Publication of a preclinical study: Inositol hexakisphosphate kinase (IP6K) is crucial in regulating plasma phosphate levels *in vivo*, and SCO-006-mediated IP6K inhibition is a potential novel treatment strategy against hyperphosphatemia

Kanagawa, Japan, August 19, 2021 – In a new study published by *Nature Communications*, a research team at SCOHIA PHARMA, Inc. reported that the enzymatic activity of IP6K regulates circulating phosphate levels *in vivo* and suggests that IP6K inhibition is a potential treatment strategy against hyperphosphatemia.

Article title

The enzymatic activity of inositol hexakisphosphate kinase controls circulating phosphate in mammals

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Inositol hexakisphosphate kinases (IP6K1, 2, and 3 in mammals) participate in diverse cellular signalling pathways by generating inositol pyrophosphates, which are highly energetic molecules, from their precursors. IP6K generates 5-InsP$_7$ (InsP$_7$), an inositol pyrophosphate whose *in vivo* physiological role has not been fully characterized. The present report is the first to reveal the crucial role of IP6K in regulating plasma phosphate levels *in vivo*. Using SCO-006 (SC-919), a novel and highly selective inhibitor against IP6K, which could be orally administered and examined *in vivo*, a research team revealed a molecular mechanism by which IP6K regulates cellular phosphate export, demonstrating the significant contribution of the IP6K-mediated cellular phosphate export on circulating phosphate concentrations in mammals. Moreover, the team demonstrated that the inhibition of IP6K using SCO-006 to suppress cellular phosphate export has therapeutic relevance. An oral administration of SCO-006 potently alleviated hyperphosphatemia in preclinical disease models. Collectively, the current study illustrates the physiological significance of phosphate regulation by IP6K *in vivo* and provides a novel strategy to treat hyperphosphatemia and the associated complications using the IP6K inhibitor. SCO-006 is a potential first-in-class IP6K inhibitor and is under development in preclinical studies. SCOHIA is actively seeking a partner worldwide for further development and commercialization of SCO-006.

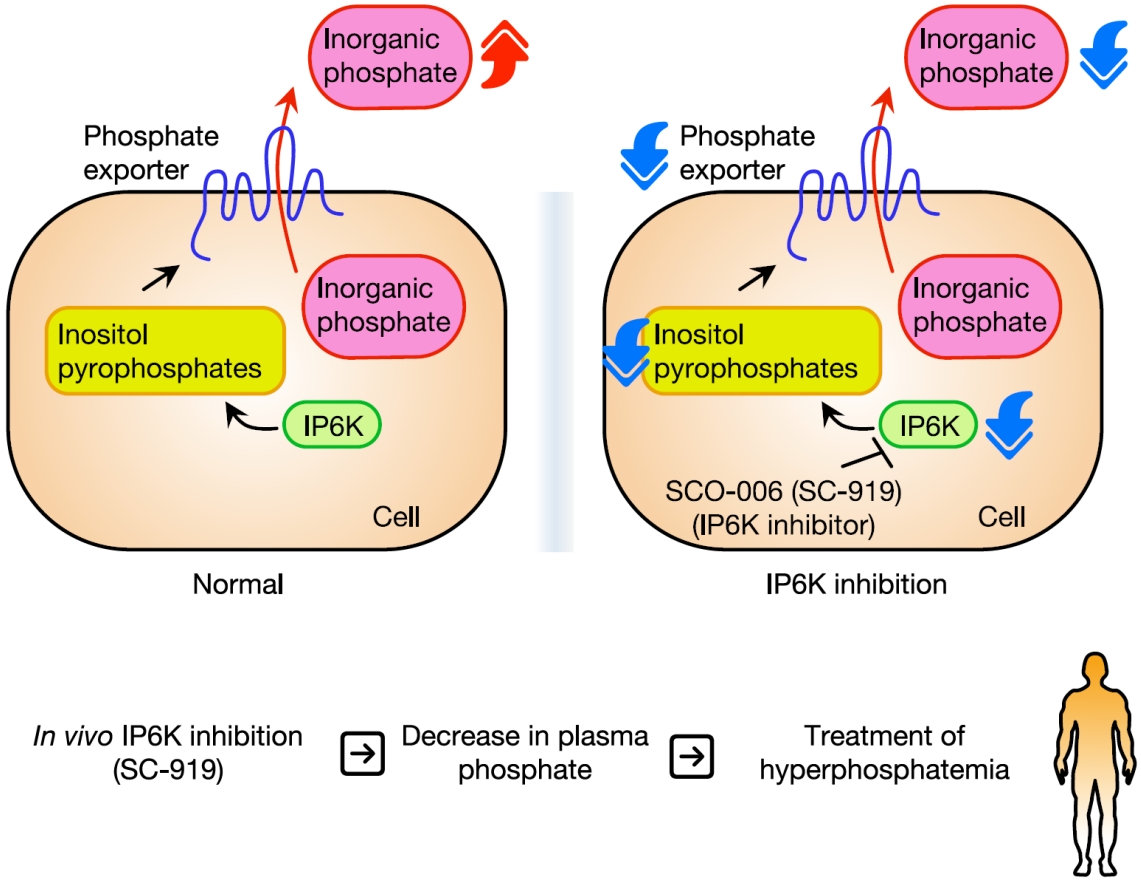

Figure. Schematic representation of inositol hexakisphosphate kinase (IP6K)-mediated phosphate regulation and its therapeutic relevance.
In the normal condition, IP6K stimulates cellular phosphate export via a phosphate exporter. IP6K inhibition-mediated reduction of inositol pyrophosphates inhibits phosphate export ability of a phosphate exporter, resulting in a decrease in plasma phosphate levels *in vivo*. IP6K inhibition is therapeutically relevant and improves hyperphosphatemia and associated complications.

About SCOHIA PHARMA, Inc.:
SCOHIA PHARMA, Inc. is a drug discovery bioventure focusing on the field of lifestyle-related diseases such as cardiovascular, metabolic, and renal diseases. Our R&D team has a rich pipeline and track record in each stage of drug development, including compound discovery, drug evaluation, and clinical development, which makes us special. For detailed information about SCOHIA PHARMA, Inc., please visit https://www.scohia.com/eng/.

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