



SCS
Swiss Chemical
Society

Community News

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www.chemanager-online.com

SWISS CHEMICAL SOCIETY NEWS

SCS Annual Report 2018



The annual report of the Swiss Chemical Society 2018 is now available as pdf download on the website scg.ch/about. The printed version is part of this CHIMIA issue.

In 2018 SCS initialized different initiatives to further strengthen the position of the SCS in Switzerland. The goal is to keep our core competences in the tra-

ditional fields of chemistry but to broaden the scope and to link new areas to the Society. Such areas are:

- Green & Sustainable Chemistry;
- Environmental Sciences;
- Intellectual Property in Chemical and Pharmaceutical Industry;
- Artificial Intelligence in Chemical Research;

Furthermore, we continued our efforts to enrich our event portfolio and partnered for many events in Switzerland and the near abroad. Together with the traditional SCS events and the incorporated events of the past three years, we offer now a very diverse program with annual or bi-annual activities.

Please enjoy reading through the 2018 annual report that shows again a very active and lively society.

scg.ch/about

Chemistry Travel Awards 2018



Through the «Chemistry Travel Award», contributions towards the cost of participation at an international conference in the chemical sciences are granted to selected PhD students. The award is sponsored by the «Platform Chemistry» of the SCNAT and the Swiss Chemical Society.

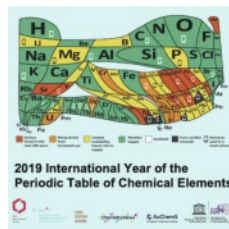
The award includes a contribution of CHF 1'000 towards the cost of an active participation (poster or oral presentation) at an international conference of three days or more between 15 May 2019 and 14 May 2020 in any field of chemical sciences. Up to 45 awards will be distributed to selected doctoral students from Swiss research institutions. Selection will be based primarily on scientific accomplishments and on the submitted conference abstract.

- Only applications in English will be considered.
- The award can only be won once in a lifetime – winners of previous years are excluded.
- There is no limitation of winners per research group.
- The award money will be paid upon presentation of a confirmation of attendance from the conference.

The deadline is: 31 March 2019 (23.59)

Further information as well as the application form can be found at: chemistry.scnat.ch/travel_award

Swiss Website to collect IYPT 2019 Initiatives



The Periodic Table of Chemical Elements is one of the most significant achievements in science, capturing the essence not only of chemistry, but also of physics and biology.

1869 is considered as the year of formulation of the modern concept of the Periodic System by Dmitri Mendeleev (and others). 2019 is the 150th anniversary

of the Periodic Table of Chemical Elements and has therefore been proclaimed the “International Year of the Periodic Table of Chemical Elements (IYPT2019)” by the United Nations General Assembly and UNESCO.

Share your IYPT2019 activities in Switzerland by submitting your initiative via our online form and let the world know about it via #IYPT2019 on Instagram, Facebook and Twitter.

www.iypt.ch

New call NCCR's Postdoctoral Fellowship for Women in Science



Postdoctoral fellowship
for Women in Science

The Swiss National Center of Competence in Research (NCCR) Bio-inspired Materials has opened a new call of the Women in Science Postdoctoral Fellowships.

The Research Fellowship Program for Women in Science of the NCCR Bio-Inspired Materials seeks to support the professional development of outstanding female researchers who have already demonstrated excellence at an early stage of their careers and wish to pursue an academic career. The fellowships support the residency of researchers in the laboratory of one of the research groups of the NCCR Bio-Inspired Materials. The grant is designed to fund original research ideas of the applicants and to leverage impact through integration within the NCCR Bio-Inspired Materials and its international network. While being fully integrated in the NCCR Bio-Inspired Materials, the fellows have the possibility to apply to all other NCCR programs, grants and support actions for NCCR members (such as childcare support during travel).

To whom is this call addressed? The program is open to female applicants who hold or are about to earn a doctoral degree in a relevant field of natural or life sciences, such as medicine, biology, biochemistry, chemistry, physics or materials science.

Start and duration: The start of the grant can be discussed but should be between the 1st June 2019 and the 1st September 2019. The duration of the research fellowship is 24 months.

What does the fellowship fund: The grant includes a standard researcher salary (100%) following the rules of the Swiss National Science Foundation (SNSF) for a period of 24 months (including social charges to be paid by the employer). The grant additionally includes funds to cover research and travel expenses for the entire funding period.

How to apply: see details about the application and evaluation process on the website.

Application deadline: 15th March 2019.

More detailed information on the grant and the application procedure can be found on the website:

www.bioinspired-materials.ch.ch

Reaxys PhD Prize 2019 is open for submission. Deadline is March 22, 2019



The Reaxys PhD Prize recognizes accomplished young chemists for innovative and rigorous research. This global competition is open to anyone who is doing or has recently completed a PhD in any discipline of chemistry. Discover more about the world's highest accolade for ambitious early-career chemistry researchers.

Eligibility

To enter, you must meet the following rules and requirements:

- You must currently be in a PhD program or have completed your PhD after January 1, 2018
- Your PhD topic must be within the chemical sciences. All areas of research are considered eligible.
- Only one candidate per research group can apply.
- You must submit your completed application on this platform.

What are the submission requirements?

Your application must include:

- An example of an accepted, peer-reviewed article that primarily showcases your work. NOTE: If you have previously applied, you must submit a new paper that features new and innovative research.
- Your curriculum vitae or résumé
- A personal statement
- A letter of recommendation from your PhD supervisor, including an overview of your qualifications, details of your achievements during your PhD studies, and a clear description of your role

Deadline: Please submit your application until March 22, 2019

www.elsevier.com/solutions/reaxys/reaxys-phd-prize

Invitation to the SCS General Assembly 2019



The Board of Directors invites all members of the Swiss Chemical Society and the delegates of its associated societies to join the 29th General Assembly.

April 5, 2019, 13.00–13.30h

Empa Akademie, Dübendorf

Provisional Agenda

1. Welcome and approval of the agenda
2. Election of the vote counters
3. Minutes of the 28th General Assembly from April 6, 2018 in Neuchâtel (published in CHIMIA 5/2018, A348)
4. Annual report 2018 (published in CHIMIA 1-2/2019)
5. Financial statement 2018 incl. audit report
6. Discharge the Board
7. Elections
10. News and strategic projects
11. Outlook 2019/2020
12. Varia

Motions to the assembly can be submitted until March 22, 2019 to info@scg.ch. A summary of the financial statement 2018 will be published on the website after the formal audit.

Swiss Chemical Society (SCS)

Dr. Alain De Mesmaeker
President

David Spichiger
Executive Director

SCS Anniversary Members



Several of our senior SCS members will celebrate special birthdays in 2019. This gives us the opportunity to warmly congratulate them and wish them many more years with us!

