

(2006/9/28 2006/4/5)

LC85 LC50
Melia azedarach *Nerium oleander*
 Tobie *Leishmania tropica* promastigote
 %15
 ()
 (3 / 4) LC85
 (3 / 1) LC85 (3 / 0.725) LC50

Effect of Aqueous Extract of *Nerium oleander* and *Melia azedarach* Plants on the Morphology and Osmolarity of *Leishmania tropica* Promastigotes *In Vitro*

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ABSTRACT

The study investigated the effect of LC50 and LC85 aqueous extract of *Nerium oleander* and *Melia azedarach* plants on the morphology and osmolarity of *Leishmania tropica* promastigotes grown on Tobie's medium, using the technique of determining of acid phosphatase activity and the potassium ion concentration in the medium at the log phase and the measurement of parasite lengths on the same day.

The results showed that the *Leishmania tropica* promastigotes treated with LC85 of *Nerium oleander* had an increase in potassium ions which led to osmotic changes. The results also indicated that the *Leishmania tropica* promastigotes treated with LC50 and LC85 aqueous extracts of *Melia azedarach* changed the osmolarity which led to a noticeable swelling in the parasites.

4 – 2

.(Molyneux and Killick-Kendrick, 1987)

(ELISA)

.(EL-Roufaie et al., 1987) Enzyme Linked Immunosorbent Assay

Leishmania major

(1991) Blum

.(Blum, 1994)

L. major

Herpetomas samuelepessonai

(1997) Lawrence

.(Andradet and Andrade, 1988)

L. donovani

L. tropica

MHOM / IQ / 1992 / MREC3 *L. tropica*

/ /

.(AL-Jeboori and Evans, 1980)

...

³ (0.1) (Tobie et al., 1950)
³ (5) ³ (1.9)
 3 / (105×2) (4)
 (5) ⁰ (26)

(1987) Riöse
 3 / (4) (1.5) LC85 LC50
 .(1) 3 / (1) (0.725)

(106) :1

.(³ 105 × 2) *Leishmania tropica*

%	96	%	72	%	48	%	24	/	
	±		±		±		±		
-	1.73 ± 25.59	-	0.61 ± 12.17	-	1.26 ± 3.07	-	0.06 ± 0.67		
50	2.54 ± 12.84	57	0.74 ± 5.18	46	0.17 ± 1.67	28	0.11 ± 0.48	1.5	
84	0.00 ± 4.02	76	0.31 ± 2.86	55	0.13 ± 1.39	40	0.04 ± 0.4	4	
50	0.65 ± 12.74	47	2.49 ± 6.47	41	0.00 ± 1.81	30	0.04 ± 0.47	0.725	
85	0.53 ± 3.84	81	0.14 ± 2.28	77	0.02 ± 0.71	45	0.06 ± 0.37	1	

± *

Control **

(% 100)

Giemsa Stain

(Manson-Bahr and Bell, 1987)

.(X100)

Olympus XSZ _ 510D

Rieichert Neovar

(×)

.(X 40)

Micrometer Lens

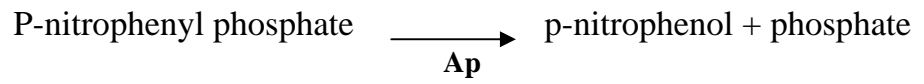
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:

:

.1

(Fishman and Lerner, 1953) (Andresch and Szczypinski, 1947)
 p-nitrophenol p-nitrophenyl phosphate



(405)

: (/)

101 × = ()

.Randox Laboratories Ltd.

