



SCS
Swiss Chemical
Society

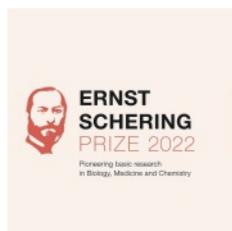
Community News

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SWISS CHEMICAL SOCIETY NEWS

Ernst Schering Prize – Call for Nominations



The prestigious Ernst Schering Prize annually honors outstanding scientists whose groundbreaking work has yielded new, inspiring models and led to fundamental shifts in biomedical knowledge. As of now, we invite both established scientists and scientific research institutions and societies to nominate candidates for this prize.

We especially want to honor scientists who, in addition to their top-level research in biology, medicine or chemistry, actively engage in socially relevant debates or have launched initiatives that inspire and support future generations of scientists.

We accept nominations for the Ernst Schering Prize 2022 until February 6, 2022. The prize winner will be selected from among the received nominations by our high-ranking, international selection committee.

The prize has been given annually since 1991. Previous prize winners include Aviv Regev (South San Francisco, 2021), Bonnie L. Bassler (Princeton, 2018), David MacMillan (Princeton, 2015), Matthias Mann (Martinsried, 2012), Rudolf Jaenisch (Cambridge, 2009), Klaus Rajewski (Berlin, 2008), and Christiane Nüsslein-Volhard (Tübingen, 1993).

More information: scheringstiftung.de

Call for nominations for the Prize Program 2022 of the Swiss Physical Society (SPS)



SPS Prizes, each endowed with CHF 5000, will be awarded again in 2022.

The work submitted must have been carried out either in Switzerland or by Swiss nationals abroad. The work will be judged on the basis of its significance, quality and originality.

Deadline for submission: January 31, 2022.

The prizes will be presented at the SPS Annual Meeting 2022 in Fribourg.

The Program includes the following prizes:

- SPS Prize donated by the company ABB Switzerland AG for an outstanding research work in all fields of physics.
- SPS Prize donated by the company IBM Research GmbH for an outstanding research work in the field of condensed matter
- SPS Prize donated by the company Oerlikon for an outstanding research work in the field of applied physics
- SPS Prize donated by the Swiss Federal Institute of Metrology METAS for an outstanding research work related to metrology
- SPS Prize donated by COMSOL Multiphysics GmbH for

an outstanding research work in the field of computational physics

- SPS Prize sponsored by Hitachi Energy Switzerland AG for outstanding research work in the field of energy technology.
- With these prizes, the SPS would like to recognize young physicists in the early stages of their career, in any case before they reach a permanent academic position or before they have been working in a start-up company or in industry for more than three years, for outstanding scientific work.

More information: sps.ch/en/awards

ICHO 2023 - International Chemistry Olympiad 2023



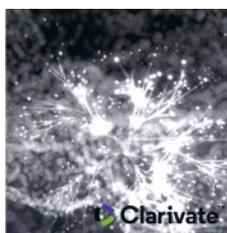
The first IChO in Switzerland! From 16 - 25 July 2023 more than 900 participants, mentors and volunteers from over 90 countries are expected to attend the International Chemistry Olympiad 2023. Besides two chemistry exams the young talents will experience a wide range of cultural activities, Swiss business and lifestyle as well as the picturesque landscape of Switzerland.

esque landscape of Switzerland.

The International Chemistry Olympiad (ICHO) is an annual international competition for talented young students in secondary schools and colleges. The first IChO took place in Prague in 1968. Since 1987, Switzerland has sent delegations to more than 30 IChOs but has never been a host country itself. For 2023, the Swiss Chemistry Olympiad Association (SwissChO) and ETH Zurich have been awarded the contract to host the event in Switzerland.

More information: icho2023.ch

Annual Ranking of Highly Cited Researchers



The annual ranking lists 6,600 researchers from more than 70 countries worldwide who have strongly influenced their own or several research fields through their publication activities. The list includes the most cited publications between January 2010 and December 2020. Data scientists at Clarivate's Institute for Scientific Information compiled

the information. The most highly cited researchers work in the USA (2,622), followed by China with 935 scientists. Switzerland ranks 10th with 102 highly cited researchers. This number has decreased slightly by 0.7 percent since 2018, which is attributed to a change in the recording method. Publications that listed more than 30 addresses of institutions have been excluded from the analysis for several years. This year, the data analysts compiling the ranking also excluded publications in which more than 30 authors or group authorships were listed. Harvard University is the university that unites the most highly cited scientists under one roof, namely 214 researchers. For ETH Zurich, 18 highly

cited researchers are listed, although one of them departed ETH Zurich two years ago and is now conducting research at the University of Leipzig.

Source: *ethz.ch*

SCS Anniversary Members 2021



The board members of the Swiss Chemical Society would like to take this opportunity to congratulate our senior members who celebrate an SCS anniversary in 2021. We would like to express our special thanks to Jost Wild, Porrentruy Rudolf Andreatta, Arlesheim and Daniel O. Hauser, New York (USA) who have been SCS members for 60 years.

