

Conference Paper

The Effect of Sappan Wood Extract (*Caesalpinia sappan*), Wheat grass and Vitamin E Treatment on the Liver Structure of Iron overload of Rat (*Rattus norvegicus*)

Ratu Safitri^{1,2}, Lelani Reniarti³, Madihah¹, Lila Delia¹,
Mas Rizky A.A Syamsunarno^{2,4}, and Ramdan Panigoro⁴

¹Department of Biology, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Jl. Raya Bandung Sumedang Km. 21, Jatinangor, Jawa Barat 45363, Indonesia

²Program Study Of Biotechnology, Post Graduate School Universitas Padjadjaran, Jl. Dipati Ukur no. 35, Bandung, Indonesia

³Department of Pediatrics, Faculty of Medicine, Universitas Padjadjaran, Jl. Eijkman No. 38 Bandung 40162, Indonesia

⁴Department of Biochemistry and Molecular Biology, Faculty of Medicine, Universitas Padjadjaran, Jln. Raya Bandung-Sumedang KM.21, West Java, Indonesia 45363

Corresponding Author:

Ratu Safitri

Received: 03 October 2017

Accepted: 10 October 2017

Published: 29 November 2017

Publishing services provided
by Knowledge E

© Ratu Safitri et al. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the VMIC Conference Committee.

Abstract

This research was carried out to detect the effect of Sappan Wood Extract (*Caesalpinia sappan*), Wheat grass and Vitamin E Treatment on the liver structure of iron overload rat (*Rattus norvegicus*). The method of experimental used Completely Random Design (CRD in triple repetition. The treatment had been carried out orally. Iron dextran with total dose of 1.5 g kg⁻¹ of body were given to rat on the first, fourth, seventh, ten and thirteenth day. Sappan Wood Extract (*Caesalpinia sappan*) 200 mg kg⁻¹ bw, 400 mg kg⁻¹ bw, Wheat grass extract 100 mg kg⁻¹ bw and Vitamin E 60 mg kg⁻¹ bw were given to rat everyday for 15 days. At the seventeenth, rat were killed and their liver were taken. The observed parameters are morphological abnormality including the colour, the contour, ratio between liver weight and body weight as well as histological destruction. The result showed iron dextran treatment was proved the abnormality on morphological and histological destruction. Furthermore, Sappan Wood Extract (*Caesalpinia sappan*), Wheat grass and Vitamin E Treatment can decrease the morphological abnormality and the liver histological destruction of iron overload rat.

Keywords: Sappan Wood Extract, Wheat grass, Vitamin E, Iron, Morphological abnormality, Histological destruction.

OPEN ACCESS