

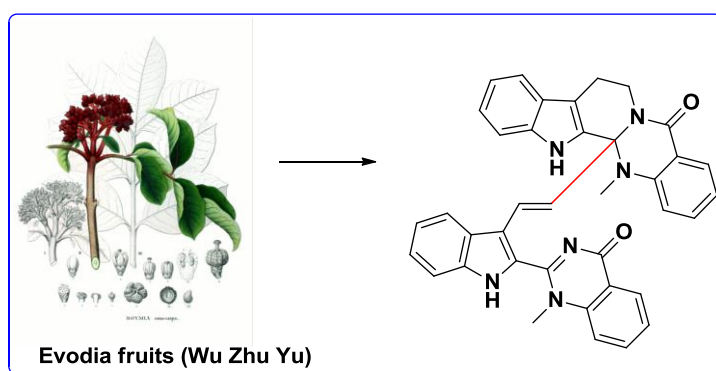
# Total synthesis of ( $\pm$ )-Dievodiamine

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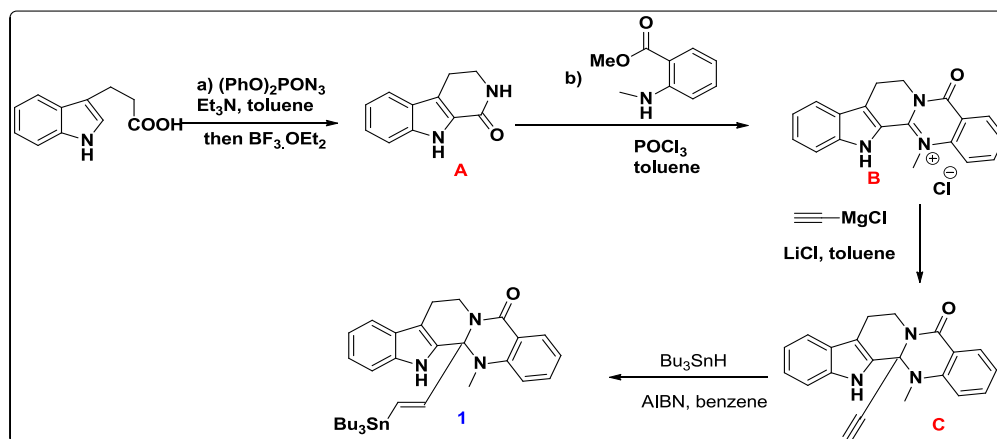


Dievodiamine was recently isolated from *Evodia rutaecarpa*. *Evodia rutaecarpa* is an original plant of several crude drugs. The *Evodia* fruits (Wu Zhu Yu) have been used in traditional Chinese prescriptions for the treatment of headache, abdominal pain, migraine, chill limbs, postpartum hemorrhage, dysmenorrhea, diarrhea, nausea, hyperbaropathy, antinociception, anti-inflammatory and anticancer.

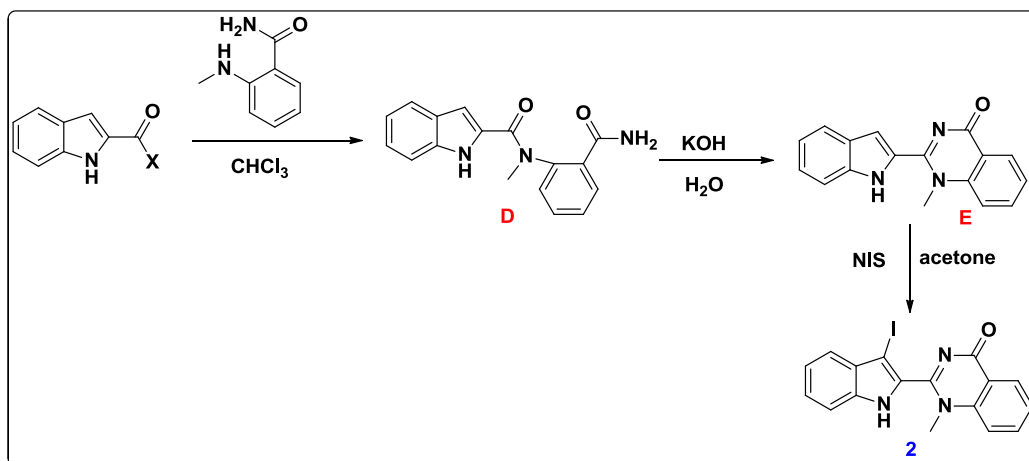
Regarding Dievodiamine synthesis I am asking questions (1-4):

1. Find the products **1** and **2**?
2. Find each intermediates from **A** to **E**

Synthesis of compound **1**

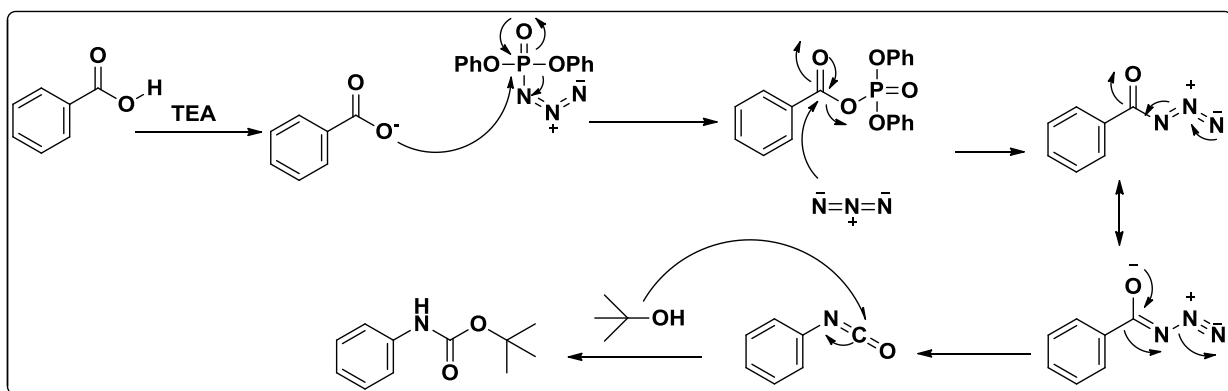


## Synthesis of compound **2**



3. Find the name and the mechanism for the formation of **A**?

### Curtius rearrangement:



4. Find the coupling reaction name and mechanism?