Member for 60 years

Jost Wild, Porrentruy
Rudolf Andreatta, Arlesheim
Daniel O. Hauser, New York (USA)

Member for 50 years

Lucie R. Balsenc, Geneva
Gérald Jan, Villars-sur-Glâne
Urs Burckhardt, Basel
Martin Karpf, Hofstetten
Richard Buchecker, Zurich

Member for 40 years

Michael Allan, Wünnewil
Bernard Aebischer, Murten
Hanspeter Huber, Basel
Hans Rudolf Wäspe, Allschwil
Rudolf O. Duthaler, Bettingen
Roland Heckendorn, Arlesheim
Gerardo Ramos Tombo, Arlesheim
Peter Schnurrenberger, Kaiseraugst
Andreas Haag, Fehraltorf
Franz-Peter Montforts, Lilienthal
Rinaldo Marini Bettolo, Roma (IT)
Jean-Paul Stringaro, Winterthur
Albert K. Beck, Uetikon Waldegg

Member for 30 years

Imre Farkas, Hochwald
Peter Wipf, Pittsburgh (USA)
Jörg Herrmann, Kaiseraugst
Thomas Koch, Oftringen
Fabrizio Gasparini, Lausen
Beat Ernst, Magden
Conrad Roten, Termen
Laurenz Kellenberger, Riehen
Miguel A. Maestro-Saavedra, La Coruna (ES)
Werner Hälgi, Männedorf
Ian Lewis, Riehen
Steven V. Ley, Cambridge (UK)
Pierre-Philippe Chappuis, Geneva
Dominique Sallin, Gland
Otmar Zoller, Liebefeld
Dieter Müller, Schaffhausen
Hans-Rudolf Dettwiler, Glis
Robert Kuhn, Appenzell
Peter Hauser, Basel

Member for 20 years

Michele Leuenberger, Riehen
Felix Wettstein, Zurich
Roger Mutter, Brittnau
André Peisker, Mönthal
Andrea Manola, Le Grand Saconex
Gerhard Wittwer, Pratteln
Thomas Frey, Erlinsbach
Valentin Köhler, Basel
Edouard Marc Meyer, Neuchâtel
Alfred Stutz, Zurich
Martina Zsely Schaffter, Satigny
Marc Lanz, Reitnau
Jean-Paul Roduit, Grône
Primo Mercoli, Severen
Jürgen Maier-Rosenkranz, Tübingen
Pablo Lerena, Basel
Ferdinand Wild, Uetikon am See
Kay Severin, Lausanne
Stefan Hildbrand, Gelterkinden
Radoslaw Sobota, Warsaw
Sandrine Gerber, Etoy
Nicola Solcà, Bellinzona
Bassam Alameddine, Hawally (KW)
Thierry Kimmerlin, Basel
Oliver Knopff, Bellevue
Davide Ferri, Zurich
Thomas Giger, Nulgar
Christian Quellet, Biel
Stefan W. Scheuplein, Kaiseraugst
Qian Tang, Oberwil
Christian Bisang, Basel



Season's Greetings

Many thanks to all our members, partners, board members and co-workers who have supported us over the past year. Merci!

We hope that this Christmas season may sparkle and shine, that all your wishes and dreams may come true and that you may feel this happiness all year round.

All the best for 2022 and Happy New Year!

Your team from the SCS Office
Sarah, Gillian, Esther, Céline,
Robert, Hans Peter & David



SCS
Swiss Chemical
Society

A Warm Welcome to Our New Members!



Period: 27.10.–24.11.2021

Lisa-Maria Boulgoura, Goldach – Domenico Gioffre, Zurich – Laura Hendriks, Fribourg – Stef Jucker, Winterthur – Clara Lambert, Geneva – Michael Levis, Clafingen – Meghna Manae, Zurich – Elinor Morris, Basel – Florian Puschmann, Zurich – Ivana Sekulovska Crvchevska, Oftringen.

SCS AWARD WINNERS 2022

It's our pleasure to announce the winners of the 2022 SCS Scientific Award Programs. We would like to sincerely congratulate all winners for their outstanding scientific contributions, and we are looking forward to the award ceremonies and lectures that will take place at one of our upcoming SCS events.

Paracelsus Prize 2022



Prof. Antonio Togni, ETH Zurich is awarded for his groundbreaking contributions to organic, inorganic, organometallic chemistry and catalysis both in industry and academia as well as for his inspiring approaches to teaching and education.

The award is endowed with CHF 20,000 and a medal in gold.

