

A watercolor-style map of France, filled with various colors like red, yellow, blue, green, and purple, with a white outline. The map is positioned on the left side of the page, with the text overlaid on it.

2022 LOUIS-JEANTET SYMPOSIUM

Louis-Jeantet Prize Winners' Day
2020, 2021 & 2022

Louis-Jeantet Prize Winners' Day 2020, 2021 & 2022

- 08:15 – 08:50 **Registration and welcome coffee**
- 08:50 – 08:55 **Cem Gabay**, Dean of the Faculty of Medicine, University of Geneva
Opening
- 08:55 – 09:00 **Denis Duboule**, President of the Board of Trustees of the Louis-Jeantet Foundation
Welcome

SESSION 1

- Chairperson: **Denis Duboule**, University of Geneva and EPFL, Switzerland and Collège de France, Paris, France
- 9.00 – 9.30 **Erin Schuman**, Max Planck Institute for Brain Research, Frankfurt, Germany
Local Protein Synthesis at Synapses
- 9.30 – 10.00 **Graziella Pellegrini**, Centre for Regenerative Medicine "Stefano Ferrari", Modena, Italy
Epithelial stem cells, a real tool for effective regenerative medicine treatments
- 10.00 – 10.30 **Michele De Luca**, Centre for Regenerative Medicine "Stefano Ferrari", Modena, Italy
Epidermal stem cells and gene therapy of genetic skin diseases
- 10:30 – 11:00 **COFFEE BREAK**

SESSION 2

- Chairperson: **Diane Mathis**, Harvard Medical School, Cambridge, USA
- 11.00 – 11.30 **Jérôme Galon**, Institut National de la Santé et de la Recherche Médicale, Paris, France
The immune contexture and Immunoscore in the era of cancer immunotherapy
- 11.30 – 12.00 **Ton Schumacher**, Netherlands Cancer Institute, Amsterdam, The Netherlands
T cell recognition of human cancer
- 12.00 – 12.30 **Patrick Cramer**, Max Planck Institute for Multidisciplinary Sciences, Göttingen, Germany
Mechanisms of gene transcription and its regulation
- 12:30 – 13:45 **LUNCH**

SESSION 3

- Chairperson: **Michael Hall**, Biozentrum, University of Basel, Switzerland
- 13.45 – 14.15 **Carol Robinson**, Kavli Institute for Nanoscience Discovery, Oxford, UK
From GroEL folding to receptor signalling across native membranes – The promises and pitfalls of native mass spectrometry
- 14.15 – 14.45 **Uğur Şahin**, Johannes Gutenberg University and BioNTech, Mainz, Germany
mRNA cancer vaccines and immunotherapies
- 14.45 – 15.15 **Özlem Türeci**, Johannes Gutenberg University and BioNTech, Mainz, Germany
Project Lightspeed – developing a COVID19 mRNA vaccine
- 15.15 – 15.45 **Katalin Karikó**, Szeged University, Hungary and BioNTech, Mainz, Germany
Developing mRNA for therapy
- 15:45 – 15:50 **CONCLUDING REMARKS**

WELCOME ADDRESS

Dear Participants in the 2022 Louis-Jeantet Symposium,

The Louis-Jeantet Foundation is pleased to welcome you to the eleventh edition of the Louis-Jeantet annual Symposium. This exceptional event will bring together the 2020, 2021 & 2022 Louis-Jeantet Laureates.

We welcome all of you to this overview of diverse and exciting areas of biology and hope you have an enjoyable and productive day.

Denis Duboule
President of the
Board of Trustees

Gisou van der Goot
Secretary delegate to
the Board of Trustees

THE LOUIS-JEANTET SYMPOSIUM

Held for the first time in 2012, the Louis-Jeantet Symposium has been chaired every year by two former Louis-Jeantet prize winners who, together with speakers specialized in the same area, report on the progress of their research and discuss the challenges on the latest developments. These events offer a

unique opportunity for Master students, PhD students and post-docs to meet with other scientists and create networking opportunities. Over the years, a wide range of medical and biomedical research topics such as cancer, stem cells, immunity, development biology and mRNA biology were discussed.

THE LOUIS-JEANTET FOUNDATION

Founded in 1983 and established in Geneva, the Louis-Jeantet Foundation seeks to further the cause of medicine by encouraging innovative projects, both in fundamental and in clinical medicine. It is one of the leading European foundation in its field of activity.

