# Microbial transformations of isosteviol

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## Abstract

Microbial transformations of the tetracyclic diterpenoid isosteviol (ent-16-ketobeyeran-19-oic acid) (2) have revealed that isosteviol is metabolized by Cunninghamella bainieri, Actinoplanes sp., Mucor recurvatus, and Cunninghamella blakesleeana to yield five new metabolites, ent-11alpha,12alpha-dihydroxy-16-ketobeyeran-19-oic acid (5), ent-11alpha,12alpha,17-trihydroxy-16-ketobeyeran-19-oic acid (6), ent-12alpha,15alpha-dihydroxy-16-ketobeyeran-19-oic acid (7), ent-7alpha,15alpha-dihydroxy-16- ketobeyeran-19-oic acid (8), and ent-9alpha-hydroxy-16-ketobeyeran-19-oic acid (9), together with three known metabolites, ent-7alpha-hydroxy-16-ketobeyeran-19-oic acid (3), ent-7beta-hydroxy-16-ketobeyeran-19-oic acid (4), and ent-12alpha-hydroxy-16-ketobeyeran-19-oic acid (10). The structures of these metabolites were established on the basis of HRFABMS and 1D and 2D NMR spectral data. In addition, metabolites 3-10 were tested for antihypertensive activity and were found to be less active than the parent compound 2.