



LAUNCH OF THE **BILLION MOLECULES AGAINST COVID-19** **JEDI GRANDCHALLENGE**

#JEDICovid19Challenge

- The Joint European Disruptive Initiative is launching the **Billion Molecules against COVID-19 Grand Challenge**, with grand prizes of **up to 2 million Euros** for the winners.
- Open to the best scientific & technology teams in the world, it has one objective: **to screen billions of molecules** with blocking interactions relevant to SARS-CoV-2, and **fast-track the route to a therapeutic treatment**.
- The current major health crisis has highlighted the need for strong anticipation, interdisciplinarity and massive agility. This is the **first-ever DARPA-type** (Advanced Research Projects Agency) **challenge in Europe** at the intersection of **epidemiology, high performance computing, molecular biology and artificial intelligence**.
- Strong support has been provided by our first global partners, **AXA Research Fund and Merck**.
- **We call upon more private and public partners to join** this unique and global initiative.
- JEDI has brought together an **exceptional Scientific Committee** with major scientific figures from Europe, Asia and the Americas.
- Another unique aspect of this GrandChallenge is the **involvement of the larger scientific community** that we call upon to provide feedback on the GrandChallenge & our success metrics until the formal launch of the Grand Challenge mid April

<http://covid19.jedi.group>
www.jedicovid19.org

#JEDICovid19Challenge

Berlin, Brussels, London, Paris, Rome, Boston, Seoul, April 8, 2020

As the world faces one of the most challenging crises in modern history, radical new methodologies are needed to tackle the exponential threats of our times. The Joint European Disruptive Initiative (JEDI), the major European Initiative for disruptive innovation, is thus announcing the **launch of the JEDI Billion Molecules against Covid-19 high performance computing Grand Challenge** with the support of several major partners including Merck and the AXA Research Fund.

This 8-week Grand Challenge will be exceptionally launched on a global scale, with the precise objective to **identify molecules with blocking interactions relevant to SARS-CoV-2**. It aims to break the walls between fields ranging from structural biology, molecular simulations, artificial intelligence and machine learning, high-throughput screening, and rapid experimental testing.

It is the **first time in Europe that a DARPA-type Challenge is launched**. With its methodology based on excellence, bold risk-taking, a complete absence of bureaucratic constraint, and precise metrics for success; JEDI promotes the use of radical new methods to achieve major technological breakthroughs, by encouraging the brightest minds in the world to cooperate and emulate each other, with common good, excellence and frontier science as the sole compass.

To run this Challenge, JEDI has gathered a **world-class scientific committee**, composed, amongst others, of Sir Peter Ratcliffe, 2019 Laureate of the Nobel Prize in Medicine; Bernhard Schölkopf, a leading researcher in machine learning and director at the Max Planck Institute for Intelligent Systems in Tübingen; Dr. Marion Guillou, former CEO of Inra and of Ecole Polytechnique; epidemiologist Adolfo Garcia-Sastre, director of the Global Health and Emerging Pathogen Institute at Mount Sinai and partaker in the 2005 reconstruction of the extinct 1918 pandemic influenza virus; Sang-Yup Lee, head of the Bioinformatics Center at the Korea Advanced Institute of Science and Technology; and Daniel Verwaerde, a major figure of high performance computing and former CEO of the French national laboratory CEA – among other great scientific & technological figures.

The JEDI Billion Molecules against COVID-19 GrandChallenge has been built to be **deeply integrated into many other global efforts** on Covid-19 and has secured strong infrastructure in terms of High Performance Computing and molecular libraries. Strategic partnerships have been set with operators of major supercomputer infrastructures. We are ready.

In a very unique way, the GrandChallenge will be open to comments and input from the wider Scientific community between April 7 and April 14, in order to finetune even more precisely the Grand Challenge and its success metrics and ensure maximal impact. Inputs can be delivered on <http://covid19.jedi.group>.

