

Modifications of Natural Products

Ingrid Wilt

EuroScholars Midstay

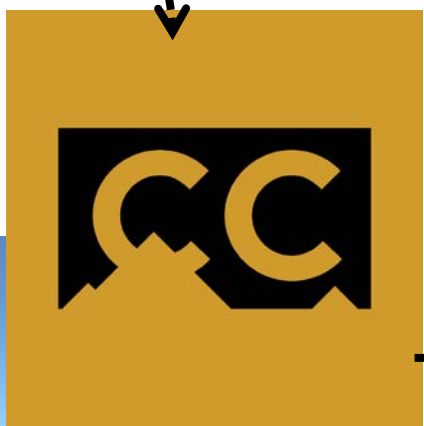
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Research Opportunities

About Me

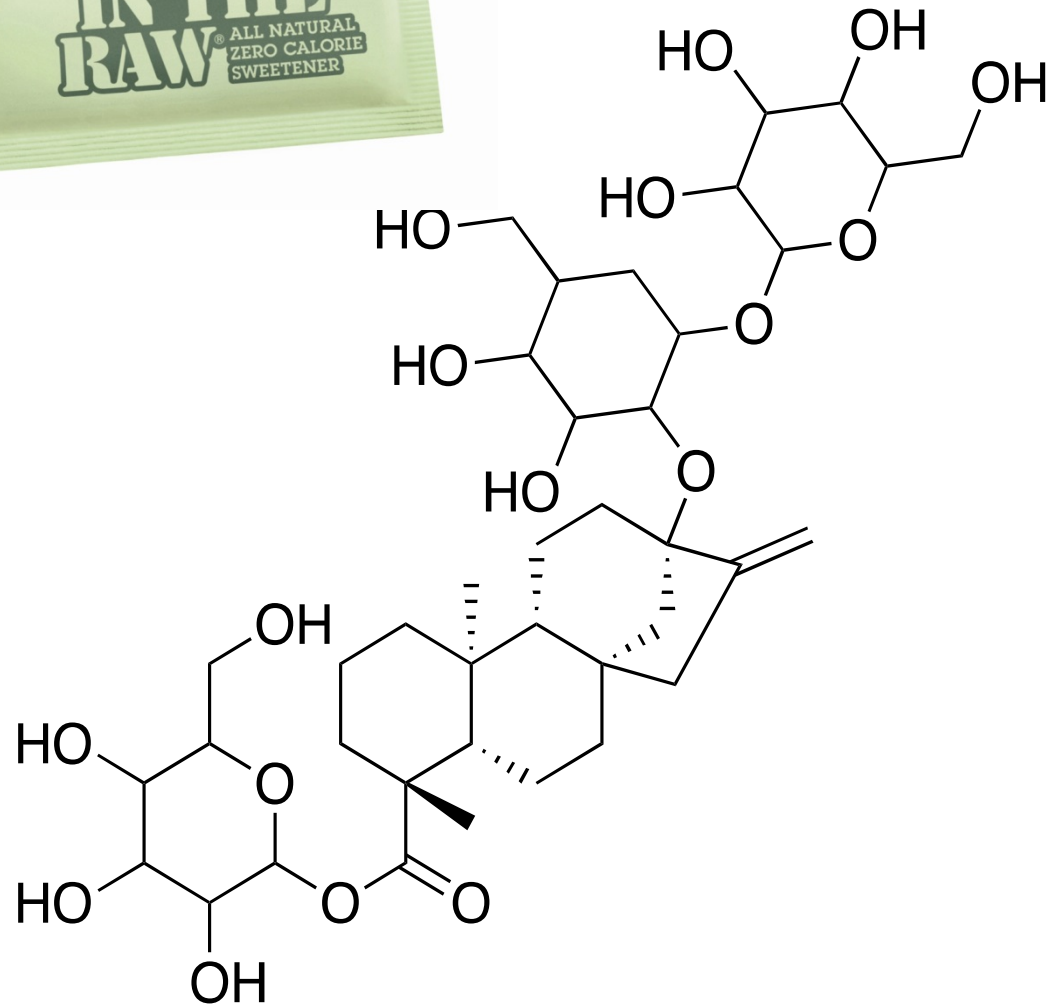


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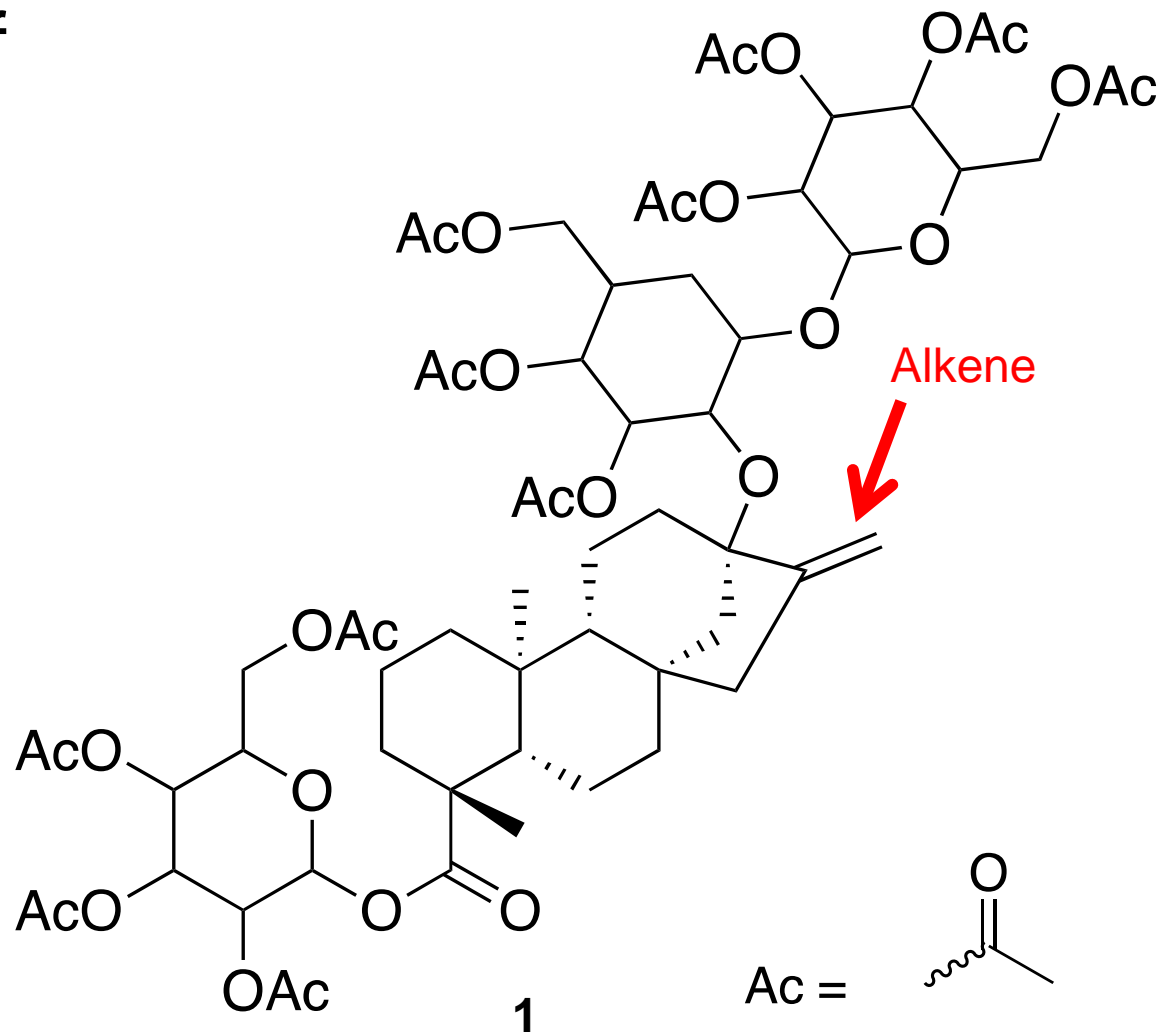
Stevioside

