HN21C0947

Nonclinical Study for Treatment of IRI Using Bilirubin Nanoparticle (Brixelle)

BILIX

IMMUNOLOGY | Non-Clinical

Product Type	Chemical product
Indication	Ischemic Reperfusion Injury in Kidney Transplantation
Target	Reactive Oxygen Species (ROS)
MoA(Mechanism of Action)	Antioxidation – Extracellular ROS Scavenging Immune Modulation – Inhibition of Antigen-Presenting Cell Maturation by Intracellular ROS Removal
Competitiveness	First in Class • Unique MoA – Both Antioxidation and Immune Modulation • Targeted distribution – Preferential Distribution to Inflamed Tissues and Immune Cells with Enhanced Permeability and Retention Effect • Appropriate PK Profile – High exposure and longer half-life than general antioxidants, and shorter half-life and high clearance than antibodies that inhibit immune responses • Good Safety Profile – Synthetic Bilirubin, an endogenous substance, was conjugated with discrete PEG. Tolerability was confirmed in cells (200 μM) and rodents (mice: 500 mg/kg, single; rats: 250 mg/kg, repeat).
Development Stage	Preclinical (Toxicology)
Route of Administration	Intravenous administration

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