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SWISS CHEMICAL SOCIETY NEWS

Minutes of the 31st General Assembly of the SCS



April 15, 2021, 13:15–13:50
Online meeting via Zoom.

1. Welcome; Approval of the Agenda

During the lunch break of the online SCS Spring Meeting David Spichiger, SCS Executive Director, opened the assembly and welcomed all members/attendees. Due to the Corona restric-

tions that are still in place, the assembly took place as an online meeting. Legal formalities were all fulfilled, and the assembly was quorate. Item 9. 'Membership fees 2022' was added to the agenda as this item was missing in the invitation. The agenda was approved.

2. Accepting online vote counting

17 SCS members participated in the virtual meeting. The director proposed to vote and elect with the Zoom voting tool and the assembly the proposal approved.

3. Minutes from the 30th GA from June 24, 2020

The minutes were published in CHIMIA (2020, 74, No. 7–8, A635f). The minutes were approved with 13 votes in favor and one abstention.

4. Annual report 2020

The annual report was published in CHIMIA (2021, 75, No. 1–2, A142 ff.). It was approved unanimously.

5. Financial report 2020 and audit report

David Spichiger presented the financial statement. Incomes of CHF 1'092'723 and expenses of CHF –1'223'967 result in an operating loss before taxes of CHF –131'244. The portfolio at Bank von Graffenried performed well and resulted in a value increase of CHF 87'313. Taking into account taxes and non-periodic income and expenses of –4'048, an overall loss of CHF –48'160 resulted.

The SCS funds profited from the positive development at the stock markets as well and an overall surplus of CHF +46'962 resulted.

As of 31.12.2020 the assets summed up to CHF 4'515'923.

Audit Report: In the audit report from March 10, 2021, provided by BDO AG, Bern, no inconsistencies are mentioned, and the financial statement fulfills the legal requirements according to the SCS bylaws and the Swiss Civil law.

The assembly approved the financial statement 2020 and the audit report with 16 votes in favor and one abstention.

6. Discharge the Organs of the Society

The assembly discharged the board members and the financial audit unanimously with one abstention.

7. Elections: SCS Executive Board, ExB (and BoD)

Alain De Mesmaeker, SCS President, presented the changes to the Executive Board (ExB) and the Board of Directors (BoD) and introduced the candidates. The assembly elected the following members to the ExB unanimously. As ExB members, they also take a seat on the Board of Directors ex-officio:

- Prof. Dr. Christian Bochet, University of Fribourg, currently Vice-President, was elected as SCS President as of 1 January 2022. He succeeds Dr. Alain De Mesmaeker who steps down after six years in charge.
- Dr. Yves Auberson, Novartis, was elected as new member of the Board of Directors and member of the Executive Board as of 1 May 2021. He was also elected as new Vice-President as of 1 January 2022. As a member of the Executive Board, Yves Auberson is granted joint signature with a second ExB member.
- Dr. Hans Peter Lüthi, was elected with reservation to continue his mandate as member and treasurer until the ExB appoints a successor. Hans Peter has to step down after 9 years in office.

8. Elections: SCS Board of Directors, BoD, and Financial Audit

The assembly elected the following members to the BoD with 15 votes in favor and one abstention:

- Prof. Dr. Christoph Copéret, ETH Zurich, Swiss Representative in the EuChemS ExB, no signatory right.
- Dr. Maud Reiter, Firmenich SA, Member, no signatory right.
- Dr. Corinne Jud, Agroscope, Member, no signatory right.
- Dr. Leslie Fendt, F. Hoffmann-La Roche, Member, no signatory right.

The assembly confirmed the elections of the divisional assemblies and elected the following persons to the BoD unanimously:

- Prof. Dr. Jean-Louis Reymond, University of Bern, representative of the DMCCB, Member, no signatory right.
- Prof. Dr. Harm-Anton Klok, EPFL Lausanne, representative of the DPCI, Member, no signatory right.
- Prof. Dr. Eric Bakker, University of Geneva, representative of the DAS, Member, no signatory right.
- Dr. Benjamin Ries, ETH Zurich, representative of the young-SCS, no signatory right.

The following BoD members stepped down and the entries in the commercial register will be deleted with immediate effect.

