

# Medicinal Chemistry & Computer Aided Drug Designing

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## Prodrug design and synthesis of oxyresveratrol to improve bioavailability

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ITRI pharmaceutical optimization technology division found a uricosuric nature compound, oxyresveratrol, as a potential gout treatment agent. The pharmacological effect of oxyresveratrol is limited by low exposure of the compound associated with rapid metabolic modification and excretion. A possible approach to overcome the hurdle is to develop oxyresveratrol prodrugs. In order to overcome the PK weakness of oxyresveratrol, some functional groups have been decorated onto the metabolic weak point of the molecule, aimed to generate a fit for purpose prodrug molecule. Twenty-nine oxyreveratrol prodrugs have been synthesized by two different synthetic pathways. The  $C_{max}$  and AUC of the ether linkage oxyresveratrol prodrug OP-0108 were two-fold more than that of oxyresveratrol compared with equal molar dose strength.

### Biography

Yen-Fang Wen has completed her PhD from National Tsing Hua University in 1993. She is the researcher of Biomedical Technology and Device research Laboratories, Industrial Technology Research Institute. She was interested in organic synthesis and asymmetric synthesis and applied these technologies in the drug optimization.

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