

## Biotransformation of Chrysin into Baicalein through ortho-hydroxylation using *Streptomyces Ceolicolor*

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Chrysin (5,7-dihydroxyflavone) is a naturally occurring flavone chemically extracted from the blue passion flower. Dietary flavonoids have many biological properties that could make them useful as chemopreventive agents. However, very poor oral bioavailability makes them largely ineffective in vivo. In previous studies, hydroxylated flavonoid compounds are certificated more effective absorption in vivo than flavonoid compounds. We selected the chrysin as substrate.

*Streptomyces Ceolicolor* showed high ortho-hydroxylation activity to produce baicalein (5,6,7-tetrahydroxyflavone).

*Streptomyces Ceolicolor* incubation condition is 28°C, 220rpm for 4 day (96h), using R2YE media 100ml. We were reacted using PBS (Phosphate buffered saline) buffer 100ml, chrysin 10mM 2ml, incubated cell for 4h.

The reaction product was analyzed using HPLC and GC/MS. Time-course and conversion of substrate will be discussed. P450 inhibitor assay and reaction profile with each detergent will be also discussed.