyer Award is presented to a team or an individual for outstanding work in the field of industrial or applied chemistry. The work must have been carried out in Switzerland or abroad by a team including Swiss nationals. The award may be presented to an individual – Swiss or foreign national – if the work was carried out in Switzerland. The award may be presented to an individual for work carried out abroad if the person is Swiss. Tenured professors will not be considered for the award as individuals. In the case of foreign teams, the Swiss member must have made a substantial contribution to the work. There is no age restriction. The prize is awarded annually.

**SCS Industrial Science Awards**

Since 2013 the Swiss Chemical Society runs this award program with financial support from the Swiss chemical and pharmaceutical industry in order to honor R&D researchers in Switzerland. The program targets scientists from companies of any size working in the field of chemistry or chemical related sciences. There are three awards with different criteria in terms of the experience and level of research attained by the candidates. The awards are presented to active researchers working in Switzerland and are given to individuals exclusively.

**Industrial Science Award**

to honor successful investigators with outstanding achievements. Certificate and cash check of CHF 7'000 The prize is given on an annual basis.

**Senior Industrial Science Award**

to honor very successful and established investigators with outstanding achievements over many years. Certificate and cash check of CHF 10'000 The prize is given on an annual basis.

**Distinguished Industrial Science Award**

to honor senior scientists for their lifetime achievements in chemical research. Certificate and cash check of CHF 15'000 Reward-ed on decision by the board

**Green & Sustainable Chemistry Award**

CHF 10'000

This new prize that will be awarded the first time in 2021 is implemented in collaboration with Syngenta as founding partner and SusChem Switzerland as hosting institution. It targets young professors that are working in the field of Green and Sustainable Chemistry and recognizes outstanding scientific discoveries that lay the foundation for environmentally-friendly approaches and products. The award is given annually.

**Clariant CleanTech Awards Switzerland**

CHF 5'000 for the winner and CHF 10'000 in total including the runners-up

This award program honors outstanding scientific achievements of Master students, PhD students, and Postdocs in Switzerland in the field of Sustainable Chemistry, in areas such as resource efficiency, renewable energy, renewable raw materials or green technologies and environmental protection.

The prizes are awarded every two years.

Please note that the deadline for this award series is May 2021 and candidates will have to submit their dossiers *via* the website of the 2<sup>nd</sup> Swiss SusChem Days 2021.

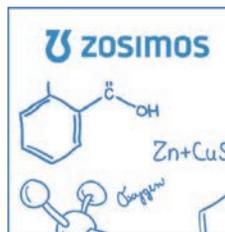
More information on all the award programs is available on our website: [scg.ch/awards](http://scg.ch/awards)

**scienceindustries published its Annual Report 2019**

scienceindustries has published its annual report of 2019. They not only continued and developed their well-established activities but again pushed new initiatives to face today's challenges. With its new and fresh design, scienceindustries focuses any more on the important areas of the Industries chemistry pharma and life sciences such as innova-

tion and political dossiers.

[scienceindustries.ch/verband/jahresberichte](http://scienceindustries.ch/verband/jahresberichte)

**Special Offer due to CORVID-19: free access to Zosimos (ChemAxon)**

ChemAxon offers free access to all features of the recently developed chemistry online learning platform to universities closed due to coronavirus outbreak. University teachers can get free access to Zosimos online educational framework, to help facilitate online learning in their chemistry classes.

How to apply? Please provide your email address *via* the link shown at the end of this article to receive the access link to a classroom within a few hours.

How can Zosimos help closed higher educational institutions to teach chemistry?

- The teacher manages a virtual class and sends the class link to the students. The students can start joining the class with a simple click on a link.

- The teacher formulates practice problems and sets the criteria for the evaluation of student responses.
- The teacher can either draw a molecule or enter a text as criteria for the evaluation of student responses. Because of the structure drawing, Zosimos is especially good at organic chemistry education.
- The teacher adds the practice quiz to the virtual class and students can already start practicing on their own schedule.
- The teacher can see the progress of the students and the automatically evaluated responses of the students.
- The teacher may also assign a quiz to the students within a set time frame. It may be used for homework or tests and the result is only visible to the students once the teacher has closed the assessment.
- Zosimos is supported on laptops, tablets, and mobile phones. Please keep in mind that this offer is valid for usage until the end of September 2020.

