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## NEOVACS ANNOUNCES POSITIVE RESULTS OF PRECLINICAL STUDY FOR IFN $\alpha$ KINOID IN TYPE 1 DIABETES

### Company intends to continue preclinical development in this indication in 2018

Paris and Boston, December 12<sup>th</sup> 2017, 07:00 am CET – Neovacs (Euronext Growth Paris: ALNEV), a leader in active immunotherapies for the treatment of autoimmune diseases, today announced positive initial results from its ongoing proof-of-concept (PoC) preclinical studies with IFN $\alpha$  Kinoid for the treatment of Type 1 Diabetes (T1D).

The ongoing PoC preclinical studies in Type 1 Diabetes in non-obese diabetic (NOD) mice<sup>1</sup>, conducted in collaboration with Dr. Agnès Lehuen and Pr. Christian Boitard, from the department of Immunology of Diabetes at the Hospital Cochin in Paris, have confirmed:

- A strong production of neutralizing antibodies to IFN $\alpha$  following IFN $\alpha$  Kinoid administration
- A twice higher preservation of Langerhans islets<sup>2</sup> is observed in mice treated with IFN $\alpha$  Kinoid compared to the control groups.
- A notable delay in the onset of Type 1 Diabetes in relation to the persistence of anti-IFN $\alpha$  neutralizing antibodies

*“In this initial preclinical study for the treatment of type 1 diabetes, we observed a delay in the triggering of the pathology, which was maintained for several weeks.”* said Miguel Sieler, Chief Executive Officer of Neovacs. *“Additionally, the protection of Langerhans islets suggests that the IFN $\alpha$  Kinoid vaccine could have a preventive action. Based on these promising results, we look forward to finalizing our trials, with the goal of initiating a clinical development program in type 1 diabetes in the near future.”*

Neovacs expects to complete this study in 2018 in order to fully evaluate the therapeutic potential of IFN $\alpha$  Kinoid in T1D. These final results will guide the protocol of Neovacs’ first clinical study in this indication.

IFN $\alpha$  Kinoid is an anti-interferon-alpha vaccine that is currently in clinical development in several indications. Neovacs previously demonstrated in its Phase I/IIa<sup>3</sup> clinical study of IFN $\alpha$  Kinoid in Lupus that the persistence of neutralizing antibodies for several years can be achieved with the Company’s vaccine candidate and is also capable of neutralizing the Interferon signature. A Phase IIb study is currently ongoing with IFN $\alpha$  Kinoid for the treatment of Lupus.

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<sup>1</sup> Non-obese Diabetic (NOD), Leiter, Curr Protoc Mouse Biol. 2013

<sup>2</sup> Langerhans islets or pancreatic islets: cells capable of producing insulin

<sup>3</sup> Lauwerys *et al.*, Arthritis & Rheumatism 2013 ; Ducreux *et al.*, Rheumatology 2016

**About Type 1 Diabetes**

Type 1 Diabetes is an autoimmune disease which is foreseen to affect 25 million people in the world by the year 2020 with growing incidence worldwide (+3%pa). *Source WHO*. This disease may cause severe and even life threatening complications and has no curative treatment. Patients have to monitor their glycaemia throughout the day and are treated with multiple insulin injections over their lifetime.

**About Neovacs Technology**

Neovacs targets pathologies associated with an overproduction of endogenous cytokines. This technology is based on active immunotherapy to generate an immune response through the administration of an immunogenic complex involving the target cytokine to a carrier protein. The intramuscular injection of this Kinoid induces an immune response and stimulates the production of polyclonal antibodies against the target cytokines. It is thus possible to block cytokine overproduction and its pharmacological effects. Several autoimmune and inflammatory diseases (Type 1 diabetes, systemic lupus erythematosus, psoriasis, etc.) are characterized by a disorder of cytokines that are found produced in excess (ex: IFN $\alpha$ ). This overproduction will promote inflammation and dysregulation of the immune system.

**About Neovacs**

Listed on Euronext Growth Paris since 2010, Neovacs is today a leading biotechnology company focused on an active immunotherapy technology platform (Kinoids) with applications in autoimmune and/or inflammatory diseases. On the basis of the company's proprietary technology for inducing a polyclonal immune response (covered by five patent families that potentially run until 2032) Neovacs is focusing its clinical development efforts on IFN $\alpha$ -Kinoid, an immunotherapy being developed for the indication of lupus and dermatomyositis. Neovacs is also conducting preclinical development works on other therapeutic vaccines in the fields of autoimmune diseases, oncology, allergies and Type 1 diabetes. The goal of the Kinoid approach is to enable patients to have access to safe treatments with efficacy that is sustained in these life-long diseases. [www.neovacs.fr](http://www.neovacs.fr)

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