

Europe's Largest Initiative Launches to Accelerate Therapy Development for COVID-19 and Future Coronavirus Threats

- CARE (*Corona Accelerated R&D in Europe*), supported by Europe's Innovative Medicines Initiative (IMI), is the largest undertaking of its kind dedicated to discovering and developing urgently needed treatment options for COVID-19.
- The initiative is committed to a long-term understanding of the disease and development of therapies for COVID-19 and future coronavirus threats in addition to urgent efforts to repurpose existing therapies as potential immediate response.
- The CARE consortium will accelerate COVID-19 R&D by bringing together the leading expertise and projects of 37 teams from academic and non-profit research institutions and pharmaceutical companies into a comprehensive drug discovery engine.

Brussels, Belgium – 18 August 2020 – CARE (Corona Accelerated R&D in Europe) a new consortium supported by the Innovative Medicines Initiative (IMI) public-private partnership announced its launch today to accelerate the discovery and development of urgently needed medicines to treat SARS-CoV-2, the virus that causes COVID-19. With a grant totaling € 77.7 million, CARE is funded by cash contributions from the European Union (EU) and cash and in-kind contributions from eleven European Federation of Pharmaceutical Industries and Associations (EFPIA) companies and three IMI-Associated Partners. CARE is a five-year project bringing together 37 partners from Belgium, China, Denmark, France, Germany, the Netherlands, Poland, Spain, Switzerland, the UK and the US, and is led by VRI-Inserm (French National Institute of Health and Medical Research, Paris, France), Janssen Pharmaceutica NV, one of the Janssen Pharmaceutical Companies of Johnson & Johnson (Beerse, Belgium), and Takeda Pharmaceuticals International AG, (Zurich, Switzerland). It integrates partners' COVID-19 projects ongoing since February 2020.

Ai-biopharma, an agile SME member of the consortium, will bring its decades of viral polymerase inhibitor expertise and will provide for screening a focused small molecule antiviral library, designed with its *in silico* platform, with high potential to finding active new molecules.

"The COVID-19 pandemic has emerged as the largest global health threat to humanity in this century, requiring the global scientific community to join forces in unprecedented ways," said Professor Yves Lévy, Executive Director of the VRI-Inserm and CARE coordinator. *"Beyond the scientific excellence of the different teams involved in this very ambitious project, CARE is bringing together 37 partners in an alliance pooling their expertise and know-how around an ambitious five-year work plan to develop therapeutics against the current COVID-19 pandemic. We are very grateful for the financial support provided by the Innovative Medicine Initiative that will enable us to implement this plan."*

With no licensed vaccines and only limited therapy options against COVID-19, the pandemic is ongoing, counting more cases and deaths every day. Uniting some of the most innovative and experienced scientists from all relevant areas in a unique collaborative spirit CARE will maximize synergies and complementarities with other initiatives such as the Gates Foundation-supported COVID-19 Therapeutics Accelerator, MANCO¹, SCORE², and the ECRAID³ network, to accelerate the

¹ Monoclonal Antibodies against 2019-New Coronavirus

² Swift Coronavirus therapeutics Response

³ European Clinical Research Alliance on Infectious Diseases

path to providing solutions for the current COVID-19 pandemic as well as future coronavirus outbreaks. After testing in the laboratory, the project will advance the most promising drug candidates to clinical trials in humans.

“We are delighted to be part of such a strong scientific team within the CARE consortium and aiming to deliver a new drug against SARS-CoV-2 and other coronaviruses.” said Ai-biopharma CEO Cyril B. Dousson, Ph.D. *“Like other RNA viruses our scientific team has tackled over the years, the virus polymerase is a target of choice and finding an active site therapeutic molecule against SARS-CoV-2 polymerase has also a stronger potential for a broader coverage of other future coronaviruses.”*

“We are very excited to launch the CARE consortium and collaborate with other leading experts to urgently identify new medicines against SARS-CoV-2 and other coronaviruses that may have the potential to cause epidemics,” added CARE project leader Marnix Van Loock, Senior Scientific Director and R&D Lead of Emerging Pathogens, Global Public Health, Janssen Pharmaceutica NV. *“As part of this initiative, we look forward to applying learnings from an ongoing collaboration on COVID-19 with the Rega Institute for Medical Research, part of KU Leuven, to screen a drug repurposing library of thousands of existing drug compounds.”*

Kumar Saikatendu, Ph.D., Director, Global Research Externalization, Takeda said *“It is humbling to see such a large collection of the best scientific minds in Europe come together to solve this complex problem with such urgency. COVID-19 is a once in a lifetime scientific challenge for our generation. CARE aims to create effective therapies with a positive safety profile for current and future coronaviral outbreaks. We hope to move fast and have a meaningful impact in a timely manner.”*

Comprehensive short- and long-term response to COVID-19

CARE aims to create effective therapies with a positive safety profile for the COVID-19 pandemic (drug repositioning), and develop new drugs and antibodies specially designed to tackle the SARS-CoV-2 virus.

The consortium builds on three pillars:

- Drug repositioning, by screening and profiling compound libraries contributed by partners with the aim of rapidly progressing molecules to advanced stages of clinical testing.
- Small-molecule drug discovery based on *in silico* screening and profiling of candidate compounds directed against SARS-CoV-2 and future coronavirus targets.
- Virus neutralizing antibody discovery using fully human phage and yeast display, immunisation of humanised animal models, patient B cells and *in silico* design.

