European Commission

BRINGING GREAT IDEAS TO LIFE

erc

European Research Council

The European Research Council (ERC) at "Summer Davos",

Annual Meeting of the New Champions, World Economic Forum

1-3 July 2019, Dalian, China

ERC PROGRAMME & SPEAKERS

The ERC will participate in over 10 sessions (several open to the press) with 9 top scientists and the ERC President. Highlights are the ERC IdeasLab on cancer and the ERC Press Conference. 5 ERC grantees are part of the WEF Young Scientists Programme.

- **Jean-Pierre Bourguignon**, President of the European Research Council

ERC grantees:

- **Flemming Besenbacher,** *Co-Chair AMNC 2019,* Chairman of the Supervisory Board, Carlsberg A/S, Aarhus University
- **Shahzada Ahmad,** Professor, Basque Centre for Materials
- **Frances Balkwill OBE, FMedSci**, Centre Lead, Centre for Cancer and Inflammation, Queen Mary University of London
- **Michael Bojdys,** Assistant Professor, Humboldt University of Berlin
- **Camilla Colombo,** Associate Professor, Politecnico di Milano
- **Thomas Hermans,** Professor, University of Strasbourg, University of London, CNRS
- **Núria Montserrat,** Research Professor, Institute for Bioengineering of Catalonia, IBEC
- **Gaëlle Offranc Piret**, Researcher, Inserm
- **Vered Padler-Karavani,** Assistant Professor, Tel Aviv University

As the programme may still change, please also consult the WEF official programme.

ERC speakers are available for interviews.

Press contact:
Madeleine Drielsma, Press Advisor to the ERC President
madeleine.drielsma@ec.europa.eu (mobile: +32 498 98 43 97)

Monday 1 July

9:30 - 10:00

Press Conference of the AMNC 2019 Co-Chairs

Briefing Centre

ERC Speaker: **Flemming Besenbacher**

Building on nearly 40 years of convening leaders in China, this year's meeting convenes under the theme Leadership 4.0: Succeeding in a New Era of Globalization. The Co-Chairs play an important role in helping to shape the agenda of the meeting. Join us to hear their perspectives on how leaders can succeed in this new era.
Live-streamed

09:45 - 10:30

Ask About: Tackling Cancer

Hub E

Speakers: **Frances Balkwill, Núria Montserrat, Vered Padler-Karavani**

Despite progress in diagnostic and therapeutic capabilities, cancer remains a leading cause of death worldwide, and one that is expected to rise in coming decades. Come to the hub to explore the latest research in cancer treatment therapies.

10:15 - 10:45

Turning Back the Tide of Trash

Hub C

ERC Speaker: **Flemming Besenbacher**

Following China's recent ban on waste imports, municipalities and waste companies around the world are faced with an unmanageable volume of trash. As global waste starts piling up, what are the solutions to our throwaway culture?

12:15 - 13:30

Promoting Responsible Leadership

Studio

ERC Speaker: **Flemming Besenbacher**

Leaders today have the choice to leave a legacy that tackles the imminent climate crisis and addresses unprecedented levels of inequality, or one that risks ecological and societal collapse. How can leaders pave the way to set up the next generation for success? Dimensions to be addressed:

- Promoting environmental justice
- Bridging social and economic progress
- Creating an innovative ecosystem

Live-streamed

12:45 - 13:15

New Champions of Disability Inclusion

Hub F

ERC Speaker: **Gaëlle Offranc Piret**

From 3D-printed prosthetics to autonomous-car technology for the visually impaired, what new technologies could enhance the lives of all?

13:00 - 13:30

-- PRESS CONFERENCE --

Tackling Cancer from Within – New Perspectives

Briefing Centre

Speakers: **Jean-Pierre Bourguignon, Frances Balkwill, Núria Montserrat, Vered Padler-Karavani**

Cancer is a growing health threat across the world, notably in China - a country that has embraced precision medicine on a large scale to combat the disease. Three leading scientists will share their latest findings and scientific insights on how to tackle cancer through blue sky research. They will highlight the topic from different perspectives, including: exploiting a tumour's environment for better treatments, harnessing stem cells for organ regeneration, and targeting the sweet spot of cancer's sugar coating.

Live-streamed

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Tuesday 2 July

09:00 - 10:00

Climate Change: The Next Financial Crisis?

Studio

ERC Speaker: **Jean-Pierre Bourguignon**

Climate inaction risks $23 trillion of global economic losses a year, amounting to permanent economic damage four times greater than the impact of the 2008 financial crisis. What does financial leadership entail as we stand at the brink of climate calamity? On the Forum Agenda:

- Scaling up climate-friendly innovation
- Closing the climate financing gap
- Addressing the rising cost of insurance

Live-streamed

12:30 - 13:00

In Science We Trust?