<https://forms.gle/4xrS13Ro7MArKs2A6>

### A Warm Welcome to Our New Members!



Period: 26.03.–23.04.2020

Jill Bachelder, Lindau - Andrea Blankenship, Zurich - Alexandre Dickson, Zurich - Manuel Hugo, Basel - Josep Mas-Rosello, Lausanne - Marie-Desiree Scheidt, Neuchâtel - Jean-Philippe Surivet, Allschwil - Joseph Woods, Zurich.

## HONORS, AWARDS, APPOINTMENTS

### Prof. Gisbert Schneider, ETH Zurich received the Prous Institute – Overton and Meyer Award for New Technologies in Drug Discovery



**Prof. Gisbert Schneider**, ETH Zurich, was awarded for his pioneering work integrating machine learning into medicinal chemistry, drug discovery and chemical biology. His contributions spread across the whole drug discovery process, and introduced visionary concepts for concrete applications of computational methods. These are now broadly adopted

in drug discovery and recognized as robust foundations for transformative advancements in the field.

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. The Award is given biennially to acknowledge the discovery, evaluation or use of a new technology, and consists of a diploma, € 7.500 and an invitation to present a lecture at an EFMC-ISMC symposium.

Source: [efmc.info](http://efmc.info)

### Prof. Jean-Christophe Leroux, ETH Zurich, gets an ERC Advanced Grant 2020



In the latest call for proposals of the European Research Council (ERC), two projects of ETH Zurich were awarded with the prestigious ERC Advanced Grant. One of the awardees is **Prof. Jean-Christophe Leroux**. For his project in the field of gene therapy, he will receive 2.58 million Swiss francs.

In his ERC project, Leroux aims at finding ways to suppress cellular defence systems.

Source: [chab.ethz.ch](http://chab.ethz.ch)

### Prof. Edwin Constable, University of Basel, Elected as President of Euresearch



On 23 April 2020, the general assembly of Euresearch elected **Prof Edwin Constable**, University of Basel, to the role of President. Ed Constable has served on the Management Board of Euresearch for the past eight years.

Prof. Constable has himself been principal investigator in many European projects and was the recipient of an

European Research Council Advanced Grant. From 2011 to 2018 he also served as Vice-President for Research at the University of Basel.

Euresearch is a non-profit association supported by the Swiss federal government to inform, advise and connect researchers based in or coming to Switzerland about opportunities for European Union funding. The Euresearch network facilitates a high Swiss participation in the EU Framework Programmes for Research and helps ensure that excellent proposals in all disciplines are submitted by researchers with the highest potential.

Source: [chemie.unibas.ch](http://chemie.unibas.ch)

## JOURNAL NEWS

### Helvetica, Volume 103, Issue 4, April 2020



#### Reviews

Chemistry and Biology of the Clinically Used Macrolactone Antibiotic Fidaxomicin

Andrea Dorst, Karl Gademann

#### Full Papers

Total Synthesis and Biological Evaluation of Zealactone 1a/b

Masahiko Yoshimura, Michael Dieckmann, Pierre-Yves Dakas, Raymonde Fonné-Pfister, Claudio Screpanti, Katrin Hermann, Stefano Rendine, Pierre Quinodoz, Beyza Horoz, Saron Catak, Alain De Mesmaeker

Acrylate Esters by Ethenolysis of Maleate Esters with Ru Metathesis Catalysts: an HTE and a Technoeconomic Study

Pascal S. Engl, Alexey Tsygankov, Jordan De Jesus Silva, Jean-Paul Lange, Christophe Copéret, Antonio Togni, Alexey Fedorov

[onlinelibrary.wiley.com/journal/15222675/](https://onlinelibrary.wiley.com/journal/15222675/)

## INDUSTRIAL NEWS

Source: [www.chemanager-online.com](http://www.chemanager-online.com)

### Swiss WorldCargo: Charter Flights to Support Global Supply Chains Launched

March 24, 2020: Swiss WorldCargo, the air cargo division of Swiss, will operate cargo-only flights on some aircraft beginning this week (CW 13). The belly carrier Swiss WorldCargo transports high-value and care-intensive goods on the existing Swiss passenger network. In these unprecedented times, the carrier is committed to continue maintaining global supply chains and delivering goods on behalf of its customers.