- Prof. Dr. Sandrine Gerber, EPFL Lausanne, Member
- Dr. Martin Vollmer, Clariant AG, Member

Dr. Alain De Mesmaeker will step down as SCS President as of 31 December 2021 and his entry in the commercial register will be deleted afterwards.

The assembly confirmed BDO AG, Bern unanimously as audit instance for the financial statement 2021.

9. Membership fees

The annual membership fees 2022 were approved unanimously:

• Regular member	CHF	150.00
• Student member	CHF	50.00
• Retired member / unemployed members	CHF	80.00
• Institutional member (institutions)	CHF	800.00
• SCS Partnership (institutions)	CHF	3'000.00

Additional Fees for Divisions

• Industrial & Applied Chemistry	- Regular	CHF	20.00
	- Company	CHF	100.00
• Photochemistry Section	- Regular	CHF	40.00
	- Student	CHF	20.00

15% discount on collective memberships for university research groups.

10. News and Strategic Projects

The Board of Directors decided on the following, strategic initiatives that will be pushed the coming months:

- Establish recently implemented networks like the ...
- Material Sciences (Lead Maksym Kovalenko)
- Chemical Ecology (Lead Matthias Erb)
- Flow Chemistry (Lead Claudio Battilocchio)
- Artificial Intelligence (Lead Thorsten Luksch)
- Transform the DAS Education Course Organization into the SCS Academy (Lead David Spichiger and Esther Wolff)
- Industry jobs for PhD, Internships for MSc (Lead Hans Peter Lüthi)
- SCS Partnership / SCS Industrial Science Awards (Lead David Spichiger)
- Managing the late effects of the pandemic

11. Outlook 2021/22

- In 2021 sixteen conferences and symposia took place or will take place either onsite or online under the direct organization of SCS. Due to the COVID-19 pandemic, 2 events and most SCS Lectureship tours are postponed to 2022.
- The list of all events is updated regularly and is available on <http://scg.ch/events>.

12. Varia

No requests to speak were requested from the audience. The Director thanked for the confidence and closed the meeting.

Bern, April 15, 2021

Dr. Alain De Mesmaeker
President

David Spichiger
Executive Director

Balmer Prize Lecture 2020 by Dr. Hans Ueli Ehrensperger



At the ChemEdu Symposium 2021 that took place as an online event on April 14, 2021, Hans Ueli Ehrensperger presented an instructive video with interesting experiments for high school classes. The video is available on the SCS website in the SCS news section and the portal of the Division Chemical Education.

Hans Ueli Ehrensperger was awarded the Balmer Prize 2020 for his lifetime achievements as high school teacher and for his methods of encouraging and challenging his students to develop their talents.

Source: scg.ch

Ružička-Prize 2021: Call for Nominations



The Ružička-Prize is awarded each year to a young scientist for her/his outstanding, published contribution in the field of chemistry, achieved either in Switzerland or by a Swiss citizen abroad.

Proposals for candidates (age limit 40 years) may be submitted written or e-mail until September 5, 2021 (date of receipt) to ETH Zurich, Departement

Chemie und Angewandte Biowissenschaften, Prof. Dr. Karl-Heinz Altmann.

About the Ružička Prize

The Ružička Prize, named after the ETH professor and Nobel laureate Leopold Ružička, is considered one of the most important awards for the promotion of young scientists in the field of chemistry in Switzerland.

More information: chab.ethz.ch/en/research/awards-and-lectures/ruzicka-prize.html

The International Year of Basic Sciences for Sustainable Development 2022: we need it more than ever



A message from Michel Spiro, President of the Steering Committee for the proclamation of the International Year of Basic Sciences for Sustainable Development in 2022 (IYBSSD 2022)

For almost a year and a half now, the world has been disrupted by the COVID-19 pandemic caused by the SARS-CoV-2 virus. But how much worse could

the situation have been without the progress and results produced for decades, even centuries, by curiosity-driven scientific research?

We deplore the many deaths due to COVID-19, and the future is still very uncertain, especially with the detection of new variants, some of which are spreading more quickly. But, in the first place, how could we have known that the infection was caused by a virus, what this virus looks like and what its genetic sequence and variations are without basic research? Viruses were discovered at the beginning of the 20th century, thanks to the work of Frederick Twort, Félix d'Hérelle and many others. The first electron microscope was built in the 1930s by Ernst Ruska and Max Knoll; and DNA sequencing began in the mid-1970s, notably with research by the groups of Frederick Sanger and Walter Gilbert.