The award lecture will take place at the SCS Fall Meeting in Zurich on September 8, 2022.

scg.ch/paracelsus

Werner Prize 2022



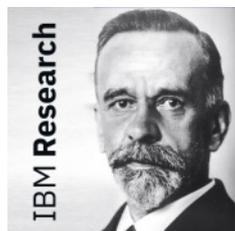
Prof. Fabian O. von Rohr, University of Zurich

receives the prize for developing sophisticated approaches to the design and preparation of novel quantum materials that show emergent collective quantum phenomena, such as superconductivity or magnetic order, or materials with topologically non-trivial properties.

The prize is endowed with CHF 10,000 and a medal in bronze. The award lecture will take place at the SCS Spring Meeting in Geneva on April 22, 2022.

scg.ch/werner

Sandmeyer Prize 2022



The SCS honors Alain Vaucher, Daniel Probst, Philippe Schwaller, Theophile Gaudin, Teodoro Laino, Matteo Manica, Alessandra Toniato, Federico Zipoli, Antonio Cardinale, Alessandro Castrogiovanni, Heiko Wolf, Aleksandros Sobczyk, Joppe Geluykens, from the **RXN for Chemistry Project Team from IBM Research**

for their important scientific breakthrough in the digitalization of synthetic organic chemistry that helps to improve digital workflows with state-of-the-art machine learning technologies.

The award is endowed with CHF 20,000.

The award lecture will take place at the SCS Fall Meeting in Zurich on September 8, 2022 and at the Freiburger Symposium 2023. scg.ch/sandmeyer

Senior Industrial Science Award 2022



Dr. Bernd Kuhn, F. Hoffmann-La Roche AG, receives the prize for his groundbreaking achievements over the past two decades, bringing together novel computational approaches and medicinal chemistry knowledge that led to new drug designs and scientific discoveries that have had tremendous impact on small molecule discovery projects.

The award is endowed with CHF 10,000.

The award lecture will take place at the SCS Fall Meeting in Zurich on September 8, 2022

scg.ch/scs-industrial-awards

Swiss Green & Sustainable Chemistry Award 2022



Prof. Xile Hu, EPFL Lausanne is awarded for his outstanding, interdisciplinary research program to develop catalysis for sustainable synthesis of added-value chemicals and for cost-effective production of solar and electric fuels.

The award is endowed with CHF 10,000.

The award lecture will take place at the SCS Fall Meeting in Zurich on

September 8, 2022

scg.ch/green-and-sustainable-chemistry-award

Balmer Prize 2022



Dr. Urs Leisinger, Kantonsschule Zug wird geehrt für seine höchst engagierte und innovative Lehrtätigkeit, sein Engagement in Politik und Lehrerfortbildung sowie für die Entwicklung und Implementierung des Projekts «Molekularium» welches eine neue Ebene des Chemieunterrichtens darstellt, welche

– ergänzend zum klassischen Theorie- und Experimentalunterricht – den Einsatz von Computern an Gymnasien in sinnvollster Weise aufzeigt.

as well as



Dr. Paolo Lubini, Liceo cantonale di Lugano 2, Savosa and

Mr. Michele D'Anna, Liceo cantonale di Locarno (retired)

for developing and implementing their concepts of energy, entropy, and the chemical potential, the latter being key

to a new way of teaching chemistry at high-school level, thus representing to most significant didactic innovation in view of an early and systematic understanding of chemical reactivity and equilibrium.

The awards are endowed with CHF 4,000 and a medal in bronze.

scg.ch/balmer

Dr. Max Lüthi Prize 2022



Stefanie Rychard, HEIA Fribourg for her outstanding Bachelor project: «Optimisation of extraction methods for the analysis of natural dyes in cultural heritage objects»

The prize is endowed with CHF 1,000 and a medal in bronze.

scg.ch/max-luethi

HONORS, AWARDS, APPOINTMENTS

Prof. Fabian von Rohr, University of Zurich wins the Ruzicka-Prize 2021



Prof. Fabian von Rohr from University of Zürich wins the Ruzicka-Prize 2021 for his work on the discovery of quantum materials by combining chemical and physical design principles. The award ceremony took place at the ETH Campus Höggerberg on November 18, 2021.

The Ruzicka Prize, named after the ETH professor and Nobel laureate Leopold Ruzicka, is one of the most important awards for the promotion of young scientists in the field of chemistry in Switzerland. The prize is endowed with 10,000 CHF.

Source: chab.ethz.ch

Prof. Nina Hartrampf, University of Zurich: Recipient of the 2021 Bachem Award



Prof. Nina Hartrampf from the University of Zurich is the winner of the Bachem Award 2021. Nina Hartrampf is an Assistant Professor (tenure track) for “Next Generation Synthesis” at the University of Zurich. Her group’s current research interests are the development of new flow-based methods for peptide synthesis and modification, and their

application to the investigation of post-translationally modified peptides and proteins.

