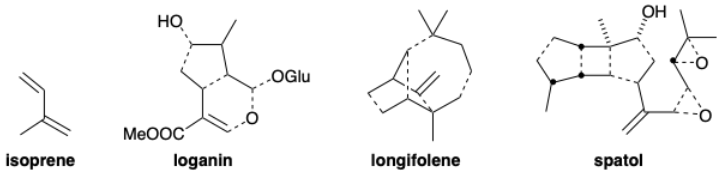
CHAPTER OVERVIEW

4: Terpenes

A trivial pattern characterizes the structures of fatty acids: their carbon skeletons generally have even numbers of carbons. This is a consequence of their biosynthetic origins. They are oligomers of the two-carbon building block, acetyl CoA. Terpenes are a structurally and functionally diverse family of natural products. Nevertheless, a pattern that characterizes their structures is often discernible. They appear to be oligomers of isoprene. In the ensuing discussion, for clarity, we occasionally will represent bonds that that are not in these isoprene units with dashed lines as in the following examples.



isoprene **loganin** **longifolene** **spatol**

The biosynthesis of some terpenes involves such intricate carbon skeletal transmogrifications that the terpenoid biosynthetic origin is not at all obvious. Moreover, the intricate multicyclic skeletons of some terpenes are devoid of functionality. For such molecules, polar reactivity analysis is of little value. Instead, it is the topology of these molecules that must be analyzed in order to perceive potentially effective dislocations to generate precursors, and ultimately, to identify starting materials.

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