- Stevia leaf
- Main component of sweet flavor
- 300x sweeter than cane sugar
- Promising medicinal benefits related to insulin



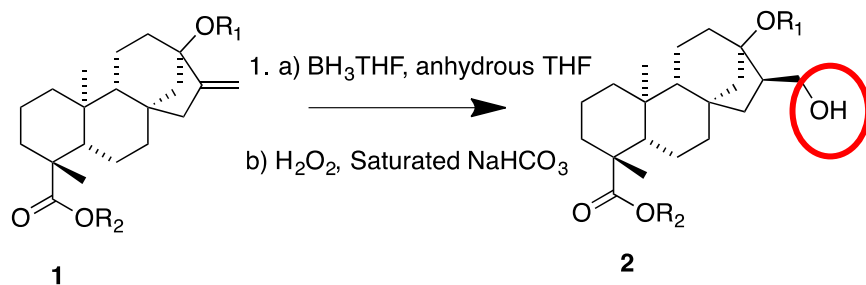
Modification of Stevioside

- Protect alcohol groups on sugars: peracetylation
- Oxidation of the alkene
 - Alcohol
 - Ketone

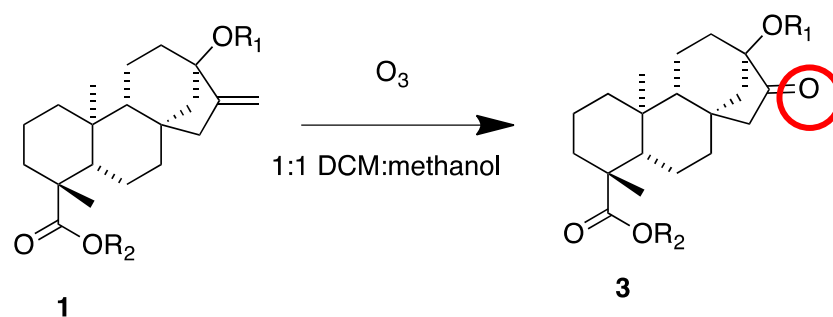


Oxidation reactions

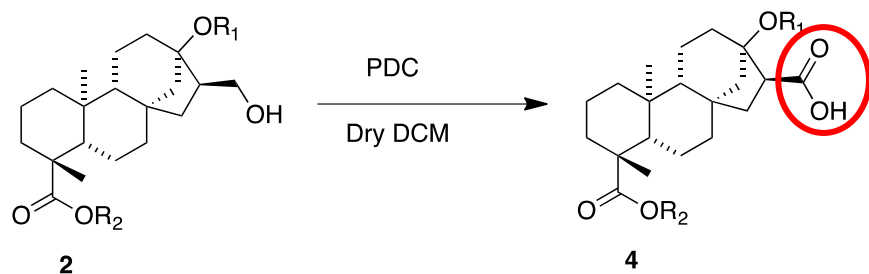
Alcohol



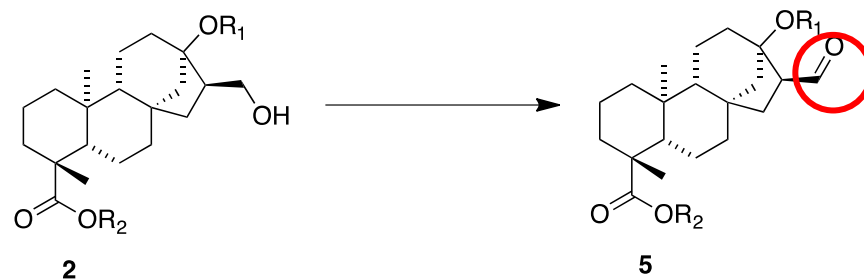
Ketone



Modification of the alcohol



