



## ***New independent publications underscore the potential of masitinib in neurological and neurodegenerative diseases***

**AB Science SA** (NYSE Euronext - FR0010557264 - AB), a pharmaceutical company specializing in the research, development and commercialization of protein kinase inhibitors (PKIs), today reports the publication of four independent, peer-reviewed, expert opinion articles that highlight a growing recognition of masitinib as a candidate drug in the field of neurological and neurodegenerative disease.

These publications highlight that masitinib is considered by experts as a drug candidate in neurology, following:

- 1) Animal model studies enlightening masitinib mechanism of action
- 2) Published phase 2 proof of concept studies
- 3) Successful futility analyses in the on-going phase 3 studies

The fact that masitinib phase 3 studies are non futile is a key milestone since Alzheimer's disease, progressive forms of multiple sclerosis (MS) and amyotrophic lateral sclerosis (ALS) are indications where clinical studies failed in the past ten years.

### ➤ ***New publications on the potential of masitinib in neurological and neurodegenerative diseases***

- ***Current research therapeutic strategies for Alzheimer's disease treatment***, published in the journal *Neural Plasticity* (January 2016). Authored by leading researchers in the fields of Alzheimer's research, including Prof. Antoni Camins (Faculty of Pharmacy, University of Barcelona), this article reviews the nascent approach of targeting downstream A $\beta$  signaling at the synapse, particularly the Fyn signaling pathway. The authors comment that "*the mechanism of action of masitinib in Alzheimer's disease is twofold. Apart from blocking Fyn, masitinib is also a stem cell factor (SCF) receptor (c-KIT) inhibitor. By inhibiting SCF/c-Kit signaling on mast cells (MCs), this compound may prevent neuroinflammation by blocking the activated MCs-microglia interactions*".

Full citation: Folch J, Petrov D, Ettcheto M, Abad S, Sánchez-López E, García ML, Olloquequi J, Beas-Zarate C, Auladell C, Camins A. Current research therapeutic strategies for Alzheimer's disease treatment. *Neural Plast.* 2016;2016:8501693. doi: 10.1155/2016/8501693. This publication is freely available online at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4735913/>.

- ***Therapeutic advances and future prospects in progressive forms of multiple sclerosis***, published in the journal *Neurotherapeutics* (January 2016). This review discusses therapeutics under phase 2 or phase 3 investigation and identifies masitinib as the lead candidate in the class of tyrosine kinase inhibitors.

Full citation: Shirani A, Okuda DT, Stüve O. Therapeutic advances and future prospects in progressive forms of multiple sclerosis. *Neurotherapeutics.* 2016 Jan;13(1):58-69. doi: 10.1007/s13311-015-0409. This publication is available online at: <http://link.springer.com/article/10.1007%2Fs13311-015-0409-z>.

- ***The latest innovations in the drug pipeline for multiple sclerosis***, published in the journal *American Health & Drug Benefits* (November 2015). This review summarizes data for key

investigational agents, including masitinib, which the authors say may prove to be significant additions to the therapeutic armamentarium if phase 3 results continue to show promise. Masitinib is distinguished from other investigational drugs in development for this indication because it has already published positive phase 2 data in the difficult to treat subvariant of primary progressive multiple sclerosis (PPMS) and is administered orally.

Full citation: Radick L, Mehr SR. The latest innovations in the drug pipeline for multiple sclerosis. Am Health Drug Benefits. 2015 Nov;8(8):448-53. This publication is freely available online at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4684635>.

- ***Tyrosine kinase inhibitor as a new therapy for ischemic stroke and other neurologic diseases: is there any hope for a better outcome***, published in the journal Current Neuropharmacology (November 2015). This review discusses the plausible usage of tyrosine kinase inhibitors, prominently including masitinib, in neurological disorders, such as ischemic brain stroke, Alzheimer's disease, and multiple sclerosis. The collected data indicates that tyrosine kinase inhibitors are very promising candidates for new therapeutic interventions in neurological diseases.

Full citation: Gagalo I, Rusiecka I, Kocic I. Tyrosine Kinase inhibitor as a new therapy for ischemic stroke and other neurologic diseases: is there any hope for a better outcome? Curr Neuropharmacol. 2015 Nov 26;13(6):836-44. This publication is available online at: <http://www.ncbi.nlm.nih.gov/pubmed/26630962>.

#### **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 in cancers, inflammatory diseases, and central nervous system diseases, both in humans and animal health.

AB Science has developed a proprietary portfolio of molecules and the Company's lead compound, masitinib, has already been registered for veterinary medicine in Europe and in the USA. The company is currently pursuing thirteen phase 3 studies in human medicine in first-line and second-line GIST, metastatic melanoma expressing JM mutation of c-Kit, multiple myeloma, metastatic colorectal cancer, metastatic prostate cancer, pancreatic cancer, T-cell lymphoma, mastocytosis, severe asthma uncontrolled by oral corticosteroid, Alzheimer's disease, progressive forms of multiple sclerosis, and amyotrophic lateral sclerosis. The company is headquartered in Paris, France, and listed on Euronext Paris (ticker: AB).

Further information is available on AB Science website: <http://www.ab-science.com>

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