Hub D

ERC Speaker: **Frances Balkwill**

From vaccine scepticism to climate-change denial, scientific consensus is easily rejected or opposed. How can the scientific world better engage those who dismiss its findings?

15:30 - 16:30

China, Science and the World

Salon

ERC Speaker: **Jean-Pierre Bourguignon**

Between 2009 and 2013, China experienced a meteoric expansion in R&D, doubling its research spending and overtaking the US with the largest number of researchers in any single country. How is China redrawing the map of global science?

Live-streamed

16:45 - 18:00

-- ERC IDEAS LAB --

Tackling Cancer from the Inside with the European Research Council

IdeasLab

Speakers: **Frances Balkwill, Núria Montserrat, Vered Padler-Karavani**
Introduced by **Jean-Pierre Bourguignon**

Discover new ideas and insights with leading researchers in the IdeasLab.

- Harnessing stem cells for organ regeneration
- Targeting the sweet spot of cancer's sugar coating
- Exploiting a tumour's environment for better treatments

Available on demand on the Forum YouTube channel/TopLink after the meeting.

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Wednesday 3 July

07:30 - 8:30

Leadership in Science

IdeasLab

Speakers: **Flemming Besenbacher, Jean-Pierre Bourguignon**

Breakfast session with Jean-Pierre Bourguignon and Flemming Besenbacher: learn from their experiences on how to cultivate your leadership skills to be a great mentor for both your peers and students.

12:30 - 13:00

Conversations on Leadership 4.0

Betazone

ERC Speaker: **Jean-Pierre Bourguignon**

Join for a candid conversation on what it takes to succeed as a leader in this new era of globalisation. The Conversations on Leadership 4.0 series provides a glimpse into the daily habits, visions and values of some of the world's most accomplished leaders.
Live-streamed

ERC SPEAKERS' BIOGRAPHIES

Prof. Jean-Pierre Bourguignon

President of the European Research Council

Jean-Pierre Bourguignon is the President of the European Research Council and took office in 2014. Prior to that, he was the Director of the Institut des Hautes Études Scientifiques (IHÉS) from 1994 until 2013. This international research institute located near Paris, France, was built as the European counterpart of the Institute for Advanced Study in Princeton. He was also the first ERC Panel Chair in Mathematics, for Starting Grants.

A mathematician by training, he spent his whole career as a fellow of the Centre National de la Recherche Scientifique (CNRS). He held a Professor position at École polytechnique from 1986 to 2012. From 1990 to 1992, he was President of the Société Mathématique de France and President of the European Mathematical Society from 1995 to 1998. He is a former member of the Board of the EuroScience organisation (2002-2006) and served on EuroScience Open Forum (ESOF) committees since 2004.

Prof. Bourguignon received the Prix Paul Langevin in 1987 and the Prix du Rayonnement Français in Mathematical Sciences and Physics from the Académie des Sciences de Paris in 1997. He is a foreign member of the Royal Spanish Academy of Sciences. In 2005, he was elected honorary member of the London Mathematical Society and has been the secretary of the mathematics section of the Academia Europaea. In 2008, he was made Doctor Honoris Causa of Keio University, Japan, and, in 2011, Doctor Honoris Causa of Nankai University, China.

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Flemming Besenbacher

Co-Chair AMNC 2019,
Chairman of the Supervisory Board, Carlsberg A/S, Aarhus University (DK)

ERC Advanced Grant

Flemming Besenbacher is a **professor of nanoscience** at Aarhus University, and he was the founding director of the Interdisciplinary Nanoscience Center (iNANO) from 2002-2012. Prof. Besenbacher is Chairman of the Carlsberg Group, the Carlsberg Foundation, the Tuborg Foundation, and Aarhus Vand A/S. Prof. Besenbacher is also deputy chairman of Innovation Fund Denmark and board member of Unisense A/S. In 2016, Prof. Besenbacher was appointed both chairman of the Danish Government's Advisory Board for Circular Economy, member of the Danish Government's Digital Growth Panel, and member of the Danish Ministry of Taxation's advisory panel for succession planning in commercial foundations. He sits on **several advisory boards related to the UN Sustainable Development Goals** and he is chairman of the non-profit organization UNLEASH.

Prof. Besenbacher is an international leading scientist within the field of **nanoscience**, and he has published more than 700 scientific articles in international journals such as Science and Nature. He is one of the most cited Danish scientists with 36,000 citations and an H-factor of 98. Furthermore, Prof. Besenbacher is honorary doctor at 13 Chinese universities, and he has received several distinctions in Denmark and abroad for his research, for instance "The Chinese Government Highest International Scientific and Technological Cooperation Award" of the People's Republic of China.

He is foreign member of the Chinese Academy of Sciences (Academician) and holds the title of Commander of the Order of Dannebrog.