She received a Bachelor’s degree in Chemistry and Biochemistry as well as a Master’s degree in Chemistry from the Ludwig-Maximilians-Universität München. In 2013, she joined the group of Prof. Dirk Trauner for her graduate studies in natural product synthesis. After graduating summa cum laude in 2017, she joined the group of Prof. Bradley L. Pentelute at Massachusetts Institute of Technology. Her postdoctoral work focused on the rapid high-fidelity synthesis of peptides and proteins using automated flow chemistry.

Source: chem.uzh.ch

Yimon Aye, EPFL Lausanne wins the ICBS Award



The ICBS awarded its 2021 Global Lectureship award to **Prof. Yimon Aye** at EPFL’s School of Basic Sciences. The award recognizes “distinguished investigators whose research has significantly advanced the field of chemical biology.”

The award announcement refers to Professor Aye as “a creative chemical biologist who has generated large impact

across the globe, best embodying the spirit of the ICBS Global Lectureship”.

Professor Aye leads the Laboratory of Electrophiles And Genome Operation (LEAGO) in the Institute of Chemical Sciences and Engineering (ISIC). In a letter to Professor Aye, the ICBS states that she is being “recognized for [her] pioneering research on the development and application of innovative chemical biology tools to enable the study of reactive electrophilic species (RES) signaling with high spatiotemporal resolution and [her] contributions to the chemical biology field.”

The International Chemical Biology Society (ICBS) was founded in 2011 as “an independent, not for profit organization dedicated to promoting research and educational opportunities at the interface of chemistry and biology.” As an international forum, the ICBS “brings together cross-disciplinary scientists from academia, nonprofit organizations, government, and industry to communicate new research and help translate the power of chemical biology to advance human health and enhance a stable ecosystem for environmental sustainability.”

Source: actu.epfl.ch

Selina Kaiser wins the 1st prize of the Swiss CleanTech Award, sponsored by Clariant



Congratulations to **Selina K. Kaiser**, ETH Zürich for winning the first prize (CHF 5’000) of the Swiss CleanTech Award 2021 for her research on «Nanostructured Catalysis for Sustainable Acetylene-Based Vinyl Chloride Production»

The second price (CHF 2’500) went to **Scott R. Docherty**, ETH Zürich for his

project on «Bimetallic Palladium-Gallium Catalysts for the Hydrogenation of CO₂ to Methanol».

The third prize (1’500) was awarded to Wooseok Yang, University of Zürich for his research on «Conversion of solar energy into a vector suitable for storage using Sb₂Se₃».

The fourth prize (CHF 1’000) went to Ahmed Elabd, University of Fribourg for his project on «Functional Mechanically Interlocked Polymers for Stabilizing High Energy Density Batteries»

The 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. As a company that creates value through sustainability and innovation, Clariant is particularly concerned about strengthening the knowledge base of CleanTech in Switzerland by sponsoring basic research and fostering the knowledge and technology transfer between industry and academia.

The award ceremony 2021 took place at ILMAC Basel on October 20, 2021

Source: scg.ch

JOURNAL NEWS

Helvetica, Volume 104, Issue 11, November 2021



Reviews

α - and β -Eliminations in Transition Metal Complexes: Strategies to Cleave Unstrained C–C and C–F Bonds

Raphaël Morteza Karimzadeh-Younjali, Ola F. Wendt

Catalyst-Controlled Chemoselective Nitrene Transfers

Hidetoshi Noda, Xinxin Tang, Masakatsu Shibasaki

Communications

Synthesis and Reactivity of Molybdenum and Tungsten Alkyne Complexes Containing 6-Methylpyridine-2-thiolate Ligands

Madeleine A. Ehweiner, Miljan Z. Corovic, Ferdinand Belaj, Prof. Dr. Nadia C. Mösch-Zanetti

Palladium-Catalyzed Aminocarbonylation of Aryl Halides with *N,N*-Dialkylformamide Acetals

Shuichi Hirata, Takao Osako, Yasuhiro Uozumi

Increasing Olefin Metathesis Activity of Silica-Supported Molybdenum Imido Adamantylidene Complexes through E Ligand σ -Donation

Darryl F. Nater, Bhaskar Paul, Lukas Lätsch, Richard R. Schrock, Christophe Copéret

Full Papers

Improvements in the Synthesis of the Third-Generation EGFR Inhibitor Osimertinib

Pinelopi Voulgari, Dimitrios Alivertis, Konstantinos Skobridis

Cassis and Green Tea: Spontaneous Release of Natural Aroma Compounds from β -Alkylthioalkanones

Sarah Bättig, Timothy Egger, Olga Gey, Christian G. Bochet, Felix Flachsmann

Regioselective Short Synthesis of Epiisoborneol Neopentyl Ether as Chiral Auxiliary: An Absolute Configuration Reset

Anna Piatek, Christian Chapuis

Scorpio-Ligand: Synthesis of Biphenyl-Dihydroazepine Phosphoramidite Ligands for Asymmetric Hydrogenation

