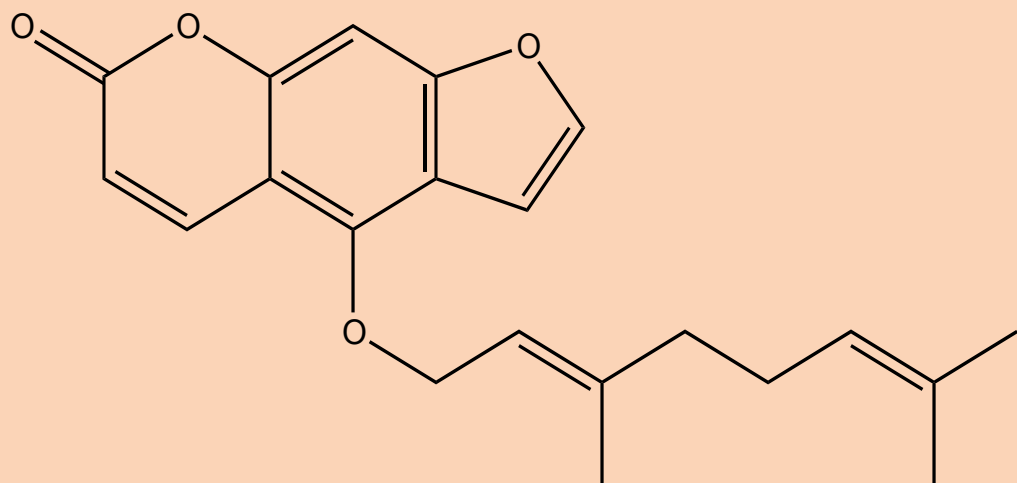


# THE CHEMISTRY OF A GRAPEFRUIT

## INTERACTIONS WITH DRUGS



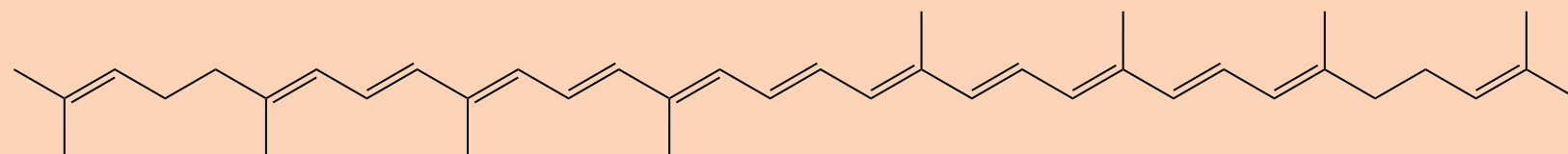
BERGAMOTTIN

Grapefruit, and grapefruit juice, is known to interact with a large number of drugs, usually resulting in adverse effects. These interactions are caused by a class of compounds called furanocoumarins, in particular the compounds bergamottin and dihydroxybergamottin.

These compounds inhibit some forms of an enzyme responsible for breaking down drugs in the body. As the prescribed dose of drugs takes into account how quickly the drug is broken down in the body, this can lead to higher concentrations of the drug in the bloodstream, which in turn can result in unpleasant side effects.



## WHAT CAUSES A GRAPEFRUIT'S COLOUR?



LYCOPENE

The colour of pink and red grapefruits is caused by the compound lycopene. This is a compound composed entirely of carbon and hydrogen atoms. The compound absorbs all but the longest wavelengths of visible light, causing it to appear red.

Lycopene is also the compound responsible for the colouration of tomatoes. It is also used as a food colouring due to its strong colour and lack of toxicity.