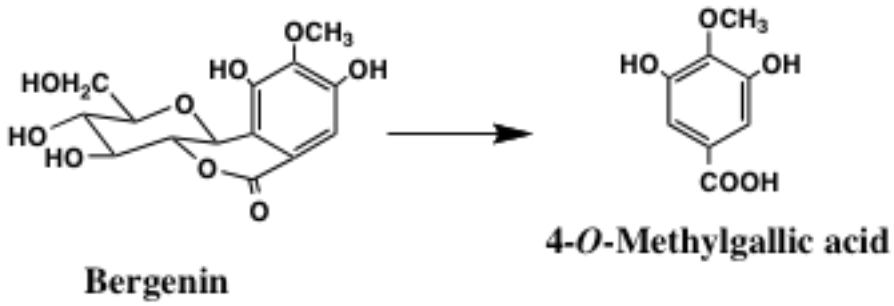
Bergenin



Transformation of bergenin by human intestinal microflora

代謝実験

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Fresh feces obtained from a healthy man was thoroughly suspended in 30 volumes or the anaerobic dilution medium by bubbling with oxygen-free CO_2 and filtered through gauze to eliminate the residue. Bergenin (100 mg) was anaerobically incubated with an intestinal bacterial mixture (200 ml). The EtOAc extract was chromatographed on a silica gel column (24 x 24 cm) with $CHCl_3$-MeOH (100:1) to yield a metabolite 4-*O*-methylgallic acid (73 mg).

4-*O*-Methylgallic acid

Colorless prisms (from $CHCl_3$-MeOH). mp 261-262°. high-resolution MS: Found, 184.0388, Calcd for $C_8H_8O_5$, 184.0372 (M^+). UV (log ε) nm: 224(383), 261(381), sh 296(340). IR νcm^{-1}: 3170(OH), 1710(C=O), 1595, 1510 (Ar ring), 1230 (COO). ^{1}H NMR (90 MHZ, CD_3OD) δ: 3.88 (3H, s, MeO), 7.08 (2H, br s, 2,6-H). ^{13}C NMR (CD_3OD) δ: 61.5 (*q*, -OMC), 111.2 (*d*, C-2 and C-6), 127.7 (*s*, C-1), 141.7 (*q*, C-4), 152.1 (*s*, C-3 and C-5), 170.6 (-COOH). MS *m/z*: 184 (M^+), base peak, 169 (M^+–15], 141, 113, 67.

参考文献

1)　Hattori M., Shu Y. Z., Tomimori T., Kobashi K. and Namba T.: A bacterial cleavage

of the *C*-glucosyl bond of mangiferin and bergenin. *Phytochemistry*, **28**, 1289-1290 (1989).