Press release, 25th January 2022

Defymed receives approval to start its pilot clinical study with ExOlin®: the promise of a physiological treatment for diabetic patients

The French authorities validate the start of the therapeutic trial to evaluate the safety of the ExOlin® device for patients suffering from poorly controlled type 1 diabetes with severe glycaemic fluctuations and prone to severe hypoglycaemia.

Specialising in the design and development of innovative medical devices for the delivery of therapeutic compounds, the French medical technology company Defymed, chaired by Séverine Sigrist, announces the start of an open-label, single-centre pilot study at the University Hospitals of Strasbourg - France.

This first phase of clinical entry, estimated to last 18 months and to start in the first quarter of 2022, aims to **validate the benefit** of **physiological insulin delivery** for diabetic patients **with ExOlin® and to evaluate the safety and tolerability of this new device**.

> *"The fact that the French competent authority has granted the authorisation to enter the clinical phase is the result of many years of research by the Defymed teams to improve the quality of life of diabetic patients. This is just the first step, but it has taken many years of development to ensure the safety and efficacy of the ExOlin® device for the benefit of the patient. It is also thanks to the expertise and support from French and European stakeholders that we are proud to reach a key Milestone in Defymed's mission at the service of diabetic patients. ExOlin® brings the hope for a more physiologic treatment for diabetic patients, that aims to their unmet medical needs"*
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> *Dr Séverine SIGRIST, President of Defymed*

8 patients implanted according to a surgical protocol developed in collaboration with the University Hospital of Strasbourg (HUS) and the IRCAD a centre of excellence for laparoscopic surgery training.

To conduct this first-in-human safety and performance investigation, the number of patients implanted was set at 8, based on staggered recruitment. The patients will be included and monitored by Prof. Nathalie Jeandidier, *Head of the Endocrinology, Diabetes and Nutrition Department of the HUS*.

> *"The HUS diabetes and endocrinology team is very pleased with the authorization to enter the clinical phase of the ExOlin® system; this is the result of many years of collaboration with Defymed and the IRCAD on innovative projects in diabetes centered on insulin infusion allowing a first hepatic passage. Such a device will enable physiological, effective insulin administration, limiting the acute and chronic complications of diabetes and improving the patient's quality of life and autonomy of management".*
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> *Prof. Nathalie JEANDIDIER, PU-PH - Head of the Department of Endocrinology, Diabetes and Nutrition*

> *"We are proud of this entry into the clinical phase of the ExOlin® device, the result of close collaboration between Defymed and IRCAD since 2011, after many years of joint research. Defymed has been able to improve and adapt this revolutionary device by drawing on the surgical expertise of the IRCAD. The entire IRCAD team was enthusiastic about the announcement of the validation of this medical device for insulin delivery in humans. This new device gives great hope to many diabetic patients.*
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> *Prof. Jacques MARESCAUX, Professor of Digestive Surgery, President and founder of IRCAD*

Physiological insulin administration: best favourable outcome for these unstable patients

This method of insulin delivery is intended for so-called unstable type 1 diabetic patients who do not respond properly to subcutaneous administration of insulin, which causes large variations in blood sugar levels, leading to severe hypoglycaemia.

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Better management of their disease requires a more physiological administration of insulin, allowing it to be rapidly delivered to the liver.
The ExOlin® medical device is implanted in the patient's extraperitoneal site, allowing the insulin to reach the liver.
Invisible, ExOlin® is connected, through the skin, to an external insulin pump allowing a significant improvement in glycaemic control (as already demonstrated in pre-clinical phases).

SIMUDIAB: training for trainers and patients

Defymed, in the framework of a collaboration involving Unisimes, a European simulation unit in health for Strasbourg University Hospitals, have put in place an innovative and unique ad hoc training programme, including physical and digital educational tools dedicated for caregivers and future users of the device.

⇒ ***The initial results are expected by the end of 2022. This pilot study will be followed by a multi-centre pivotal study involving several centers in Europe with a larger number of patients, with the aim of obtaining the CE mark and marketing ExOlin® by 2025.***

About Defymed

Defymed is a medical technology company created in March 2011 in Strasbourg, specialising in the development and marketing of innovative implantable medical devices. These allow therapeutic compounds to be delivered physiologically. The company, chaired by Séverine Sigrist, has 14 employees and more than 30 collaborations worldwide. Defymed is initially focused on an application for the treatment of type 1 diabetes. The first product developed is MailPan®, an implantable bio-artificial pancreas designed to restore normal insulin production in type 1 diabetic patients.
The second product developed by Defymed is ExOlin®, a medical device for physiological delivery of insulin. Defymed is now interested in using its know-how to improve the treatment of other diseases such as cancer or haemophilia.

Since its creation in 2011, Defymed has raised more than €10M from public and private funding.

www.defymed.com

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