



SCOHIA PHARMA, Inc.

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**Publication of a preclinical study: SCO-792, an enteropeptidase inhibitor,
improves obesity via microbiota-driven mechanisms in mice**

In a new report published in *Pharmacological Research*, researchers of SCOHIA PHARMA, Inc. have shown that SCO-792, an enteropeptidase inhibitor, improves obesity via microbiota-driven mechanisms in diet-induced obese (DIO) mice.

Research title

Enteropeptidase inhibition improves obesity by modulating gut microbiota composition and enterobacterial metabolites in diet-induced obese mice

<https://www.sciencedirect.com/science/article/pii/S1043661820316455>

Enteropeptidase is a transmembrane protease localized to the lumen of the duodenum that plays a key role in protein digestion. SCO-792 is an orally available enteropeptidase inhibitor that has therapeutic effects against obesity in mice. The present study shows the involvement of gut microbiota to SCO-792-induced body weight reduction in DIO mice. SCO-792 substantially decreased food intake and body weight in DIO mice. Interestingly, antibiotics-induced microbiota elimination in the gut canceled SCO-792-induced body weight reduction by nearly half without affecting the anorectic effect. Microbiome analysis showed that SCO-792 increased abundance of *Akkermansia muciniphila*, a bacterium known to be beneficial for host metabolism. As shown by fecal metabolome analysis, SCO-792 increased the level of short-chain fatty acids, including propionate, and bile acids in the feces that help maintain gut health and improve metabolism. SCO-792 also increased colonic immunoglobulin A (IgA) concentration that may support the microbiota in DIO mice. The current study reveals a novel mechanism of action of SCO-792 in improving obesity in mice.

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