CHEMISTRY 4000

Topic #9: Practicing Synthetic Design

Spring 2019

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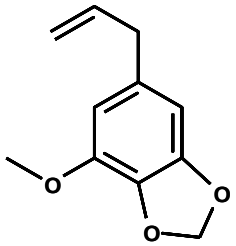
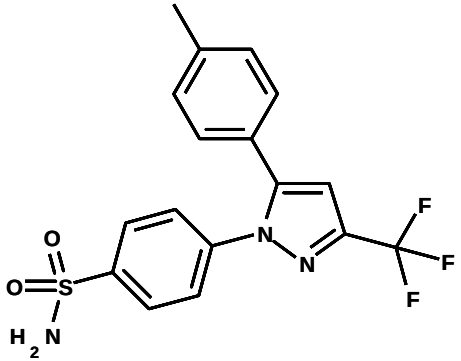
Practicing Synthetic Design

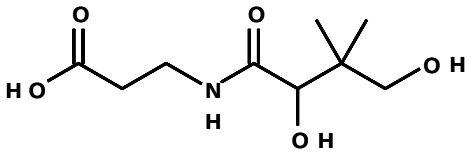
- "The Rules"
  - For mysisticin and celecoxib, starting materials may be any molecule(s) containing six or fewer carbon atoms that you could reasonably expect to be commercially available. Toluene ($C_6H_5CH_3$) is also acceptable.
  - For pantothenic acid, starting materials may contain no more than four carbon atoms (should still be likely to be commercially available).
  - Larger reagents are allowed as long as they don't contribute more than six (or four) carbon atoms to the final product. e.g. $Ph_3P{=}CH_2$, TsCl, ...
- Potential synthetic targets:



mysisticin
(found in nutmeg)



celecoxib
(Celebrex, an anti-inflammatory)



pantothenic acid
(Vitamin B_5)