



## PRESS RELEASE

### **AB SCIENCE ANNOUNCES COLLABORATION WITH THE UNIVERSITY OF CHICAGO TO CONDUCT RESEARCH FOR THE PREVENTION AND TREATMENT OF COVID-19 WITH MASITINIB AND OTHER AB SCIENCE PROPRIETARY DRUGS**

*Paris, April 6 2021, 8am CET*

**AB Science SA** (Euronext - FR0010557264 - AB), together with the University of Chicago, today announces the signing of an exclusive licensing agreement for conducting research on the prevention and treatment of humans infected with nidoviruses, coronaviruses and picornaviruses.

This collaboration follows the discovery by the University of Chicago that masitinib inhibits the main protease (3CLpro) necessary for the SARS-CoV-2 viral replication cycle [1].

Under this agreement, AB Science will supply masitinib and more than 130 other AB Science proprietary drugs that have demonstrated activity against SARS-CoV-2 main protease 3CL-Pro via virtual screening methodology, and will benefit from the proprietary research platform of the University of Chicago.

The University of Chicago will perform the following research activities:

- Enhance the preclinical program of masitinib against SARS-CoV-2
- Initiate investigation with masitinib against other viruses that are dependent on protease 3CL-Pro for replication
- Test and identify analogues of masitinib active against SARS-CoV-2 protease 3CL-Pro

To secure and consolidate patent positions, AB Science and the University of Chicago will merge their patent rights related to masitinib or masitinib analogues related to virology applications. The University of Chicago's Polsky Center for Entrepreneurship and Innovation worked with the researchers to file the associated patents and then completed the license agreement with AB Science.

In case of commercialization in viral disease, AB Science will benefit from an exclusive, royalty-bearing license on any discoveries made with AB Science products (1% of net sales on first registered product and 0.3% of net sales on further registered product to be paid to the University of Chicago).

Dr Nir Drayman, researcher at the Pritzker School for Molecular Engineering (University of Chicago) said, *"We are delighted to work with AB Science on this global program. The discovery of masitinib as an anti-protease against multiple coronaviruses is a major discovery. Masitinib should be a priority drug to develop against COVID-19 and future emerging viruses. Unfortunately, this pandemic is not over and the world urgently needs anti-virals to combat this virus, and masitinib is a very promising candidate"*.

Professor Savas Tay, principal investigator of the 3CLpro inhibitor study and author of the article (Pritzker School for Molecular Engineering, University of Chicago) said. *"In a context where we face the emergence of a number of SARS-CoV-2 variants of concern, the development of efficacious anti-viral therapeutics is urgently needed. Because masitinib specifically targets the catalytic residues of 3CLpro, its anti-viral activity is likely to be insensitive to genetic alterations of the Spike protein. Thus, masitinib constitutes a uniquely valuable therapeutic option for both ancestral SARS-CoV-2 and variants against which vaccines or monoclonal*

*antibodies may become less or not effective. This is why we are extremely pleased to collaborate with AB Science and eager to continue our research with masitinib and analogues of masitinib”.*

*“Collaboration is necessary for the rapid development of new drugs in the fight against this pandemic. We are proud to collaborate in all aspects with the School for Molecular Engineering of the University of Chicago, one of the best research centers in the world. Our ultimate objective in Covid19 is to deliver as soon as possible a drug that is a direct antiviral against the protease of the virus”* said Alain Moussy, cofounder and CEO of AB Science.

Professor Olivier Hermine, President of the Scientific Committee of AB Science and member of the Académie des Sciences in France said, *“Masitinib could represent an important therapeutic option against SARS-CoV-2 because of its dual mechanism of action. First, masitinib targets the protease, which is a validated scientific strategy to inhibit virus replication, the efficacy of which is not dependent on the emergence of new variants whose mutations primarily affect the virus spike protein but not the protease catalytic site, and second, masitinib bears anti-inflammatory properties that could reduce the cytokine storm”.*

### **Masitinib in COVID-19**

Research led by the University of Chicago [1] have shown that masitinib inhibits 3CLpro, a SARS-CoV-2 protease that is crucial for virus infection and reproduction, by directly binding to the protease catalytic site.