We could continue such a list, with basic research at the root of tests, treatments, vaccines, epidemiological modelling, etc. We even owe high-speed, long-distance communications, which allow us to coordinate the fight against the pandemic and reduce interruptions in education, economic activities and even the practice of science, to the discovery and study of electromagnetic waves and optic fibers during the 19th century, and to the development of algorithms and computers codes during the 20th century. The COVID-19 pandemic is a reminder (so harsh and brutal that we would have preferred to have been spared) of how much we rely on the continuous development of basic sciences for a balanced, sustainable and inclusive development of the planet.

iupac.org/iybssd2022-we-need-it-more-than-ever/

A Warm Welcome to Our New Members!



Period: 01.04.–28.04.2021
 Esther Amstad, Lausanne - Stefan Banz, Zurich - Alicia Beaufils, Bern - Michael Bogdos, Zurich - Ruslan Cusnir, Montreux - Luisa Deberle, Zurich - Elliott Denton, Zurich - Marc Fernandez, Zurich Roman Fišera, Bratislava (SK) - Runtian Gao, Lausanne - Jian Hao, Lausanne - Matteo Hirsch, Lausanne -

Dainis Kaldre, Lörrach (D) - Sebastian Klein, Stein AG - Lorenz Manker, Lausanne - Sven Thomas Nappen, Regensdorf - Esaie Reusser, Neuchâtel - Perrine Robin, Lausanne - Sven Roediger, Zurich - Lukas Schlemper, Olten - Vladyslav Smyrnov, Renens - Farzaneh Talebkeikhah, Lausanne - Salman Tawffik, Onex - Basil Thalmann, Zurich.

HONORS, AWARDS, APPOINTMENTS

Dan Maydan Prize for Prof. Maksym Kovalenko, ETH Zurich



The Dan Maydan Prize in Nanoscience Research is awarded annually to outstanding young scientists, from Israel or abroad, for significant academic achievements in nanoscience and nanotechnology. This year, **Prof. Maksym V. Kovalenko, ETH Zurich**, receives the award for his pioneering work on the surface chemistry of nanocrystals and

their use for electronic and optoelectronic devices, including batteries, photodetectors, thermo-electrics, solar cells and light sources. The prize is endowed with 10,000 US dollars.

Source: chab.ethz.ch

Prof. Eva Hevia, University of Bern honored with the Research Excellence Award 2021 of the RSEQ



Prof. Eva Hevia, Professor of Inorganic Chemistry at the Department of Chemistry, Biochemistry and Pharmacy in the University of Bern has been honored by the Spanish Royal Chemical Society (RSEQ) with the “Research Excellence Award 2021”.

Research in the Hevia group focusses on on polar organometallic synthesis and catalysis, at the crossroads of inorganic, organic, and green chemistry.

Source: dcb.unibe.ch

Medals for Scientific Reflection at Home for the Next Generation of Chemists



The final round of the Chemistry Olympiad took place from April 6 to April 10, 2021. Due to the COVID-19 restrictions the contest could not take place on-site in the laboratories of ETH Zurich, but at home. The best 17 of a total of 406 participants solved challenging chemistry tasks and were awarded medals.

Gold medal winners are:

- Sandro Pfammatter, Kollegium Spiritus Sanctus Brig (VS)
- Jessica Kurmann, Aprentas Training Center Muttenz (BL)
- Antoine Chèvre, CEJEF Division Technique Délémont (JU)
- Anastasia Sandamirskaya, Hulls School Zurich (ZH)

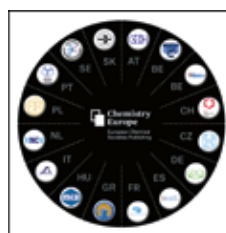
With the gold medal, the four vocational and high school students also qualify for the 2021 International Chemistry Olympiad, which will be organized by Japan and held online in July.

Picture: Chemistry Olympiad (chemistry.olympiad.ch)

Source: chemistry.olympiad.ch

JOURNAL NEWS

Chemistry Europe open data special collection now online!