European Research Council

Shahzada Ahmad

Professor, Basque Centre for Materials (ES)

ERC Consolidator Grant; WEF Young Scientists Programme

Shahzada Ahmad is an Ikerbasque professor at the Basque Centre for Materials, Applications and Nanostructures. Prior to his current position, he worked as programme director (2012-2017) at Abengoa Research, a research division of multinational energy based conglomerate Abengoa. After obtaining his PhD in Materials Chemistry from the National Physical laboratory, he moved to the Max Planck Institute for Polymer Research, as Alexander von Humboldt Fellow to work on surface and interface studies. At the École polytechnique fédérale de Lausanne, he developed nanoporous films for metal-free electro-catalysis and a new redox shuttle.

His research spans across the fields of **physical chemistry, nanotechnology** and materials science with a view to developing **advanced materials for energy application**. He was awarded an ERC Consolidator Grant in 2016.

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Frances Balkwill OBE, FMedSci

Centre Lead, Centre for Cancer and Inflammation, Queen Mary University of London (UK)

ERC Advanced Grant

Frances Balkwill is the lead of the Centre for Cancer and Inflammation, Queen Mary University of London**.** During her postdoc she worked on interferons and their actions in cancer therapy, whereas her current work focuses on ovarian cancer. Having recently published a multi-level profile of the human ovarian cancer microenvironment, her lab has developed a platform of new models in mice as well as human multi-cellular tissue culture models and they are now using these to research biological therapies that may prevent relapse and increase patient survival in this disease.

Prof. Balkwill is also actively involved in communication of science to non-specialist audiences, especially young people. She is Director of the Centre of the Cell, a biomedical science centre for children, educational website and outreach project in East London. There have been more than 183,000 participants in Centre of the Cell activities since opening in September 2009. Frances Balkwill's science communication work has been recognised by the award of the 2004 EMBO prize for communication in the Life Sciences and the 2005 Royal Society Michael Faraday Prize. Her books have been translated into at least twelve foreign languages with over half a million copies sold worldwide.

Her research spans across the fields of **tumour microenvironment research, cancer treatment, tissue engineering, mechanobiology, stem cell research and 3D computer-assisted imaging**. She was awarded an ERC Advanced Grant in 2012 which aimed to build a human tumour microenvironment.

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Michael Bojdys

Assistant Professor, Functional Nanomaterials Group, Humboldt University of Berlin (DE)

ERC Starting Grant; WEF Young Scientists Programme

Michael Bojdys joined the Humboldt University of Berlin as Assistant Professor in 2018. He is the leader of the "Functional Nanomaterials Group". Previously, he worked at the Max Plank Institute of Colloids and Interfaces, the University of Liverpool and TU Berlin. In 2014, he moved to Prague and established his own research group at Charles University.

His ERC Starting Grant project aims to develop **materials that combine useful electronic properties without the need for rare, hard-to-come-by resources.**

Camilla Colombo

Associate Professor, Department of Aerospace Science and Technology, Politecnico di Milano (IT)

ERC Starting Grant; WEF Young Scientists Programme

Camilla Colombo, who obtained her PhD in Aerospace Engineering from the University of Glasgow (UK) in 2010, with a thesis on “Optimal trajectory design for interception and deflection of Near Earth Objects” is Associate Professor at the Department of Aerospace Science and Technology of the Politecnico di Milano, Italy. Her current research focuses on novel techniques for spacecraft orbit manoeuvring by exploiting natural orbit perturbations. Together with her research group, she is developing methods for better understanding and leveraging the dynamics of natural forces acting on satellites and space debris. This will reduce the cost of travelling in orbit for small satellites. It will create new opportunities for space exploration and exploitation, such as missions to asteroid orbit manipulation and mining. The exploitation of orbit perturbations allow achieving end-of-life disposal manoeuvres for space mission, for a more sustainable use of space.

Her ERC Starting Grant project aims to bridge over the disciplines of orbital dynamics, dynamical systems theory, optimisation and space mission design by developing novel techniques for orbit manoeuvring by “surfing” through orbit perturbations. The ambition of the project is to **radically change the current space mission design philosophy**: from counteracting external disturbances, to exploiting natural and artificial perturbations. The big potential impact of this project will be in **significantly reducing the current extremely high space mission costs and mitigate space debris**.

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Thomas Hermans

Full Professor in Chemistry, University of Strasbourg University of London (A), group leader of the Laboratory of Nonequilibrium Complex Systems at CNRS (FR)

ERC Starting Grant; WEF Young Scientists Programme

Thomas Hermans is a full professor in Chemistry at the University of Strasbourg and group leader of the Laboratory of Nonequilibrium Complex Systems at the Institut de Science et d'Ingénierie Supramoléculaires, France. He studied Chemical Engineering and Chemistry at the Eindhoven University of Technology, followed by a PhD at the faculty of Biomedical Engineering at the same university. He received tenure (for professor) from the University of Strasbourg in 2019. Prof. Hermans is also the co-founder of Qfluidics, a company working on low-shear magnetostaltic pumping for transport of delicate biologicals.