Stefanie Auras, Oliver Trapp

Ring Construction by 1,1-Carboboration; Making Anthracene Derivatives from a Tetra(alkynyl)benzene

René Liedtke, Sabrina Surmiak, Xiaoming Jie, Constantin G. Daniliuc, Gerald Kehr, Gerhard Erker

Website: onlinelibrary.wiley.com/journal/15222675

INDUSTRIAL NEWS

Source: www.chemanager-online.com

DuluxGroup to Acquire Cromology

October 25, 2021: DuluxGroup, the Australian subsidiary of Japan's Nippon Paint Holdings, is to acquire European decorative

paint maker Cromology, creating a combined entity that will be the leading paints & coatings company in Asia-Pacific and the fourth largest worldwide. Cromology's shareholder Wendel said it has entered into an exclusivity period with DuluxGroup to finalize the acquisition, which is expected to close during the first half of 2022. The purchase will be made through DGL International, a newly established UK-based subsidiary of DuluxGroup, which will fund the acquisition through existing cash and new debt facilities. Financial details were not disclosed. Explaining its reasons for buying Cromology, Nippon Paint said it is "aggressively pursuing M&A activities by leveraging the high growth potential and stable cash flows of the paint market in order to firmly establish our sustainable growth and further increase our market presence around the world." According to the Osaka-based group, the European paints market is the second largest in the world behind China, and Cromology is the fourth-largest architectural paints manufacturer in Europe. Cromology is present in eight European countries and is expected to post full-year 2021 sales of about €686 million. For Nippon Paint, the acquisition will mean improving scale across France, Spain, Italy and Portugal, as well as in other major European markets, including some in central Europe. Cromology will also provide the "right level of scale, volume and manufacturing capability" to form the entry point for Nippon Paint to build a decorative paints and coatings business in Europe and provide a platform for other bolt-on acquisitions. Cromology's network consists of 386 stores across France, Portugal and Switzerland, which will provide an opportunity to leverage DuluxGroup's operational capabilities in running trade centers and selling to DIY customers in retail channels. It also presents an opportunity to launch other DuluxGroup brands in woodcare and texture coatings, and sealants, adhesives and fillers.

Novartis Reviewing Options for Sandoz

October 27, 2021: Swiss drugs giant Novartis has launched a strategic review to decide what to do with the generics business it operates under the name Sandoz – not coincidentally the name of one of its predecessors. The drugs giant revealed the plans when presenting financial results for the third quarter and the first nine months of 2021. The Basel-based group said all options are on the table, including retaining the business and separation. The timetable for the action appears to be fluid, with an update promised by the end of 2022. As recently as 2018, Novartis said it was looking to give the generics subsidiary more autonomy – a message market watchers saw as a prelude to a sale. As a generics player, Sandoz has seen considerable price pressure in recent years, especially in the US. In the first three quarters of 2021, its US sales declined 17%, compared with a 2% drop worldwide. The subsidiary's Q3 quarterly global operating income declined by 15% in the same period. Analysts noted that Novartis is focusing on biosimilars and complex generics for Sandoz's forward development. Along with in-licensing a generic version of Roche's anti-VEGF drug Avastin from China's Bio-Thera Solutions, the company is also in late-stage development of a biosimilar to Bayer/ Regeneron's VEGF inhibitor Eylea. Sandoz plans to launch six biosimilar products across the US and EU in the next few years, CEO Richard Saynor said in a conference call with investors. The company is working on around 15 biosimilar programs internally or through partnerships, he added.

Novartis and BioNTech Renew Toll Pact

Separately, Novartis and BioNTech have renewed their toll manufacturing agreement for the mRNA-based Covid-19 vaccine BioNTech markets together with Pfizer as Comirnaty. The updated agreement calls for Novartis to produce at least 24 million doses of the vaccine in 2022 at its facilities in Ljubljana, Slovenia. The Swiss drugmaker will draw bulk mRNA from BioNTech to fill into vials under sterile conditions, then return the finished doses

for distribution. Under the existing pact, the Swiss pharma was contracted to fill and finish more than 50 million doses this year. Among other sites, BioNTech produces Comirnaty in a German plant acquired from Novartis.

Roche Launches Genomic Profiling Kit for Cancer Analysis

October 29, 2021: Swiss drugmaker Roche has launched a genomic profiling kit that it has developed in conjunction with Foundation Medicine. The Basel-based company is supplying the kit across Europe, North America, South America and Asia. Their first jointly developed product, the Avenio Tumor Tissue Comprehensive Genomic Profiling (CGP) kit will allow laboratories to expand their in-house cancer research. The kit uses a gene panel that can analyze 324 cancer-related genes across four main classes of genomic alterations and signatures that are known to cause cancer. Each of the kits is configured for running 24 samples, with the entire process completed in five days. "To treat cancer effectively, we must understand what drives it at a molecular level. CGP helps inform decisions about available treatment options, including targeted therapies, immunotherapies, tumor-agnostic treatments and clinical trial participation, based on the unique genomic profile of a patient's tumor," said Thomas Schinecker, CEO of Roche Diagnostics. "We are bringing powerful insights from CGP to enable smarter, more efficient research and development. Our new kit provides the information researchers need and will ultimately provide insights physicians can use to develop personalized treatment strategies for individual patients," he added. In January 2020, Roche entered into a 15-year agreement with US company Illumina to develop, manufacture and commercialize Avenio tests for both tissue and blood for use on Illumina's in-vitro diagnostic systems. The companies' aim is to broaden global adoption of next-generation sequencing for predicting, detecting, treating and monitoring cancer.

