Fundamental Research for European Competitiveness

Biotech innovation experts express their views on the essential role of discovery-driven research for European competitiveness

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"Europe's global competitiveness depends on our ability to generate bold, curiosity-driven science and to translate it into transformative innovation. By funding institutions that foster breakthrough research and make new advances quickly available to researchers, we give science the power to shape our future and keep Europe at the forefront."

Giulio Superti-Furga
Chair of EU-LIFE
Director of CeMM

Marta Miączyńska
Co-Chair of EU-LIFE
Director of IIMCB

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EU-LIFE is an alliance of research centres whose mission is to support and strengthen European research excellence. EU-LIFE members are leading research institutes in their countries and internationally renowned for producing excellent research, widely transferring knowledge and nurturing talent. Since its foundation in 2013, EU-LIFE is a stakeholder in European policy participating regularly in the EU policy dialogue.

"Fundamental research uncovers new knowledge and fuels innovation, laying the groundwork for state-of-the-art technologies. It is the main tool for innovators to drive changes across industries and for companies to stay competitive by developing disruptive ideas and/or products."

Sergio Abrignani

Co-founder and member of the Board of Directors

CheckmAb

CheckmAb's mission is to develop novel, effective and safer therapies for cancer and autoimmune diseases by targeting molecules identified by single-cell OMICS on tissue-resident T lymphocytes, and associated to these pathological states.

It was created with the aim to generate new therapeutic mAbs against T cells infiltrating pathological tissues and promoting to neoplastic and autoimmune diseases. Their present objective is to generate therapeutic mAbs against tumor-infiltrating regulatory T lymphocytes (Tregs) for safer cancer immunotherapy.

"The rapid development of mRNA vaccines for COVID-19 stemmed from decades of fundamental research. Key discoveries, from viruses to RNA modification and delivery, many recognized with Nobel Prizes, laid the foundation. Research institutions identified and patented breakthrough technologies, setting the competition and guiding companies toward a swift, life-saving solution."

Eylem Aydogdu Lohaus

Business Development Manager and IP Advisor

CRG 5
Centre for Genomic Regulation

The Centre for Genomic Regulation (CRG) is an international biomedical research institute of excellence, founded in December 2000, whose mission is to discover and advance knowledge for the benefit of society, public health and economic prosperity.

CRG believes that the medicine of the future depends on the groundbreaking science of today. This requires an interdisciplinary scientific team focused on understanding the complexity of life from the genome to the cell to a whole organism and its interaction with the environment, offering an integrated view of genetic diseases.

"Muna Therapeutics, a biotech company based in Denmark, Belgium and the US, discovers and develops medicines that protect the brain and slow or stop the progression of diseases that affect the nervous system. As drug hunters, we leverage groundbreaking basic and applied science funded by public and private entities across the EU and around the globe.

Our most advanced potential medicine for early Alzheimer's disease has been enabled by more than 25 years of discovery-led research conducted by scientists and clinicians world-wide, and will be in human safety testing in 2025."

Rita Balice-Gordon

Chief Executive Officer

MUNA THERAPEUTICS

Muna Therapeutics discovers and develops therapies that slow or stop devastating neurodegenerative diseases including Alzheimer's and Parkinson's. These disorders impact memory, movement, language, behavior and personality, resulting in disability and death of millions of patients around the globe.

Muna Tx focuses their groundbreaking science on identifying new potential medicines to preserve cognition and other brain functions, enhance resilience to disease pathology, and improve quality of life for patients and their loved ones.

"Fundamental research is key to better understanding the pathophysiology of diseases, bringing innovative treatment modalities and stimulating a translational approach to treat symptoms. Without strong support for basic research, translational research and company creation are likely to stagnate, hindering new solutions for patients."

Adrien Clavairoly

Principal

AdBio partners

AdBio partners is a venture capital firm investing in early stage life sciences companies in Europe. Its unique strategy combines early-stage investments in promising startups and strong entrepreneurial support to enable and strengthen the company's growth.

