ENANTIOSELECTIVE SYNTHESIS OF (-)-SARRACENIN USING D-GLUCOSE AS CHIRAL TEMPLATE

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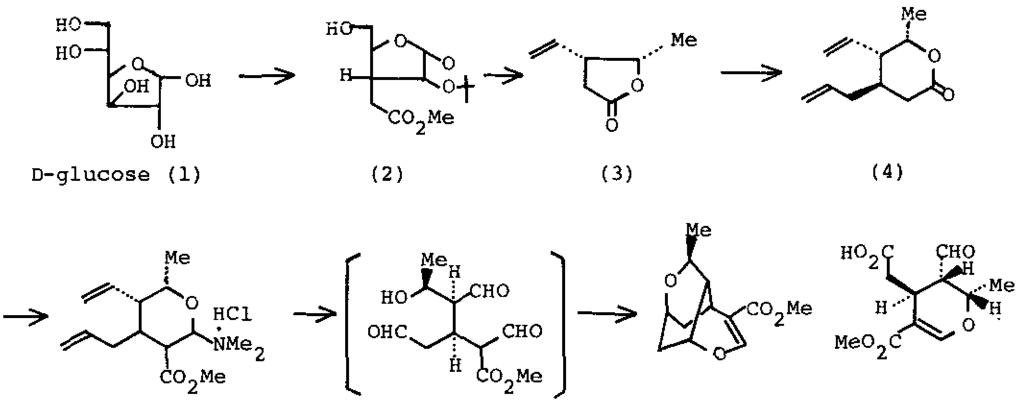
An Enantioselective synthesis of (-)-sarracenin (7)[1], a tricyclic seco-iridoid monoterpene, is described. The synthesis relies on the transformation of the chiral lactone (3), prepared from D-glucose (1) via the known alcohol (2)[2,3], into the functional equivalent of the trialdehyde (6) through stereo-and regioselective introduction of requisite carbon units, followed by oxidative cleavage of olefinic double bonds. Application of the methodology outlined above to the synthesis of other secoiridoids such as elenolic acid (8) is under investigation.



D-glucose (1) (2) (3) (4)

(5) (6) (-)-sarracenin (7) (8)

References

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