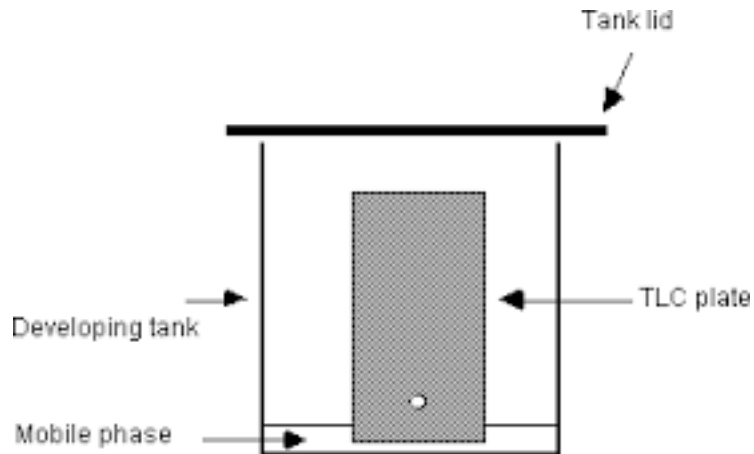
Carboxylic Acid



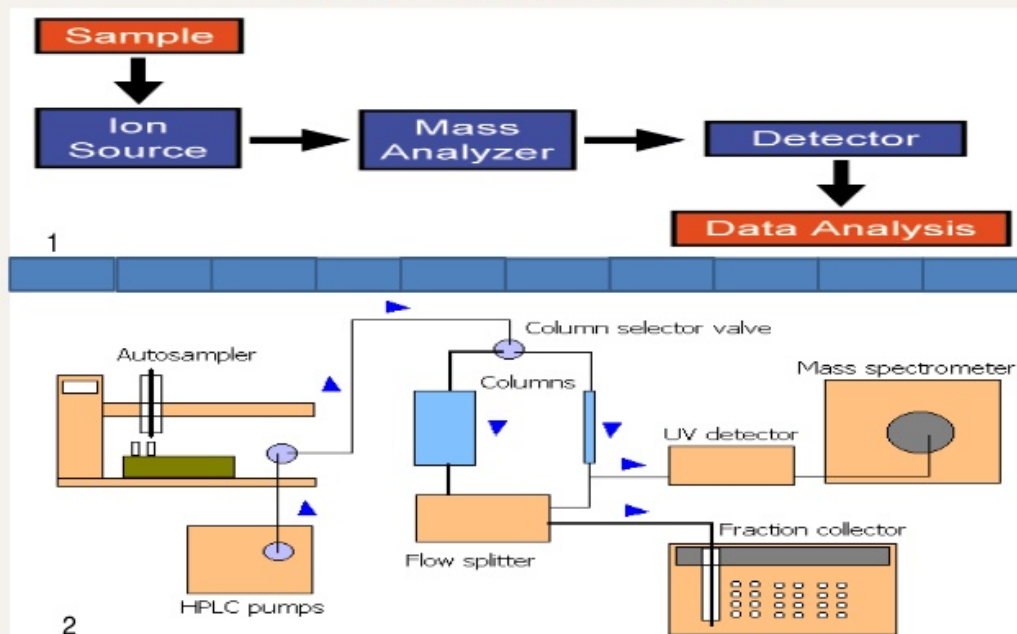
Aldehyde

Analysis

- Thin line chromatography (TLC)
- Nuclear magnetic resonance (NMR)
- Liquid chromatography-mass spectroscopy (LC-MS)

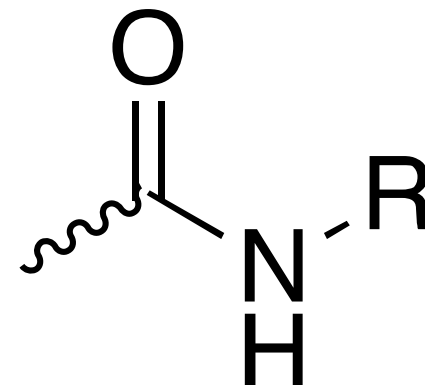


LC-MS schematic



Future Modifications

- Amine derivative
- Amide derivative
- Oxidation investigations



Thank you!

- Dr. Dehaen, KU Leuven
- Mentor Mathias, KU Leuven
- Dr. Vaghoo, Colorado College