As an early-stage investor, they act as a catalyst to create companies based on innovations coming from academic research. They have established relationships with leading research institutions and technology transfer offices in Europe and benefit from the support of strong network of scientific, clinical, industry and financial partners.

"Innovation in life sciences begins when knowledge meets purpose and thrives where scientific excellence meets entrepreneurial mindset. It takes trust, timing, expertise and passionate people to unlock the impact of scientific discoveries into societal value by building bridges between research and the real world to tackle unmet medical needs."

Marzia Fumagalli

Head of Technology Transfer Office

IEO
Istituto Europeo
di Oncologia

The European Institute of Oncology (Istituto Europeo di Oncologia - IEO), founded in 1994, is one of the world's most prestigious hospitals and the fastest growing comprehensive cancer centre in Europe.

IEO strives for excellence in cancer prevention, early diagnosis and effective treatment through integration of clinical and scientific development, training and education, basic and translational research, organisational and management innovation, with a constant focus on the quality of the service provided to the patients.

The Department of Experimental Oncology (DEO) is the research wing of IEO, focused on the deep understanding of the molecular mechanisms involved in cancer development hence accelerating knowledge, generated at the interface between curiosity and patient benefit, into clinical practice.

"Fundamental research drives innovation by revealing new ideas and untapped possibilities. It lays the foundation for breakthroughs that tackle real-world problems and pave the way for a brighter, more sustainable future."

George Garinis

Group Leader

FORTH
INSTITUTE OF MOLECULAR BIOLOGY & BIOTECHNOLOGY

The Institute of Molecular Biology and Biotechnology of the Foundation for Research and Technology Hellas (IMBB), is one of the most prominent life science research institutions in Greece, with the main mission is to pursue cutting-edge research and promote scientific excellence.

Placing emphasis solely on excellent science, IMBB researchers aim at understanding the basic principles of the biological processes operating in living organisms. An additional standing mandate of IMBB is the exploitation and translation of acquired knowledge to tangible societal benefits, including the development of new technologies, innovative products and services.

"Fundamental research is crucial for advancing cell and gene therapy, as it uncovers the mechanisms of treatment success or failure. At T-knife, investing in research and innovation enables the development of more advanced next-generation cancer therapies, enhancing patient outcomes and becoming leaders in the field."

Elisa Kieback

Chief Technology Officer

tknife THERAPEUTICS

T-knife Therapeutics is a biopharmaceutical company dedicated to developing novel therapeutics to fight cancer. The company is initially focused on T cell receptor (TCR) engineered T cell therapies (TCR-Ts), a promising modality that holds the potential to generate transformative responses in patients with solid tumors.

The company's unique approach is based on combining the most advanced, internally-developed, T cell enhancements to create supercharged TCR-Ts designed to achieve deeper responses and durability in solid tumor cancers.

"Fundamental research was the starting point of our journey at ACTOSens. Without years of studying molecular interactions in academic labs, we would not have developed our biosensor platform for sexually-transmitted infection diagnostics. It was basic science that allowed us to see what others missed – and turn it into a practical, life-improving technology."

Karel Lacina
Founder & CEO

ACTOSENS

ACTOSens s.r.o. is the second company established through the Masaryk University subsidiary MUNI Ventures s.r.o. The spin-off company focuses on the development of a diagnostic device that allows users to quickly and easily determine whether a person is infected and how intense the infection is. If bacteria causing the infection are present in the body, the device detects it within minutes and provides the result in digital form.

The commercial application and broader impact of this technology could significantly facilitate early infection detection and improve diagnostic accessibility in practice.

"Discovery-driven research lays the foundation for breakthroughs by pursuing knowledge without immediate commercial goals — just as decades of fundamental work in structural biology and machine learning made AlphaFold possible. Our future competitiveness depends on daring to explore the unknown and transform bold curiosity of human minds into innovation that changes the world."

