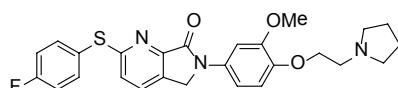


Synthesis and SAR of pyrrolo[3,4-b]pyridine-7(6H)-one derivatives as melanin concentrating hormone receptor 1 (MCH-R1) antagonists

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The melanin-concentrating hormone (MCH) is a cyclic 19-amino acid polypeptide that is expressed predominantly in the lateral hypothalamus and zona incerta of the central nervous system. MCH is known to be involved in the regulation of feeding behavior and energy homeostasis that are mediated by two types of G protein-coupled receptors, MCH receptor 1 and 2 (MCH-R1 and R2). Previously, many genetic and pharmacological studies suggest that MCH-R1 may play important role in control of food intake and body-weight. Indeed, MCH-R1 antagonist could be a potential therapeutic agent for treatment of obesity. In continuing efforts to uncover novel and potent MCH-R1 antagonists, we recently identified several pyrrolo[3,4-b]pyridin-7(6H)-ones that have highly potent binding affinities to MCH-R1. The synthesis, biological evaluation, and structure-activity relationships of several 2-substituted pyrrolo[3,4-b]pyridin-7(6H)-one will be presented in detail.



IC₅₀ = 30 nM

Biography

Chae Jo Lim has completed Ph.D. in Organic Chemistry at KAIST under the guidance of professor Sunggak Kim in 2005. After postdoctoral experience with Professor Viresh H Rawal at the University of Chicago, he joined Korea Research Institute Chemical and Technology (KRICT) as senior researcher. His current research is the focused on the development of new drug discovery involving metabolic and cardiovascular diseases.

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