# An active compound from *Lonicera hypoglauca* Miq. exhibits anti-hepatitis C virus activity

Ju-Chien Cheng[1], Sheng-Yang Wang [2], Chia-Fan Lin[1], Ching-Ya Wen [1] and Keng-Chang Tsai[3]

Department of Laboratory Science and Biotechnology, China Medical University, Taichung Taiwan[1], Department of Forestry, National Chung Hsing University, Taiwan[2] , Academia Sinica Genomics Research Center, Taiwan[3]

**Background:** Chronic hepatitis C virus (HCV) infection is a worldwide public issue. Currently, the therapeutic regimen for HCV infection consists mainly of interferon treatment in combination with ribavirin. Unfortunately, the treatment usually accompanies with strong side effects and the successful rate is only 50% to 80% dependent on the infective HCV genotypes. Therefore, it is considerable to find agents to increase the successful rate for therapy of HCV infection.

**Methods:** To find naturally chemical entities as lead compound from which novel anti-HCV agents could be developed, bioactivity-guided extraction and isolation were performed on a crude extract from *Lonicera hypoglauca* Miq. using high performance liquid chromatography technique and antiviral activities in HCV replicon cells.

**Results:** A potent compound exhibiting anti-HCV activity was isolated and identified with proven activity in the inhibition of HCV serine protease. The in vitro inhibitory activity (IC50) against HCV NS3 serine protease was 4.25 $\mu$M . The combination of the compound and alpha interferon was additive to moderately synergistic in reducing HCV in Huh7/Rep-Feo cells with no significant increase in cytotoxicity.

**Conclusion(s):** Taken together, this compound inhibits HCV NS3 protease and might serve as a potential candidate for designing and developing drugs for treatment of HCV infection.