100 Years

Hans Dahn, Le Mont sur Lausanne

95 Years

Hans-Heinrich Kuhn, Spartanburg (US)

90 Years

Jaroslav Kalvoda, Binningen
Ernst Peterli, Bottmingen
Gustav Dändliker, Therwil
Rolf H. Müller, Berkeley (US)
Randolf Zückert, Brig
Charles W. Jefford, Bogis-Bossey

85 Years

Reinhart Keese, Spiegel b. Bern
Angelo Storni, Rheinfelden
Urs Burckhardt, Basel
Hansueli Brechbühler, Basel
Franz Müller, Hergiswil
Janos Rétey, Karlsruhe (DE)
Helmut Werner, Würzburg (DE)
H. Luzius Senti, Givrins
Heinz Galliker, Rombach

80 Years

Paul Müller, Eysins
Hans Allgeier, Lörrach-Haagen (DE)
François L'Eplattenier, Hofstetten
Roland Heckendorn, Arlesheim
Wilhelm Pickenhagen, Versoix
Jean-Marie Lehn, Strasbourg (FR)
Frank Seela, Osnabrück (DE)
Hans-Hartwig Otto, Freiburg (DE)
Peter Schwaninger, Schaffhausen
Hans-Jörg Angliker, Reinach
Ulrich Graf, Bottmingen
Ulrich Huber, Erlenbach

75 Years

Michael Grätzel, St. Sulpice
Michel Geoffroy, Perly
Jean-Marie Adam, Rosenau (FR)
Klaus Müller, Basel
Hanspeter Huber, Basel
Peter Rüedi, Gockhausen
Jörg Widmer, Bern

Herbert Hohl, Wil
 Amos B. Smith III, Philadelphia (US)
 Georg Karlaganis, Münchenbuchsee
 Hans-Rudolf Dettwiler, Brig
 Oskar Pfister, Uznach
 Peter Baumeister, Flüh
 Hans Egli, Frutigen
 Hans Fierz, Allschwil
 Anna Seelig, Riehen
 Werner Urland, Muralto

70 Years

Theo Berclaz, Geneva
 Michael Allan, Wünnewil
 Beda E. Fischer, Therwil
 Roland Werner Kunz, Forch
 Hans Stünzi, Regensdorf
 Bernhard Schwyn, Würenlos
 Werner Gans, Berlin (DE)
 Ernst Kupfer, Zürich
 Kurt Dietliker, Allschwil
 Silvio Decurtins, Bern
 Ruedi Gygax, Bottmingen
 Alexandre Alexakis, Geneva



Paul Müller



Jean-Marie Lehn



H.-H. Otto



Hans Allgeier



F. L'Eplattenier



Werner Urland



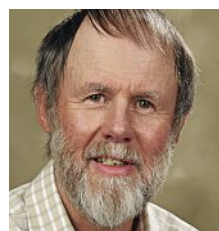
Michael Goeffroy



Herbert Hohl



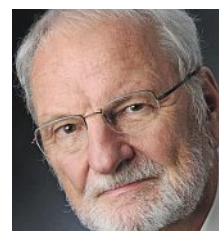
Hanspeter Huber



H. R. Dettwiler



Georg Karlaganis



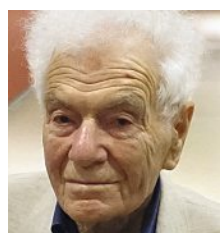
Ruedi Gygax



Michael Allan



Bernhard Schwyn



Hans Dahn



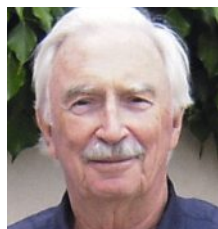
Hans H. Kuhn



Randolf Zückert



Ernst Peterli



Charles W. Jefford



Reinhart Keese



H. Luzius Senti



Janos Retey



Helmut Werner



Franz Müller



W. Pickenhagen



Ulrich Huber

A Warm Welcome to Our New Members!



Period: 13.11.2018 - 29.01.2019

Xingguang Cai, Bern - Vanessa Carle, Lausanne - Daniele Cartagenova, Baden - Gabriele Conti, Basel - Jordan De Jesus Silva, Zürich - Raphael Etter, Zürich - Prateeti Hazarika, Bern - Sascha Hoogendoorn, Geneve - Aron Huckaba, Lausanne - Nadir Jori, Lausanne - Anna Knörlein, Zürich - Sergey Kulik, Lausanne - Eleen Laul, Baden - Wan-Chi Lee, Sion - Qi Liu, Sion - Simon Mangold, Zürich - Marco Mareliati, Fribourg - Bernard Mazouin, Basel - Marco Montagnolo, Oberentfelden - Mina Moradi, Sion - Francis Pilloud, Châtel-St-Denis - Christoph Porz, Grenzach-Wyhlen - Elena Pruteanu, Bern - Samuel K. Regli, Til-

ler - Mojtaba Rezaei, Sion - Anne Riess, Herisau - David Roessel, Morges - Philipp Schilling, Zürich - Tereza Schönfeldová, Morges - Max Schwilk, Luzern - Fabio Stephan, Glis - Morris Trestman, Basel - Lorenzo Turetta, Fribourg - Michaela Vischer, Küssnacht a.R. - Jakob Wagner, Basel - Nino Wili, Zürich - Aurélien Willauer, Lausanne - Kaila Yallum, Yverdon-les-Bains - Elena Zakharova, Olten - Cathleen Zeymer, Zürich.

HONORS, AWARDS, APPOINTMENTS

Prof. Hans Dahn: Congratulations for your centenary



On January 2nd 2019, **Prof. Hans Dahn** was 100 years old and in good shape. The Institute of Chemical Sciences and Engineering at the EPFL (Ecole Polytechnique Fédérale de Lausanne) organized a reception on his honor on January 17th which was held in the restaurant l'Ornithorynque on the EPFL campus.

Former co-workers, students and colleagues of Professor Dahn met to celebrate this anniversary and to thank him once again for all his accomplishments as scientist, professor, teacher and administrator.

Professor Dahn was just 20 years old in 1939 when he published together with Prof. H. Erlenmeyer of the University of Basel his first manuscript in the *Helvetica Chimica Acta*. The work was about chromatography of inorganic compounds. He continued his chemistry studies in the laboratory headed by Prof. Paul Ruggli, and in 1944 he obtained a PhD degree from the University of Basel. He remained in the same institute headed by Prof. Tadeusz Reichstein (Nobel Prize in 1950) and carried out independent research. In 1957 he signed his 45th publication as an independent investigator and was nominated extraordinary Professor in the same Institute. In 1961 he accepted a nomination as full-professor at the University of Lausanne and succeeded to Professor Henri Goldstein. At that time the organic chemistry in Lausanne was represented by four scientists, one professor, one "chef-des-travaux" and two doctoral students. This was not an Institute yet, but a laboratory which published 4 articles this year, with a budget of CHF 50'000 that included the professor installment credit and the cost of the chemistry library. In 1966 the laboratory of organic chemistry became the Institute of Organic Chemistry (ICO) of the University of Lausanne (UNIL). In less than 12 years four professor positions were added to this new Institute and office and laboratory space was created in the old building at the Place du Château 3, and in the vicinity. In 1985, the ICO published 40 articles in referred journals. For the period 1988-1992, an American office put the chemistry of the UNIL (ICO + Institut de chimie minérale et analytique (ICMA)) at the 11th rank in Europe.

When Professor Dahn retired in 1989, the credits obtained by the ICO amounted to CHF 932'000 from the Canton de Vaud, and CHF 1'253'00 from the Swiss National Science Foundation. Professor Dahn has been a member of the scientific council of the Swiss National Science Foundation for 10 years and during that time has helped to promote scientific research and organic chemistry in Switzerland.

Scientific contributions of Professor Dahn have concentrated on the study of reaction mechanisms and on the invention of new analytical methods, especially the use of heavy oxygen isotopes, first 18-O, than 17-O. Already in 1961, and together with Prof. P. Diehl of the University of Basel, he signed a first publication on 17-O-NMR spectroscopy. After his retirement, Professor Dahn

published 20 articles in the field of 17-O-NMR spectroscopy. He is a member of the Swiss Chemical Society since 1948.

