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ASIA EDITION

Insilico Medicine, TaiGen collaborate for AI-driven PHD inhibitor for CKD-related anaemia

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Combining Insilico's generative AI discovery platform with TaiGen's regional clinical and commercial expertise

Insilico Medicine, a clinical-stage generative artificial intelligence (AI)-driven drug discovery company headquartered in Hong Kong, and Taiwan's TaiGen Biotechnology, a listed discovery-based and market-focused pharmaceutical company, as well as TaiGen Biopharmaceuticals, its wholly-owned Beijing subsidiary, have announced an exclusive pipeline out-licensing collaboration.

Under the terms of the agreement, TaiGen was granted the exclusive rights for further development, commercialisation and sub-licensing in the Greater China area, including Mainland China, Hong Kong, Macau, and Taiwan, of ISM4808 the PHD inhibitor and its related forms and structures. In return, Insilico is eligible for payments including one-time upfront, development and sales-based milestone payments, as well as tiered royalties on net sales, with a total size of double-dight million dollars.

As research indicated, Chronic Kidney Disease (CKD) accounts for over 1.5 million deaths annually, and more than one in seven people with kidney disease have anemia, due to less Erythropoietin (EPO)—a hormone that signals bone marrow to make red blood cells, and shorter lifespans of red blood cells.

Nominated in 2022 as a potential best-in-class PHD inhibitor, ISM4808 targets the Nobel-winning HIF?? pathway for the treatment of CKD-related anemia, through EPO induction and iron utilization improvement for better blood cell replacement. Notably, the novel structure of ISM4808 was empowered by Insilico's proprietary Chemistry42 engine, and was designed, synthesized, and tested within a 12?month window, prior to candidate nomination.

In preclinical studies, ISM4808 showed compelling potency across *in vitro* and *in vivo* assays, with lower effective doses in CKD rat models; promising oral drug-like properties featuring favorable *in vitro* ADME and promising pharmacokinetic (PK) profiles across animal models; and a safety profile characterised by higher maximum tolerated doses and broad safety margins. The programme received IND clearance from the Centre for Drug Evaluation (CDE) in China in 2023.