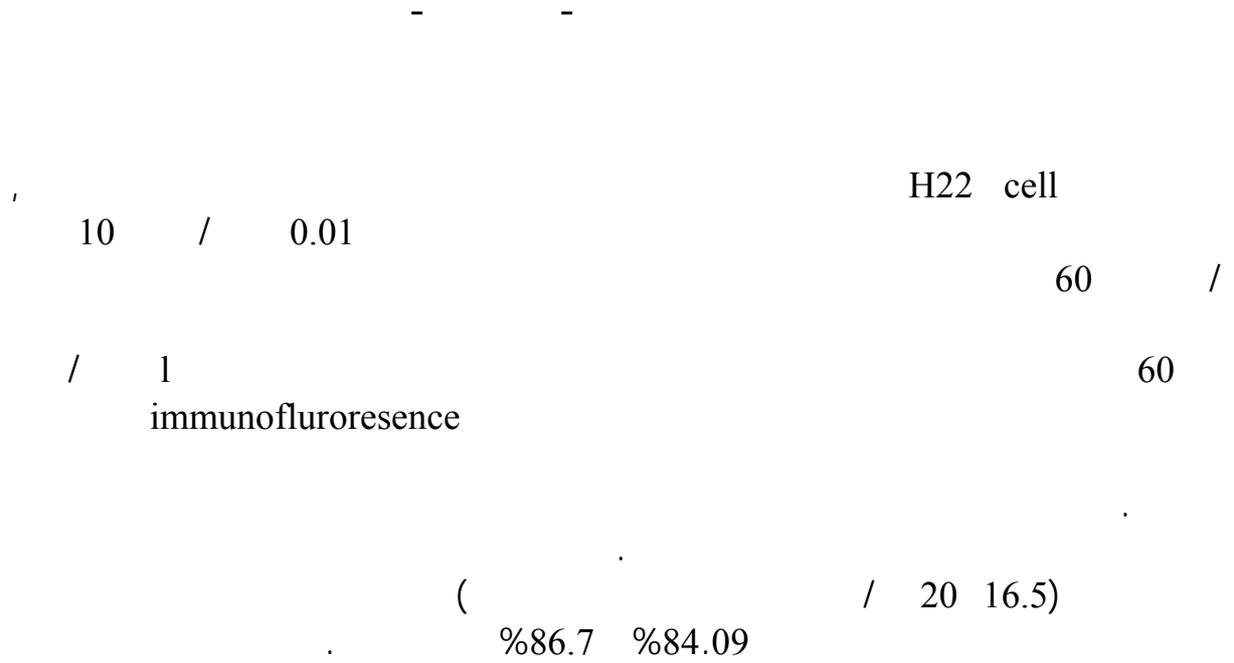


Nerium oleander

H22(Hepatic cell)



() (2008) Toshio
 Schmidt (2007) Bastians
 Apoptosis (2001) Mukherjee
 . 2010 / 10 / 20
 . 2011 / 1 / 9

colchicine (vinblastine vincristine) vinca alkaloid
 docetaxel (paclitaxel taxanes) maytansine
 ()
 panda Lopus
 (2006)

Chemotherapeutic drugs

. *Nerium oleander* :

Apocyuaceae :
 Magnoliophiyta Nangaliposida Gentianales
 . (1976) Chakravarty

. (1993) Boisio

Sangumarine

.(2002) Jordan

Convolvulues ,(2009) *Sonchus oleraceus*
 (2009) *arvensis*

-1

.(1984) Harborne
Soxhlet

. (1998) Cannell

LD₅₀

-2

(1980) Dixon

-3

(24) () Hepatic cell(H22)

(2001) Freshney

. (2002) Janardhanan Jone

)

. (2003) Ge

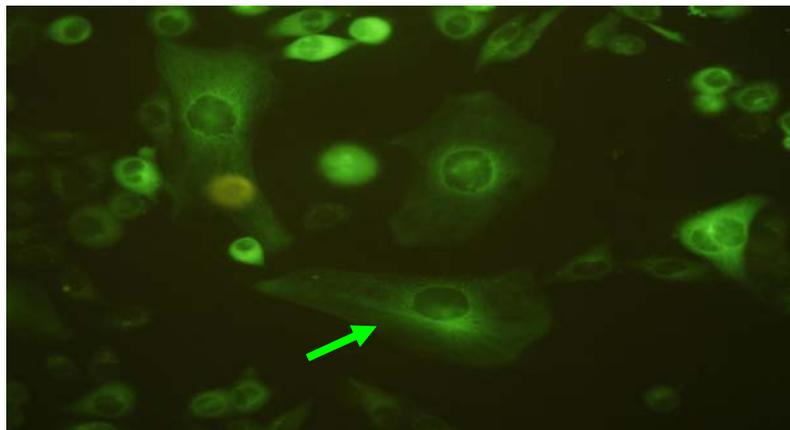
(

(H22 cell)GFP tubulin -4
 ()
 RPMI-1640)
 Complete Growth
 .(1995) Todd
 -5
 .(1995) Todd
 (0.2)
 / (0.01,0.1,1, 10,100,1,100) Serum Free Media (SFM)
 (1995) Todd (Exposure time)
 . Immunofluorescence