The sharing of data will enable researchers to do better science. Open science advocates for access to high-quality shared data, reproducibility, the provision of negative as well as positive results, and clear licensing that describes how data may be used. Improvements in technical infrastructure and software

have the potential to make collaboration more effective, ultimately accelerating science and making it more impactful. However, the advances in areas like machine learning and artificial intelligence can only be fully exploited if researchers have access to the high-quality data that the scientific community generates. (Based on Matthew Todd's statement on The Importance of Open Science at Chemistry Europe)

Committed to promote open access and open data, Chemistry Europe presents this Special Collection that compiles a selection of works on these topics, published across our portfolio. A recording to the Virtual Symposium organized by Chemistry-Open, “Open Data and Open-Source Research”, is also available. Source: chemistry-europe.onlinelibrary.wiley.com

Helvetica, Volume 104, Issue 4, April 2021



Reviews

The Rise of Dye-Sensitized Solar Cells: From Molecular Photovoltaics to Emerging Solid-State Photovoltaic Technologies

Marko Stojanovic, Natalie Flores-Diaz, Yameng Ren, Nikolaos Vlachopoulos, Lukas Pfeifer, Zhongjin Shen, Yuhang Liu, Shaik M. Zakeeruddin, Jovana V. Milic, Anders Hagfeldt

Organic Spacers in 2D Perovskites: General Trends and Structure-Property Relationships from Computational Studies
Farzaneh Jahanbakhshi, Marko Mladenovic, Mathias Dankl, Ariadni Boziki, Paramvir Ahlawat, Ursula Rothlisberger

Communications

Synthesis of Enantiopure Benzo Fused Cyclic Sulfoximines Through Stereoselective [3+2] Cycloaddition between *N*-tert-Butanesulfinyl [(2-Pyridyl)sulfonyl]-difluoromethyl Ketimines and Arynes
Jian Rong, Chuanfa Ni, Yucheng Gu, Jinbo Hu

Synthesis and Chiroptical Properties of Quinoxaline-Fused Polyaza[5]–[7]helicenes with Orange-Color CPL Emissions

Takashi Otani, Takuma Sasayama, Masashi Horiuchi, Shunosuke Okauchi, Hidetoshi Kawai, Maho Kitahara, Yoshitane Imai, Takanori Shibata

Full Papers

Anionic Thia-Fries Rearrangement at Ferrocene: A Computational and Experimental Study

Geanne M. R. Boston, Irmgard Frank, Holger Butenschön

onlinelibrary.wiley.com/journal/15222675/

INDUSTRIAL NEWS

Source: www.chemanager-online.com

China Approves ChemChina and Sinochem merger

April 6, 2021: The Chinese government has approved the merger of state-owned enterprises ChemChina and Sinochem. The State-owned Assets Supervision and Administration Commission (Sasac) gave its approval on Mar. 31, stating that the companies will undergo a joint restructuring and become subsidiaries of a new and yet-to-be-named holding company. A timetable for the restructuring has not been disclosed. The restructuring will “create synergy, build up a world-class chemical company and promote a high-quality development of the chemical industry in China,” said Sinochem, adding that the new holding company “will optimize resource allocation, strengthen innovation, and stimulate business growth.” In recent years, said Sinochem, “global chemical giants have undergone consolidation to create large-scale chemical companies which play a leading role in chemicals R&D and product innovation.” Sinochem and ChemChina have combined assets that are said to be worth about \$245 billion. The combined entity will form an industrial giant with businesses in life science, materials science, basic chemicals, environmental science, rubber and tires, machinery and equipment, real estate and industrial finance. Media reports have alluded to a merger between the two organizations during the past four-to-five years. Sinochem chairman Ning Baoning also took over as chairman of ChemChina in July 2018, a move seen as “extraordinary” at the time but also regarded as a sign that a merger was in the offing. Early last year, the Chinese groups announced plans to merge their agrochemical assets under a new holding company named Syngenta Group, based in Shanghai. The reorganization included Swiss seeds giant Syngenta, which ChemChina acquired in 2017 and Israeli crop protection company Adama, wholly owned by ChemChina since 2016. Speaking to the newspaper Financial Times, an analyst at a research center under Sasac said that ChemChina’s focus on traditional chemicals and Sinochem’s strength in foreign trade suggested it might take time for the two groups to find common ground. The analyst commented: “It is easy for Sinochem and ChemChina to merge since they report to the same boss (the government). The real challenge is to make them work more efficiently together.”

