Paris, March 21, 2019, 6.30pm

AB Science Announces Acceptance of Abstract for Oral Presentation at the 2019 Muscular Dystrophy Association Conference

Data Provides Further Evidence on Masitinib's Mode of Action in ALS via Modulation of the Degenerative Neuronal Microenvironment

AB Science SA (NYSE Euronext - FR0010557264 - AB), a pharmaceutical company specializing in the research, development and commercialization of protein kinase inhibitors (PKIs), announced today that new preclinical data for masitinib in amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease, will be presented at the 2019 Muscular Dystrophy Association (MDA) Clinical & Scientific Conference (Orlando, FL, USA, April 13th - 17th).

This research, which comes from the laboratory of Professor Luis Barbeito (Head of the Neurodegeneration Laboratory, Institut Pasteur in Montevideo, Uruguay), will be delivered during an oral session on 'Inflammation, Immune Mechanisms, & Therapeutic Approaches' on Tuesday, 16th April (8am – 10am). The title of this 25-minute platform presentation is "Post-paralysis treatment with masitinib ameliorates peripheral nerve pathology driven by macrophages, mast cells and neutrophils in an inherited model of ALS".

Findings which will be detailed during the conference have revealed a novel mechanism of neurogenic inflammation from damaged motor neurons and non-neuronal cells, which can be therapeutically modulated by masitinib.

Together with previously published evidence in prominent peer-reviewed journals[1,2,3], which showed that masitinib effectively co-targets independent pathological mechanisms in different cell types of the brain and spinal cord, these data provide additional insight into masitinib's mode of action and further validate its potential as a new treatment option for ALS.

The 2019 MDA Clinical & Scientific Conference is the most comprehensive neuromuscular disease meeting in the United States, representing the full spectrum of scientific researchers, medical professionals, and decision makers.

- **Reminder of key findings from previously published preclinical studies[1,2,3]**

  - It has been demonstrated that mast cells infiltrate and degranulate into skeletal muscle of ALS patients to a significantly greater degree than is seen in control samples.
  - Neutrophils infiltrate into the degenerating skeletal muscle of ALS patients and interact with mast cells and neuromuscular junctions.
  - These findings in ALS patients are in accordance with analyses in muscle from SOD1^{G93A} rats, where paralysis progression is known to correlate with degranulating mast cells.
  - Masitinib, administered after paralysis onset, significantly reduced mast cell and neutrophil accumulation and motor pathway degeneration.
  - Preclinical data derived from human ALS patients supports relevance of past animal data to human pathology.
  - Masitinib treatment significantly prolonged survival in post-paralytic SOD1^{G93A} rats.
  - Disease progression in this animal model of ALS was accompanied by massive infiltration and accumulation of mast cells around degenerating motor axons and neuromuscular junctions. This correlated with paralysis progression, suggesting mast cells may be deleterious for the maintenance of functional neuromuscular junctions.

- Masitinib-induced mast cell reduction significantly reduced the rate of neuromuscular junction denervation, progression of motor deficits, and prevented morphological changes in Schwann cells and capillary networks that are typically observed in advanced paralysis.
- Immunohistochemistry data showed that masitinib treatment modulated microglia activity improving microgliosis and motor neuron pathology.

[1] Trias E, et al. Mast cells and neutrophils mediate peripheral motor pathway degeneration in ALS. JCI Insight. JCI Insight. 2018;3(19):e123249. https://doi.org/10.1172/jci.insight.123249.

[2] Trias E, et al. Evidence for mast cells contributing to neuromuscular pathology in an inherited model of ALS. JCI Insight. 2017;2(20):e95934. https://doi.org/10.1172/jci.insight.95934.

[3] Trias E, et al. Post-paralysis tyrosine kinase inhibition with masitinib abrogates neuroinflammation and slows disease progression in inherited amyotrophic lateral sclerosis. J Neuroinflammation. 2016;13(1):177.

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.

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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