Text, photo: *Prof. hon. Pierre Vogel, ISIC, EPFL*

Katharina Fromm, University of Fribourg, receives the Prix Jaubert from the University of Geneva



On the occasion of the Geneva Chemistry and Biochemistry Days 2019 on Friday, January 18th 2019, **Prof. Katharina M. Fromm**, University of Fribourg, was awarded the Prix Jaubert 2018 from the University of Geneva for her contributions and works for the betterment of humankind. This is the highest recognition given to former alumni of the University of Geneva.

The award lecture was entitled "How bacteria cope with antimicrobial silver: molecular insights". The prize is endowed with 5'000 CHF that will be used for research and the organization of seminars (e.g. the next Chaim Weizmann Lecture with Nobel Prize Winner Randy Schekman is planned for May 13th 2019).

Source: unige.ch/sciences, frommgroup.ch

Prof. Ursula Roethlisberger, EPFL, elected AAAS Fellow



This year, the AAAS has honored 416 of its members with the lifetime title of elected Fellow, "in recognition of their extraordinary achievements in advancing science". One of the new AAAS Fellows in the Section of Chemistry, is **Prof. Ursula Roethlisberger** with EPFL's Institute of Chemical Science and Engineering (ISIC). Professor Roethlisberger directs the Laboratory of Computational Chemistry and Biochemistry, and her research focuses on ab initio molecular dynamics methods based on density functional theory (Car-Parrinello simulations) and their application, adaption and extension to systems of chemical and/or biological interest.

The AAAS Fellows will be recognized at the 2019 AAAS Annual Meeting in Washington D.C. during a Fellows Forum on 16 February 2019. They will be presented with an official certificate and the AAAS Fellows' gold and blue rosette pin, the colors of which represent the fields of science and engineering respectively.

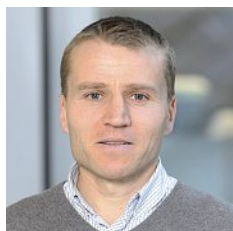
The American Association for the Advancement of Science (AAAS) is "the world's largest multidisciplinary scientific society", publishing the Science family of research journals.

Source: actu.epfl.ch

Dr. Fabrice Gallou, Novartis and Dr. Christoph Boss, Idorsia, receive one of the SCS Industrial Science Awards 2019

It's our pleasure to announce the winners of the 2019 SCS Industrial Science Awards. We would like to sincerely congratulate the two winners and we are looking forward to the award lectures that will take place on the occasion of the SCS Fall Meeting at University of Zurich, Irchel Campus on September 6, 2019.

SCS Senior Industrial Science Award 2019



The prize is given to honor very successful and established investigators with outstanding achievements over many years. The winner receives a certificate and a cash check of CHF 10'000.

The Swiss Chemical Society awards **Dr. Fabrice Gallou**, Novartis Pharmaceuticals AG, Basel, in recognition of his outstanding track record of innovation and creativity in the field of organic synthesis and for his leadership in coaching and mentoring of young scientists at Novartis.

tion and creativity in the field of organic synthesis and for his leadership in coaching and mentoring of young scientists at Novartis.

SCS Industrial Science Award 2018



The prize is given to honor successful investigators with outstanding achievements. The winner receives a certificate and a cash check of CHF 7'000.

The Swiss Chemical Society awards **Dr. Christoph Boss**, Idorsia Pharmaceuticals Ltd., Stein, to honor his outstanding contributions as medicinal chemists with remarkable analytical skills and an excellent flair for multidimensional lead optimization taking into consideration all aspects of modern medicinal chemistry.

Source: scg.ch/awards

Ruzicka Prize awarded to Prof. Christof Sparr, University of Basel



This year's Ruzicka Prize has been awarded to **Prof. Christof Sparr**, University of Basel. The 38-year-old ETH alumnus was honored for his outstanding achievements in the development of new synthesis methods.

Sparr conducts research in the area of the stereoselective representation of compounds with restricted rotation. His

research group is focused on arene-forming aldol condensation, which works in a similar way to aromatic polyketide biosynthesis. In recognition of his pioneering results, ETH Zurich is awarding Sparr the Ruzicka Prize, which includes prize money of CHF 10'000.

Source: ethz.ch/ruzicka-preis

Prof. Sandra Luber, Uni Zurich, honored with the Carl-Duisberg-Gedächtnispreis

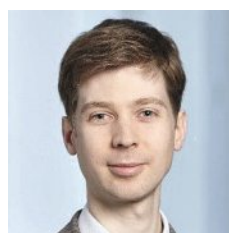


The GDCh awards **Prof. Sandra Luber** from the University of Zurich with the Carl-Duisberg-Gedächtnispreis honoring her work in the field of theoretical spectroscopy when it comes to developing new methodological approaches as well as relevant applications. According to GDCh Luber's work is an example how modern chemistry contributes to

the resolving of complex chemical phenomena. The award ceremony will take place on March 18th 2019 in Koblenz during the annual meeting of the GDCh.

Source: chem.uzh.ch

Prof. Jeremy Richardson, ETHZ, awarded the Robin Hochstrasser Young Investigator Award 2018

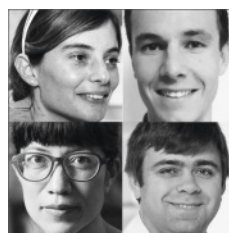


Prof. Jeremy Richardson, Assistant Professor of Theoretical Molecular Quantum Dynamics in the Laboratory of Physical Chemistry at ETH Zürich received the Robin Hochstrasser Young Investigator Award 2018.

Within his research topic of theoretical quantum molecular dynamics he currently involved in the following

projects: Development of ring-polymer instanton theory; simulation of quantum-mechanical tunnelling in molecules, clusters and the condensed phase; development of nonadiabatic quantum dynamics using classical trajectories; simulation of ultra-fast nonadiabatic processes; development of nonadiabatic quantum transition-state theory; simulation of electron-transfer reactions. Source: journals.elsevier.com/chemical-physics/awards

ERC Consolidator Grants in the field of Chemistry awarded to three EPFL professors and one ETHZ professor



Professors Clémence Corminboeuf, Christoph Galland, and Suliana Manley from EPFL Lausanne as well as **Prof. Maksym Kovalenko, ETH Zurich**, have been awarded Consolidator Grants from the European Research Council.

The European Research Council's (ERC) Consolidator Grants are given annually to researchers of any nationality with 7–12 years of research experience after completion of their PhD, as well as “a scientific track record showing scientific talent and an excellent research proposal”.

Prof. Clémence Corminboeuf directs the Laboratory of Computational Molecular Design at EPFL. Her research focuses on the development of electronic structure methods as well as conceptual tools targeted for applications in the fields of organic electronics and catalysis.

Prof. Christophe Galland directs the Laboratory of Quantum Nano-Optics at EPFL. His research focuses on developing new optical techniques and nanostructures to measure and control the dynamics of internal vibrations in crystals and molecules, with a focus on revealing phenomena that can only be described by quantum mechanics.

Prof. Suliana Manley directs the Laboratory of Experimental Biophysics at EPFL. In her research, she combines super-resolution fluorescence imaging techniques with live cell imaging and single molecule tracking to determine how the dynamics of protein assembly are coordinated.