This week, the carrier will fly twice between Zurich and Hong Kong, the first of several planned charter flights. The route will be serviced by the Airbus A340-300, and additional destinations and aircraft may be selected based on customer needs for global shipping. "Despite the slowdown in global air travel, we are seeing an ongoing demand for the transportation of goods," said Ashwin Bhat, Head of Cargo, Swiss International Air Lines. "At Swiss WorldCargo, we are therefore committed to supporting logistics and customer needs, especially for the shipping of sensitive goods such as medicines or pharmaceuticals. We aim to continue to offer the Swiss quality and consistency we are known for throughout the industry."

### Oqema has Entered into an Agency and Distribution Partnership with Chemada

April 1, 2020: The Oqema Group has entered into an exclusive agency and distribution partnership with Chemada. Chemada Industries is a leading manufacturer that focuses on the research, development and production of fine chemicals for the pharmaceutical, agricultural and speciality chemicals industries. The Oqema Group will act as a European agent and distributor for the full range of Chemada's high-quality brominated intermediates and brominating reagents, and also provide custom manufacturing based on other technologies to the Benelux countries, France, Germany, Denmark, Switzerland, the UK, the Czech Republic, Slovenia, the Baltic countries, Italy and Hungary. James Berwick, Group Director of Speciality Chemicals, Oqema, comments, 'As a leading distributor of speciality products in 21 European countries, the intermediate business of Chemada represents a strong addition to our portfolio. As the Oqema Group continues to build a wider chemical intermediate range, we are increasingly focused on bringing the leaders and innovators with a strong brand and market reputation into key areas of our portfolio. We are therefore very proud to be the exclusive distribution partner for the intermediate product range in major European countries, and our technical sales expert teams are ready

to offer the Chemada range to our network.' Eyal Azulay, CEO of Chemada Industries, adds, 'We look forward to this new agency and distribution partnership with the Oqema Group. Oqema's strong market and application experience, *i.e.* in the life-science and technical industries, and its proven performance as a value creator in the distribution markets, combined with its willingness and capability to represent the complete Chemada product range, are a good guarantee for a successful collaboration.'

### Trump's Promotion of COVID Cure is Media Fodder

April 9, 2020: US President Donald Trump's relentless promotion of the 86-year-old generic drug hydroxychloroquine, used successfully to treat malaria, lupus and rheumatoid arthritis, as an experimental treatment for COVID-19 continues to dominate the discussion in medical circles and in the media. So far, the main consequence has been that the US Food and Drug Administration (FDA), despite initial reservations, has temporarily allowed the drug to be used for experimental treatment – if it can be sourced at all amid speculative buying. Clinical trials with the drug are now scheduled and will take months to complete. The US health watchdog, however, has allowed physicians to prescribe it and retail pharmacists to formulate it as tablets to dispense to patients who hope to find a place in clinical trials as well as those who don't find a place. The emergency approval requires only that doctors and patients have access to a fact sheet that outlines risks and interactions with other medications. The FDA, under populist pressure, is basing its decision on what leading infectious diseases specialist and presidential advisor Anthony Fauci in a White House press briefing called anecdotal evidence. Only two small studies with COVID patients have been conducted, both by the same medical team and without a defined control group. To conduct the trials, the US Department of Health and Human Services (HHS) has accepted donations of millions of tablets from the surplus stocks of international pharmaceutical producers including Bayer, Sandoz, Mylan and Amnael. Sanofi also produces a branded drug under the name Plaquenil, but it is not sold on the US market. Despite the donations, both chloroquine and hydroxychloroquine are both short. Mylan has pledged to increase its production, and Sandoz parent Novartis has said it will search for more supplies. Novartis CEO Vas Narasimhan told Swiss newspaper SonntagsZeitung the company is "working with Swiss hospitals on possible treatment protocols for the clinical use of the drug, but it's too early to say anything definitively." US officials also have beseeched India to lift its export ban for hydroxychloroquine. According to Bloomberg, Indian imports have a 47% share of the US market. The country, which is in the throes of a 21-day lockdown ordered by Prime Minister Narendra Modi and potentially faces a serious outbreak, reportedly has now agreed to license its stock to other "badly affected" countries.



## GAINING INNOVATION MOMENTUM THROUGH DATA ANALYTICS

Business leaders are exploring how businesses can empower experts and provide the right environment for effective data analytics.