Kornelia Mikula
Head of the Technology Transfer Office

IIMCB mission is to support ambitious scientists of any nationality, driven by passion to pursue frontier research that aims to make a difference for society. Focusing primarily on RNA and cell biology, the Institute aims to understand the fundamentals of infectious, neurological, oncological, and rare diseases. The dedicated Technology Transfer Office supports the translation of research into practical applications for the societal benefit.

"Fundamental research generates the knowledge base on which the biotech sector rests, builds capacity for the sector in the form of training young talents, and innovates to a larger degree than many expect."

Søren-Peter Olesen

Chief Executive Officer

Danmarks
Grundforskningsfond
Danish National
Research Foundation

The Danish National Research Foundation is an independent organization established by the Danish Parliament in 1991. The foundation's endowment secures its independence and a long-term commitment to the best Danish research.

The Danish National Research Foundation (DNRF) funds outstanding basic research of the highest international level at the frontiers of all research fields to strengthen the development of Danish research.

"Fundamental research is essential to sustaining an innovation pipeline, especially when paired with entrepreneurial scientists who also choose to bring the science to market to create lasting impact."

Bobby Soni
Chief International Officer

BI BioInnovation Institute

Bio Innovation Institute 's mission is to accelerate research and startups to realize the boldest ideas for better human and planetary health ahead of the curve, taking them from A to B, from Academia to Business.

The Bio Innovation Institute brings science to life by identifying unmet needs and supporting early-stage start-ups that will create long-lasting impact.

"The ERC funds frontier research – where innovation begins and new knowledge is created. It drives progress across all fields, including biotechnology, boosts competitiveness, and delivers solutions to global challenges. Simply put, it's the best possible investment in our future."