Prof. Maksym Kovalenko researches metal halides which emit light in response to the passage of an electric current or when excited optically. In his ERC project, he uses chemical engineering approaches to broadly tune the optical properties of these materials. The aim is to develop various forms of non-toxic light sources, including nanocrystals, thin films and composites, for a wide range of applications. These could be employed in television displays, solar cells, photodetectors or detectors for radioactivity, or even future quantum communications technologies.

The Consolidator Grants, which generally provide funding for five years, are part of the ERC's commitment to support “the highest quality research in Europe with competition-based fi-

nancing”, with the ultimate aim “to establish and solidify European research as cutting-edge research.”

Source: actu.epfl.ch, ethz.ch

Junior Speaker's Awards at the Geneva Chemistry and Biochemistry Days 2019



For their excellent oral contributions at the Geneva Chemistry and Biochemistry Days 2019, three young researchers from University of Geneva were awarded the best Junior Speaker Awards.

Simona Angerani (Group of Nicolas Winssinger) was awarded for her talk entitled «Luciferase-induced photo-reductive uncaging of small-molecule effectors».

The prizes for the best Follow-up Speakers went to **Annelies Sees** (Group of Thomas Bürgi) for her talk on «Au₂₅(SR)₁₈ cluster assembly in multiple dimensions», and **Bahman Golesorkhi** (Group of Claude Piguet) for his contribution about «Light-up-conversion operating at the molecular scale: The pinnacle of miniaturization».

Source: *Didier Perret, University of Geneva*

JOURNAL NEWS

EurJOC: Special Issue on Organic Reaction Mechanisms



EurJOC's recent Special Issue, guest-edited by Peter R. Schreiner (Justus Liebig University Giessen), highlights great research in the diverse field of Organic Reaction Mechanisms conducted by researchers from across the globe. The entire issue is free-to-read until the end of February 2019. Discover more on onlinelibrary.wiley.com/toc/10990690/2019/2019/2-3

ChemCatChem: 10th Anniversary Issue



Celebrating a Decade of Catalysis: This Anniversary Mega-Issue is dedicated to the people that have made the journal the success it is today, i.e. authors, reviewers, readers, board members, chairs, colleagues, and society partners. Discover nearly 60 primary and secondary research articles from over 260 authors from more than 20 countries. The entire

issue is free-to-read throughout 2019.

onlinelibrary.wiley.com/toc/18673899/2019/11/1

ChemSystemsChem Welcomes Your Submission



If you are curious about ChemSystemsChem's scope, then check out this small virtual collection of articles on systems chemistry from its sister journals. If you work on similar topics, ChemSystemsChem would be the ideal platform for your work.

For more information, also read the Editorial by Editor Greta Heydenrych and Editorial Board Chairs Wilhelm Huck (Radboud University, Nijmegen, the Netherlands) and Ludovic Jullien (Sorbonne University and École Normale Supérieure, Paris, France).

[onlinelibrary.wiley.com/doi/toc/10.1002/\(ISSN\)2570-4206.systems-chemistry](http://onlinelibrary.wiley.com/doi/toc/10.1002/(ISSN)2570-4206.systems-chemistry)

INDUSTRIAL NEWS

Source: www.chemanager-online.com

AstraZeneca Sells Synagis Rights to Sobi

November 14, 2018: Anglo-Swedish drugmaker AstraZeneca has sold US right for its Synagis infant respiratory drug to Swedish Orphan Biovitrum (Sobi) for an upfront sum of \$1.5 billion. The payment consists of \$1 billion in cash and \$500 million in Sobi ordinary shares, equivalent to a stake in the Swedish company of 8%. The sale is part of AstraZeneca's moves to refocus its portfolio and follows the divestment earlier this month of rights outside the US for several respiratory drugs to Switzerland's Covis Pharma. “We continue to streamline our portfolio, allowing AstraZeneca to allocate resources more effectively, while Sobi's focus on Synagis will enable infants in the US to continue benefiting from this important treatment,” said AstraZeneca's CEO, Pascal Soriot. Sobi's president and CEO, Guido Oelkers, added that the addition of Synagis “will become an important catalyst for Sobi's future development and will form a powerful platform for growth in rare diseases.” About 130 AstraZeneca staff will transfer to Sobi, which also gains the right to participate in AstraZeneca's share of US profits and losses related to MEDI8897, a vaccine for immunizing infants against respiratory syncytial virus (RSV) that received US Fast Track Designation in March 2015. AstraZeneca is developing and commercializing MEDI8897 with Sanofi Pasteur. Under the terms of the deal, AstraZeneca is also eligible to receive up to \$470 million in sales-related payments for Synagis; a \$175-million milestone following the submission of the Biologics License Application for MEDI8897; potential net payments of around \$110 million on achieving other profit and development milestones for MEDI8897 and a total of \$60 million in non-contingent payments for MEDI8897 during the period 2019–2021. The sale is expected to complete very early in 2019, subject to the usual conditions. In the year to Dec. 31 2017, pre-tax profits attributable to Synagis in the US were approximately \$118 million.

Novartis Slashes 20% of R&D Programs

November 19, 2018: After completing a portfolio review, Novartis has dropped around 20% of its R&D projects as it narrows its focus to the most cutting-edge medicines. Jay Bradner, president of the Novartis Institutes for Biomedical Research, said the substance programs will shrink to 340 from 430. Among the 90 projects no longer pursued are treatments for infectious diseases. The cuts are believed to reflect new CEO Vas Narasimhan's efforts to make the Swiss drugmaker more competitive in view of soaring development costs climb and declining returns on

investment. In a recent interview with the Bloomberg news agency, Bradner, who joined Novartis in 2016 from Harvard Medical School and the Dana-Farber Cancer Institute said the “sadness” about the abandoned projects is that while many of them have momentum, they either are not likely to be transformative for patients or they are ill-suited to the focused business ambitions of Novartis. “Society should expect Novartis to bring forward truly impactful, truly differentiated, truly important medicines for patients with life-threatening diseases,” the research manager said, adding that some of the discarded projects may be picked up by other drugmakers. The Swiss group is now looking to expand in areas including cell and gene therapies to build on its purchase of drugmaker AveXis earlier this year and the launch of its breakthrough cancer treatment Kymriah. In October, Novartis licensed to Boston Pharmaceuticals three programs to find new drugs to treat antibiotic-resistant infections.

EuroChem and Aphea.Bio in Fertilizer Pact

November 21, 2018: Swiss fertilizer group EuroChem has signed a research and development agreement with Belgian biotech Aphea.Bio. The companies will collaborate on developing next-generation fertilizer technologies that will be designed to significantly boost plants’ take-up of key nutrients. The research will use data and samples from scientific field trials at 10 different locations across Europe. EuroChem, one of just three companies in the world that produces fertilizers in all three primary nutrient categories (nitrogen, phosphorus and potassium), is developing enhanced efficiency and slow-release fertilizers that are optimized for different soil conditions, improving yields and enabling farmers to grow more crops from the same amount of land. The increased nutrient uptake also minimizes losses to the environment. “We are delighted to have signed EuroChem as our first commercial partner,” said Isabel Vercauteren, Aphea.Bio’s CEO. “EuroChem has deep expertise in the mineral fertilizer sector and we look forward to a long and fruitful collaboration together.” The companies have not disclosed commercial terms of the agreement. Aphea.Bio, a spin-off of the Flemish Institute for Biotechnology, Ghent University and KU Leuven, specializes in researching microorganisms that closely interact with plants and their effect on agricultural crops. The company successfully raised €9 million of funding in 2017 following a successful Series A financing round and an R&D grant approved by Flanders Innovation & Entrepreneurship. Last month, EuroChem boosted its fertilizer distribution network in the US with the acquisition of Trammo’s transport and storage assets. The company also opened a new manufacturing plant at its Lifosa subsidiary in Lithuania.