Watch the discussion  
[jmp.com/innovation](http://jmp.com/innovation)

Copyright © 2019 SAS Institute Inc. Cary, NC, USA. All rights reserved. G114120US.1019



**jmp**  
Digital Discovery • from SAS

### ***French experiment is controversial***

Trump has promoted especially the combination of hydroxychloroquine and the antibiotic azithromycin, as used in one French experiment with altogether only 80 patients, calling it a “game changer.” Aix-Marseille University professor Didier Raoult, who led the team, has reported that 93% of patients treated with the cocktail tested negative eight days into treatment. A second trial conducted with hydroxychloroquine was inconclusive. Raoult, who is controversial in France, especially as a climate change skeptic, said the successful outcome of one of his studies allowed patients to rapidly be discharged from “highly contagious wards” with a mean length of stay of five days. He urged other teams to “urgently evaluate this cost-effective therapeutic strategy.” France’s health authority has now also allowed emergency use of hydroxychloroquine as a COVID-19 treatment, provided the patients are without other options and the risks are justified. Other countries have indicated they may follow suit, barring any catastrophic results that may be reported. Some of Raoult’s peers have suggested his methodology is flawed, and have noted that the doctor failed to mention that one of his patients had died. Ironically, Raoult and several of his co-authors were banned from publishing in any American Society for Microbiology (ASM) journals for a year due to errors in their published studies. In another hospital in France, treatment with hydroxychloroquine on at least one coronavirus patient was halted on Apr. 8 after it became a “major risk” to the patient’s cardiac health, press reports said. Trials recently conducted in Sweden also were ended early due to serious side effects. Critics of the virus treatment with hydroxychloroquine, which was invented by Bayer in 1934, have said there is not enough evidence that either of the two drugs used in France is able to reduce viral load and prevent the inflammatory response that can destroy the lungs of seriously ill coronavirus patients – those for which it is to be reserved. Some said they worry about serious side effects, in particular cardiac arrhythmia, which can lead to heart attacks in patients with a history of heart disease or those on antidepressants. Other side effects have been described as vision loss or psychosis.

### ***Bending drug approval rules?***

Other critics say that with the rush to find effective treatments in the absence of a vaccine, the US government in particular is bending its own rules for drug approval, and the price surge is upending pharmaceutical pricing. The president’s efforts to find a miracle cure reveal how this could change the nature of drug oversight, a field long governed by strict rules of science and testing, a Reuters report concludes. “Rarely, if ever,” it says, “has a president lobbied regulators and health officials to focus their efforts on specific unproven drugs.” Reuters points to guidance published by the federal government-run US Centers for Disease Control and Prevention (CDC) telling doctors they had the option to prescribe the drugs, with key dosing information based on unattributed anecdotes – “something that is never done.” “The president is short-circuiting the process with his gut feelings,” Jeffrey Flier, a former dean of Harvard Medical School, told Reuters. “We are in an emergency and we need to rely on our government to ensure that all these potential therapies are tested in the most effective and objective way.”

### ***Right wing personalities also hype the drug***

US media have focused heavily on the motivation behind Trump’s glowing recommendation of a treatment he with his non-medical background knows nothing about for a disease he knows nothing about. Some have speculated that he has a financial stake in one of the drugmakers, while others have surmised that the president is grasping at straws to find a ticket to re-election in November. Research by the New York Times revealed several connections between Trump and his confidants related

to hydroxychloroquine. Through Fisher Asset Management, a brokerage run by a major donor to Republicans, the president (also a beneficiary) has a small financial interest in Sanofi, which sells the drug outside the US, but it is thought not big enough to make much of an impact on his bottom line if the drug became a successful treatment. Invesco, the fund previously run by Wilbur Ross, current US Secretary of Commerce, owns shares in Mylan and Sanofi. Financial considerations aside, Washington political columnist Philipp Bump has noted that the most vocal cheerleaders of hydroxychloroquine are right wing media-savvy personalities such as Fox News host Laura Ingraham, Oracle founder Larry Ellison, TV doctor Mehmet Oz and Trump’s personal lawyer Rudi Giuliani. The latter has connections to Vladimir Zelenko, a Ukrainian doctor who has enjoyed popularity with conservative outlets for claims he has successfully treated patients with a drug cocktail of hydroxychloroquine, azithromycin and zinc sulfate.

