

Abstract

The aim of this research was to determine effect of mangosteen rind extract (*Garcinia mangostana L.*) to decrease necrosis alveolar type II cell of lung on pregnant mice exposed by cigarette smoke. Cigarette smoke exposure increased *Reactive Oxygen Species* (ROS) that damage alveolar type II cell of lung. Mangosteen rind extract was needed as a good arrester to obstruct ROS since it had antidote such *xanthone*. The sample of this research was 20 pregnant mice. The mice divided into five groups: K-, K+, P1, P2 and P3. K- was given aquadest. K+ was given cigarette smoke exposure. P1 was given cigarette smoke exposure and treated by mangosteen rind extract 50 mg/kg BW. P2 was given cigarette smoke exposure and treated by mangosteen rind extract 100 mg/kg BW. P3 was given cigarette smoke exposure and treated by mangosteen rind extract 150 mg/kg BW respectively during 12 days. The result showed that there were significant differences of the number necrosis alveolar type II cell of lung in each group. Data was analyzed using ANOVA and Tukey test. The conclusion of this research was mangosteen rind extract can decrease necrosis alveolar type II cell of lung on pregnant mice by cigarette smoke exposure. The effective dose of mangosteen rind extract was 100 mg/kg BW.

Keywords: *Garcinia mangostana L.*, necrosis, alveolar type II cell of lung, pregnant mice, cigarette smoke