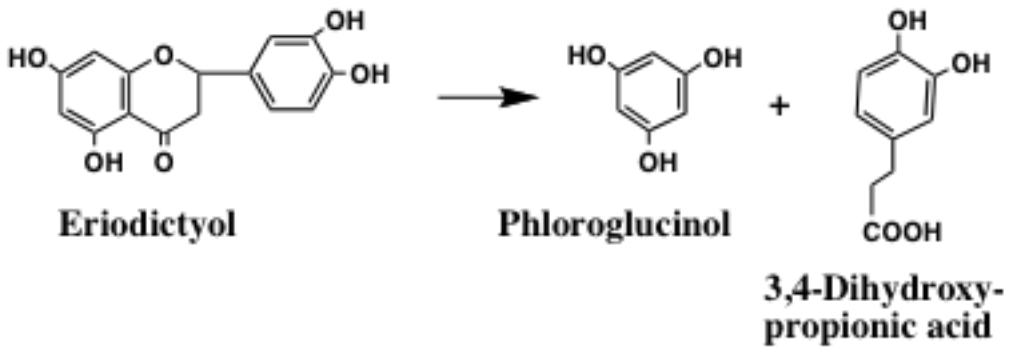
Eriodictyol



Metabolic process of eryodictyol by a human intestinal bacterial mixture

代謝実験

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3,4-Dihydroxyphenylpropionic acid

Yield 2 mg (1.2%); uv λ_{max} (EtOH) nm 224, 283, 340; ir ν_{max} (KBr) cm^{-1} 3350 (OH), 1705 (COOH), 1600 (Ar ring), 1520 (Ar ring); ^1H nmr (90 MHz, CD_3OD) δ 2.30-2.90 (4H, m, H_2-2 and H_2-3), 6.48 (1H, dd *J* = 7.0, 1.5 Hz, H-6'), 6.60 (1H, d, *J* = 1.5 Hz, H-2'), 6.64 (1H, d, *J* = 7.0 Hz, H-5'); ms *m/z* $[M]^+$ 182, 136, 123 (base peak), 77.

Phloroglucinol

Yield 7 mg (7%); white powder, mp 192-194°; uv λ_{max} (EtOH) nm 226, 267, 273, λ_{sh} 278; ir ν_{max} (KBr) cm^{-1} 3180 (OH), 1615 (Ar ring), 1495 (Ar ring); ^1H nmr (90 MHz, CD_3OD) δ 5.82 (3H, br s, H-2,4,6); ^{13}C nmr (CD_3OD) δ 86.1 (d, C-2,4,6), 150.4 (s, C-l,3,5); ms *m/z* $[M]^+$ 126 (base peak).

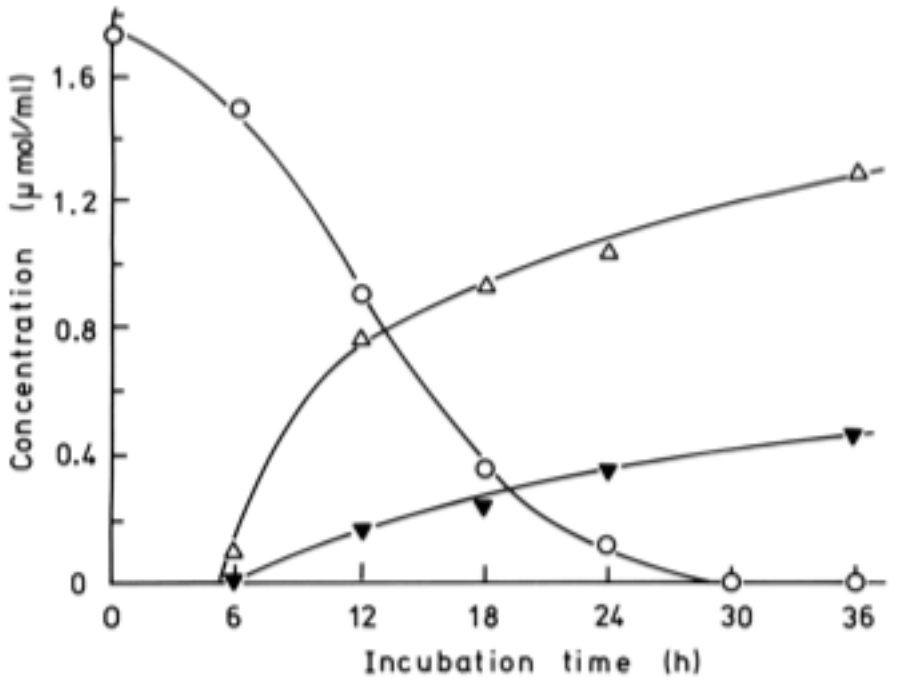

Fig. 2. Metabolic time course of eriodictyol by human intestinal bacteria.

(○), (±)-eriodictyol; (△), 3,4-dihydroxyphenylpropoinic acid; (▼), phloroglucinol.

Time course of the metabolism of eriodictyol

Tubes containing eriodictyol (1.5 mg) and an intestinal bacterial mixture (3 ml) were anaerobically incubated at intervals at 37°. The mixture was adjusted to pH *ca*. 3 and extracted twice EtOAc (3 ml each). The products were loaded onto a Si gel tic plate, which was then developed with solvent system A. The metabolites were separated on the plate and quantitatively analyzed with a tic scanner at 240 nm to a reference wavelength of 550 nm by using calibration lines of authentic samples. The calibration lines were linear in a range of 1—40 μg/spot. [Hattori et al., *J. Nat. Prod.*, **51**, 874-878 (1988)]

参考文献

1) Hattori M., Shu Y. Z., El-Sedawy A. I., Namba T., Kobashi K. and Tomimori T.: Metabolism of homoorientin by intestinal bacteria. *J. Nat. Prod.*, **51**, 874-878 (1988).