

Glycyrrhiza glabra

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<i>Glycyrrhiza glabra</i>			
)		
3-2		18	.(
(%2)			. 5±50
()		/	0.75 0.25)
.((P ≤ 0.05)
			(P ≤ 0.05)
			(P ≤ 0.05)
			(P ≤ 0.05)
P ≤)			(0.05)
			(P ≤ 0.05)
			(P ≤ 0.05)
P)			(P ≤ 0.05)
			(≤ 0.05)
		(P ≤ 0.05)	
	(GOT) AST	(P ≤ 0.05)	
(GPT) ALT		(P ≤ 0.05)	
		(P ≤ 0.05)	

The biological effect of the Licorice rot (*Glycyrrhiza glabra*) in some biochemical and enzymical characteristics in the blood serum of the Awassi ewes

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Abstract

This study had obtained in the subject of the biological effect of the licorice root on some Biochemical and Enzymical in Awassian ewes during four physiological stage (Pre-pregnancy, early pregnancy, late pregnancy and post-partum) in this experiment, the 18 Awassi ewes are used and their ages are ranged between 2-3 years and weight ranged are 50 ± 5 Kg. The ewes are divided into three groups, feeding on the concentrated feed (2% from life body weight) with hard food and pasturing – One of these groups is considered as a control (without addition) and the first and second as treatments (0.25 and 0.75 Gm of licorice root / Kg of life body weight). A significant increase ($P \leq 0.05$) is observed in the level of blood glucose for first and second groups comparison with control in pre-pregnancy, Whereas the second groups increase significant ($P \leq 0.05$) in comparison with first and control groups in stage of early pregnancy and post-partum. The results are also stated that treatments of licorice root had an effect on level of total protein when the second group had a significant increase ($P \leq 0.05$) upon the control group in stage of pre-pregnancy. By pursuing of biological effect of licorice root on level of cholesterol, two groups which treated by licorice root had a significant increase ($P \leq 0.05$) in comparison with group of control for stage of pre-pregnancy. In pursuing of triglyceride level, there is a significant decrease ($P \leq 0.05$) in first and second groups in comparison with control groups except stage of post pregnancy, there is a significant decrease ($P \leq 0.05$) in second group in comparison with first and control groups. The first group is decreased significantly ($P \leq 0.05$) in comparison with control. The result of H.D.L. was showed that no significant differences among groups in pre-pregnancy. But in stage of early pregnancy the second group had a significant increase ($P \leq 0.05$) in comparison with first and control groups. In late pregnancy and post-pregnancy, there is a significant increase ($P \leq 0.05$) in first and second groups in comparison with control. It is seamed there a significant decrease ($P \leq 0.05$) in AST (GOT) enzyme level in first and second groups in comparison with control groups in stage of pre and post-pregnancy, but in stage of early and late pregnancy there is a significant decrease ($P \leq 0.05$) in second group in comparison with control. For ALT (GPT), the average of groups had not a significant differences in stage of pre-pregnancy and late pregnancy, where as the second groups decreased significantly ($P \leq 0.05$) in comparison with the control in the stage of early pregnancy and post-partum.

Glycyrrhiza glabra

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.2

) - -) .2009/1/15 2008/6/1
) () ()
 .(2009/1/15) (

18

5 ± 50

(1) ()

%2

(1)

3			
/	%	%	
1240.8	5.17	47	
650.0	7.65	50	
-	-	2	
-	-	1	
1890.8	12.82	100	

)
 0.75 0.25 (/
 .
 12 Jugular vein 10
 24 °45 () °4
 Blood 20 (/ 3000) serum
 ° 20 - ()
 .Kit

$$Y_{ij} = \mu + T_i + e_{ij} :$$
 (CRD)
 5 4

(P ≤ 0.05) 2
 (P ≤ 0.05)

Glucose sugar Glycosides
 2 .8 7 6
 (P ≤ 0.05)

.8 6 9 .

