Microbial Hydroxylation and Reduction of the Diterpene Psiadin

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Z. Naturforsch. **56 c**, 216–222 (2001); received October 4/November 10, 2000

Psiadin, Microbial Bioconversion, 2α-Hydroxydeoxopsiadin

Microbial bioconversion studies conducted on the diterpene psiadin have revealed that it was metabolized by Aspergillus niger (NRRL 2295) to give 2α-hydroxydeoxopsiadin, Cunninghamella blakesleeana (ATCC 8688a) to give 11B-hydroxypsiadin, and Cylindrocephalum aureum (ATCC 12720), Gongronella butleri (ATCC 22822), Kloeckera africana (ATCC

20111), and Kluvveromyces marxianus var. lactis (ATCC 2628) to yield 7α -hydroxypsiadin. Their structures have been established on the basis of spectral data. The structure and rela-

tive stereochemistry of 7α -hydroxypsiadin was confirmed by single-crystal X-ray analysis.