WEF’s Global Competitiveness Index 2018

November 28, 2018: Although global economic growth has been robust over the past two years, it remains fragile in the current changing economic and political context, according to the Global Competitiveness Report 2018. The annual report — issued by the World Economic Forum (WEF) — this year covers 140 economies and finds that amidst the transformations and dis-

ruptions brought about by the Fourth Industrial Revolution (4IR), adaptability and agility of all stakeholders—individuals, governments and businesses—will be key features in successful economies. According to the report’s Global Competitiveness Index (GCI), the United States is the closest economy to the frontier, the ideal state, where a country would obtain the perfect score of 100 on every component of the index. With a competitiveness score of 85.6, it is 14 points away from the frontier mark of 100, implying that even the top-ranked economy among the 140 has room for improvement. It is followed by Singapore (83.5) and Germany (82.8). Switzerland (82.6) comes in at place 4, followed by Japan (82.5), Netherlands (82.4), Hong Kong SAR (82.3). The United Kingdom (82.0), Sweden (81.7) and Denmark (80.6) round out the top ten.

Americas

With a score of 85.6 out of 100, the United States tops the 2018 rankings of the GCI 4.0, confirming its status of most competitive economy in the world. Canada ranks 12 overall with a score of 79.9, behind three Scandinavian countries: Sweden (9), Denmark (10) and Finland (11). Canada’s performance across the 12 pillars is generally strong. Its labor market is characterized by high flexibility, combined with very strong workers’ protections and gender parity for labor force participation. The country is fairly innovative, but not yet an innovation powerhouse. Economic growth in Latin America picked up modestly in 2017. The region’s economic recovery remains fragile as multiple economic and geopolitical factors could jeopardize growth. Some of these risks include a rise of trade protectionism in the United States; a spillover of Venezuela’s economic and humanitarian crisis; policy uncertainty emerging from elections in the region’s largest economies, Brazil and Mexico; and disruptions from natural disasters threatening Caribbean economies still recovering from the devastating impacts of the fall 2017 hurricanes.

Chile ranks 33 overall with a score of 70.3. The country is the most competitive in Latin America, followed by Mexico, which ranks 46 globally (64.6). Brazil (72, 59.5) is down three places from its 2017 score. Argentina ranks 81 with an overall competitiveness score of 57.5.

Europe

Real gross domestic product (GDP) growth was up for the majority of European countries in 2017, with current growth forecasts for the subset of euro area countries above 2% for 2018. While this looks like a continuation of the recovery, the situation remains fragile, as uncertainty over international cooperation and trade is dampening 2018’s growth outlook. Germany emerges as the strongest European performer in this year’s competitiveness rankings and the third-strongest globally (overall score: 82.8). It also tops the innovation rankings in this year’s GCI. Switzerland ranks 4 (82.6) globally and second in Europe. The Netherlands is the third-most competitive European economy and the sixth-best globally (82.4). The United Kingdom is the fourth-most competitive economy in Europe and 8 globally (82.0). Sweden ranks 9 globally in this year’s index and 5 within Europe (81.7).

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Denmark, one of the smallest markets in Europe, ranks 10 globally (80.6). France secures a place among the top twenty economies globally (17, 78.0). Italy ranks 31 overall and 17 in Europe. The country's GDP is growing at 1.5%, the fastest rate since the 2008's financial crisis. Turkey positioned 61 on the overall GCI.

Eurasia

Eurasia is growing at a moderate pace (slightly above 2%) and is expected to continue on this trend for the next few years. The Russian Federation, the largest economy in the region, is expected to grow at 1.7% in 2018, and China is strengthening its position as a key commercial partner for the region. Eurasia has attained a moderate competitiveness performance (58.4 out of 100). Most countries in the region achieve a GCI score between 52 and 65, and all share strong performances on health, education and skills and infrastructure. Yet, to secure a stronger competitiveness position, Eurasian countries should diversify their economies and work to build upon these strengths to increase their presence in higher segments of the value chain. The best performer in Eurasia, the Russian Federation ranks 43 overall with a score of 65.6. This is a slight increase from 2017. Its competitiveness performance reflects better growth prospects; the country is growing at 1.7% in 2018, the highest in over five years.

East Asia and Pacific

The region's seven advanced economies all feature in the top 20 of the GCI rankings and three of the world's seven most competitive economies – Singapore (2, 83.5), Japan (5, 82.5) and Hong Kong SAR (7, 82.3) – stem from the region. Most boast world-class physical and digital infrastructure and connectivity, macroeconomic stability, strong human capital and well-developed financial systems. However, performance on the innovation ecosystem is uneven. Among the region's emerging markets, the picture is more diverse. Malaysia (25, 74.4) and China (28, 72.6) are less than 30 points to the competitiveness frontier (the highest score on the GCI) and on par with many advanced economies. The largest ASEAN economies – Indonesia, the Philippines, Viet Nam and Thailand – as well as Brunei Darussalam are 40 points or less to the frontier. Finally, Mongolia (99, 52.7), Cambodia (110, 50.2) and Lao PDR (112, 49.3) are only halfway to the frontier, reflecting major weaknesses that threaten sustained growth. Australia ranks 14 overall (78.9), up one spot from 2017, four places ahead of New Zealand (18, 77.5). The Republic of Korea ranks 15 overall (78.8), Indonesia positioned 45 overall (64.9).

South Asia

South Asia continues to show strong economic growth and an improved macroeconomic outlook on the back of reforms in some of the world's largest countries. GDP growth is expected to pick up in 2018, reaching an average of 7.1%, confirming the region as one of the world's fastest-growing. India, which ranks 58 (62.0), remains the region's main driving force. In spite of growing international flows, South Asia remains the region with the lowest trade penetration in the world. While some countries in the region have managed to localize segments of global industries – in terms of both services and manufactured goods – all will need to increase their innovation capacity and technological readiness in order to move towards higher value-added processes and productions.

Middle East and North Africa

After a slowdown in 2017, growth in the MENA region is expected to bounce back this year. After facing the peak of financial turmoil, oil-exporting countries are continuing to reduce fiscal imbalances. This is expected to improve domestic demand and economic activity in non-oil industries, while future trends for the oil sector remain unsure due to uncertainty on both prices and production levels. Israel leads the Middle East and

North Africa with a score of 76.6 (20). The country has grown to become one of the world's innovation hubs thanks to a very strong innovation ecosystem. Ranked 27 globally with a score of 73.4, the United Arab Emirates is next in the region in terms of competitiveness. Saudi Arabia ranks 39 overall with a score of 67.5 and can rely on a conducive macroeconomic environment.

