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SAFETY APPLICATION PRE-CLINICAL STUDY *WHARTON JELLY SECRETOME* WITH INTRAMUSCULAR INJECTION: TOXICITY AND TUMOROGENICITY TEST IN ANIMAL STUDY *RATTUS NOVERGICUS***Ance Imelda Betaubun^a, Yenie Astuti^b, Yuda Heru Fibrianto^c, Hariadi^d, Yuyun Rindiasuti^b, Nurul^b, Ainun Julianto^b and Indah Julianto^a**^aSebelas Maret University, Indonesia^bPT. Dermama Bioteknologi Laboratorium, Indonesia^cGadjah Mada University, Indonesia^dGadjah Mada University, Indonesia

Introduction: *Mesenchymal stem cells (MSC)* now are the recent modalities in cell and regeneration therapies to their ability of regeneration and differentiation become other cells accordance with its microenvironment. Wharton Jelly is the source of endothelial progenitor cells, which are primitive, easily found with less invasive procedures and not causing trouble in bioethique. The consideration before clinically applied, the cells must fulfill the safety procedure in in vivo, the toxicity and tumorigenicity test.

Objective: To know the toxicity effect of *WHARTON JELLY secretome* application in liver and kidney profile function, organs such as liver, heart, lung, brain, kidney and spleen, and also the tumorigenicity in animal studies.

Methods: This study was done on eight female and male rats *Rattus novergicus*, averaged age of 6 weeks, healthy, and had weight averaged of 150 – 220 gram. Divided in four groups, first as control, second, third, and fourth got *WHARTON JELLY secretome* injection (10 ul/kg/weight, 15 ul/kg/weight, and 20 ul/kg/weight). Then assessed of the toxicity by using parameter of liver function and kidney on 13th week, and the histopathology test was performed on the 26th week).

Result: None of the study animal died until the end of the study. The histopathological changes in lungs, liver and kidney were not found as well as behavior changes and tumorigenicity effect.

Conclusion: There are no significant differences between the liver and kidney function, and tumorigenicity effect was not found in the study group ($p > 0,05$).

Biography

Ance Imelda Betaubun graduated as a general practitioner in 2009. Since 2015, she is studying as a dermatoveneraology resident in Sebelas Maret University of Surakarta. Two papers that she has written published in International and national congress of dermatology.

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