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Study the Effect of Different Concentrations of *Cyperus Rotundus* Extract on Cellular Immunity on Cellular Immune Response in Mice

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ABSTRACT
In this work, Study the effect of specific concentrations of *Cyperus rotundus* two extract on cellular immunity on mobile immune response in mice (in vivo). In contrast, little is recognized about cellular immunity prompted by way of exceptional concentrations of *Cyperus rotundus*. Some parameters, had been used to gain this study, are WBC count (PMNs) percentage, and phagocytosis coefficient of PMNs at distinctive time periods 30, 60, 90.

Keywords: *Cyperus rotundus*, in vivo.
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INTRODUCTION

C. rotundus two L., two (Family – Cyperaceae. The plant is harvested from the wild for local use, mainly as a medicine however also for food, fundamental oils, and basketry.[1,2,3] Phytochemical surveys of Cyperus rotundus revealed that.[4,5] it contained flavonoids, tannins, glycosides, furochromones, monoterpenes, sesquiterpenes, sitosterol, alkaloids saponins, terpenoids, critical oils, starch, carbohydrates, protein, separated amino acids, and many different secondary metabolites.[6,7] Different phytochemical research on C.rotundus revealed the presence of alkaloids, flavonoids, tannins, starch, glycosides.[8,9,10] Furochromones, monoterpenes, sesquiterpenes, sitosterol, fatty oil containing an impartial waxy substance, glycerol, linolenic, myristic and stearic acids. [11,12,13]

MATERIALS AND METHODS

Prepare the vegetable extract

It is prepared by dissolving 50 g of dry plant in 250 ml of alcohol, using the cellulite after after the extract is dried and several concentrations are prepared.[14]

Mouse dosage

The treatments were divided into four treatments, the first was mouse dose 50% of the plant extract concentration by half a ml per day, the second treatment 70%, and the third 90% of the plant extract for a period of 21 days.[15]

Giemsa Stain

This stain was prepared and ready from BDH.

Laboratory animals

From Medicative Control Center, Ministry of Health, Baghdad, Iraq.

RESULTS

The effect of the immunization by means of the usage of the extract of Cyperus on the survival of basophile is mentioned in table 1. Cyperus extract did no longer showcase any good sized differences (p< 0.05) in mice. The greater proportion is 83.6±0.84% through T1 ninety percent of Cyperus extract compared with the manage (phosphate buffer) 83.2±0.42%. in contrast with the control (phosphate buffer) 83.2±0.42%.

Table 1: Study effect of different concentrations of *Cyperus rotundus* extract on PMNs in mice

T	PMNs%
T1 50% of *Cyperus* extract	83.0±0.51[a]
T1 70% of *Cyperus* extract	83.2±0.22[a]
T1 90% of *Cyperus* extract	83.6 ±0.64[a]
(control)	83.2±0.22[a]

Table (2) shows the effect of different concentrations of the *Cyperus rotundus* extract on the phagocytosis process. The results of the experiment showed that there are significant differences with respect to the three treatments used compared to the control where the best concentration of the phagocytosis process gave the treatment in which the concentration of 90% of the plant extract (65.3) and the treatment were used. The focus of

the extract was 50% (60.7) compared to the control where it was (50). The results showed that there were no significant differences in time

Table 2: Study effect of different concentrations of *Cyperus rotundus* on phagocytes

T	Phag. Coeff. of PMNs at (minutes)			
	1/2 Hour	One Hour	One H and /half	Two hour
T1 50% of *Cyperus* extract	60.7±0.14a	60.0±0.01a	60.0±0.28a	57.7±0.13b
T1 70 % of *Cyperus* extract	56.1±0.32a	56±0.44a	54.1±0.47b	52.6±0.13c
T1 90 % of *Cyperus* extract	65.3±0.16[b]	64.5±0.11a	63.7±0.23a	62.1±0.05b
(control)	50.1±0.32a	56.0±0.44a	54.1±0.47b	52.6±0.32c

Table (3) shows the effect of the *Cyperus rotundus* extract on the migration of polymorphic cells, where the results showed that there are significant differences for cell migration compared to the control, where the treatment in which 90% of the plant extract was used gave the best results at 6.15, followed by the treatment in which a 50% concentration was used. And 70%, respectively, 10.4 and 15.4, compared to the control of 15.4

Table 3: Influence of different concentrations of *Cyperus rotundus* on the migration of PMNs

T	Zone of migr. (mm)	Mig. Inh. factor
T1 50 % of *Cyperus* extract	10.4 ±0.10 c	0.59
T1 70 % of *Cyperus* extract	15.44±0.04 a	1.00
T1 90 % of *Cyperus* extract	6.15±0.12 d	0.33
(control)	15.44±0.04 a	1.00

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