Merck Moves to Advance ADC Therapies

November 3, 2021: German pharmaceuticals, chemicals and life sciences group Merck has launched new technology and a capacity expansion to advance development of antibody-drug conjugate (ADC) therapies. The initiatives, it said, underscore its continued investment in novel modalities and support efforts to double ADC and high-potent active pharmaceutical ingredient (HPAPI) capacity in the near future. Among the initiatives is the launch of ChetoSensar, a technology designed to improve the poor aqueous solubility of many ADCs, which Merck estimates causes more than 20% of ADC clinical terminations. Merck has also created a new platform called Dolcore to reduce the development and manufacturing time required for ADCs. The Darmstadt-based player estimates that Dolcore can increase speed to market for a novel Dolostatin-based ADC payload by up to a year. In December, Merck said it will enhance the ADC capabilities of its clinical manufacturing facility in St. Louis, Missouri, USA. The investment will expand the facility's footprint to enable large-scale production, including chromatographic purification for early phase clinical supply. The project follows the September 2020 announcement of a €59 million expansion of Merck's plant near Madison, Wisconsin, USA. Here it is doubling its HPAPI kilo lab capacity in order to expedite the manufacture of HPAPIs, ADC linker/payloads and complex APIs. Completion is expected by mid-2022. "ADCs have experienced remarkable growth, with commercially approved ADCs tripling in the past three years," said Andrew Bulpin, head of process solutions in the Life Science business unit. "We are a pioneer in this space, involved in 50% of the commercially approved ADCs on the market today. This latest innovation and additional capacity help bring novel treatments to cancer patients around the world and reinforce our commitment to shaping the future of these novel modalities." Merck has announced a spate of expansion projects recently, including three in the US, at Carlsbad, California; Jaffrey, New Hampshire; and Danvers, Massachusetts, as well as in Darmstadt; Cork, Ireland; and Buchs, Switzerland. The German group said the expansions are part of an ambitious, multi-year program to increase the industrial capacity and capabilities of the Life Science business to support growing global demand for lifesaving medications and to make significant contributions to public health.

Zürcher Hochschule für Angewandte Wissenschaften

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zhaw.ch/icbt/weiterbildung

Lonza Expands Exosomes With two new Acquisitions

November 4, 2021: Swiss CDMO Lonza is making major strides to expand its position in exosome manufacturing. This week it announced two new moves. In the first, it will acquire and operate a plant at Lexington, Massachusetts, US, from Codiak BioSciences. In the second, it is acquiring a service unit in Italy. Under the terms of the deal with Codiak, the clinical-stage biopharmaceutical company pioneering the development of exosome-based therapeutics will retain its pipeline of therapeutic candidates as well as its exosome engineering and drug-loading technologies. For \$65 million, Codiak will receive GMP manufacturing services in kind from Lonza, which in turn will gain worldwide access and sub-licensable rights to the US clinical-stage biopharmaceutical company's pioneering exosome-based therapeutics high-throughput perfusion-based cGMP process for exosome manufacturing. Together, the two firms plan to establish a Center of Excellence for the development of exosome manufacturing technologies. This, Lonza said, will leverage the strengths of both players to advance developments in exosome production, purification and analytics while providing customers of the Basel-based CDMO with exosome assay and process development, analytics and manufacturing services. Exosomes are emerging as a new modality for advanced therapies and could become the next frontier in biotherapeutics, said Lonza senior vice president Alberto Santagostino, who heads Lonza's Cell and Gene Technologies unit. The arrangement with Codiak, he commented, is not only consistent with Lonza's strategy to advance this technology. It also will benefit the entire industry. The nano-sized membrane vesicles secreted by many cell types play a role in cell-to-cell communication and, as Lonza explains, represent clinically valuable tools for applications ranging from early detection, diagnosis, prognosis and targeted treatments. Further development of the exosome platform also has the potential to make cell and gene therapies available and commercially viable for large patient populations, the CDMO believes. Codiak, which went public last year, already has two engineered exosome therapeutic candidates in clinical studies in patients and plans to file a third investigational new drug application to the US Food and Drug Administration (FDA) for a third candidate during the current fourth quarter.

