Supporting Information to:

**Inhibitory Effects of Deoxypodophyllotoxin from *Anthriscus sylvestris***
**on Human CYP2C9 and CYP3A4**

Sang Kyu Lee¹, Yoon Kim¹, Changbae Jin¹, Seung Ho Lee², Mi Jeong Kang², Tae Cheon Jeong², Seo Young Jeong³, Dong-Hyun Kim⁴, Hye Hyun Yoo¹

**Affiliation**

¹ Doping Control Center, Korea Institute of Science and Technology, Chungryang, Seoul, Korea  
² College of Pharmacy, Yeungnam University, 214-1 Dae-dong, Gyeongsan, Korea  
³ College of Pharmacy, Kyung-Hee University, Seoul, Korea  
⁴ Research Center, Yuyu Pharma, Inc., Suwon-city, Gyeonggi-do, Korea

**Correspondence**

*Hye Hyun Yoo, Ph.D.*  
Doping Control Center  
Korea Institute of Science and Technology  
P.O. Box 131  
Chungryang, Seoul 130-650  
Korea  
Tel.: +82-2-958-6422  
Fax: +82-2-958-6677  
behappy@kist.re.kr

**Instruments**

The microsomal incubation mixture was analyzed using an LC-10ADvp binary pump system coupled with an API2000 triple quadrupole mass spectrometer (Applied Biosystems-SCIEX) equipped with a turbo ion spray source. For LC analysis, a C₈ column (2.1 × 100 mm, 5 μm; Fortis Technologies Ltd.) was used. The mobile phases consisted of 0.1% formic acid (A) and acetonitrile (B). The initial composition of B was 15%, which was gradually increased to 90% for 4 min, followed by a 2-min re-equilibration. The flow rate was 0.2 mL/min. The turbo ion
spray interface was operated in the positive-ion mode at 5500 V and 450 °C. Nitrogen was used as the nebulizing, turbo spray, and curtain gas, with the optimum values set at 40, 80, and 40 (arbitrary units), respectively. The analytical data were processed using Analyst software (version 1.4.2; Applied Biosystems). Multiple-reactions monitoring detection was used for the detection of the CYP isozyme-specific marker metabolites. The precursor–product ion pairs used for monitoring the metabolites generated were: \( m/z = 152 \rightarrow m/z = 110 \) (acetaminophen), \( m/z = 162 \rightarrow m/z = 107 \) (7-hydroxycoumarin), \( m/z = 870 \rightarrow m/z = 286 \) (6-hydroxypaclitaxel), \( m/z = 312 \rightarrow m/z = 230 \) (4-hydroxydiclofenac), \( m/z = 235 \rightarrow m/z = 150 \) (4-hydroxymephenytoin), \( m/z = 258 \rightarrow m/z = 157 \) (dextrophan \{dextrorphan?\}), \( m/z = 342 \rightarrow m/z = 324 \) (1-hydroxymidazolam), and \( m/z = 472 \rightarrow m/z = 436 \) (IS, terfenadine).

**Data analysis**

IC\(_{50}\) values (the concentration of the inhibitor causing 50% inhibition of the original enzyme activity) were calculated based on the curves of mean enzyme activity versus inhibitor concentration. The apparent kinetic parameters for inhibitory potential (\( K_i \) values) were estimated by using a Lineweaver–Burke plot.