BOOK OF ABSTRACTS

POLYMERS IN MEDICINE & BIOLOGY

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21.

GLY-200: A novel polymer therapeutic for metabolic diseases

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Glyscend Therapeutics is pioneering a new generation of orally administered polymer therapies that safely and temporarily modify the mucosal lining of the gastrointestinal tract. Glyscend's first clinical candidate, GLY-200, was designed to elicit an immediate improvement in type 2 diabetes (T2D) by a mechanism related to certain bariatric surgical procedures (e.g., Roux-en-Y gastric bypass) and duodenojejunal bypass liners (e.g., Endobarrier®). These procedures/devices produce a rapid therapeutic response in part through exclusion of the duodenum from the path of nutrient flow ("duodenal exclusion"). By crosslinking with mucin in the gastrointestinal tract and enhancing its barrier function, GLY-200 creates a pharmacological duodenal exclusion that modulates signaling in the duodenum. In several rat models of T2D, GLY-200 significantly reduced postprandial hyperglycemia. In preclinical studies, GLY-200 was found to be non-absorbed (excreted in feces) and well tolerated. In a phase-1 clinical trial, the safety and tolerability of GLY-200 was confirmed, and the drug is currently under investigation in a phase-2 trial in T2D patients under an IND.