Each year since 1986 the Louis-Jeantet Prize for Medicine and the Jeantet-Collen Prize for Translational Medicine, recognize cutting-edge researchers who are active in the European Council member countries. These prizes does

not reward a completed work but serve to ensure the continuation of promising projects. Research is encouraged in all aspects of life sciences which relate to human health.

Strongly attached to its home town, the Louis-Jeantet Foundation provides annual funds to the Faculty of Medicine of the University of Geneva in support of local biomedical research. These subsidies allow the Faculty to maintain or to create centres of excellence by financing full professorial and tenure track positions.



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2022 LOUIS-JEANTET SYMPOSIUM

11 October 2022



Erin Schuman

is awarded the 2020 Louis-Jeantet Prize for Medicine for her work on the requirement for local protein synthesis in synaptic plasticity.

Max Planck Institute for Brain Research, Frankfurt, Germany

Local Protein Synthesis at Synapses

Biography

Born in 1963, Erin Schuman obtained her Bachelor's degree from the University of Southern California and her Ph.D. in Neuroscience from Princeton University. She carried out her postdoctoral work in Molecular and Cellular Physiology at Stanford University. In 1993 she joined the Biology faculty at the California Institute of Technology. In 1997 she was also appointed as an investigator of the Howard Hughes Medical Institute. In 2009 she was recruited as a founding director of the Max Planck Institute for Brain Research and moved to Frankfurt, Germany, where she heads the Department of Synaptic Plasticity.

In 2014 Erin Schuman was elected to the European Molecular Biology Organization (EMBO) and in 2017 she was elected to the German National Academy of Sciences Leopoldina. Throughout her career, she has been honoured with awards and recognition, including the Pew Biomedical Scholar Award, the Beckman Young Investigator Award, and most recently the Salpeter Lifetime Achievement Award from the Society for Neuroscience.

www.brain.mpg.de

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2022 LOUIS-JEANTET SYMPOSIUM

11 October 2022



Graziella Pellegrini

shares the 2020 Jeantet-Collen Prize for Translational Medicine for the development of epithelial stem cell-based regenerative therapy in patients with severe eye and skin disease.

Centre for Regenerative Medicine "Stefano Ferrari", Modena, Italy

Epithelial stem cells, a real tool for effective regenerative medicine treatments

Biography

Born in Genoa in 1961, Graziella Pellegrini earned her degrees in Chemistry and Pharmaceutical Technologies in 1988 and Pharmacy in 1989 from the University of Genoa. She carried out her postdoctoral work at the Advanced Biotechnology Center in Genova before becoming deputy head of the Laboratory of Tissue Engineering of Istituto Dermopatico dell'Immacolata (IDI) in Rome and Director of the Regional Research Center on Epithelial Stem Cells in Venice.

<http://www.cmr.unimore.it/>



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2022 LOUIS-JEANTET SYMPOSIUM

11 October 2022



Michele De Luca

shares the 2020 Jeantet-Collen Prize for Translational Medicine for the development of epithelial stem cell-based regenerative therapy in patients with severe eye and skin disease.

Centre for Regenerative Medicine “Stefano Ferrari”, Modena, Italy

Epidermal stem cells and gene therapy of genetic skin diseases

Biography

Michele De Luca was born in Savona in 1956. He received his M.D. from the University of Catania and his specialization in endocrinology from the University of Rome. He was a fellow at the National Institutes of Health in Bethesda, USA and a visiting scientist at Harvard Medical School, USA. He was senior investigator at the Laboratory of Stem Cell Differentiation at the National Institute for Cancer Research in Genova, head of the Laboratory of Tissue Engineering at IDI in Rome and scientific director of the Veneto Eye Bank Foundation in Venice.

<http://www.cmr.unimore.it/>



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2022 LOUIS-JEANTET SYMPOSIUM

11 October 2022



Jérôme Galon

shares the 2021 Jeantet-Colleen Prize for Translational Medicine for the development of technologies to study the role of the immune system in cancer progression and for the improvement of cancer diagnosis and treatment.