Lonza to Make Prussian Blue for Natron Energy

April 9, 2021: Lonza Specialty Ingredients (LSI), a division of Swiss-based CDMO Lonza, has sealed a deal to manufacture “high volumes” of Prussian blue materials to be used in energy group Natron’s electrodes for sodium-ion batteries. The Basel-based group said output from its facility in Visp, Switzerland, will supply 600 megawatts of battery production annually from 2022. According to Natron, this is sufficient to power five to ten major data center facilities. To accommodate the new order, LSI is upgrading existing facilities at the alpine site. Natron

will use the Lonza materials to produce battery electrodes at a plant it intends to build in Valais, Switzerland, as part of a previously announced partnership with the canton government. The materials will subsequently be shipped to the US for integration into battery production. The California-headquartered battery maker said LSI’s output will help it to meet growing global demand for its BlueTray-brand 4000 Rack-Mounted Battery Pack. Due to their reliability and long cycle life, the company said its battery systems are particularly attractive to customers in data center, telecom and 5G, forklift and other industrial power markets. Prussian blue pigment stores and releases energy in the form of sodium ions. Natron said its battery products are based on “a unique Prussian blue chemistry” and can be integrated into a wide variety of energy storage applications.

Former Braskem CEO Pleads Guilty to Bribery

April 19, 2021: Former Braskem CEO José Carlos Grubisich has pleaded guilty in a US court to conspiring to violate the anti-bribery provisions of the US Foreign Corrupt Practices Act (FCPA) as well as provisions of that act by failing to accurately certify the Brazilian chemical producer’s financial reports. The charges brought by the US Justice Department are tied to Brazil’s Operation Car Wash corruption scandal and cover the period from roughly 2002 to 2014, when Braskem’s American Depository Receipts were publicly traded on the New York Stock Exchange. The financial statements in question pertained to 2006 and 2007. Over the 12-year period, Grubisich alternately had roles at Braskem and construction conglomerate Odebrecht, one of the chemical producer’s two major shareholders, which still holds a majority of its voting shares. The second major shareholder is Brazilian state-owned energy group Petrobras, which was also implicated in the scandal. The former CEO was arrested at New York’s Kennedy airport in December 2019 and subsequently arraigned, initially pleading not guilty. The current case is being heard by a federal court in Brooklyn, New York. Under the plea agreement, the Brazilian national, who is free on bail, has agreed to forfeit \$2.2 million. Sentencing is scheduled for August this year, and Grubisich faces a maximum sentence of 10 years. On top of violating US financial laws, the US accuses the executive of working together with co-conspirators to divert \$250 million from Braskem to secret offshore shell firms to pay bribes to government officials and political parties in Brazil to obtain and retain business. One of the bribes is said to be related to a polypropylene plant the chemical company wanted to build. It is not clear whether this was a US project. Braskem, which bought Dow Chemical’s activities in 2011, is the largest producer of PP in North America. According to the court report, Grubisich admitted to paying bribes to an unnamed official at Petrobras, following a 2005 contract with Braskem to operate a PP plant. In 2016, Braskem and Odebrecht agreed to pay a combined penalty of at least \$3.5 billion to authorities in the US, Brazil and Switzerland to settle bribery charges. Odebrecht was suspected of making the illicit payments from bank accounts in New York City and holding secret meetings in Miami. Both companies pleaded guilty to conspiring to violate the anti-bribery provision of the FCPA; Braskem settled separately with the US Securities and Exchange Commission. As part of its own September 2018 deal with US authorities, Petrobras agreed to pay an \$853.2 million fine to resolve charges that its former executives and directors violated the country’s anti-corruption laws by paying and seeking to conceal bribes. Both Odebrecht and Petrobras are in the process of divesting their shares in Braskem. Earlier this month, Odebrecht, which as part of its restructuring in December 2020 changed its name to Novonor, said it was accepting bids for its 38.3% stake that carries 50.1% voting rights. Some analysts suggested that talks with LyondellBasell might be resumed.

