

Supporting Information to:

Microbial Transformation of Podocarpic Acid and Evaluation of Transformation Products for Antioxidant Activity

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General experimental procedures

IR spectra were recorded on a Thermo Nicolet iS10 FT-IR spectrometer. UV spectra (λ nm) were measured on a Shimadzu 1601 PC ultraviolet spectrophotometer (Japan). The ^1H - and ^{13}C -NMR spectra were recorded in CD_3OD , using TMS as an internal standard, on a JEOL Eclipse NMR spectrometer operating at 400 MHz for ^1H and at 100 MHz for ^{13}C . The HR-EI-MS experiments were conducted at the University of Michigan on a Micromass LCT spectrometer. TLC analyses were carried out on precoated silica gel 60 F₂₅₄ 500- μm TLC plates, using the developing system

CHCl₃–MeOH. For CC, silica gel 60 (particle size 63–200 μm), Bakerbond octadecyl (C-18) (40 μm), or Sephadex LH-20 (Pharmacia; Uppsala, Sweden) columns were used.

Biocatalysis, isolation, and purification of the metabolites

Ten growing fungi cultures were used for screening of **1**: *Cunninghamella verticillata* ATCC 8986, *Cunninghamella elegans* ATCC 7929, *Lipomyces lipofer* ATCC 32371, *Lipomyces starkeyi* ATCC 58680, *Botrytis allii* ATCC 9435, *Mucor ramannianus* ATCC 9228, *Rhizopus arrhizus* ATCC 11145, *Streptomyces griseus* ATCC 19968, *Beauveria bassiana* ATCC 7159, and *Cunninghamella* sp. NRRL 5695. These cultures were maintained at the University of Louisiana at Monroe, School of Pharmacy, Basic Pharmaceutical Science Department. Podocarpic acid (98%) was purchased from Koch-Light Ltd.

Scavenging activity of ABTS radical cation assay

ABTS was dissolved in water to 7 mM concentration, and the ABTS radical cation was produced by adding potassium persulfate to a final concentration of 2.45 mM. The completion of radical generation was obtained in the dark at room temperature for 12–16 h. This solution was then diluted with ethanol to adjust its absorbance at 734 nm to 0.50 ± 0.02. Podocarpic acid and its metabolites were prepared by dissolving 1 mg each in 1.0 mL methanol. To determine the scavenging activity, 1 mL of diluted ABTS⁺ solution was added to 50 μL of tested compounds (or water for the control), and the absorbance at 734 nm was measured 6 min after the initial mixing, using ethanol as the blank. Vitamin C (Sigma, 99%) was used as positive control. The percentage of inhibition was calculated by the equation

$$\text{inhibition percentage} = \frac{A_c - A_s}{A_c} \times 100,$$

where A_c and A_s are the absorbances of the control and of the test sample, respectively.