### **Blackstone Invests \$ 2 Billion in Biotech Alnylam**

April 14, 2020: Through a combination of equity and debt, private equity giant Blackstone will invest up to \$2 billion in Cambridge, Massachusetts-based US biotech Alnylam Pharmaceuticals. The company founded in 2002 specializes in RNA interference, which intercepts disease-causing proteins. The multi-component deal gives the publicly traded biotech needed resources to move through the costly phase of bringing late-stage drugs to market, analysts commented. With a cash injection of \$1 billion, Blackstone is securing rights to 50% of the royalties and commercial milestones for inclisiran, an investigational RNAi therapeutic currently under review by both the US Food and Drug Administration (FDA) and the European Medicines Agency (EMA). Inclisiran is being recommended for treatment of atherosclerotic heart disease and hypercholesterolemia, a genetic disorder that causes very high cholesterol. Phase 3 clinical trials are said to have shown it can reduce low-density lipoprotein (LDL) or “bad” cholesterol with an acceptable safety profile. The drug is being developed in partnership with Switzerland’s Novartis, which picked it up in its \$9.7 billion takeover of The Medicines Company, where it was under license. As part of the deal, Blackstone is also buying \$100 million in Alnylam shares, and the investor’s Life Sciences unit has agreed to invest up to \$150 million in the development of two other Alnylam drugs. Cardiometabolic vutrisiran is being investigated for ATTR amyloidosis and ALN-AGT is aimed at treating hypertension. The private equity group headed by Steven Schwarzman is also providing Alnylam with a loan worth up to \$750 million, which US business newspaper Wall Street Journal called “noteworthy both for its size and because biotech companies with unproven drugs and uncertain cash flow are often considered too risky for many lenders.” Senior managing director at GSO, Brad Marshall, noted, however, that Alnylam is unique because it has two drugs already on the market and a manufacturing facility, in addition to the new cholesterol drug. In February 2019, Blackstone Life Sciences invested \$250 million in a joint venture with Novartis to develop drugs to treat blood clots. In November 2019, it contributed \$400 million to a joint venture with Ferring Pharmaceuticals to develop and market a gene therapy to treat bladder cancer.

### **Technology and Innovation in the Pharmaceutical Industry**

April 14, 2020: Established in 2004 by the International Society for Pharmaceutical Engineering (ISPE), the Facility of the Year Awards (FOYA) recognize innovation and creativity in manufacturing facilities serving the regulated healthcare industry. The award-winning projects selected by the FOYA program set the standard for pharmaceutical facilities of the future by demonstrating excellence in facility design, construction, and

operations. The FOYA program each year recognizes state-of-the-art projects utilizing new, innovative technologies to improve the quality of products, reduce the cost of producing high-quality medicines, and demonstrate advances in project delivery. This year, the category winners were announced at the ISPE Europe Annual Conference in Dublin, Ireland, in April. The overall winner will be revealed at the ISPE Annual Meeting to be held in Philadelphia, PA, USA in November. “Technology and innovation in the pharmaceutical industry are more critical now than ever before as healthcare worldwide is straining from the Covid-19 pandemic,” said Tim Howard, ISPE’s president and acting CEO. “Even in these trying times, it is important to spotlight the dedication of companies like the 2020 FOYA Category Winners who are at the forefront of not only setting the standard for pharmaceutical facilities of the future but also creating new opportunities to enhance patient health and safety worldwide.”

### 2019 FOYA Category Award Winners

The Equipment Innovation Category was awarded to **Roche** for its new in-vivo building in Basel, Switzerland. This project brings innovation to one of the lesser understood parts of the pharmaceutical discovery and development process – the animal research facility. The equipment innovation that is found in every part of the project aims to protect researchers and animals, drive efficiency, and set new industry standards for animal research.

The Facility Integration Category was awarded to **Pfizer** for its Pfizer Building E - Andover Clinical Manufacturing Facility (ACMF) in Andover, MA, USA. The ACMF proves that a sustainable, flexible, configurable, and wireless clinical manufacturing facility can achieve complete integration into a dynamic, high-performance process development flow today and preserve that integration no matter how biologic drug development may evolve in years to come.

**Sanofi** was awarded the Facility of the Future Category Award for its Sanofi Digitally Enabled Integrated Continuous Biomanufacturing Facility in Framingham, MA, USA. This fully integrated bioprocessing facility takes the application of disposable process technology and flexible facility design to a new level. Using the best of already proven technology and design, they have expanded the use to allow design and construction of a facility that enables continuous upstream and downstream processing.