Sub-Saharan Africa

The economic prospects of Sub-Saharan Africa are at a crossing point. The average GDP growth of the region has fallen below 5% since 2015 and is expected to grow at 3.4% in 2018. After having benefitted from a period of fast growth driven by strong foreign demand and high commodity prices, economies in the region need to strengthen their fundamentals to become more resilient to commodity price shocks and to compete successfully in the technology-driven global economy. Kenya, the most competitive economy in East Africa (93, 53.7), is developing into one of the region's strongest innovation hubs. Mauritius ranks 49 globally (63.7) and achieves the best performance in Sub-Saharan Africa, in line with 2017. South Africa ranks 67 (60.8) and attains the second spot in Sub-Saharan Africa.

4IR: Opportunities and Challenges

With the Fourth Industrial Revolution, humanity has entered a new phase. The 4IR has become the lived reality for millions of people around the world, and is creating new opportunities for business, government and individuals. Yet it also threatens a new divergence and polarization within and between economies and societies. For the second half of the 20th century, the pathway to development seemed relatively clear: lower-income economies would be expected to develop through progressive industrialization by leveraging low-skilled labor. In the context of the 4IR the sequence has become less clear, particularly as the cost of technology and capital are lower than ever but their successful use relies on a number of other factors. The results of the GCI reveal the sobering conclusion that most economies are far from the competitiveness "frontier"—the aggregate ideal across all factors of competitiveness. In fact, the global average score of 60 suggests that many economies have yet to implement the measures that would enhance their long-term growth and resilience and broaden opportunities for their populations. In addition, it turned out that countries have a mixed performance across the twelve pillars of the index and that long-standing developmental issues—such as the lack of well-functioning institutions—continue to be a source of friction for competitiveness. Yet there are bright spots—in the form of economies that outperform their peers and present valuable case studies for learning more about methods to implement the factors of competitiveness.

Ineos Backs Brexit Deal

November 29, 2018: Olefins and polyolefins giant Ineos has come out in support of the Brexit deal approved last week by the EU at a summit in Brussels. The agreement, said the group's chairman, Jim Ratcliffe, "provides frictionless trade between the UK and the EU while giving the UK freedom to develop its own long-term global trading relationships that would advance the economy." The British tycoon, who moved operations to Switzerland in 2010, but repatriated some businesses in 2016, said the deal creates a "sensible" transition period that should allow both parties the time to develop long-term agreements. "I have made no secret of the fact that while I have long supported the concept of a Common Market within Europe, I have never felt comfortable with the concept of ever closer union," Ratcliffe told the UK press. The chemical producer has said its business would face "significant risk" from a no-deal Brexit that could involve tariffs on chemicals and the potential disruption to its supply

chain at ports. Director Tom Crotty told the London newspaper *The Times* that the group may ultimately have to shutter some of its UK assets to unite the supply chain on one side of the border. Ineos' biggest UK site is the Grangemouth oil refinery and petrochemicals complex in Scotland. It also operates a major petrochemicals complex at Runcorn in Cheshire, a plant in Hull producing ethyl acetate and a PVC plant at Newton Aycliffe in County Durham. If the relationship between Britain and the EU reverted to World Trade Organization (WTO) rules, chemical products moving back and forth across the border could be hit with a 6.5% tariff s each way, Crotty said. These could cost Ineos "tens of millions of pounds." A bigger concern, Crotty said, is the "unquantifiable" risk from uncertain customs arrangements. Long delays at ports "would rack up costs much higher than tariff risks." The majority of Ineos' chemical business is conducted in the EU, so that UK plants would be at greater risk, he remarked. However, he said Ineos is unlikely to close entire UK sites, but rather "certain assets on certain sites." The chemical giant has been lobbying the UK government for financial support on various projects that the director has suggested it could build post-Brexit. Crotty has dropped hints that Antwerp is the favored location for a new VAM plant, but Hull could have a chance if the UK government offers incentives.

Start-ups Accelerate Innovation

November 30, 2018: Virtually all areas of our lives would be inconceivable without products that come directly or indirectly in contact with chemical production: It affects the modern office environment, our private lives and thus our well-being and life fulfillment including health, leisure and personal protection. According to James Clark, professor at the University of York speaking at the Green & Sustainable Chemistry Congress, around 97 percent of the products around us derive from chemical production or contain at least one chemical process step in their manufacture.

Sustainable Development Goals as Innovation Driver

To create more sustainable products and services as well as to establish a circular economy we need innovative solutions. The UN has defined 17 Sustainable Development Goals (SDG). The associated goals will need new chemical solutions to become reality. For example, the goals related to affordable and clean Energy or responsible production and consumption. The road leads to higher efficiency, increased sustainability and more environmentally friendly products with more efficient production methods. The associated goals can only be achieved in an interchange across regional, cultural, systemic and cross-disciplinary boundaries in shared cooperation.

Market Push Drives Innovation

Chemistry has to be innovative to meet the ambitious goals of its customers. Ikea, one of the world's leading furniture retailers from Sweden, has an on-going project to eliminate virgin fossil-based raw materials in its plastic products. The goal is to use only plastic products from renewables or recycled materials by 2030. The same goes for Lego, a big Danish toy manufacturer, which has started to use sugar cane for its world-famous bricks. Both examples show that chemistry has to continuously innovate. The value chains in chemical production will change dramatically over the next decades.

All About Start-ups

Nowadays talking about innovation means talking about start-ups. This applies generally, but now also in chemistry. Start-ups are flexible, can act faster and - this is maybe the most important aspect - they can think out of the box on a daily basis. They can develop visionary projects, away from the constraints of stock market prices. Markus Steilemann, CEO at Covestro, al-

so knows: "We need start-ups. No company today has the potential to solve everything alone." Many large Chemical companies also run so-called corporate venture units to finance start-ups. Nevertheless, a vibrant and broad venture capital scene is yet to develop. The business models of chemical start-ups do not always fit into the portfolio thinking of investors. One reason might be a service-based business model which limits the investor's opportunities to sell its shares. Another reason might be the high capital expenditures for plants. For sure not every Start-up will make it at the end, there will be an economically driven attrition rate. However, to deliver the best chances vibrant marketplaces are needed where the community can learn together and build up trust, to increase the probability of meeting the right people with the right problem at the right point of time. Meeting points can be events of Suschem, the European Technology Platform for Sustainable Chemistry, and of International Sustainable Chemistry Collaborative Center (ISC3), an international institution that promotes and develops sustainable chemistry solutions worldwide, or of course, the European Chemistry Partnering.

High Founding Figures since 2007

The increasing significance of start-ups for the chemical industry is also reflected in the trend towards higher Start-up figures. Since 2013 BCNP Consultants has continuously researched the situation of innovative chemical start-ups and start-ups that influence the chemical value chain in Europe. Influencing the chemical value chain is not just about classical chemistry, but it is also about an enzyme producer helping to avoid heating and refluxing or a digital Start-up helping to extract the better processing parameters out of the data available. Statistics show that since 1990 there were two growth steps. The first step was starting in 1997 when the yearly number of foundations raised from single-digit to double-digit numbers. Beginning with 2007 the yearly number of foundations increased again from around 15 to over twenty to thirty foundations a year. In the last years the statistic shows a decrease in the number of foundations. At least for the years 2017 and 2018 this will probably change because of companies that are still under radar or not founded yet (n.f.y.).

New Materials as Main Application

Thematically, chemical start-ups concentrate in particular on three fields of application. Most chemistry start-ups develop new or nanomaterials. This group accounts for almost a third (32%) of the start-ups. About a quarter (26%) of the start-ups produce fine and specialty chemicals. Following in third place are start-ups developing new technologies and hardware (21%). About a tenth of all start-ups focus on research R&D and services. Niche applications for chemical start-ups include analytics (4%) and catalysis and enzymes (4%). A relatively new field for chemistry start-ups relates to digitization issues. Meanwhile, these application accounts for 3% of foundations. The trend is clearly rising.