:

.2

Flame Photometry

.(1980) Geise Annino- Jevic

:

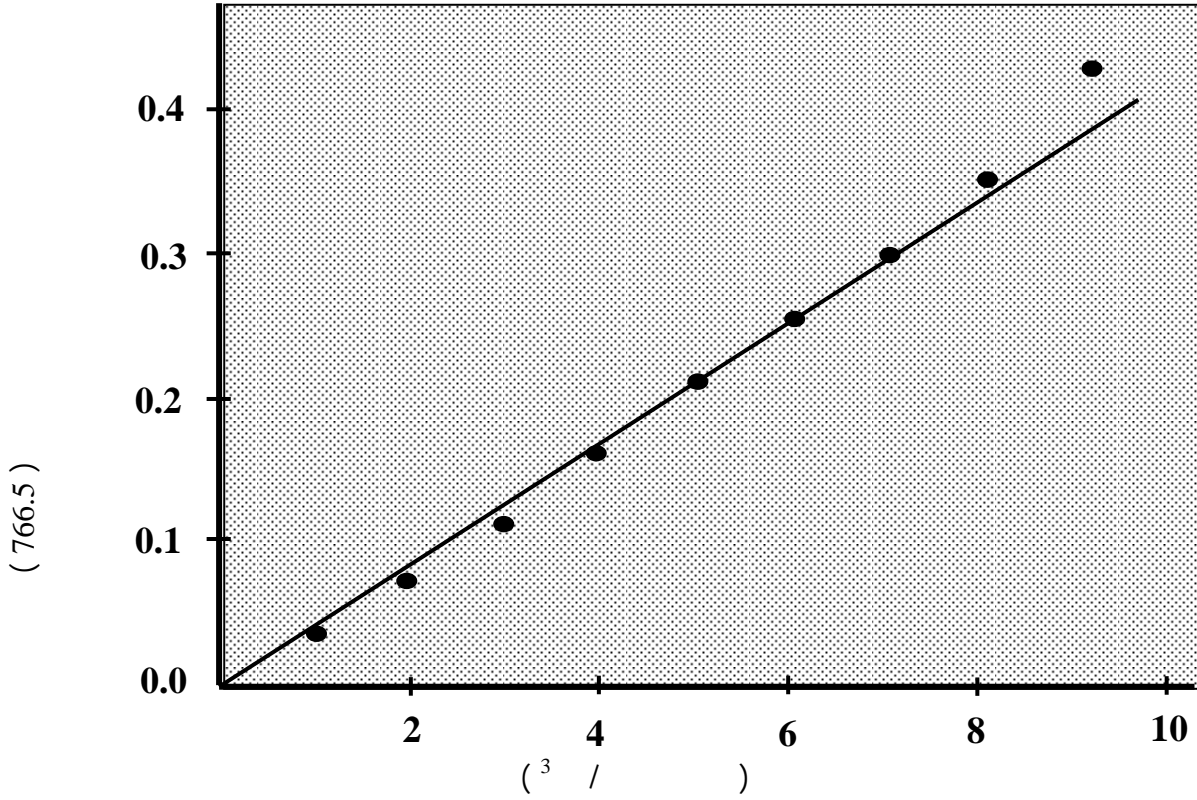
KCl (1.9070) / (1)

.(Whiteside and Milner, 1984) (766.5)

...

:

$$\frac{3}{(9-1)} \cdot (1) \quad (766.5)$$



.(Whiteside and Milner, 1984)

: 1

DNA RNA

.(Talaro and Talaro, 1996)

LC50 %50
 (106 × 25.59) 3 / (106 × 12.84)
 (106 × 12.74) LC50 3 /
 %85 3 /
 3 / (106 × 3.84) 3 / (106 × 4.02) LC85
 (96) 3 / (106 × 25.59)
 .(1)
 LC50 (3) (2)

(%22) LC85
 LC50 (%22)
 LC50 (%15.8) LC85 (%133)
 LC85 (%45.4)

Nerium oleander

LC85 LC50 :2

AP

Melia azedarach

(96)

L. tropica

		**	(3 /)	
		±		
-	100	0.20 ± 1.82	-	
-	100	0.00 ± 1.82	1.5	
-	100	0.10 ± 1.82	4	
22	122	0.60 ± 2.22	0.725	
133	233	1.41 ± 4.24	1	

*

.(/)

**

...

