

Abstract

An experimental animal study of burn healing activities of *Urtica dioica* ethanolic extract

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12 **Abstract:** Burns are traumatic pathologies responsible for significant morbidity and mortality,
13 which is considered as a public health problem, particularly due to their frequency, potential se-
14 verity, the side effects they can cause as well as their treatment and prevention. In fact, according to
15 WHO, approximately 11 million people/year suffer from burns and 180,000 deaths are due to these
16 injuries. Although, the development of modern medicine has resulted in the coming of innovative
17 drugs and procedures, the problem of accelerating healing with the least possible side effects still
18 remains in addition to socio-economic and cultural reasons which are added to that. A renewed
19 interest in traditional medicine for curative purposes is currently being observed to treat burns. It is
20 in this context that our study takes place, the essential objective of which is to evaluate the poten-
21 tially healing and toxicological effect of crude *Urtica dioica* leaves extract through an *in vivo* study.
22 Our results demonstrated the safety of nettle ethanolic extract, in fact, the evaluation of *Urtica dio-*
23 *ica* ethanolic extract acute toxicity revealed no mortality or morbidity of female albino Wistar rats
24 treated topically with single doses of extract (1g/kg, 2g/kg and 5g/kg). During the 14 days of ob-
25 servations, no sign of intoxication or physiological change in the animal was recorded. The use of
26 nettle leaf extract on 3rd degree thermal burns inflicted on male Wistar rats showed significant an-
27 ti-inflammatory and healing activity, as well proliferative effect on hairs through activation skin
28 hair follicles compared to untreated groups. It can be concluded that plant extract has remarkable
29 healing effects with non-toxic effect on the organism.

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Keywords: Burns; wound healing; *Urtica dioica*; toxicity; bacterial infection.

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