4.58

1.445

H22 cell (1)



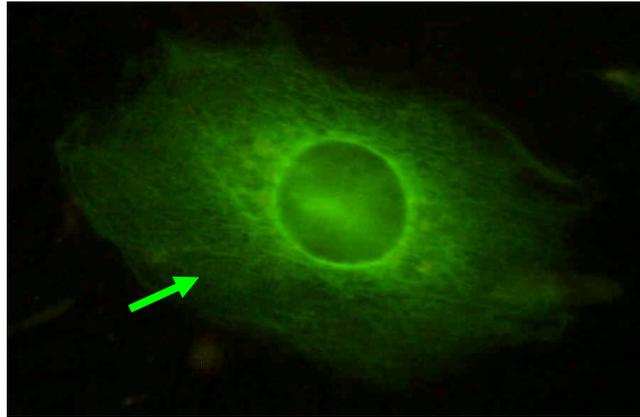
H22 خلايا GFP-tubulin 1.

1 /

10 /

(2) (3)

(4).

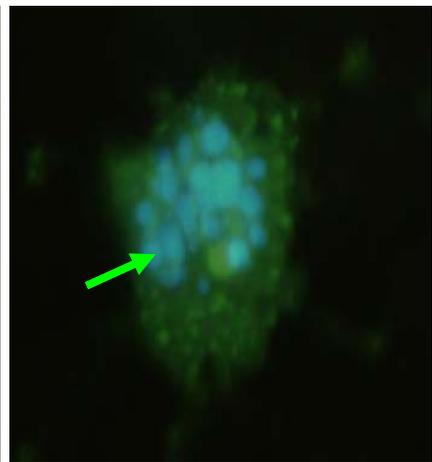
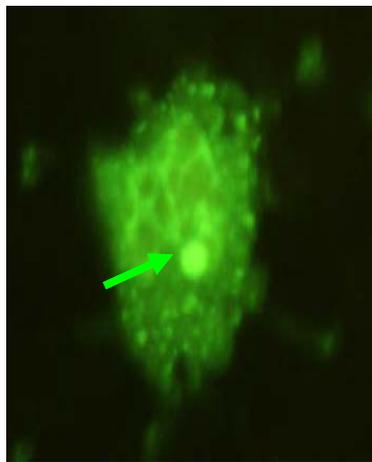
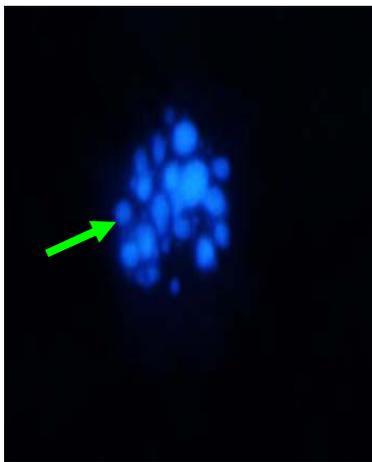


GFP-tubulin بالتركيز

H22

.2

60 / 0.1



100 /

H22 .3

60



/ 100

H22 .4

60

. (1976) Chakravarty

NaKATPase

oleandrin, digitoxigenin,
)

gitoxin

(

.(SCE)Sister chromatid exchange

(2005)

Fu

DNA

telomere

TRF2

.(2006)

G2/M

(LD50)

/ 165

/ 201

8.2 16.5

(P<0.01)

/ 4.1

/ 16.5

(2059.26 145.57)

3 860 36

.3 4033.05

3

/ 5 10 20

(P<0.01)

36

3 (4047.54)

3 (1188.2,1432.74,2276.36)

3 1188.28

/ 20

3 (2276.63 1432.74)

.3 5547.45

() PBS

H22

%(84.09)

