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## Design, synthesis and bioevaluation of paeonol derivatives as potential anti-HBV agents

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Hepatitis B virus (HBV) infections are a major global health problem despite the availability of an effective vaccine. Over two billion people are infected at present and about 400 million are chronically infected carriers of this virus. Paeonol, 2-hydroxy-4-methoxy acetophenone, a major composition of the traditional Chinese medicine, peony is being used for more than thousand years. Paeonol exhibit many interesting biological activities that has been applied to anti-inflammatory, analgesic effects, antioxidant, anti-diabetic, and acaricidal activity. Herein, we report a new series of paeonol derivatives has been tested for their design, synthesis, and bioevaluation. The paeonol core was kept and a new sulfone side chain was conjugated in the phenol group. These new serious of paeonol derivatives were found to have potential anti-HBV effects in HepG2 2.2.15 cells. Among them, compound XX had the most potent inhibition activity of the  $IC_{50}$  value of 16.38  $\mu\text{g/mL}$  with high selectivity index,  $SI (TC_{50}/IC_{50})$  10.64. The newly synthesized compounds can be a structural template for designing and developing novel anti-HBV agents.

### Biography

Ming-Hua Hsu has completed his PhD from Department of Chemistry, National Tsing Hua University and got Postdoctoral studies from National Cheng Kung University and Academia Sinica. He joined Nuclear Science & Technology Development Center, National Tsing Hua University from 2010, and has been working on drug design, synthesis, evaluation, and the development of Boron Neutron Capture Therapy Agents.

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