Closely integrated with these pillars are work streams focusing on the refinement of candidate compounds through a comprehensive medicinal chemistry campaign, systems biology research and pre-clinical and clinical evaluation of molecules from all three pillars. The systems biology work package will investigate the viral pathophysiology to increase our understanding of the interplay between virus infection stages and human immune responses. It will identify disease markers, to inform therapy development and improve clinical trial design and monitoring of Phase 1 and 2 trials investigating new therapeutics developed by CARE.

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About CARE

CARE is a new public-private partnership bringing together scientists from academia, research centers, Small Medium Enterprises (SMEs), European Federation of Pharmaceutical Industries and Associations (EFPIA) member companies and IMI Associated Partners. In total, it comprises 37 different partner organizations. Professor Yves Lévy from VRI-Inserm is the academic coordinator, Marnix Van Loock from the Janssen Pharmaceutical Companies of Johnson & Johnson is the EFPIA project leader and Kumar Saikatendu from Takeda is the project co-leader. The project partners are 11 academic institutions (KUL, GUF, AMU, UzL UU, EDI-IVI, UHAM, UEDIN, TiHo, JU, LUMC), five public research organisations (Inserm, CHUV, CEA, HZI, SERMAS) and 7 SMEs (IT, EVF, EXSCI, NUVISAN, SCIFEON, ENYO, AIB), together with eleven EFPIA members (Janssen, Takeda, Pfizer, ABBV, BI, Merck KgA, BAG, Novartis, Astellas, Servier and AiCuris), and three IMI2 Associated Partners (BMGF, UNIVDUN, GHDDI).*

About Ai-biopharma

Ai-biopharma is a private biotech company that was founded in 2018 with the mission to become a leader in the treatment of viral infections and liver diseases. Ai-biopharma is focused on the discovery and development of a liver targeted combination therapy for chronic hepatitis B (CHB) and the discovery of Coronavirus polymerase inhibitors. Ai-biopharma's strategy is to combine its deep expertise and decades of drug discovery experience its scientific team has acquired in viral disease, particularly viral hepatitis and HIV, with its Artificial Intelligence and Chemoinformatic Platform to rapidly advance its pipeline of best-in-class small molecules. www.ai-biopharma.com

About the IMI

The [IMI](http://imi.europa.eu/) is Europe's largest public-private initiative aiming to speed up the development of better and safer medicines for patients. IMI supports collaborative research projects and builds networks of industrial and academic experts in order to boost pharmaceutical innovation in Europe. IMI is a joint undertaking between the European Union and the European Federation of Pharmaceutical Industries and Associations (EFPIA).

For further details please visit: <http://imi.europa.eu/>

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*List of partners

- 1 (Coordinator) VRI-Institut National de la Santé et de la Recherche Médicale (Inserm) FR
- 2 (Project Leader) Janssen Pharmaceutica NV (Janssen) BE
- 3 (Project co-Leader) Takeda Pharmaceuticals International AG (Takeda) CH
- 4 Commissariat à l'énergie atomique et aux énergies alternatives (CEA) FR
- 5 Centre Hospitalier Universitaire Vaudois (CHUV) CH
- 6 Eurovacc Foundation (EVF) CH
- 7 Exscientia Limited (EXSCI) UK
- 8 Johann Wolfgang Goethe University Frankfurt am Main (GUF) DE
- 9 Helmholtz-Zentrum für Infektionsforschung GmbH (HZI) DE
- 10 Uniwersytet Jagiellonski (JU) PL
- 11 Katholieke Universiteit Leuven (KUL) BE

- 12 Academisch Ziekenhuis Leiden (LUMC) NL
- 13 Servicio Madrilen0 De Salud (SERMAS) ES
- 14 Nuvisan ICB GmbH (NUVISAN) DE
- 15 Scifeon ApS (SCIFEON) DK
- 16 Universit  d'Aix Marseille (AMU) FR
- 17 The University of Edinburgh (UEDIN) UK
- 18 University of Hamburg (UHAM) DE
- 19 Universitaet zu Luebeck (UzL) DE
- 20 Universiteit Utrecht (UU) NL
- 21 Eidgenoessisches Departement des Innern (EDI-IVI) CH
- 22 Inserm Transfert SA (IT) FR
- 23 AbbVie Inc. (ABBV) US
- 24 Astellas Pharma Europe BV (ASTELLAS) NL
- 25 Bayer AG (BAG) DE
- 26 Boehringer Ingelheim (BI) DE
- 27 University of Dundee (UNIVDUN) UK
- 28 Enyo Pharma SA (ENYO) FR
- 29 Bill & Melinda Gates Foundation (BMGF) US
- 30 Global Health Drug Discovery Institute (GHDDI) CN
- 31 Novartis Pharma AG (NOVARTIS) CH
- 32 Pfizer
- 33 Merck KGaA (Merck) DE
- 34 University of Veterinary Medicine Hannover (TiHo) DE
- 35 Ai-biopharma (AIB) FR
- 36 AiCuris Anti-infective Cures GmbH (AiCuris) DE
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