Nerium oleander

LC85 LC50

:3

Melia azedarach

(96)

L. tropica

		**	(3 /)	
		±		
-	100	5.77 ± 480.0	-	
-	100	0.00 ± 480.0	1.5	
22.0	122.0	5.24 ± 586.0	4	
15.8	115.8	9.00 ± 566.6	0.725	
45.4	145.4	26.8 ± 689.0	1	

*

(3 /)

**

K+

AP

(1988)

Andrade

K+

Herpetomas samuelepessonai

AP

L. donovani

(Lawrence et al., 1997)

K+

AP

(1)

(5 3)

(4)

%85

(1977)

Zuckerman

%50

(2)

(%33.4) LC85³ / (4) (×)
 (%42)
 LC85³ / (1) LC50³ / (0.725)
 (%60) (%39.2) (%36) (%7.5)
 .(4)

Nerium oleander LC85 LC50 : 4
 (×)
 (96) *Melia azedarach*
L. tropica

%		%	** (μm)	%		%	** (μm)	(/)	
			±				±		
-	-	100	0.20 ± 3.33	-	-	100	0.64 ± 16.0	-	
-	-	100	0.24 ± 3.33	-	1.2	101.2	0.64 ± 16.2	1.5	
-	42	142	0.24 ± 4.73	33.4	-	66.6	0.76 ± 10.66	4	
-	36	136	0.32 ± 4.53	7.5	-	92.5	0.64 ± 14.8	0.725	
-	60	160	0.20 ± 5.33	39.2	-	60.8	0.48 ± 9.73	1	

15

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.() **

(1991) Blum (1990)Darling and Blum

L. major

.(Blum, 1996)

(2001) Ganong

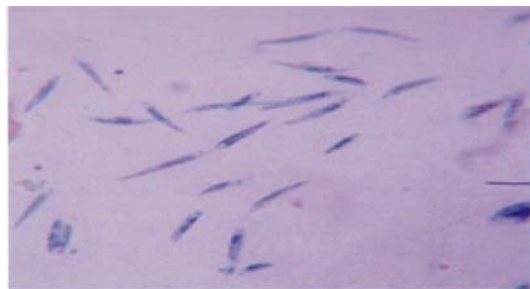
...

(2002) . 1999) Chlorpromazine Alopuranol
 (2001) (2001) *L. major*

Trichomonas vaginalis

48

Althaea rosea



(X 1000) (96)

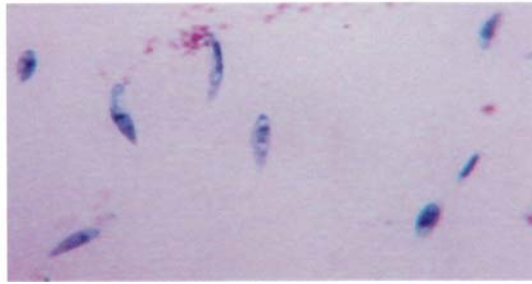
:1



³ / (1.5)

:2

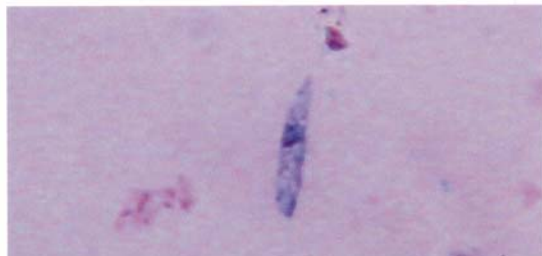
(X 1000) (96)



3 / (0.725) :3
(X 1000) (96)



3 / (4.0) :4
(X 1000) (96)



3 / (1.0) :5
(X 1000) (96)

.2001

Trichomonas vaginalis In Vitro

.2002

.146 – 137 : (1) .(13)

.2001

L. major

.1999

(11)

.59 – 43 : (1)

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