Institut National de la Santé et de la Recherche Médicale, Paris, France

The immune contexture and Immunoscore in the era of cancer immunotherapy

Biography

Jérôme Galon was born in 1967 in France. He obtained his Ph.D. in immunology from the University of Jussieu, Paris Diderot, University of Paris and he worked at the National Institute of Health (NIH) in Bethesda, USA on functional genomics, bioinformatics, and immunology. In 2000 he established a research group at the National Institute of Health and Medical Research (INSERM) in Paris, France. In 2007 he became Director of research and Director of the laboratory of integrative cancer immunology. In 2015 he created the immunology diagnostic company HaliDx.

He has received numerous awards including the William B. Coley Award in 2010 (Cancer Research Institute, New York, USA), and the European Inventor Award in Research in 2019 (EPO, EU). He has been knighted in the French Order of the Legion of Honour in 2020.

www.ici.upmc.fr



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2022 LOUIS-JEANTET SYMPOSIUM

11 October 2022



Ton Schumacher

shares the 2021 Jeantet-Collen Prize for Translational Medicine for the development of technologies to study the role of the immune system in cancer progression and for the improvement of cancer diagnosis and treatment.

Netherlands Cancer Institute, Amsterdam, The Netherlands

T cell recognition of human cancer

Biography

Born in 1965, Ton N. Schumacher carried out his Ph.D. with Hidde Ploegh at The Netherlands Cancer Institute, describing fundamental rules of antigen presentation, and did his postdoctoral research with Peter Kim at The Whitehead Institute, MIT, USA. In 1996 he came back to his home country and joined The Netherlands Cancer Institute, where he is currently Senior Member. He is also Principal Investigator at the Oncode Institute, and professor of Immunotechnology at Leiden University.

He has received numerous awards including the William B. Coley Award in 2016 and the 2020 Stevin Prize.

<https://www.nki.nl/research/research-groups/ton-schumacher/>



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2022 LOUIS-JEANTET SYMPOSIUM

11 October 2022



Patrick Cramer

is awarded the 2021 Louis-Jeantet Prize for Medicine for providing an understanding of the structural and biochemical aspects of gene transcription in eukaryotic cells.

Max Planck Institute for Multidisciplinary Sciences, Göttingen, Germany

Mechanisms of gene transcription and its regulation

Biography

Born in 1969, Patrick Cramer studied chemistry at Stuttgart, Heidelberg, Bristol and Cambridge, and carried out his Ph.D. at the European Molecular Biology Laboratory (EMBL) in Grenoble. From 1999 until 2001 Cramer worked as a postdoctoral researcher with the later Nobel laureate Roger Kornberg at Stanford University. He became a professor of biochemistry at the University of Munich in 2001 and served as Director of the Gene Center Munich from 2004 to 2013. Since 2014, he has been Director of the Max Planck Institute for Biophysical Chemistry in Göttingen.

In 2009 Patrick Cramer was elected to the European Molecular Biology Organization (EMBO) and to the German National Academy of Sciences Leopoldina. In 2020 he was elected to the National Academy of Sciences, USA. Throughout his career, he has been honoured with awards and recognitions, including the Gottfried Wilhelm Leibniz Prize and, most recently, the Otto Warburg Medal.

<https://www.mpinat.mpg.de/cramer>



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2022 LOUIS-JEANTET SYMPOSIUM

11 October 2022



Carol Robinson

is awarded the 2022 Louis-Jeantet Prize for Medicine for establishing mass spectrometry as a rigorous method to analyse the composition of protein complexes, and their interactions with small molecules.

Kavli Institute for Nanoscience Discovery, Oxford, UK

From GroEL folding to receptor signalling across native membranes – The promises and pitfalls of native mass spectrometry

Biography

Born in 1956, Professor Dame Carol Robinson graduated from the Royal Society of Chemistry in 1979 and completed her PhD at the University of Cambridge. She took an eight-year career break to bring up her children and later became the first female Professor of Chemistry at the University of Cambridge (2001-2009). She has held the Chair of Dr. Lee's Professor of Chemistry at the University of Oxford since 2009 and is Oxford's first female Professor of Chemistry. Since 2021 she has been Director of the Kavli Institute for Nanoscience Discovery.

Her work has attracted many awards including the Othmer Gold Medal from the Science History Institute, the Royal Medal A from the Royal Society, the Novozymes Prize and the Stein and Moore Award. She is the former President of the Royal Society of Chemistry, a Foreign Associate of the National Academy of Sciences USA and EMBO member. She holds fifteen honorary doctorates and offices and was appointed DBE in 2013 for her contributions to science and industry.

