

JEDI GRANDCHALLENGE
BILLION MOLECULES AGAINST COVID-19
#JEDICovid19Challenge

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STAGE 1 OF THE JEDI BILLION MOLECULES AGAINST COVID19 GRANDCHALLENGE LAUNCHES ON MAY THE 4TH

#JEDICovid19Challenge
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PRESS RELEASE

- The Joint European Disruptive Initiative is launching on a global basis the JEDI Billion Molecules against Covid19 Grand Challenge. The Stage 1 of this **unique, concrete, impact-driven** competition will run for 33 days until June 6.
- Open to the best scientific & technology teams in the world, it has one objective: screen billions of molecules with blocking interactions on SARS-CoV-2, and **ultra-fast-track the route to a therapeutic** treatment, which is, with the development of a vaccine, the only exit from the current global crisis.
- Stage 1 is a real moonshot: instead of testing individual molecules – what is happening all over the world - the participant teams will, **at a scale never seen before**, screen enormous molecular libraries against protein targets of the virus, using supercomputing and AI. Results will be cross-correlated to determine a “high potential” list of unprecedented quality, allowing a fast track to clinical testing. Overall time to find active compounds reliably will be massively shorter as compared to current methods.
- Already before the start of the JEDI GrandChallenge, **more than 45 teams** from the best research institutions, biotechs and corporates have pre-registered to participate, a particularly strong mobilization to solve a very hard problem.
- As several countries come together for the Global Response pledging event of the EU, we call upon them, as well as all private & public donors, to **join JEDI and its partners**, the AXA Research Fund, Merck and the BMW Foundation, in this highly ambitious and impact-driven initiative, with results shared with the world, in Open Science.

The scientific uniqueness of this JEDI GrandChallenge is :

1. to model a number of active molecules at a scale never seen before,
2. determine a highly accurate list of active compounds cross-correlated by the best teams in the world,
3. push for ultra-fast-track in-vitro identification of molecules with 99% reduction in viral activity,
4. identify the best drug-cocktail out of existing FDA-approved molecules.

In research against Covid-19, **the approach by JEDI is radically different:**

- 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 constraints, and precise metrics for success, we aim for major breakthroughs.
- We are convinced that scientific discoveries will come from making different disciplines working together: structural biology, virology, molecular simulations, AI and machine learning, high-throughput screening, and rapid experimental testing.
- The *JEDI Billion Molecules against Covid19 GrandChallenge* is focused on near-term breakthroughs with results shared with the world, in the spirit of Open Science.
- The GrandChallenge has been built to be deeply integrated and complementary to other global efforts like Folding@home, and many others.

In just 4 weeks, JEDI has secured the **first funding partners**, AXA Research Fund and Merck, as well as strategic partnerships with major organizations: Academic as well as industrial teams will have access to massive computing power as well as first-rate compound library and scientific tools. JEDI has brought together an exceptional **Scientific Committee** with 17 renowned scientists from Europe, Asia and the Americas, including the 2019 Nobel prize in Medicine.

Andre Loeseckrug-Pietri, Director of the Joint European Disruptive Initiative, underlines *‘This crisis of historical proportions is a strong confirmation of JEDI’s vision for much bolder anticipation, interdisciplinarity, massive agility and a radical new approach to innovation. We are bringing our contribution in the fight against the virus, and excited that JEDI is launching the first-ever DARPA-type challenge in Europe at the intersection of high-performance computing, molecular biology and machine-learning’*.

Thomas Hermans, Program Manager of the #JEDICovid19Challenge, adds: *‘It is great to see that scientists are bundling forces in an unprecedented manner, sharing data and experiments at a global scale. This Challenge builds on the collective knowledge of the best teams in computational drug discovery, and adds rapid experimental validation, to find new or existing compounds to block SARS-CoV-2, in record time’*

<http://covid19.jedi.group>
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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)

PRESS CONTACTS:

Laura Mueller, Joint European Disruptive Initiative
+33 6 85 31 51 59
media@jedi.group