.11 10

Glycyrrhiza glabra

(2)

a1.11±45.12	a1.56±46.22	b 2.06±41.23		3 100/
a5.31±53.84	b0.80±42.15	b 3.30±42.31		
a6.53±62.58	a 7.74±52.94	a3.77±50.88		
a4.94±58.16	b5.22±48.65	b 2.40±39.81		
a0.53±7.53	ab0.23±7.06	b 0.20±6.59		3 100/
a0.34±10.03	a0.64±9.48	a 0.42±9.35		
a0.27±8.93	a0.42±8.39	a 0.43±8.17		
a0.43±10.69	a0.46±9.31	a 0.47±9.97		
a0.07±3.40	a0.11±3.52	a 0.11±3.37		3 100/
a0.25±4.65	b0.25±3.78	b 0.14±3.49		
a0.21±5.03	a0.13±5.16	a 0.18±4.78		
a0.42±4.98	a0.37±4.61	a 0.24±4.86		
a1.04±40.24	ab1.20±37.45	b 2.39±34.03		3 100/
b2.04±44.52	b2.40±46.66	a 3.94±61.99		
b1.48±35.23	b0.38±33.03	a 2.05±40.00		
b5.72±55.18	b7.07±54.50	a 4.04±72.32		

±

P ≤)

(.0.05

2

.11 10

(P ≤ 0.05)

.12

Homeostasis

3

(P ≤ 0.05)

(2)

(P ≤ 0.05)

()

α

.13

Chymotrypsin

Glycyrrhiza glabra

(3)

				³ 100/
a3.38±81.54	a1.59±76.20	b2.56±61.34		
a2.25±122.21	b3.60±101.22	c5.41±85.84		
a3.92±163.05	b3.60±143.79	c3.15±118.03		
a5.59±151.21	b5.16±120.56	c7.40±88.53		
b1.77±70.45	b1.85±73.39	a1.96±76.58		
b1.44±61.21	b1.57±65.33	a2.23±73.48		
b1.30±72.36	b2.21±75.07	a1.23±100.03		
c2.35±49.16	b2.59±69.26	a4.50±94.24		
a1.64±64.35	a1.62±60.34	a1.75±62.38		
a1.23±69.15	b1.75±67.91	b1.39±65.65		
a1.50±79.04	a1.28±76.71	b1.17±66.49		
a0.81±75.69	a1.54±72.24	b1.76±67.86		
a3.34±87.63	a2.24±89.25	b4.04±75.53		
a6.70±115.51	b4.79±97.40	b3.61±39.67		
a3.65±156.37	a3.69±151.56	b5.24±142.24		
a5.21±124.68	a6.90±117.57	a11.74±114.91		
b0.35±14.09	b0.36±14.67	a0.39±15.31		
c0.28±12.24	b0.31±13.06	a0.44±14.69		
b0.52±14.47	b0.43±15.01	a0.24±20.00		
c0.47±9.83	b0.51±13.85	a0.89±18.84		

±

P ≤)

.(0.05

3

(P ≤ 0.05)

(P ≤ 0.05)

(P ≤ 0.05)

(P ≤ 0.05)

Linalol Fenchone Volatile oil
 Indoie Butyric acid Acetic acid Propionic acid Benzaldehyde
 Di-hydroxystigmasteroles Stigmasterol β-Sitosterol Sterols
 17 16 15 14
 (P ≤ 0.05) 3 .8 6
 P ≤)
 (P ≤ 0.05) (0.05)

3 .18

HDL

(P ≤ 0.05)

(P ≤ 0.05)

TG

VLDL

3 .19

(P ≤ 0.05)

Glycyrrhiza glabra

(4)

				(/)
b 1.91±71.33	b 2.36±75.50	a 4.36±84.50		AST
b 4.09±174.33	ab 4.80±182.50	a 5.82±193.33		
b 5.48±176.00	ab 7.40±188.33	a 6.40±201.33		
b 2.70±47.00	b 4.61±59.83	a 6.08±75.50		ALT
a 3.06±40.16	a 3.95±41.83	a 3.71±42.33		
b 3.66±39.00	a 5.44±51.67	a 8.47±50.83		
a 3.29±40.67	a 3.19±47.67	a 8.47±50.83		
b 4.93±31.50	a 4.59±48.83	a 3.71±42.33		

P ≤) ± •
 •
 .(0.05

(P ≤ 0.05)

Phenolic compounds

LDL

.22 21 20

(P ≤ 0.05)

4

AST

(P ≤ 0.05)

ALT

(P ≤ 0.05)

Ascorbic acid Glutathione

Carotinoid Atochopherol

E C B

23

25

AST

24

.ALT AST

6

ALT

8

ALT

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