

Mus musculus

*Mus musculus* ( ) ( )

Abstract

The study is designed to investigate the role of garlic (*Allium sativum*) in the inhibition of genotoxic effects of cyclophosphamide drug in mice [*Mus musculus*] through using the cytogenetical test by determining the mitotic activity, chromosomal aberration [ chromatide and chromosome break].

The results revealed the following :

Absence of toxicity and mutagenicity for all garlic extraction at tested doses, the high inhibitory effects of cyclophosphamide for cell division in addition to induction of chromosomal aberration and the inhibitory efficiency of all extraction of garlic against the toxicity and mutagenicity of cyclophosphamide.

( 16 , 11 , 10 )

(4-OH-CP) 4-

Aldophosphamid

hydroxy cyclophosphamide

.Phosphamide mustard (2) (PAM) (ALP)

(2) T

K<sub>3</sub>

(2)

Kwon

(2)

4-OH-CP

(11) Harris

DNA

. DNA

Single Strand Break

(13)

(15) Sato

(9) Harbones

/ ( 250 100 50 )

/ 20

*Mus musculus* :

(27-23)

(12-8) / -

7

Allen

(8)

Evans

(5)

(17) San Stick

$$100 \times \frac{\text{Number of mitotic cells}}{\text{Total number of cells}} = \text{Mitotic Index}$$

( )

(6) Au

100

24

( L.S.D )

النتائج

-1

-

(1)

/ 100

( P < 0.05 )

%15.20

%17.59 %17.76

( P< 0.05 )

( )

-

**-2**

-

( P< 0.05 )

(2)

%6.70

7

%16.20

( P< 0.05 )

/ 100

( %13.7-%10.30 )

%9.00

( P< 0.05 )

( P< 0.05 )

7

%4.30

(%9.20-%6.30 )

/ 100

/ 250

-

( P< 0.05 )

(2)

%0.22

%12.30

7

( P< 0.05 )

/ 100

**-3**

-

( P< 0.05 )

%15.71

%8.82

( P< 0.05 )

50)

%( 13.93 14.53 14.40 15.00 )

/ ( 250 100

/ 100 % (13.90 14.21 12.78 13.89 13.21 )  
/ 250

/ 250

-

(3)

( P < 0.05 )

%5.20 %1.80

/ 100

(1 )

(3) Kesavan , Abrahan (1)

(18)

(7)

(2)

/ 20

(2)

(2)

DNA

DNA

N<sub>7</sub>

(2)

( 3 2 )

Glutathione-s-

Allyl methyl disulfide , Diallyi disulfide , Dially sulfide  
transferase

(12)

Benze Pyrene

Ramel Bioantimutagene ( ) Desmutagene (14)

(4)

-1  
-2  
-3  
-4

/ 100

(1)

%	%	%	/	
0.11 ± 0.066	9.37 ± 0.185	15.20 ± 0.375		
0.22 ± 0.100	11.20 ± 0.730	15.33 ± 0.760	50	/
0.29 ± 0.025	12.90 ± 0.603	17.76 ± 0.261	100	
0.20 ± 0.090	12.20 ± 1.005	14.20 ± 0.362	250	
0.09 ± 0.090	10.53 ± 0.625	15.22 ± 0.390	50	/
0.30 ± 0.300	11.85 ± 0.405	17.59 ± 0.902	100	
0.34 ± 0.035	11.33 ± 0.411	16.50 ± 0.750	250	
0.33 ± 0.33	11.00 ± 0.500	16.75 ± 0.800	50	/
0.29 ± 0.05	12.50 ± 0.395	16.85 ± 0.722	100	
0.32 ± 0.13	12.21 ± 0.455	16.00 ± 0.675	250	
0.46	1.62	1.75	L.S.D. 5%	

(2)

%	%	%	/	
0.22 ± 0.050	9.00 ± 0.155	16.20 ± 0.318		
12.30 ± 0.348	4.30 ± 0.66	6.70 ± 0.144	/ 20	
7.00 ± 0.133	6.35 ± 0.320	14.00 ± 0.099	50	+
5.92 ± 0.080	7.69 ± 0.260	14.60 ± 0.357	100	
6.32 ± 0.319	7.83 ± 0.116	13.90 ± 0.173	250	
7.02 ± 0.365	6.30 ± 0.115	10.70 ± 0.070	50	+
6.57 ± 0.328	8.60 ± 0.310	10.99 ± 0.115	100	
6.67 ± 0.400	9.20 ± 0.322	10.30 ± 0.173	250	
7.42 ± 0.191	7.40 ± 0.114	13.20 ± 0.344	50	+
7.35 ± 0.193	9.00 ± 0.520	13.6 ± 0.400	100	
7.85 ± 0.261	7.10 ± 0.116	12.8 ± 0.175	250	
1.60	1.30	1.15	L.S.D. 5%	

(3)

%	%	%	/	
0.32 ± 0.030	9.72 ± 0.060	15.79 ± 0.150		
12.90 ± 0.133	4.25 ± 0.117	8.82 ± 0.127	/ 20	
4.30 ± 0.100	8.34 ± 1.020	13.21 ± 0.128	50	+
1.80 ± 0.050	8.92 ± 0.100	13.89 ± 0.220	100	
2.20 ± 0.067	9.00 ± 0.173	12.78 ± 0.200	250	
5.20 ± 0.111	8.73 ± 0.100	14.21 ± 0.115	50	+
4.00 ± 0.087	9.20 ± 0.153	13.90 ± 0.122	100	
4.70 ± 0.200	8.79 ± 0.100	15.00 ± 0.122	250	
4.20 ± 0.091	7.30 ± 0.280	14.40 ± 0.300	50	+
2.50 ± 0.090	7.82 ± 0.289	14.53 ± 0.290	100	
2.90 ± 0.100	7.10 ± 0.177	13.93 ± 0.220	250	
1.64	2.02	0.82	L.S.D. 5%	

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