

**GLOCALIZING OF A UNIQUE YELLOW MUTANT DERIVED
FROM THE CASSAVA/SOYBEAN UTILIZING
*MONASCUS KAOLIANG KB11304***

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Abstract

This paper communicates our new finding on the secondary *Monascus* yellow mutants which are capable on producing high yellow pigmentation at single wavelength (λ_{\max} 370 nm) instead of red pigments at multi wavelength (λ_{\max} 420, 500 nm) produced by its parents. One yellow mutant, strain KB20M10.2 could efficiency synthesise yellow pigments in both submerged fermentation using cassava starch with soybean flour, and in solid state fermentation using rice or cereal products as substrates. No citrinin or aflatoxin could be detected. Crude ethanol yellow pigment extracts could serve not only as an efficient yellow colourant but also as an effective antimutagenic substance using Ames and fruit fly tests. In addition, two new purified azaphilones pigments (monascusone A and monascusone B) were isolated from the CH_2Cl_2 extract of yellow rice solid culture together with known azaphilones, monascin and FK 17-P₂b₂. Moreover, either crude ethanol yellow extract or its key purified yellow pigment (monascusone A) could serve as strong antioxidant analyzed by FRAP or DPPH assay. Our finding suggested that Thai local strain *Monascus kaoliang* KB20M10.2, the new potent yellow mutant, produced unique and innovative UV-absorbing yellow compounds with their strong antimutagenic and antioxidant characteristics should lend globally some parts in protecting various kind of market products (food and non food) from deterioration.