/ 16.5

20

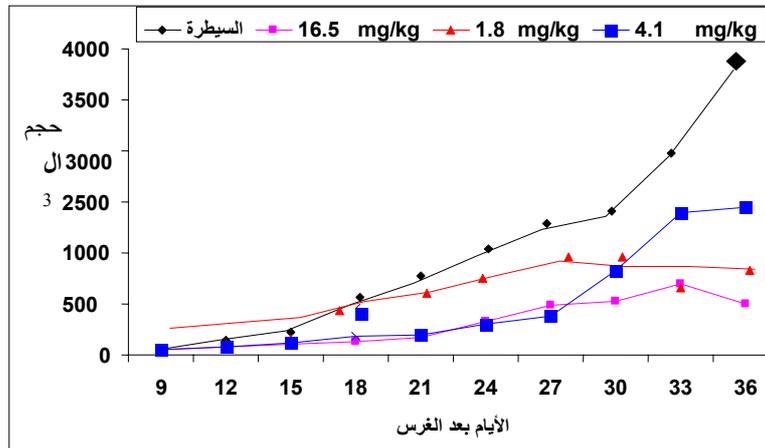
, %(86.07)

/

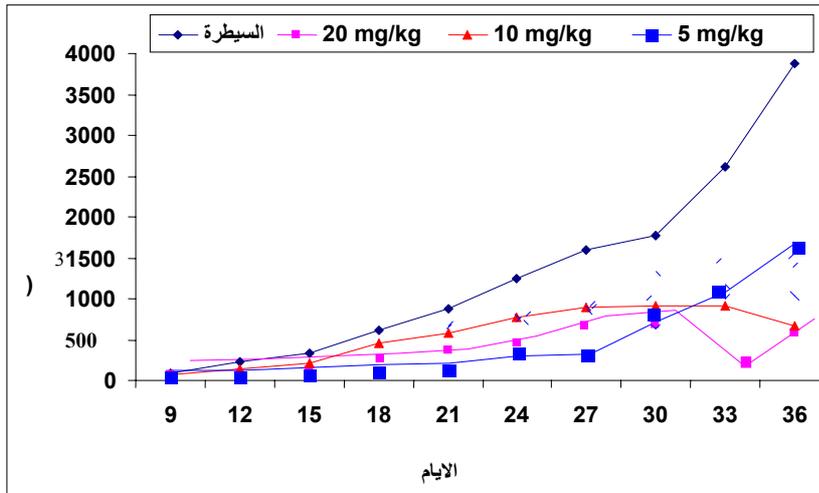
(2002) Meng

Okamura

.(1998)



.1



.2

(1)

(P < 005)

26.70 27.21) \ (4.1, 8.2 ,16.5)

.(4) %19.32

%(25.34

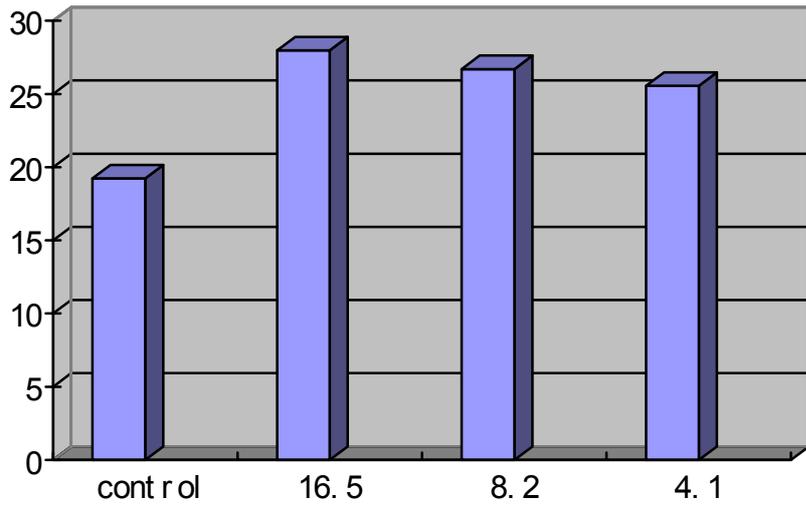
(2)

(P < 005)

\ (5, 10 ,20)

. (4) %18.30

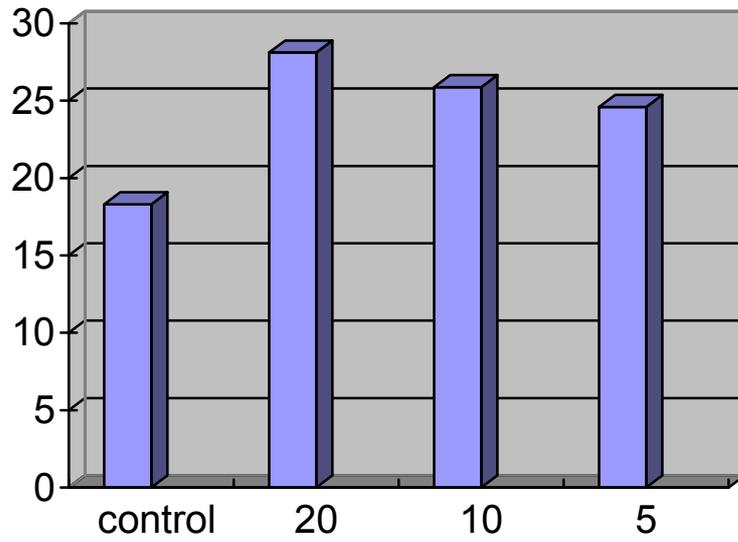
%(24.53 25.06 28.16)



