

Themis collaborates with ABL Europe to manufacture its SARS-CoV-2 Vaccine Candidate in France

ABL applies its expertise in custom manufacturing virus-based therapeutics to accelerate the Institut Pasteur and Themis' coalition COVID-19 vaccine development

Vienna, Austria, and Illkirch (Strasbourg), France, May 11, 2020 – [Themis](#), a clinical-stage biopharmaceutical company focused on immunomodulation therapies for infectious diseases and cancer, and ABL Europe ([ABL](#)), a global Contract Development and Manufacturing Organization ([CDMO](#)) and Contract Research Organization ([CRO](#)) a subsidiary of the French bioindustrial group Institut Mérieux, announced today that they have signed an agreement under which ABL will manufacture Themis' vaccine candidate in preparation for clinical trials. The vaccine is being developed using a proprietary measles virus vaccine platform technology, which is licensed exclusively to Themis by the world-renowned Institut Pasteur in Paris.

Dr. Erich Tauber, CEO of Themis commented, "The key elements behind our decision to partner with ABL Europe are our past experience, their viral expertise and consequently the significant advantage of ABL being able to rapidly manufacture supplies to start our clinical trials."

Themis recently announced that it is underway and actively collaborating with Institut Pasteur, the Center for Vaccine Research at the University of Pittsburgh and the Coalition for Epidemic Preparedness Innovations (CEPI) to develop a COVID-19 vaccine candidate. CEPI has invested an initial US\$4.9 million for its development. ABL has been chosen by Themis to manufacture clinical trial supplies of its COVID-19 vaccine candidate in France.

"It is a privilege to combine forces with Themis in the global fight against the COVID-19 pandemic. In this case, ABL is uniquely positioned to use our expertise to accelerate a promising vaccine candidate into the clinic," added Dr. Patrick Mahieux, Managing Director of ABL Europe.

Measles vector platform

In order to rapidly design a COVID-19 vaccine, Themis uses the measles vaccine vector backbone as a vehicle to deliver selected, incorporated protein antigens, in this case from SARS-CoV-2, directly to macrophages and dendritic cells – the most potent and effective antigen-presenting cells that can trigger a specific immune response to the viral antigen. The broad applicability of the technology platform allows for the insertion of multiple large recombinant antigens from different pathogens into the vector. This approach was used to develop a vaccine candidate against SARS, and Themis has previously partnered with CEPI to harness this technology to develop vaccine candidates against Chikungunya, MERS, and Lassa fever.

Viral vector manufacturing

In order to manufacture recombinant vaccines for human use under the high quality standards required by national health authorities like the US FDA, Japanese PMDA and European EMA, ABL has specialized facilities located in Illkirch (Strasbourg) and Lyon, France, as well as in Rockville, Maryland, designed specifically to accommodate the complex biotechnological manufacturing processes required for such therapeutics. Both French sites will be involved supporting Themis in this urgent effort. Virus-based therapeutics are custom manufactured by ABL for use as vaccines in infectious disease, cancer and gene therapy treatments. ABL has experience manufacturing a variety of viral vectors, including those based on measles viruses, pox viruses (vaccinia and MVA), adeno viruses, adeno associated viruses and arena viruses. After manufacture of the bulk drug, individual doses are filled at ABL under aseptic conditions into vials, ready to be used in clinical trials.

About Themis

Themis is developing immunomodulation therapies for infectious diseases and cancer. Through advanced understanding of immune system mechanisms, the Company has built a sophisticated and versatile technology platform for the discovery, development, and production of vaccines as well as other immune system activation

approaches. Initially focused on preventing infectious diseases, Themis has demonstrated the potential of its versatile platform through the rapid and successful completion of Phase 2 and near-term entry into Phase 3 clinical development for a vaccine against Chikungunya, a debilitating disease with global outbreak potential. Funded to date by leading venture capital firms, Themis has also gained prestigious non-dilutive funding for emerging infectious disease indications. The Company will apply its platform and commercial manufacturing capabilities to diseases with high market potential both alone and for its partners. For more information, visit <http://www.themisbio.com>.

About ABL

ABL Europe is the European subsidiary of ABL Inc, - a leading CDMO and CRO harnessing decades of pioneering science and manufacturing expertise to drive the development of innovative therapies and vaccines. ABL has extensive experience working with diverse organizations –including industry, government, and academic entities – to support their quest in improving public health. ABL Inc. – in turn a subsidiary of the French bioindustrial group Institut Mérieux, a group of companies dedicated to developing translational science for better patient care globally –maintains global GMP facilities meeting U.S. and European regulatory standards, providing GMP manufacture of virus-based oncolytic therapies, gene therapies, vaccines, and protein-based immunotherapeutic products. ABL's CDMO services include bulk drug substance, fill/finish of drug product, process and assay development, and bioanalytical testing.

As a CRO, ABL's immunologists use an integrated array of optimized immunology and molecular laboratory assay platforms, to extract immunological correlates of activity and response in both preclinical studies and clinical trials. To stay informed on the latest updates, please follow us on [LinkedIn](#), [Twitter](#) and [Facebook](#) and subscribe to our mailing list.

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