- Key points from this research article include:
  - The study objective was to identify safe-in-human drugs with potential anti-coronavirus properties from an initial library of 1,900 compounds, either approved for human use or with extensive safety data in humans (Phase 2 or 3 clinical trials).
  - Masitinib significantly inhibited SARS-CoV-2 replication in human lung cells.
  - Notably, masitinib completely inhibited 3CLpro activity. 3CLpro is the SARS-CoV-2 main protease, necessary for its viral replication cycle.
  - X-ray crystallography revealed that masitinib directly binds to the active site of 3CLpro, thereby having a direct antiviral activity by blocking its enzymatic activity.
  - Masitinib was also effective in blocking the replication of multiple picornaviruses (human pathogens that cause a range of diseases including meningitis, hepatitis, and poliomyelitis).
  - Overall, masitinib was shown to have broad anti-coronavirus and anti-picornavirus activity.

A Phase 2 study is on-going to evaluate masitinib in combination with isoquercetin for the treatment of COVID-19. This study (AB20001) is a randomized (1:1), double-blind, placebo-controlled Phase 2 clinical trial to evaluate the safety and efficacy of masitinib combined with isoquercetin in hospitalized patients with moderate and severe COVID-19. The study will enroll 200 patients (age ≥18 without an upper age limit) at medical centers in France and other countries. The primary objective is to improve the clinical status of patients after 15 days of treatment.

[1] Drayman N, Jones KA, Azizi S-A, et al. Drug repurposing screen identifies masitinib as a 3CLpro inhibitor that blocks replication of SARS-CoV-2 in vitro. bioRxiv 2020.08.31.274639; doi: <https://doi.org/10.1101/2020.08.31.274639>

### **About the Polsky Center for Entrepreneurship and Innovation at the University of Chicago**

The Polsky Center for Entrepreneurship and Innovation is the central resource for transforming groundbreaking ideas and discoveries into new products, services, and ventures at the University of Chicago. A dedicated team of professionals with deep technical expertise exclusively focused on enabling technology commercialization perform market analysis, manage intellectual property, identify partners, and negotiate partnerships and licenses for discoveries and inventions developed by faculty, researchers, and staff.

### **About masitinib**

Masitinib is a new orally administered tyrosine kinase inhibitor that targets mast cells and macrophages, important cells for immunity, through inhibiting a limited number of kinases. Based on its unique mechanism of action, masitinib can

be developed in a large number of conditions in oncology, in inflammatory diseases, and in certain diseases of the central nervous system. In oncology due to its immunotherapy effect, masitinib can have an effect on survival, alone or in combination with chemotherapy. Through its activity on mast cells and microglia and consequently the inhibition of the activation of the inflammatory process, masitinib can have an effect on the symptoms associated with some inflammatory and central nervous system diseases and the degeneration of these diseases.

#### **About AB Science**

Founded in 2001, AB Science is a pharmaceutical company specializing in the research, development and commercialization of protein kinase inhibitors (PKIs), a class of targeted proteins whose action are key in signaling pathways within cells. Our programs target only diseases with high unmet medical needs, often lethal with short term survival or rare or refractory to previous line of treatment.

AB Science has developed a proprietary portfolio of molecules and the Company's lead compound, masitinib, has already been registered for veterinary medicine and is developed in human medicine in oncology, neurological diseases, and inflammatory diseases. The company is headquartered in Paris, France, and listed on Euronext Paris (ticker: AB).

Further information is available on AB Science's website:

[www.ab-science.com](http://www.ab-science.com).

#### **Forward-looking Statements - AB Science**

This press release contains forward-looking statements. These statements are not historical facts. These statements include projections and estimates as well as the assumptions on which they are based, statements based on projects, objectives, intentions and expectations regarding financial results, events, operations, future services, product development and their potential or future performance.

These forward-looking statements can often be identified by the words "expect", "anticipate", "believe", "intend", "estimate" or "plan" as well as other similar terms. While AB Science believes these forward-looking statements are reasonable, investors are cautioned that these forward-looking statements are subject to numerous risks and uncertainties that are difficult to predict and generally beyond the control of AB Science and which may imply that results and actual events significantly differ from those expressed, induced or anticipated in the forward-looking information and statements. These risks and uncertainties include the uncertainties related to product development of the Company which may not be successful or to the marketing authorizations granted by competent authorities or, more generally, any factors that may affect marketing capacity of the products developed by AB Science, as well as those developed or identified in the public documents filed by AB Science with the Autorité des Marchés Financiers (AMF), including those listed in the Chapter 4 "Risk Factors" of AB Science reference document filed with the AMF on November 22, 2016, under the number R. 16-078. AB Science disclaims any obligation or undertaking to update the forward-looking information and statements, subject to the applicable regulations, in particular articles 223-1 et seq. of the AMF General Regulations.

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