**Eli Lilly** won the Operational Excellence Category Award for its Innovation Development Center (The Center) in Indianapolis, IN, USA. They embraced optimized work processes and provided workspace to agilely adapt not only to laboratory needs, but to the most appropriate processes for collaboration and workspaces. The Center established itself as a model for rapid pharmaceutical development, proving to the industry that it is possible to bring successful therapies to market faster than ever before.

**Janssen Pharmaceuticals** won the Process Innovation Award Category for its Mirror-1: The Continuous Manufacturing Platform for the Development of a new oral solid dosage portfolio based in Beerse, Belgium. Mirror 1 incorporates and integrates three different process technologies (direct compression, roller compaction, and twin-screw wet granulation) into a single equipment set. This required intense collaboration with multiple equipment vendors, but ultimately enables this one platform to respond to the needs of the Janssen’s entire solid dosage portfolio.

**Bristol-Myers Squibb** is the winner of the Project Execution Category Award for its Multi-Product Cell Culture (MPCC) Project in Cruiserath, County Dublin, Ireland. The goal of the Project was to transform an existing BMS active pharmaceutical ingredient (API) site into a state-of-the-art biologics drug substance manufacturing campus that includes consideration for future commercial products.

The first of two companies to be awarded in the Social Impact Category was **GlaxoSmithKline** for its Attachment Inhibitor (AI) Project based in Parma, Italy. The project needed to be exceptionally fast to ensure continuity of supply of fostemsavir to allow submission of a new drug application to the FDA in December 2019. The result was 15 months from ground-breaking to handover of the fully finished facility to start manufacture.

The second of two companies to be awarded in the Social Impact Category was **United Therapeutics** for its Dinutuximab-Dedicated Oncology Medical and Analytical Laboratory in Silver Spring, MD, USA. The judging team was especially impressed by the sheer number of challenges this project had to overcome, while never losing focus on why they were doing this work. The project also took the time to consider the impacts to the community both during and after construction, even including external artwork for the facility.

**Boehringer Ingelheim Biopharmaceuticals China** was awarded an Honorable Mention for its new facility in Shanghai, China which is the first international provider of biopharmaceutical contract manufacturing solutions to clients in China. The commercial facility OASIS is designed to fulfill a maximum degree of flexibility: this includes a modular approach to fit out distinct manufacturing modules sequentially, implementing a single-use bioreactor design to react to various customer needs until the mode of operation.

**Janssen Pharmaceutical** and **Legend Biotech USA** received an Honorable Mention for its Raritan CAR-T clinical manufacturing facility in Raritan, NJ, USA. Janssen entered into a worldwide collaboration and license agreement with Legend Biotech to jointly develop and commercialize a therapy for multiple myeloma, an incurable blood cancer that occurs when malignant plasma cells grow uncontrollably in the bone marrow.

### Roche and Arrakis Link on RNA-targeted Drugs

April 15, 2020: Swiss drugmaker Roche has entered into a strategic collaboration and license agreement with US biopharma Arrakis Therapeutics for the discovery of RNA-targeted small molecule (rSM) drugs. The Waltham, Massachusetts-based firm will lead discovery and research activities to a defined point on a broad set of targets across all of Roche’s R&D areas. Roche will then have the right to exclusively pursue further preclinical and clinical development. Under the terms of the deal, Roche will make an upfront payment of \$190 million cash to Arrakis, which is also eligible to receive further payments, which could exceed several billion dollars, on reaching various milestones as well as royalties on any resulting products. “Together, we share a common vision of accessing new drug targets at the RNA level and thereby discovering novel medicines to treat diseases with high unmet medical need. The collaboration will increase the number of new treatments for patients arising from our proprietary rSM discovery platform,” said Michael Gilman, CEO of Arrakis. “In addition to the Roche collaboration, we are further building our capabilities and advancing our wholly-owned rSM programs for diseases unaddressed by today’s medicines,” Gilman said. Arrakis’s founder and chief scientific officer, Jennifer Petter, added that the company’s platform allows it to “predict and validate the structure of RNA targets, locate druggable pockets, identify drug-like hits and conduct medicinal chemistry programs to discover a new class of RNA-targeted medicines optimized for potency, selectivity, and safety.” As well as partnering other companies, Arrakis is also developing an internal pipeline of rSMs to treat a range of serious illnesses, including cancers and other diseases where it said strongly validated targets and drivers of disease have been identified but have proven challenging with other drug approaches and modalities. In December 2013, Arrakis entered into an exclusive license agreement with the University of Pennsylvania to access intellectual property and technology related

to small molecule drug candidates that directly target RNA. The biopharma said the ability to target RNA with small molecules opens up the potential to access the biological and potentially disease-relevant activity of more than 200,000 RNA transcripts, representing a vast number of therapeutic targets that are largely out of reach with today's drug development tools.

