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The development of antiviral agent for Hepatitis B virus

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Infection of *Heapatitis B virus* (HBV) was widely known for causing 680,000 deaths annually worldwide and 240 million individuals suffer from chronic HBV infection. It is a key cause of fatal liver cirrhosis and hepatocellular carcinoma. Even if there are several treatment options for chronic HBV infections, they also have some disadvantages. Nucleot(s)ide analogues (NAs), such as telbivudine, lamivudine, adefovir, tenofovir, entecavir, can be used as rapid effects on HBV polymerase and reverse transcriptase activity. But, it give rise to problems of drug-resistant HBV strains and the requirement of the patient for essentially lifelong treatment. Thus, it needs to be considered about developing drug which target different stages. The HBV nucleocapsid is an essential element that can encapsulate the HBV pgRNA, as well as HBV polymerase. Because of its critical roles in viral assembly, it has been attracted as a target of HBV. Among many classes, represnetative two inhibitors are belived as SBAs (sulfamoylbenzamides) and HAP (heteroaryldigydropyrimidines). Due to outstanding similarity and difference between both of their chemical structures and binding poses in same pocket, it is attracting us to structure-based drug design and synthesis for HBV inhibition. With aim to improve the anti-HBV activity, we found some activity compound.

Biography

Hong Sik Han has completed his Bachelor's degree in Chemistry at the Kangwon National University, Korea in 2015 and He is now in the process of graduate courses in Medicinal and Pharmaceutical Chemistry at University of Science and Technology, Korea. (prof. Soo Bong Han) He is interested in both Drug Discovery (HBV inhibitors) and Development of useful reactions. (Organometallic catalysis which utilize especially visible light).

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