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Poxel Announces Publication of Important New Mechanism Data for Imeglimin Relating to Insulin Secretion in the Treatment of Type 2 Diabetes

New study led by Yale School of Medicine demonstrates Imeglimin directly stimulates insulin secretion in a glucose-dependent manner

Preclinical results help to explain Imeglimin's observed efficacy without causing hypoglycemia, as shown in more than 850 subjects in clinical trials to date

LYON, France--(BUSINESS WIRE)-- POXEL SA (Euronext – POXEL - FR0012432516), a biopharmaceutical company focused on the development of innovative drugs to treat type 2 diabetes, today announced the publication of novel preclinical data further elucidating the mechanism of action for its lead program, Imeglimin, in an animal model of type 2 diabetes. Imeglimin is the first in a new class of oral anti-diabetic agents targeting mitochondrial bioenergetics and has completed Phase 2 development in over 850 subjects in the United States and Europe and has completed Phase 2b enrollment in Japan for a study with approximately 300 patients.

"New innovation in type 2 diabetes is needed, and working with Imeglimin, with its novel mechanism of action, has been a valuable opportunity to help advance research to treat this fast-growing global disease," said Richard G. Kibbey, MD, PhD, Associate Professor of Medicine and Cellular & Molecular Physiology at Yale School of Medicine. "By amplifying mitochondrial metabolism-dependent signals, Imeglimin opens a new way of triggering glucose dependent insulin secretion."

The findings, published in the current issue of the *American Journal of Physiology, Endocrinology and Metabolism* (**http://ajpendo.physiology.org/content/early/2016/07/06/ajpendo.00009.2016**), demonstrate that Imeglimin primarily lowers glucose levels by increasing glucose-stimulated insulin secretion in a preclinical model. The results additionally highlight that Imeglimin's effect on insulin secretion in response to glucose is a direct effect as shown in isolated islets that act through amplification of mitochondrial metabolism-dependent signals. Importantly, this helps to explain the absence of hypoglycemia seen in clinical trials to date. The research was conducted in collaboration with the departments of Internal Medicine and Cellular and Molecular Physiology at Yale University School of Medicine and with the contribution of the Novo Nordisk Foundation Center for Basic Metabolic Research.

“Type 2 diabetes is a complex disease and comprehensive treatment requires an advanced understanding of both disease mechanisms and how a drug works. We believe that these findings, together with the extensive preclinical and clinical data Poxel has already generated, further support Imeglimin’s unique mechanism of action and the potential for this to be a differentiated new therapy for the treatment of patients with type 2 diabetes,” said Kitt Falk Petersen, MD, Professor of Medicine at Yale School of Medicine.

The publication titled “Imeglimin lowers glucose primarily by amplifying glucose-stimulated insulin secretion in high fat fed rodents” investigated Imeglimin’s effects on insulin secretion utilizing intraperitoneal glucose tolerance test (GTT) in mice and rats fed with high fat or chow diet and in isolated rat islets. Animals demonstrated a striking improvement in glucose tolerance and a doubling in insulin secretion after 2 weeks of Imeglimin treatment. Furthermore, researchers could show in rat isolated islets that the effect on insulin secretion is primarily based on an amplification of mitochondrial metabolism-dependent signals that stimulate insulin release, emphasizing Imeglimin’s unique mode of action targeting mitochondrial bioenergetics.

“We are very excited to have worked with the prestigious research team at Yale School of Medicine and to benefit from their extensive experience in the field of diabetes and metabolic research,” said Thomas Kuhn, CEO of Poxel. “These results further confirm our findings on Imeglimin’s insulin secretion and demonstrate its unique mechanism of action. We continue to believe that Imeglimin has the potential to become an important new treatment option in the global fight against type 2 diabetes.”

About Imeglimin

Imeglimin is the first in a new chemical class of oral anti-diabetic agents, the Glimins. Imeglimin acts on three main target organs involved in glucose homeostasis: the liver, muscle, and the pancreas. Imeglimin’s unique mechanism of action targets mitochondrial bioenergetics. This distinct mode of action compared to existing treatments for type 2 diabetes makes Imeglimin a prime candidate in monotherapy and to complement other treatments, such as metformin or sitagliptin.

About Poxel

Poxel uses its development expertise in metabolism to advance a pipeline of drug candidates focused on the treatment of type 2 diabetes. We have successfully studied over 850 subjects in 9 Phase 1 trials and 7 Phase 2 studies for our first-in-class lead product, Imeglimin, which targets mitochondrial dysfunction, in the U.S. and EU, and are conducting a Phase 2b clinical development program in Japan with approximately 300 patients. We are advancing our second program, PXL770, a direct AMPK activator, which is in Phase 1 development. We intend to generate further growth through strategic partnerships and pipeline development. (Euronext: POXEL, www.poxel.com).

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