## Comparison of CYP 3A4 metabolism between DA-8159 and Sildenafil in vitro and in vivo

Park KyungJin°, Youn HaeSun, Shim Hyunjoo, Kim SoonHoe, Yoo MooHi, Kim WonBae

Research Laboratories, Dong-A Pharmaceutical Co.,Ltd.

DA-8159 is a new PDEV inhibitor, synthesized by Dong-A Pharm., as an oral agent to treat male erectile dysfunction. DA-8159 and sildenafil are mainly metabolized by cytochrome P450 enzyme CYP 3A4. In this study, we compared the metabolism of DA-8159 with sildenafil in vitro and in vivo. First, we quantified the remaining ratio of original compound, DA-8159 and sildenafil, after we incubated drugs for 30 minutes with human liver microsome cytochrome P450 3A4. The remaining ratio of DA-8159 is higher than sildenafil (Sildenafil : 19.76% ,DA-8159 : 50.67%). In vivo experiment, we examined changes in the drugs metabolism when we inhibited CYP 3A4 by the ketoconazole administration in rats. When CYP 3A4 is inhibited, AUC0-8 of sildenafil was increased by 352.75% .On the hand, AUC0-8 of DA-8159 was increased by only 44.10%. It means that sildenafil is more metabolized than DA-8159 by CYP 3A4. Therefore, it is considered that the drug interaction of DA-8159 is less than that of sildenafil.

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## Synthesis and Evaluation of Biological activities of New Imine Derivatives of Apicidin

Jin ChengHua°, Kim HyungKyo, Han JeongWhan, Lee HyangWoo, Lee YinWon, Zee OkPyo, Jung YoungHoon

College of Pharmacy, Sungkyunkwan University, Suwon 440-746

Apicidin, a natural product HDAC inhibitor, is recently isolated from Fusarium sp, at Merk Research Laboratories, induces therapeutic applications as a broad spectrum antiprotozoal agent to muti-drug resistant malaria and a potential antitumor agent. The biological activity of apicidin appears to be apicocomplexan HDAC at low nanomolar concentrations.
In since, we have worked about the synthesis and the evaluation of biological activities of various derivatives of apicidin, we have discovered that apicidin and some derivatives have mild antitumor activity, which change the morphology of tumor cells to the one of normal cells.
As part of our program toward the development of new antitumor agents, we synthesized its derivatives systemically, and then studied their structure-activity relationships. At present, we modified the ketone moiety of apicidin to obtain various imine derivatives in consideration of interaction with HDAC

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## Revers phase HPLC Separation of D-Amygdalin and Neoamygdalin and Optimum Conditions for Inhibition of Racemization of Amygdalin

Hwang Eun Young°, Kim DongMin, Koh Jung A, Lee SangSoo, Lee JeHyun, Lee YongMoon, Hong SeonPyo

Department of Oriental Pharmaceutical Sciences, Kyung Hee University, College of Pharmacy, Chungbuk National University