He was awarded with an ERC Starting Grant in 2017 which helps him to develop a **new class of artificial supramolecular materials that are kept in sustained non-equilibrium states by continuous dissipation of chemical fuels**. Those chemically fuelled artificial supramolecular polymers should lead to more life-like materials that could perform functions so far reserved only for living beings.

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Núria Montserrat

Research Professor, Institute for Bioengineering of Catalonia, IBEC (ES)

ERC Starting Grant

Núria Montserrat is a research professor at the Catalan Institution for Research and Advanced Studies in Barcelona. Her field of expertise is the somatic reprogramming and organ regeneration. Since 2015, she and her team of researchers at the Institute of Bioengineering for Catalonia (Barcelona) have been combining innovative approaches for the establishment of cellular platforms for the study of human development and disease. Prof. Montserrat's team has recently demonstrated the possibility to generate organoids for further applications in disease modelling. Her laboratory is also investigating how the modulation of the physical microenvironment during organoid formation and maintenance recapitulates key steps determinant for human development and disease.

She was awarded an ERC Starting Grant in 2014, which helps her carrying out a **dual strategy for kidney regeneration and therapy**.

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Gaëlle Offranc Piret

Researcher, Inserm (FR)

ERC Starting Grant; WEF Young Scientists Programme

Gaëlle Offranc Piret is a research fellow at Braintech Laboratory, Inserm. During her thesis at the IEMN (Lille, France) and her post-doctorate at the University of Lund (Sweden), she worked on the development of micro-nano technologies and materials and the study of their interactions with cells or biological organisms. Her current research focusses on the **development of brain implants**.

She was awarded an ERC Starting Grant in 2014 to achieve the realisation of a **highly mechanically stable implant, allowing long-term connection between neurons and microelectrodes and to provide neural implants with a high temporal and spatial resolution**. To do so, she develops implants with structural and mechanical properties that resemble those of the natural brain environment.

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Vered Padler-Karavani

Assistant Professor, George S. Wise Faculty of Life Sciences, Department of Cell Research and Immunology, Tel Aviv University (IL)

ERC Starting Grant

Vered Padler-Karavani received her PhD in biochemistry from Tel Aviv University, Israel. She then did her postdoctoral training with Prof. Ajit Varki at the University of California San Diego (UCSD), USA, and subsequently established the Laboratory for Glycoimmunology at Tel Aviv University, Faculty of Life Sciences, Department of Cell Research and Immunology. Her research combines glycobiology, immunology, bio-nanotechnology and cancer research, and involves cutting edge technologies within these disciplines. The research is currently focused on investigating how immune recognition of certain sugars contribute to cancer and heart diseases and in developing novel diagnostics and therapies for such diseases.

Her ERC Starting Grant project aims to design a **novel personalised cancer therapeutic approach based on xeno-autoantibodies against the dietary sugar antigen**. The innovative interdisciplinary approach crosses the boundaries of **cancer research, glycosciences, immunology and nanotechnology, with cutting-edge technologies**.

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PRESS CONFERENCE

Tackling Cancer from Within – New Perspectives

Monday 1 July 2019
Dalian: **13:00 - 13:30 (CEST +6)**
Brussels time: **07:00 - 07:30 (CEST)**
Briefing Centre

ERC grantees
Frances BALKWILL
Núria MONTSERRAT
Vered PADLER-KARAVANI
And
ERC President **Jean-Pierre BOURGUIGNON**

Cancer is a growing health threat across the world, notably in China - a country that has embraced precision medicine on a large scale to combat the disease. Three leading scientists will share their latest findings and scientific insights on how to tackle cancer through blue sky research. They will highlight the topic from different perspectives, including: exploiting a tumour's environment for better treatments, harnessing stem cells for organ regeneration, and targeting the sweet spot of cancer's sugar coating.

Live-streamed

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Interview opportunity with ERC delegation

For scheduling, please contact:
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Background

The European Research Council, set up by the EU in 2007, funds the very best, creative scientists and their boldest ideas. The ERC helps to make Europe more competitive and more attractive to scientific talent from anywhere in the world. To date, some 9,000 top researchers, both young and more senior, have been backed via ERC grants. ERC-funded research has led to some 80% breakthroughs/major scientific advances, according to a recent independent study. It has also been shown that, since the ERC's launch, Europe has narrowed the gap with the USA regarding highest impact research. The ERC is led by an independent governing body, the Scientific Council, chaired by ERC President Jean-Pierre Bourguignon. The overall ERC budget from 2014 to 2020 is over €13 billion, as part of the EU's Horizon 2020 programme, for which European Commissioner for Research, Innovation and Science Carlos Moedas is responsible.

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