

**OR-56****Therapeutic Potential of Polysaccharide-Rich Fraction from *Morinda Citrifolia* Fruits as Hepatoprotective Agent**

Nurdalila Zailan<sup>1,2</sup>, Nik Musa'adah Mustapha<sup>1,\*</sup>, Mohamad Jemain Mohamad Ridhwan<sup>1</sup>, Abd Rashid Li<sup>1</sup>, Normaizira Hamidi<sup>1</sup>, Mohd Radzi Ahmad<sup>1</sup> and Siti Balkis Budin<sup>2</sup>

<sup>1</sup>Natural Products Division, Forest Research Institute Malaysia (FRIM), 52109, Kepong, Selangor Darul Ehsan;

<sup>2</sup>Department of Biomedical Sciences, Faculty of Health Sciences, Universiti Kebangsaan Malaysia (UKM), Jalan Raja Muda Abdul Aziz, 50300, Kuala Lumpur; E-mail: musaadah@frim.gov.my

Overdose of paracetamol (PCM) will cause liver injury through free radical activity. *Morinda citrifolia* extract was found to reduce the oxidative stress in many pathological conditions. Hence, the aim of this study was to evaluate the therapeutic potential of polysaccharide rich fraction (PS) of *M.citrifolia* as hepatoprotective agent based on the assessment of liver function test, oxidative stress and liver morphology changes. Male adult *Sprague-Dawley* rats were divided randomly into six groups of control, PS. *M.citrifolia* 400mg/kg (PS400), PCM, PS.*M.citrifolia* (200mg/kg)+PCM (PS200+PCM), PS.*M.citrifolia* (400mg/kg)+PCM (PS400+PCM) and silymarin+PCM. Supplementation was given for seven consecutive days of forced oral and one hour after the last supplementation, induction of liver injury was done by given single dose of PCM (2g/kg) orally. Following 48 hours, all rats were sacrificed, plasma and liver sample were taken immediately. Research findings showed levels of alanin aminotransaminase (ALT), aspartate aminotransferase (AST), and total bilirubin in plasma was significantly ( $p<0.05$ ) lower in PS200+PCM and PS400+PCM compared with PCM group. Meanwhile, total protein and  $\gamma$ -glutamyl transferase (GGT) of plasma in PS200+PCM and PS400+PCM group showed no significant difference ( $p>0.05$ ) compared with PCM group. Pretreatment of PS.*M.citrifolia* also significantly ( $p<0.05$ ) increased glutathione (GSH) level, malondialdehyde (MDA) and protein carbonyl concentration and activity of catalase (CAT) and superoxide dismutase (SOD) in hepatic tissue compared with PCM group. Histological observation showed both PS.*M.citrifolia* treated groups prevent disruption of normal liver cells architecture induced by PCM. These data suggest that polysaccharide rich fraction *M.citrifolia* has the therapeutic potential as hepatoprotective agent against PCM induce liver injury.

**Keywords:** *Morinda citrifolia*, hepatoprotective, polysaccharide.

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