Acquisition of Exosomics service unit in Italy

In a second deal, for which financial terms were not disclosed, Lonza is acquiring the Siena, Italy-based service unit of Exosomics, an extracellular vesicles (EV) biotech. The Swiss company has been a minority shareholder of Exosomics since 2017 and will retain an interest after the acquisition. With this purchase, Lonza will gain access to expertise and capabilities in EV analytics and characterization. In addition to R&D, it intends to expand service offerings from the site to a "comprehensive suite" of development and analytical services for exosomes. This acquisition, the company said, is designed to strengthen its position as a "leading global CDMO in exosomes bioprocessing." Commenting that Lonza's acquisition reaffirms the recognition for his company as a key player in Europe in the field of exosomes sciences, CEO Antonio Chiesi said Exosomics "will now focus on its original goal of pan-cancer screening and liquid biopsy applications in human diseases, still supported by Lonza as its most important industrial shareholder."

Novartis Selling Roche Shares Back to Swiss Rival

November 8, 2021: In the reverse of a deal sealed 20 years ago, Novartis is selling the 33% stake it bought in Roche back to the compatriot drugmaker. The latest transaction between the two Swiss giants sees 53.3 million shares moving across Basel again for a much higher price of \$20.7 billion. At \$388.99 per share, the sale price reflects the volume-weighted average price of Roche's

non-voting equity certificates over the last 20 trading days ending on Nov. 2, the companies said. The deal covers roughly 33% of voting rights in Roche. Novartis acquired the stake between 2001 and 2003 for about \$5 billion as a long-term financial investment that it said delivered "significant, recurring earnings contribution and cumulative dividends in excess of \$6 billion." Over the holding period, this translated into an annualized return of 10.2 % in US dollar terms and 6.6% in Swiss francs. Today, the drugmaker said it no longer considers the investment in the pharma rival to be part of its core business and it is therefore not a strategic asset. "After more than 20 years as a shareholder of Roche, we concluded that now is the right time to monetize our investment," Novartis CEO Vas Narasimhan said in a statement, adding that the divestment is consistent with its strategy as a "focused medicines company." Market reports noted that the share sale comes at a time when Roche's value on the SIX Swiss Exchange is trading at all-time highs, thanks in part to some of its products being used as Covid treatments. Novartis will report a core adjusted gain of about \$14 billion from the sale of the stake under income from associated companies. The transaction still must be approved by Roche shareholders, at an extraordinary general meeting on Nov.26. In announcing plans for the transaction, Novartis said the proceeds will be used in line with its capital allocation priorities to "enhance strong returns to shareholders." Analysts and other observers are now perusing stock market developments and gazing into their crystal balls and other technical tools to gain insight into what the Swiss drug giant may pick up next. In a conference call to present financial results at the end of October, Novartis CFO Harry Kirsch said the drugmaker's priorities for future capital spending include investment in the internal business, growing its dividend, bolt-on acquisitions and in-licensing, as well as share buybacks. Likely bolt-on targets could be businesses engaged in oncology, cardiovascular disease and novel gene therapies.

Arxada and Troy Merger Would Add Muscle in Microbial Control

November 9, 2021: Swiss specialty chemicals producer Arxada, which was recently sold by CDMO Lonza to private equity funds Bain Capital and Cinven, has made its first strategic move since the separation in July. The fledgling company has announced plans to merge with Troy Corporation, a globally oriented US player in microbial control. Financial details of the proposed transaction have not been disclosed, and no expected closure date or even a potential new name post-merger revealed. The prospective joint owners said they will work to close the transaction as soon as possible after obtaining all customary approvals. As part of the deal structure, Troy's owners will invest an undisclosed sum in the combined company, thereby broadening its capabilities and strengthening the offering of the predecessors' respective Microbial Control Solutions (MC) business while enabling the delivery of new solutions and value-added services. With its broad expertise in the fields of paints and coatings, wood protection and preservation, home and personal care, plastics and textiles, energy and metal-working fluids, the US firm is regarded as a market leader. Arxada also stands to benefit from Troy's technical expertise, customer relationships and wide portfolio of performance products as well its history of innovation, including the invention of 3-iodo propynyl butyl carbamate (IPBC), which the Swiss player currently does not manufacture. Additionally, the proposed combination stands is expected to enhance Arxada's commercial presence globally, adding several production sites in important business locations such as Newark, New Jersey, USA; Horhausen, Germany; Moerdijk, the Netherlands; and Kabinburi, Thailand. Marc Doyle, Arxada's CEO, said the merger plans, coming only four months after the company's separation from Lonza, "also fits with our strategy of expanding our

geographic footprint and the scale and depth of our capabilities by bolstering our manufacturing capacity in MCS beyond North America into Europe and Asia.” Daryl D. Smith, chairman, president and CEO of Troy, commented that the combination of the US company’s strength in architectural coatings and industrial preservation, along with its leadership in IPBC technology and broad range of performance additives, “perfectly complements Arxada’s strengths in wet state preservation.”

