

A Unified Synthetic Approach to the Pleurotin Natural Products

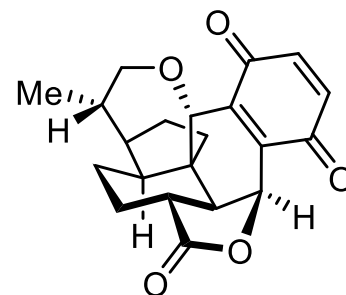
Max Eaton

7/3/2024

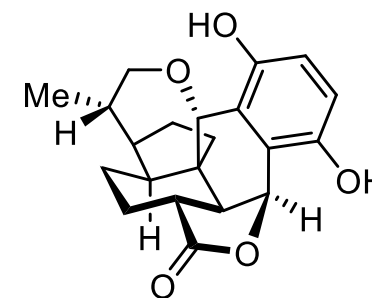
A Unified Synthetic Approach to the Pleurotin Natural Products

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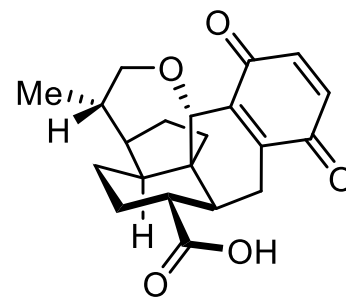
- Pleurotin family of 14 natural products isolated from fungus *Pleurotus griseus* in 1947
- Exhibit antitumor activity (carcinoma, leukemia, breast tumors)
- No enantioselective syntheses of compounds **1-4** reported
- This work describes synthesis of 4 pleurotin natural products from 1 common intermediate in 15-16 steps



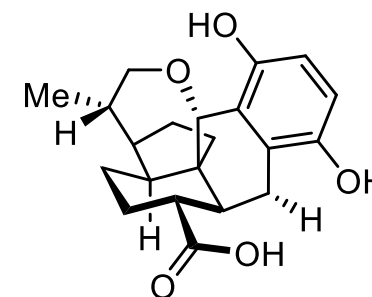
(-)-pleurotin (**1**)



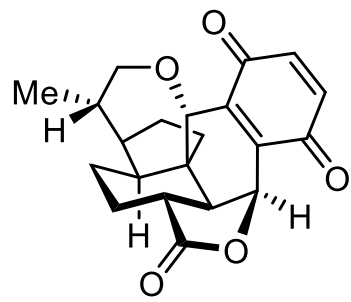
(+)-leucopleurotin (**2**)



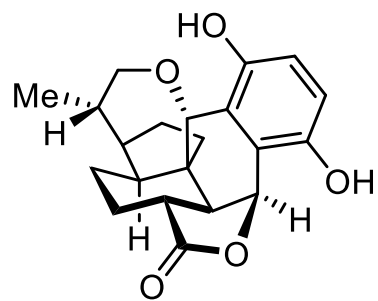
(+)-dihydropleurotinic acid (**3**)



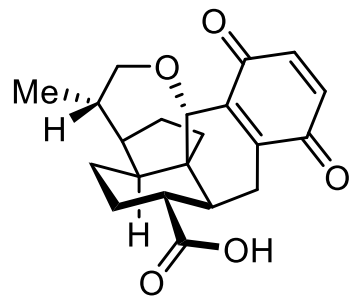
(+)-leucopleurotinic acid (**4**)



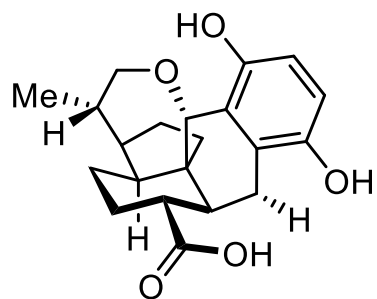
(-)-pleurotin (1)



(+)-leucopleurotin (2)

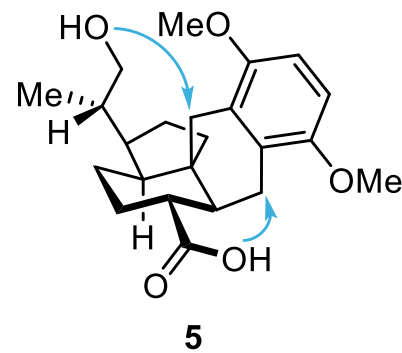


(+)-dihydropleurotinic acid (3)



(+)-leucopleurotinic acid (4)

oxidation



5

