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Isolation and characterization of active compound from endophytic fungi onion dayak (*Eleutherine americana* (Aubl.) Merr) as antioxidant activity

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Microorganisms, in particular, endophytic microbes have been well documented as alternative source of raw materials for drug development. Secondary metabolites produced by endophytic microbes have efficacious medicinal activity. The aims of this research focussed on isolation of the endophytic microbes from Bawang dayak leaf and evaluated their secondary metabolites. Isolation of endophytes were performed in PDA (Potato Dextrose Agar) using direct seed plant method. Endophytic fungi isolates with strongest antioxidant activity were fermented in PDY (Potato Dextrose Yeast) to produce large scale of the metabolites. Supernatant were extracted with ethyl acetate solvent. Ethyl acetate extract fractionated by column chromatography {SiO₂, (i). chloroform –methanol = 50:1~10:1; (ii). Chloroform-Methanol = 5:1) and obtained three fractions. Further, colorimetric using free radical scavenger method was performed to assess their antioxidant activity. The highest antioxidant activity were identified by Nuclear Magnetic Resonance (1H- & 13C-NMR), infrared and mass spectroscopies showed the antioxidant compound as flavonoid. In conclusion, the pure compound of secondary metabolites isolated from Bawang dayak leaf is flavonoid that could be responsible for its potent antioxidant activity.

Biography

Shirly Kumala has completed her PhD from Biomedical Faculty, University of Indonesia, Jakarta. She is the Dean of Pharmacy Faculty, University of Pancasila, Jakarta, Indonesia. She has published more than 25 papers in both international and national journals, and has been serving as a Reviewer in Journal of Pharmacy.

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