<https://kavliinano.ox.ac.uk/>

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2022 LOUIS-JEANTET SYMPOSIUM

11 October 2022



Uğur Şahin

shares the 2022 Jeantet-Collen Prize for Translational Medicine for the design and development of mRNA-based vaccines that safely protect humankind against the deadly SARS-CoV-2 virus.

Johannes Gutenberg University and BioNTech, Mainz, Germany

mRNA cancer vaccines and immunotherapies

Biography

Born in 1965, Uğur Şahin studied medicine at the University of Cologne, Germany and graduated with a doctoral thesis in cancer immunotherapy. He then worked as a physician and scientist in Cologne, Homburg, Zürich and Mainz before being appointed Professor of Experimental Oncology in 2006 at the University of Mainz.

In 2001, Uğur Şahin, Özlem Türeci and Christoph Huber co-founded Ganymed Pharmaceuticals, a company developing monoclonal antibodies directed against novel cancer cell surface targets discovered by them, for use against oesophageal and gastrointestinal cancer. In 2008 they co-founded the biotechnology company BioNTech, where Uğur Şahin serves as CEO and Özlem Türeci as Chief Medical Officer. Katalin Karikó joined BioNTech in 2013 as vice-president and became a senior vice-president in 2019.

Uğur Şahin, Özlem Türeci and Katalin Karikó have received many awards, including the National German Sustainability Award (Şahin and Türeci), the Knight Commander's Cross of the Order of Merit of the Federal Republic of Germany (Şahin and Türeci), the Award of the Hall of Fame of German Science (Şahin and Türeci), the Paul-Ehrlich Prize (Şahin, Türeci and Karikó), the Breakthrough Prize in Life Sciences and the Lasker-DeBakey Clinical Medical Research Award (Karikó).



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2022 LOUIS-JEANTET SYMPOSIUM

11 October 2022



Özlem Türeci

shares the 2022 Jeantet-Collen Prize for Translational Medicine for the design and development of mRNA-based vaccines that safely protect humankind against the deadly SARS-CoV-2 virus.

Johannes Gutenberg University and BioNTech, Mainz, Germany

Project Lightspeed – developing a COVID19 mRNA vaccine

Biography

Born in 1967, Özlem Türeci studied medicine at Saarland University in Homburg, Germany where she graduated in 1992. She completed her habilitation qualification at the University of Mainz, where she has been a Lecturer in Cancer Immunotherapy since 2002. Since 2021 she is also Professor of Individualized Immunotherapy at the Helmholtz Institute HI-TRON.

In 2001, Uğur Şahin, Özlem Türeci and Christoph Huber co-founded Ganymed Pharmaceuticals, a company developing monoclonal antibodies directed against novel cancer cell surface targets discovered by them, for use against oesophageal and gastrointestinal cancer. In 2008 they co-founded the biotechnology company BioNTech, where Uğur Şahin serves as CEO and Özlem Türeci as Chief Medical Officer. Katalin Karikó joined BioNTech in 2013 as vice-president and became a senior vice-president in 2019.

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2022 LOUIS-JEANTET SYMPOSIUM

11 October 2022



Katalin Karikó

shares the 2022 Jeantet-Collen Prize for Translational Medicine for the design and development of mRNA-based vaccines that safely protect humankind against the deadly SARS-CoV-2 virus.

Szeged University, Hungary and BioNTech, Mainz, Germany

Developing mRNA for therapy

Biography

Born in 1955, Katalin Karikó studied biochemistry at the University of Szeged, Hungary, where she earned her PhD. She then moved to Temple University, Philadelphia, USA for her postdoctoral studies before being appointed Adjunct Professor at the University of Pennsylvania where she investigated RNA-mediated immune activation. Since 2021 she is Professor at the University of Szeged, Hungary.

In 2001, Uğur Şahin, Özlem Türeci and Christoph Huber co-founded Ganymed Pharmaceuticals, a company developing monoclonal antibodies directed against novel cancer cell surface targets discovered by them, for use against oesophageal and gastrointestinal cancer. In 2008 they co-founded the biotechnology company BioNTech, where Uğur Şahin serves as CEO and Özlem Türeci as Chief Medical Officer. Katalin Karikó joined BioNTech in 2013 as vice-president and became a senior vice-president in 2019.

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