/

-3

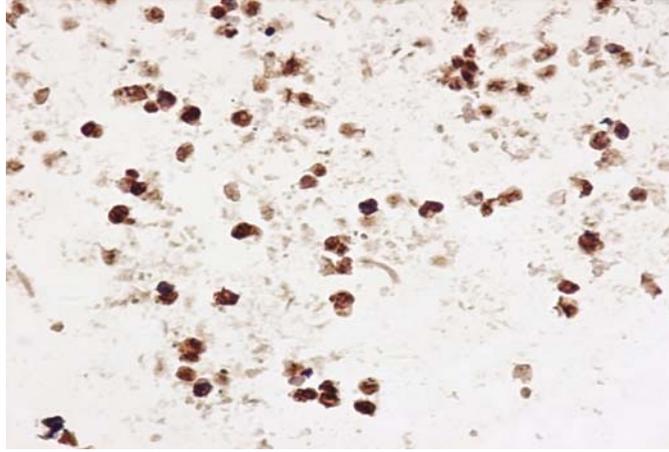
(%)



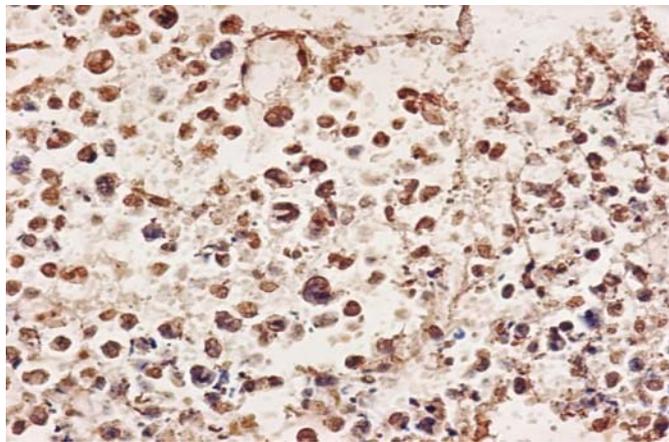
\

-3

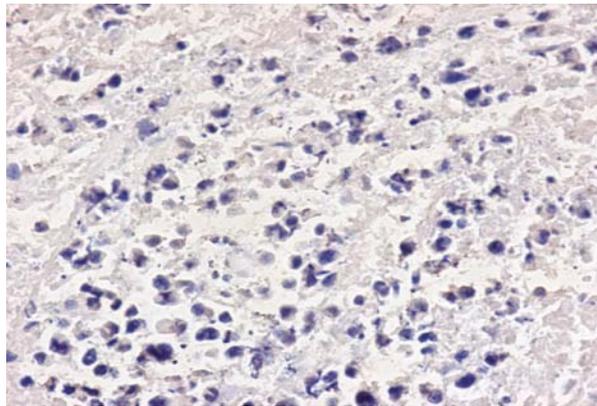
(%)



1



2



3

.4

(2)

(1) :

(DAB Chromogen 400X)

. (3)

%86.7

ursolic acid ,
Okamura

Oleanolic acid
(1998)

gene expression
Pathake apoptosis
(2000)

AP-1 NFκB

Convolvulus

.2009 .

arvensis L.

Nerium oleander

.2006.

onchus olevaceu

.2009.

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**WATERY EXTRACT AND METHONOLIC EXTRACTION OF
NERIUM OLEANDER EFFECT ON MICROTUBULES OF H22 CELL
AND PROGRAMMED CELL DEATH .**

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ABSTRACT

The study evaluated the effect of selected Oleandrin and methonolic extraction of *Nerium oleander* on the microtubule network of H22 cells line (hepatic cell) GFP tubulin labeled .

Cells were treated with watery extract and methonolic extraction at various concentration from 0.01 μ /ml to 10m/ml for 60 min , , microtubules were detected by mean of indirect immunofluorescence. the damage was examined in afluorescence microscope .

Therapeutic effect of both extracts was studied in tumor-bearing mice after (I.P) administration of watery extract at concentrations of methonolic (16.5 , 8.1, 4.1mg/kg) and methonoloic extract at concentrations (20, 10, 5 mg/kg) for 30 days alternatively. The results revealed significant reduction in the tumor volume weather in those treated with watery extract 84.09%, or those treated with alcoholic extract 86.07%, particularly at the concentration of 16.5 mg/kg and 20 mg/kg respectively .