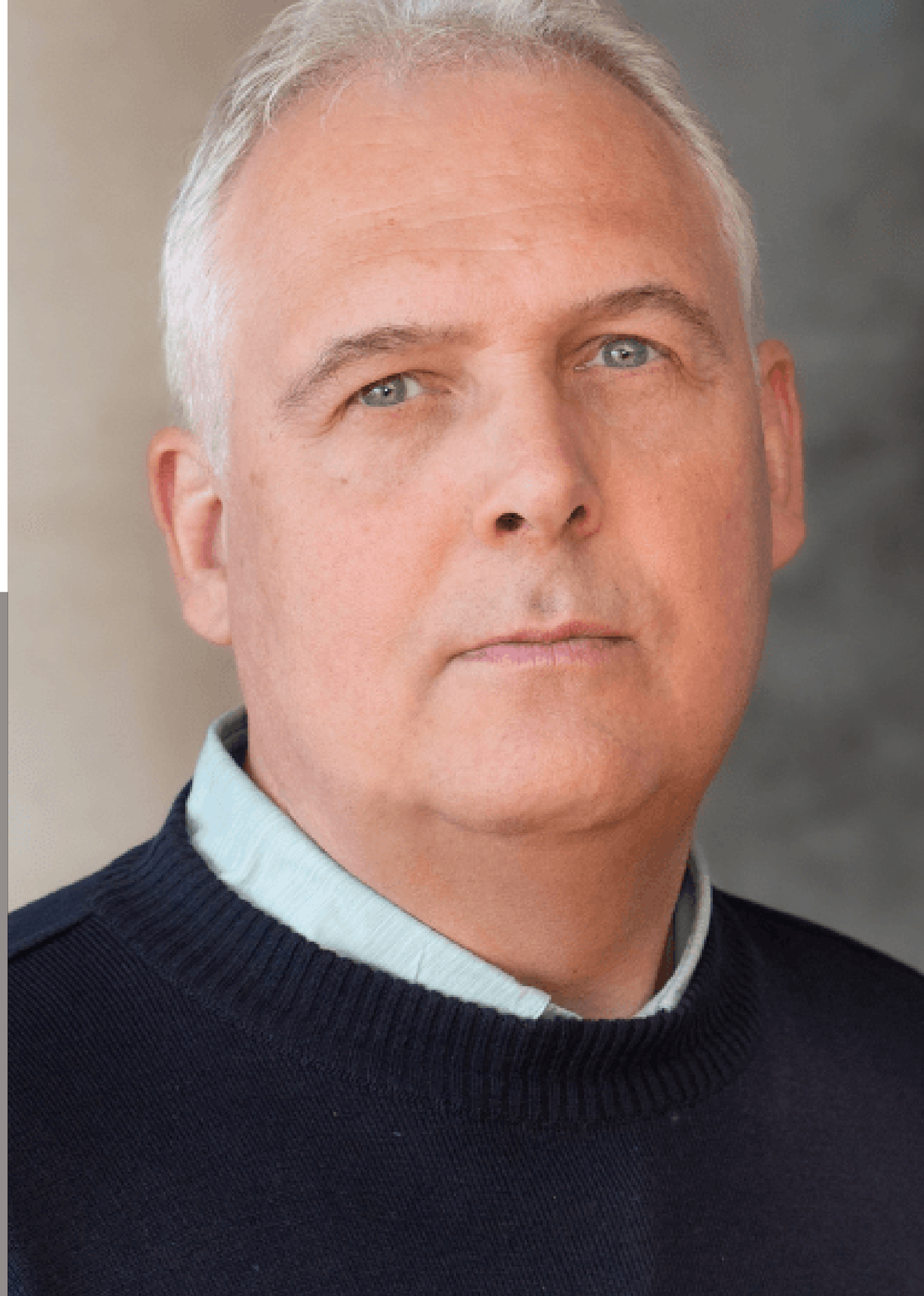
Jesper Svejstrup

Vice president of ERC Scientific Council (Life Sciences)

European Research Council
Established by the European Commission

The European Research Council (ERC), set up by the European Union in 2007, is the premier European funding organisation for excellent frontier research. It funds creative researchers of any nationality and age, to run projects based across Europe.

The ERC's mission is to encourage the highest quality research in Europe through competitive funding and to support investigator-driven frontier research across all fields, based on scientific excellence.



"Discovery driven research is vital for innovation as it provides new knowledge and insights needed to develop transformative solutions. With that spirit of innovation, Aphea. Bio creates natural solutions based on microbiology that serve as effective alternatives to chemical pesticides and synthetic fertilizers."

Isabel Vercauteren

Chief Executive Officer & Co-founder

APHEA bio

Founded in 2017 and located in the biotech cluster in Ghent, Belgium, Aphea.Bio has grown into a science-driven company that is driving the transition to a sustainable future.

Aphea.Bio is dedicated to offer alternative, more sustainable solutions for achieving food security without environmental damage. Our solutions are well suited for the conventional crop protection and fertilizer markets, offering versatility across a broad spectrum of application types, from seed treatments to foliar applications, making food systems fair, healthy and environmentally friendly.

"Fundamental research is crucial for innovation. As a Tech Transfer Officer, I observe that most major innovations originate from basic research. Marie Curie's pioneering work on radioactivity, for instance, paved the way for medical advancements. Investing in fundamental research fuels future innovations."

Jérémie Weber

Deputy Director of Technology Transfer Office

institut Curie

Institut Curie, France's leading cancer center, combines an internationally-renowned research center with a cutting-edge Hospital Group, treating all types of cancer, including the rarest. Founded in 1909 by Marie Curie, Institut Curie brings together on its three sites (Paris, Saint-Cloud, and Orsay) over 3,800 researchers, doctors, and caregivers who are all dedicated to work towards completing its three missions - care, research, and teaching. Thanks to the support of its donors, Institut Curie is able to speed up discoveries, thereby improving treatments and the quality of life of patients.

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