# 摘要

Dinklagin C、ephedroidin 與 xanthohumol D 為最近分別從植物 *Dorstenia dinklagei*、*Genista ephedroides* 與 *Humulus lupulus* 分離與鑑定出的黃酮類化合物，然而這三個天然物到目前為止並未有合成與生物活性之報導，因此本論文建立了一個簡易的合成方法合成 dinklagin C、ephedroidin 及 xanthohumol D，同時合成十一個類似物，並進一步探討這些化合物之抗發炎生物活性。

結果顯示 dinklagin C、ephedroidin 及 xanthohumol D 具有抗發炎活性，其 $EC_{50}$ 分別為 17.0、6.28 與 23.8 μM。

# Abstract

Dinklagin C, ephedroidin, and xanthohumol D were three naturally occurring flavonoids isolated previously from *Dorstenia dinklagei*, *Genista ephedroides*, and *Humulus lupulus*, respectively. However, the synthesis and biological activity of these three flavonoids were not reported yet. In this thesis, we established a simple method to prepare dinklagin C, ephedroidin, xanthohumol D, and eleven analogs. In addition, the anti-inflammatory effect of these compounds on LPS-induced NO production in RAW264.7 macrophages was also evaluated.

An assay results showed that dinklagin C, ephedroidin, and xanthohumol D showed anti-inflammatory activity with $EC_{50}$ value 17.0, 6.28, and 23.8 μM, respectively.