Several foundations, corporations, European governments and the EU are currently being **offered to join this unique Challenge that will include up to 2 million Euro prize for the winning teams.**

In the coming days, we will announce the full composition of the Scientific Committee, as well as a list of our strategic partners, together with their contribution.

<http://covid19.jedi.group>

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#ActNow

“We commit to act now”, say **André Loesekrug-Pietri, Executive Director of the Joint European Disruptive Initiative**, and **Bernhard Schoelkopf, Director of the Max-Planck Institute for Intelligent Systems** and one of the members of the *JEDI Billion Molecules GrandChallenge* Scientific Committee. “We are calling all foundations, corporations, startups and scientists to join the thousands of JEDIs in 23 European countries, and support our global GrandChallenge to win the fight against Covid-19”.

“The support for JEDI was unanimous within our Advisory Board and we are very excited to be supporting the *Billion Molecules against Covid-19 Grand Challenge*. At the AXA Research Fund, we believe in open science and collaboration to confront the issues our societies face today. The *JEDI Billion Molecules GrandChallenge* brings together the health and technologies research fields and private sector assets to help accelerate treatment responses to Covid-19, our single most pressing issue today” underlines **Marie Bogataj, head of the AXA Research Fund** and AXA Group Foresight.

“Merck is delighted to be part of the *JEDI Billion Molecules against Covid-19 GrandChallenge*, which aims to combine and crosscheck multiple simulation approaches to validate at least 100 promising compounds and rapidly expand the body of knowledge around Covid-19. The best molecules are then rapidly screened from the protein level all the way up to clinically relevant models. In this way, the GrandChallenge can identify novel compounds for repurposing as well as completely new substances to battle Covid-19” stresses **Belen Garijo, CEO Healthcare & Member of the Executive Board, Merck**.

About JEDI

The Joint European Disruptive Initiative (JEDI) is the initiative for disruptive innovation to bring Europe in a leadership position in breakthrough technologies. It is powered by 3.700 leaders of Europe's deeptech ecosystem in 23 countries. JEDI is launching Technology & Scientific GrandChallenges to push the frontiers of innovation, with a radical method based on excellence, no geographical return, speed, highest expectations & bold risk-taking. JEDI is driven by humanistic values, a purpose-driven approach to solve major societal issues in environment & energy, healthcare, digital and new frontiers (space and oceans) through innovation. Europe needs a strong change to stay in the race and affirm its values. More by email covid19@jedi.group or on www.jedi.group & twitter [@eurojedi](https://twitter.com/eurojedi)

About the AXA Research Fund

The AXA Research Fund was born out of the belief that science plays a crucial role in responding to the most important issues facing our planet today. AXA's scientific philanthropy initiative is committed to supporting science contributing to societal progress and encouraging researchers to share their work and inform decision making. The AXA Research Fund supports projects in the risk areas of climate and the environment, health and socioeconomics. With 250 Million Euros committed since its inception in 2007, the Fund has supported over 650 projects to date, in 300 leading academic institutions. More on www.axa-research.org [@AXAResearchFund](https://twitter.com/AXAResearchFund)

About Merck

Merck, a leading science and technology company, operates across healthcare, life science and performance materials. Around 57,000 employees work to make a positive difference to millions of people's lives every day by creating more joyful and sustainable ways to live. From advancing gene editing technologies and discovering unique ways to treat the most challenging diseases to enabling the intelligence of devices – the company is everywhere. In 2019, Merck generated sales of € 16.2 billion in 66 countries. Scientific exploration and responsible entrepreneurship have been key to Merck's technological and scientific advances. This is how Merck has thrived since its founding in 1668. The founding family remains the majority owner of the publicly listed company. Merck holds the global rights to the Merck name and brand. The only exceptions are the United States and Canada, where the business sectors of Merck operate as EMD Serono in healthcare, MilliporeSigma in life science, and EMD Performance Materials.

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