Big Economies are Ahead – Still?

The study on which the data is based initially focused on Germany. Therefore, most of the companies included in the database of Europe's Compass to innovative chemical companies are German based. Since initiation the expansion of the database is an accompanying project. More and more non-German based start-ups have been added. But the research is certainly not exhausted. Non-existent English-language homepages complicate the assessment even if foreign companies fit the innovation criteria. Therefore, the number of start-ups outside Germany is not that high yet. Excluding Germany, especially Great Britain and France have start-ups along the chemical value chain. In addition to the hub of London and the elite universities of Oxford and Cambridge, Great Britain scores with Scottish companies. Relatively smaller countries are in the following places: Nether-

lands and Switzerland. While Switzerland has generally presented itself as a strong research nation, the Netherlands focusses its innovation on the bio-economy. The Universities of Delft and Groningen are two universities with high spin-off numbers resulting in chemical incubators such as the Brightlands Innovation Factory which help to make start-ups successful in the long term.

Promotion is an International Question

The promotion of sustainable and green chemistry is becoming a top priority. While general Start-up promotion usually takes place at the country level, in the chemical industry where global value chains are crucial, international promotion instruments are developing. SusChem was launched in 2004 as a European Commission supported initiative to revitalize and inspire European chemistry and industrial biotechnology research, development and innovation in a sustainable way. The European Investment Bank (EIB) is going to launch a European investment fund for the bio-based and circular economy, especially for investments in demonstration and industrial plants. The EIB will make up to €250 million available to chemical and biotech start-ups to scale up their technologies. At the same time, start-ups worldwide can benefit from the services of the ISC3 in Bonn and their international network with and for start-ups developing business models in the field of sustainable chemistry. In addition, international events such as the European Chemistry Partnering, the unique speed dating for the chemical industry, which brings together chemical start-ups with industry representatives and investors, are establishing themselves.

Problem: Price Competitiveness and Capital

Many good ideas find their way from the research institutes into start-ups. But the big breakthrough is missing. Price competitiveness with fossil-based products is mostly challenging. Large-scale plants, which generate economies of scale and therefore would increase price competitiveness, are expensive. The EIB fund already goes in the right direction as a catalyst for more private investment in large-scale plants. More initiatives like this are needed...

European Chemistry Partnering (ECP)

The ECP is Europe's leading industry speed dating for the chemical industry and its diverse user industries. The event brings together chemical start-ups and SMEs with industry representatives and investors as well as other stakeholders. The 3rd European Chemistry Partnering will take place in Frankfurt on 26 February 2019. The organizers expect more than 1,000 participants from more than 30 countries all over the world.

Genentech Takes Jecure Therapeutics

December 3, 2018: Genentech, part of Swiss drugs giant Roche, has agreed to buy Jecure Therapeutics, a US biotech focused on discovering novel treatments for non-alcoholic steatohepatitis (NASH) and liver fibrosis. Financial details of the acquisition were not disclosed. The deal gives Genentech full rights to Jecure's entire preclinical portfolio of NLRP3 inhibitors. NLRP3 is a protein that plays a role in triggering certain inflammasomes – protein complexes that cause the body to release inflammatory interleukins to fight infection. When this process goes wrong, it results in harmful inflammation that can be found in a wide range of disorders, including NASH, liver fibrosis, gout, inflammatory bowel disease and cardiovascular diseases. "We've had a long-standing interest in targeting inflammatory pathways that may play a role in a number of serious diseases," said James Sabry, Roche's global head of pharma partnering. "We're excited to combine Jecure's portfolio with our discovery and development capabilities, as well as our expertise in NLRP3 biology, to potentially help people with inflammatory diseases." San Diego, California-based Jecure started operations in 2015 with seed fi-

ancing from founding investor Versant Ventures. The company raised \$20 million in a Series A round from Versant in 2017 to continue to develop and advance its portfolio of NLRP3 inhibitors. The company joins a host of drugmakers that have set their sights on NASH in the belief that it will become a very lucrative market given that the disorder is linked to obesity and diabetes. In October, Novartis and Pfizer announced they were collaborating to develop treatments for NASH.

FDA Greenlights Bayer-Loxo's Vitrakvi

December 5, 2018: A new type of cancer treatment developed by a partnership of Bayer with biotech partner Loxo Oncology has won approval from the US Food and Drug Administration (FDA). Vitrakvi is recommended for patients whose tumors feature a neurotrophic receptor tyrosine kinase (TRK) gene fusion. The difference between TRK inhibitors and traditional oncology drugs is that the drugs do not target tumors in a particular location but cancers throughout the body that feature a specific biomarker. The launch of Vitrakvi, said FDA Commissioner Scott Gottlieb, "marks another step in an important shift toward treating cancers based on their tumor genetics rather than their site of origin in the body. Its approval reflects advances in the use of biomarkers to guide drug development and the more targeted delivery of medicine." Analysts have calculated peak sales for the drug ranging from \$700 million to \$1 billion up to 2030. The oral version of Vitrakvi costs \$32,800 a month before discounts, according to a Loxo Oncology filing with the US Securities and Exchange Commission (SEC), nearly \$400,000 per year. Apart from its high price tag, reports say the companies may encounter difficulty in finding the right patients, as this requires genetic testing procedures not yet routine. Bayer has taken on the task of working with prescribing oncologists while Loxo focuses on interfacing with lab directors and pathologists to raise awareness around tumor genomic profiling. The German group, now fully focused on life sciences, entered the TRK inhibitor partnership with Loxo in 2017 with a \$400 million upfront payment – the deal also features milestones and royalties. The German group is investing an additional \$1 billion or more in Loxo's tropomyosin receptor kinase (TRK) inhibitor franchise, with the hope of developing other new candidates. Under the terms of its agreement with the biotech, Bayer has responsibility for global commercialization of the drug that in recent test was shown to produce response rates ranging from 75% to 81%. Vitrakvi is the second drug to win FDA approval based on biomarkers. In May 2017, Merck's Keytruda received the regulator's nod to treat microsatellite instability-high cancer in any part of the body.

Roche launches Ignyta TRK diagnostic

Switzerland's Roche meanwhile has launched a new automated in vitro diagnostic to detect tropomyosin receptor kinase proteins in cancer, which it hopes will have potential use in a range of solid tumor types and site-agnostic targeted therapies. The Ventana pan-TRK immunohistochemistry assay identifies wild-type and chimeric fusion proteins while measuring the prevalence of TRK in tumor tissue. "As the first test of its kind, the Ventana pan-TRK (EPR17341) Assay provides an important new tool to help us better understand the role of TRK protein expression, particularly fusions in cancer," said Jill German, head of Roche Tissue Diagnostics. TRK-fusion proteins have been identified in more than 30 common solid tumors, including lung, thyroid and sarcoma. While wild-type protein expression is generally low, it can be substantial in some neuroendocrine tumors, according to reports in pharmaceutical journals. In late 2017, Roche bought San Diego, California-based biotech Ignyta for \$1.7 billion in cash, gaining access to the company's TRK inhibitor entrectinib, aimed at tumors with ROS1 or NTRK fusion mutations.

