



Press release, September 9, 2016

## **Diamyd Medical expands activities to both type 1 and type 2 diabetes as well as rheumatoid arthritis with proprietary GABA drug**

*Diamyd Medical (Nasdaq Stockholm First North, Ticker: DMYD B) today announced that the Company will expand its activities to include both type 1 and type 2 diabetes as well as rheumatoid arthritis, which is planned to be pursued through the development of a proprietary GABA drug product.*

GABA forms alongside the diabetes vaccine Diamyd® a key asset of Diamyd Medical. To further develop GABA's potential, Diamyd Medical expands, in dialog with leading experts in the field, its activities towards both type 1 and type 2 diabetes as well as rheumatoid arthritis. Results from previously published preclinical studies conducted at University of California in Los Angeles (UCLA) show beneficial therapeutic effects of GABA in the diseases<sup>1,2</sup>. These results are supported by a number of other publications showing GABA's beneficial effect on the pancreas and its immunomodulatory effect.

"The expansion to both type 1 and type 2 diabetes as well as rheumatoid arthritis, with GABA as platform, is natural and has clear synergies on both the development side and licensing side," says Ulf Hannelius, President and CEO of Diamyd Medical. "Diabetes and anti-rheumatic drugs are two of the largest pharmaceutical markets in the world. Existing treatments are not optimal, leaving considerable room for improvement. We have advanced furthest with our diabetes vaccine Diamyd®, where operations are proceeding according to plan. Six studies within autoimmune diabetes are ongoing and the first half year of 2017 is exciting when we, as previously announced, are awaiting results from three studies; DIABGAD, DiAPREV-IT 1 and 6-months results from EDCR-IIa."

Since May 2013, when Diamyd Medical signed an exclusive license agreement with UCLA regarding a patent portfolio on the therapeutic use of GABA, the Company has further developed the value with activities including, as previously announced, the initiation of a clinical study with GABA and Diamyd® in cooperation with the University of Alabama, USA.

By producing its own GABA, Diamyd Medical will have full control of product development. The first development stage of a GABA drug product will, with a preferred provider for GMP production and with preclinical studies, determine formulation technology and dosage. At a later stage the production can be scaled up in alignment with the clinical development strategy including formulation, administration and dosage of the drug.

### Selected references

1. Oral GABA treatment downregulates inflammatory responses in a mouse model of rheumatoid arthritis. Tian J, Yong J, Dang H, Kaufman DL. *Autoimmunity*. 2011 Sep;44(6):465-70. doi: 10.3109/08916934.2011.571223. Epub 2011 May 23.
2. Oral treatment with  $\gamma$ -aminobutyric acid improves glucose tolerance and insulin sensitivity by inhibiting inflammation in high fat diet-fed mice. Tian J, Dang HN, Yong J, Chui WS, Dizon MP, Yaw CK, Kaufman DL. *PLoS One*. 2011;6(9):e25338. doi: 10.1371/journal.pone.0025338. Epub 2011 Sep 22.

### About GABA

GABA stands for gamma amino butyric acid and is produced in the body as glutamate is decarboxylated by the GAD enzyme. GABA is an important suppressive and "calming" neurotransmitter. Pre-clinical findings support the use of GABA as a synergistic component for treatment of autoimmune diabetes and beta cell regeneration as well as for controlling inflammation, such as in rheumatoid arthritis, metabolic syndrome and type 2 diabetes. Diamyd Medical has licensed Intellectual Proprietary rights from University of California for these applications.

**About Diamyd Medical**

Diamyd Medical is dedicated to finding a cure for autoimmune diabetes through pharmaceutical development and investments in stem cell and medical technology.

Diamyd Medical develops the diabetes vaccine Diamyd<sup>®</sup>, an Antigen Based Therapy (ABT) based on the exclusively licensed GAD-molecule. The Company's licensed technologies for GABA and Gliadin have also potential to become key pieces of the puzzle of a future solution to prevent, treat or cure autoimmune diabetes, and also certain inflammatory diseases. At this time six clinical studies are ongoing with Diamyd<sup>®</sup>. Diamyd Medical is one of the major shareholders in the stem cell company Cellaviva AB. Stem cells can be expected to be used in Personalized Regenerative Medicine (PRM), for example for restoration of beta cell mass in diabetes patients where the autoimmune component of the disease has been arrested. Diamyd Medical also has holdings in the medtech company Companion Medical, Inc., San Diego, USA and in the gene therapy company Periphagen, Inc., Pittsburgh, USA.

Diamyd Medical's B-share is traded on Nasdaq Stockholm First North under the ticker DMYD B. Remium Nordic AB is the Company's Certified Adviser.

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