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**New results published in the peer-reviewed Journal of Alzheimer's Disease support masitinib's potential mode of action in Alzheimer's Disease**

**AB Science SA** (NYSE Euronext - FR0010557264 - AB) today announced the publication of preclinical study results with masitinib in Alzheimer's disease entitled, 'Effects of chronic masitinib treatment in APPPS1dE9 transgenic mice modeling Alzheimer's disease'. The preprint of this article is accessible online from the peer-reviewed Journal of Alzheimer's Disease [1] <https://content.iospress.com/articles/journal-of-alzheimers-disease/jad200466>.

Masitinib given orally as an adjunct therapy has previously been reported to slow down cognitive decline in patients with Alzheimer's disease [2] and a multicenter phase 3 study was subsequently initiated in patients with mild to moderate Alzheimer's disease (NCT01872598).

The current research provides evidence suggesting that masitinib's therapeutic efficacy is associated with a synapto-protective action in relation with mast cells inhibition.

Dr Benoît Delatour, Principal Investigator of the Alzheimer's and Prion Diseases team at the ICM (Paris Brain Institute, France) and senior author of the paper said, *"This research has shown that masitinib can restore normal spatial learning performance in an animal model of Alzheimer's disease and also promotes synaptic recovery. As such, these findings link the previously reported positive proof-of-concept clinical data for masitinib in Alzheimer's disease with evidence of a hitherto unknown synapto-toxic mechanism associated with mast cells that can be therapeutically targeted by masitinib"*.

Olivier Hermine (President of the Scientific Committee of AB Science and member of the Académie des Sciences in France) commented, *"These data suggest a novel mechanism by which masitinib exerts a neuroprotective effect in Alzheimer's disease. Overall, these results provide a new compelling biological rationale for the use of masitinib in the treatment of Alzheimer's disease"*.

➤ Key points from this research article include:

- The study objective was to clarify the effects of masitinib in Alzheimer's disease using a relevant animal model that displays features of brain amyloid pathology, neuroinflammation, and synaptic loss.
- Masitinib treatment restored normal spatial learning performance of APPPS1dE9 transgenic mice.
- Masitinib promoted a recovery of synaptic markers that are decreased in transgenic mice (similarly to patients with Alzheimer's disease) indicating a synapto-protective mechanism of action.
- This effect on synaptic markers was mimicked in a mast-cell depleted mouse model, thereby strongly implicating mast cells as a critical therapeutic target for masitinib in Alzheimer's disease.
- These results represent the first reported evidence of mast cells exerting a deleterious effect on synapses in an Alzheimer's disease background.

[1] Li, Tengfei et al. 'Effects of Chronic Masitinib Treatment in APPPS1dE9 Transgenic Mice Modeling Alzheimer's Disease'. 1 Jan. 2020 : 1 – 7.

[2] Piette F, Belmin J, Vincent H, et al. (2011) 'Masitinib as an adjunct therapy for mild-to-moderate Alzheimer's disease: a randomised, placebo-controlled phase 2 trial'. Alzheimer's Res Ther 3, 16-16.

### **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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### **AB Science**

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