Gilead Nabs Roche Pharma Chief

December 11, 2018: Gilead Sciences has nabbed Daniel O'Day, head of Roche's pharma business, as its new chief executive to replace current CEO John Milligan, with effective from March 2019. Both Milligan and Chairman John Martin have announced plans to leave the US drugmaker at the end of 2018. O'Day joined Roche in 1987 and held various roles with the company in the US before moving in 1998 to headquarters in Basel, Switzerland. Roche has named William Anderson, current CEO of its Genentech arm, to replace O'Day next year, while Gregg Alton will serve as interim CEO at Gilead from Jan. 1, 2019 until O'Day's start date of Mar. 1. The three decades of oncology and global commercial expertise O'Day gained at Roche are expected to help Gilead build its own global presence in its new fields of oncology and inflammation as well as transact more acquisitions and in-licensing deals, analysts said.

Harke and Hulshof joint forces in the sales of beef proteins

December 12, 2018: Harke FoodTec, a business unit of Harke Pharma and part of the Harke Group in Germany, is now the exclusive distributor of Hulshof Protein Technologies in Europe and Turkey. Harke FoodTec is a specialist in functional ingredients for the meat, fish, poultry, vegetarian and bakery industry and has an European distribution network with own subsidiaries in Belgium, Hungary, Italy, Poland, Romania, Russia, Turkey and United Kingdom. The head office of the Harke Group is in Muelheim an der Ruhr in Germany. Beside the own offices, Harke FoodTec works with sales partners in Belarus, Brazil, Estonia, France, Latvia, Lithuania, Macedonia, The Netherlands, Spain, Switzerland and a recently established cooperation in Mexico. Hulshof Protein Technologies, part of the Sopraco Group is producing beef protein under the brand name Collapro Bovine in the Netherlands and it is an established company for many years, with excellent meat experts in their organization.

Clariant and Eastman in Solvent Marketing Pact

December 17, 2018: Swiss specialty chemicals producer Clariant has signed on to exclusively market US chemical producer Eastman's Tamisolve NxG solvent to the global agriculture sector. The solvent, which Clariant will market under its own trade name of Genagen NBP, is used in plant growth regulators, biological control agents, herbicides, fungicides, and insecticides. The two chemical groups said the collaboration will deliver "significant business benefits to both agrochemical formulators and end customers," especially given the dearth of effective, low-toxicity crop protection solutions on the market. In a plant protection market governed by rigid regulations and increasing demand on efficiency, crop protection players must develop innovative, efficient, and environmentally-friendlier solutions, Clariant said. Eastman's water miscible dipolar aprotic solvent, touted as a safer alternative to commonly used dipolar aprotic solvents, is claimed to work well in a variety of applications. By its own account, the Swiss group has made "massive strides" in the agrochemicals market in recent years. In addition to expanding its portfolio of crop solutions, in 2017 the company announced an investment in an R&D greenhouse that houses opportunities for real-world crop protection testing and advances in future solutions. "Clariant's formulation know-how and extensive reach into the market will ensure the success of this innovative ingredient," said Dave Watson, director Agricultural Chemical Intermediates at Eastman.

Actelion to Pay \$360 Million in DoJ Settlement

December 21, 2018: In a settlement with the US Justice Department (DoJ) Actelion Pharmaceuticals, a Johnson & Johnson subsidiary, has agreed to pay \$360 million to settle civil claims it used a charity to pay illegal kickbacks to patients in the US Medi-

care program. The Swiss drugmaker acquired by J&J in 2017 allegedly used a charitable foundation to help Medicare patients make payments for its high blood pressure drugs. According to press reports, the settlement is the largest so far in the ongoing US investigation of the use of charitable foundations in the pharmaceutical industry. In December 2017, United Therapeutics said it would pay \$210m to settle similar claims. For patients who qualify, the government-run Medicare program covers much of the cost of prescription drugs, but patients may still be required to make a copayment, which reduces the price drugmakers can charge. The DOJ charges that Actelion's arrangement with the charity violated the False Claims Act. The company effectively set up a proprietary fund to cover the copays of just its own drugs, said the US attorney for the district of Massachusetts. Actelion did not admit wrongdoing as part of the settlement. The company noted that the case pre-dates its acquisition by Johnson & Johnson. Meanwhile, the financial fallout continues from the Reuters report that J&J knew for years that its talc-based baby powder could contain traces of asbestos. Several analysts have suggested it could be cheaper to try to settle the many lawsuits – 11,700 at last count – out of court. In a day's trading after the news broke, the paper lost \$40 billion of its value. Mark Lanier, a lawyer who represented plaintiffs in the nearly \$4.7 billion talc verdict against J&J in July, told the network CNBC the company's talc problems "can be resolved for much, much less than" the tens of billions J&J has lost in market. The company has since appealed that verdict.

Transforming challenges into opportunities: Chemspec Europe 2019 explores novel chemical solutions

January 3, 2019: Amidst the current investment boom, UN climate talks and Brexit, the fine and speciality chemicals industry eagerly awaits their annual get-together at Chemspec Europe 2019 to discuss the latest market trends, technical innovations, business opportunities and regulatory issues in this rapidly changing market. Taking place 26 - 27 June 2019 at Messe Basel in Switzerland, Chemspec Europe will gather prominent leaders, innovators and decision-makers in chemicals development, manufacturing and related services, all under one roof. Now in its 34th edition, the event features the full spectrum of fine and speciality chemicals for various applications and industries, including pharmaceuticals, agrochemicals, polymers, food and feed ingredients, flavours and fragrances, pigments and dyes, paints and coatings, household and cleaning chemicals, adhesives and sealants, petrochemicals and many others. Chemspec Europe 2019 unites an impressive array of experts, scientists, managers and thought-leaders. Purchasers and agents significantly value Chemspec Europe as a powerful industry platform to explore and source the latest production technology, specific ingredients or custom-made solutions in direct exchange with suppliers, and to form international relations with peers and business partners. The previous event in 2018 hosted a total of 358 exhibitors and more than 6,000 attendees from all over the world. An outstanding 2-day seminar programme provides further knowledge and insights into major industry developments as well as key strategies adopted by industry leaders to succeed and grow. Highlights include the popular Pharma Panel and Abou-Gharbia Lecture, the Agrochemical Outlook Conference, the Regulatory Services Conference, the Royal Society of Chemistry Symposium, a bespoke Careers Clinic, and a special programme for innovative start-ups.

Clariant Studies Saudi Alkoxyates JV

January 7, 2019: Clariant and SABIC affiliate Saudi Kayan have signed a Memorandum of Understanding (MoU) to study the formation of an alkoxyates manufacturing joint venture. The

companies will evaluate establishing a plant to produce alkoxy-ates, a derivative of ethylene oxide, at Saudi Kayan's complex in Jubail Industrial City, Saudi Arabia. Clariant, which uses alkoxy-ates in various applications in the home care, personal care and industrial sectors, will provide its production technology, while Saudi Kayan will supply the raw materials. The MoU is another cooperation resulting from SABIC's purchase of a 24.99% stake in the Swiss specialty chemicals company last September. In

separate news, Clariant has reduced its stake in the Stahl group to 14.8% from 19.7%, although said it will remain a financial investor in the company. Netherlands-based Stahl is a producer of chemicals, dyes and coatings for leather and other applications. Clariant sold its leather services business to Stahl in 2014 for around 85 million Swiss francs and a 24% stake in the Dutch group.

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