AstraZeneca Sells COPD Drug Rights to Covis

November 10, 2021: AstraZeneca has agreed to transfer its global rights to two drugs for treating patients with chronic obstructive pulmonary disease (COPD) to Switzerland’s Covis Pharma for \$270 million. The transaction is expected to close in the fourth quarter of 2021. The drugs are Eklira, known as Tudorza in the US, and Duaklir, both in dry powder form and delivered via the Genuair breath-actuated multi-dose inhaler. They generated undisclosed revenue of \$143 million last year in the countries covered by the agreement. AstraZeneca licensed the global rights to both products from Almirall in 2014. Covis Pharma previously acquired the rights to three other respiratory medicines from the Anglo-Swedish drugmaker in 2018. These were Alvesco, used to treat persistent asthma, and Omnaris and Zetonna for treating nasal symptoms associated with rhinitis. Covis paid AstraZeneca \$350 million, in addition to conditional sales-related payments of up to \$21 million over four years from 2019.

Sika Boosts Construction Chemicals with MBCC Buy

November 15, 2021: Swiss specialty chemicals company Sika has agreed to buy MBCC Group, formerly BASF’s construction chemicals business, from an affiliate of private equity company Lone Star Funds for €5.2 billion. Sika described the deal as “highly complementary” and added that it expects the addition of MBCC’s portfolio to push sales above €12.3 billion by 2023. The transaction remains subject to regulatory approval, but Sika is targeting closure during the second half of 2022. The Baar-based group is anticipating annual synergies of between €152 million and €171 million. “Together we will reinforce our complementary range of products and services across the entire construction life cycle,” said Sika CEO Thomas Hasler. “With our combined portfolio, we will enable and accelerate the future of sustainable construction for the benefit of customers, employees, shareholders, and coming generations.” Commenting on the acquisition, Swiss investment group Vontobel said in a note to clients that “based on Sika’s strong track record regarding the integration of acquired businesses, we believe that also this deal will create substantial shareholder value.” It added that the deal “will add about 30% to Sika’s topline and 25% to its EBITDA, thereby making it the undisputed global market leader in construction chemicals.” However, Baader Helvea analyst Markus Mayer expressed his surprise that Sika was buying the former BASF business for a 64% uplift to the price Lone Star paid in 2019, after Sika had at the time flagged several weak points. Speaking to Reuters, Mayer said: “To turn around the weak spots of MBCC will be one of the most challenging tasks for Sika. In contrast, the integration track record of Sika is very strong and therefore if anyone can turn around the business it might be Sika.” Headquartered in Mannheim, Germany, MBCC has approximately 7,500 employees in more than 60 countries and more than 130 production facilities. The company is expected to generate net sales of €2.7 billion this year. The deal is the latest in a string of acquisitions that Sika has struck so far this year in the US, Mexico, Brazil, China, Japan and Russia. MBCC has itself acquired three companies this year, including US-based Fabpro Polymers in August, and Germany’s TPH Bausysteme and Australia’s Bluey Technologies, both in March.

Lonza Adds Microbial Development Facilities at Visp

November 19, 2021: CDMO Lonza is adding microbial development capabilities at its Visp, Switzerland, site. The company said the investment will support a capacity increase services targeting microbial-derived proteins. Both the expanded laboratory space and the new equipment should be in place by the end of this year. In particular, the expansion will support new projects within Lonza’s existing manufacturing assets, flanking the mid-scale microbial capacity added in August. As microbial expression systems demand complex manufacturing processes, the CDMO said the expanded development services will strengthen upstream, downstream and process analytics support for such projects. Additionally, Lonza sees the new development capacity as consolidating the alpine site’s microbial footprint while new high-throughput equipment and automation processes drive efficiency and project delivery. The upgrade will include three liquid-handling workstations and other equipment dedicated to upstream and downstream process development, as well analytical method development. At Visp, Lonza also plans to add a dedicated pilot suite with a 50-liter fermenter and corresponding downstream equipment capable of generating non-GMP product suitable for formulation and toxicology studies. This facility is designed to enhance the company’s internal technology transfer strategy and capability by providing a representative primary recovery scale. The additional lab space is to be aligned with available manufacturing capacity and support the new mid-scale assets due to be in operation from 2022. Shiva Khalafpour, head of Lonza’s Microbial Business unit, said the CDMO’s microbial-derived pipeline is “growing at a healthy rate,” driven by an increase in alternatives to antibodies such as nanobodies, designed ankyrin repeat proteins (DARPs) and single-chain antibodies. For some of these molecules, she said, microbial systems show better productivities, and this is strengthening the trend to outsourcing. Khalafpour said expanding its development labs will enable Lonza to support new customers with development and manufacture of these molecules and other recombinant proteins for both clinical and commercial projects.