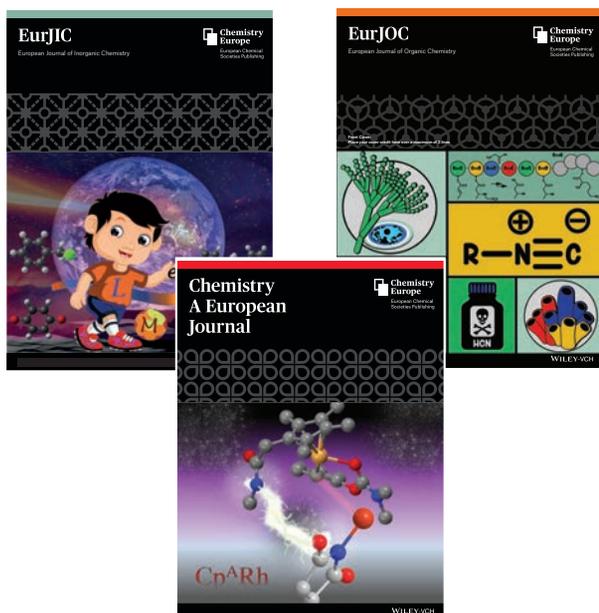
### Takeda Sells OTC Drugs to Denmark's Orifarm

April 27, 2020: Takeda Pharmaceutical has agreed to sell a selection of the over-the-counter (OTC) and prescription drugs it markets in Europe to fast-growing Danish pharma Orifarm for a total of about \$670 million. The deal will see Orifarm take about 110 products, including OTC, food supplements and drugs in the respiratory, anti-inflammatory, cardiovascular and endocrinology treatment areas, which are sold mostly in Denmark, Norway, Belgium, Poland, Finland, Sweden, the Baltics and Austria. The portfolio generated net sales of approximately \$230 million in fiscal year 2018, driven by strong sales of cough/cold and vitamin OTC brands as well as prescription products Warfarin and Levaxin. In addition, Takeda will transfer two manufacturing sites in Denmark and Poland. The parties will enter into additional manufacturing and supply agreements, under which Takeda will continue to make selected products on behalf of Orifarm. Under the terms of the deal, Orifarm will pay approximately \$505

million in cash to Takeda on closing, with about \$70 million in non-contingent cash due to be paid within four years. Takeda may also receive up to another \$95 million in potential milestone payments. The transaction is expected to close by the end of the company's current fiscal year, which ends Mar. 31, 2021, subject to customary conditions and regulatory approvals. About 600 employees will transfer to Orifarm upon completion. "These divestments will enable us to further prioritize and reinforce efforts in our core business areas" said Giles Platford, Takeda's president, Europe & Canada business unit. The move continues the Japanese drugmaker's divestment strategy as it chooses to simplify its portfolio and focus on the areas of gastroenterology, rare diseases, plasma-derived therapies, oncology and neuroscience. In the past twelve months, Takeda has made a series of divestments to meet its goal of selling about \$10 billion in non-core assets. The Osaka-based company intends to use the proceeds to continue to reduce its debt. Last month, Takeda announced it would sell its non-core products in Latin America to Brazil's Hypera Pharma for \$825 million. The Japanese pharma also closed on two other transactions in March – the sale of non-core assets in the Russia-CIS region to Germany's Stada for \$660 million, and in countries spanning the Near East, Middle East and Africa to Swiss pharma group Acino for more than \$200 million.

# Publish

in Chemistry Europe's Journals



## Batteries & Supercaps

ChemBioChem

ChemMedChem

ChemCatChem

ChemPhotoChem

ChemElectroChem

ChemPhysChem

ChemistryOpen

ChemPlusChem

Chemistry-Methods

ChemSusChem

ChemistrySelect

ChemSystemsChem

[www.chemistry-europe.org](http://www.chemistry-europe.org)