Lonza and Junshi Expand Biologics Partnership

April 19, 2021: Swiss CDMO Lonza and China pharma Junshi Biosciences have expanded their biologics collaboration. Lonza will leverage its global network and local operation capabilities to help Junshi Biosciences accelerate the development of drugs in its pipeline and promote their adoption across international markets. Under the terms of the agreement, Lonza will provide support services that include cell line construction and development, the supply of cell culture media and reagents, process development and GMP manufacturing. The partnership will also include development and manufacturing support for Junshi's current and future antibody-based product pipeline, which includes a new candidate to be manufactured at Lonza's first mammalian facility in Guangzhou that went into operation in the first quarter of 2021. The main production platform will feature Lonza's GS Exceed Expression System, which covers various techniques and commercialized processes such as host cells, expression vectors and optimized culture media. Using the GS Exceed Expression System, Junshi has already launched China's first local antibody targeting PD-1, called Tuoyi, in 2018, and then took its Covid-19 neutralizing antibody drug JS016 to clinical trials in 2020. Jeff Li, vice president of commercial development at Lonza, said the collaboration takes the relationship between the two parties to a new level. "We look forward to providing comprehensive services and professional support for Junshi Biosciences, helping to accelerate the process of drug development, production and commercialization."

Swiss Biotech Report 2021

The Biotech Sector in Switzerland Shows Exceptional Performance

April 20, 2021: Switzerland, as one of the leading global biotech hubs, was well positioned to facilitate international collaborations and develop solutions to combat the Covid-19 pandemic, and the sector saw record levels of investment in 2020. This is the bottom line of the latest edition of the Swiss Biotech Report, published by the Swiss Biotech Association in conjunction with EY and eight other partner organizations. While the spotlight was on Covid-related projects (such as cloning of the virus, diagnostic development or vaccine production) Switzerland and Swiss biotech companies have not neglected other unmet medical needs and continued to invest heavily to expand their R&D and manufacturing infrastructure. According to the report, investors contributed new funds at record levels to advance the promising pipeline of the Swiss biotech hub. In total, R&D investments increased by 10% to CHF 2.2 billion. The 2021 report highlights Switzerland's role in responding to the pandemic

through basic research (e.g. cloning and 3D structure of the virus), vaccine manufacture and component supply (e.g. Lonza, Bachem, Janssen Cilag), diagnostics (e.g. Roche, Quotient, Ender, Mosaiq, Biolytix) and therapeutics (Humabs Biomed/Vir Biotechnologies, Molecular Partners/Novartis). "While the pandemic highlighted the importance of the biotech and pharmaceutical sectors, a note of caution may be warranted as many companies suffered significant delays in their R&D pipeline. Nonetheless, we are confident that the sector will continue its impressive expansion," commented Michael Altorfer, CEO of the Swiss Biotech Association. "2020 was clearly an exceptional year. Investor interest was demonstrated by record levels of financing and the creation of new biotech-specific investment funds such as Pureos Bioventures and Bernina Bioinvest. It was encouraging that Swissmedic approved 42 new drugs in 2020, which was one third more than the 29 approvals for innovative new drugs in 2019," added Jürg Zurcher, Partner and Biotechnology Leader Germany, Switzerland, Austria at EY.

Key Findings

Swiss biotechs raised a total of CHF 3.44 billion – their best year ever. CHF 2.7 billion were invested in public companies including ADC Therapeutics with CHF 470 million (IPO and follow on), CRISPR Therapeutics (CHF 940 million), Idorsia (CHF 866 million), Molecular Partners (CHF 80 million), and Basilea (CHF 125 million). The biggest portion of the private capital was raised by VectivBio Holding (CHF 135 million), SOPHiA Genetics (CHF 100 million), and the newly founded company Noema Pharma (CHF 54 million). The report shows that the Swiss biotech industry generated revenues of CHF 4.5 billion, compared to CHF 4.8 billion in 2019. This drop in revenues was mainly due to favorable one-time events in 2019 which didn't recur in 2020. Nevertheless, biotechs selling marketed products/services continued to increase their revenues. 2020 saw Swiss companies involved in a large number of mergers and acquisitions and collaborations. Several Swiss biotech companies were acquired in 2020 by either (big) pharma or other biotech companies: Sumitomo Dainippon Pharma and Roivant Sciences completed their strategic alliance with the formation of a new company, Sumitovant Biopharma in a deal worth \$3 billion, Genkyotex announced the closing of the acquisition by Calliditas, and Boehringer Ingelheim acquired NBE-Therapeutics for €1.2 billion. The sector was successful not only on the financing front, but also in the area of collaborations and licensing arrangements. Many successful new partnerships were established in 2020, including BC Platforms' partnership with Dante Labs to build Europe's largest next generation sequencing laboratory.

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