

«

10 / 3.

60

10 / 3.

60

[2, 4]

[12].

[1, 9], [16]

[6, 10, 17].

Reina E. Mebius Georg Kraal,

[15].

[19], [17], [12], [11]

[3, 14].



1- -2,3- (CAS RN 106-89-8).

[20].

[13].

[5],

...

() [7].

« »

(- 0109U004615).

90
40 - 50 . «

».

« » (, 1985).

(30).

10 / ³ 60

(5 / , 5 /). (1) ; (2) ,

(4) , (3)

1, 7, 15, 30

60 (1- , 2- , 3- , 4- 5-),

« ».

0,2 / .

-200 1 .

100 .

- ,

Video Presenter SVP-5500,

«Master of

Morphology» [8] 0,1 .

«Statistica 6.0» 5% (<0,05).

t- -2,23.

1-

17,17% (<0,001).

7 15

131,33 163,50 ,

10,66% (=0,200). 18,43% (=0,007)

88,66 118,67
30 60

8,29%

(=0,005) 12,89% (=0,006)
143,50 158,00

384,83 452,50

(<0,001). 1- 2-
19,72% (<0,001) 17,22%
422 471 ,

- 533 601 15 30
457,50 578,50 ,

15,82% (=0,035) 9,49% (=0,004). ,
60

724,17
768 - 696 .

(=0,030). 5- 10,85%
812,33 910 - 667 .
1 7

348,40 /100 , 278,10 /100
(=0,785). 8,15% (=0,089) 1,94%

15, 30 60

359,21 /100 , 282,39 /100 , 308,30 /100
(=0,174); 1,29% (=0,716) 3,59% (=0,606) 4,71%

1- , 2- 4-
29,66; 30,39 39,38 ,
9,44% (=0,039); 10,83% (=0,042) 5,86% (=0,047)

3- 5- 1

7 6,32 7,09 .

10,10% (=0,033) 5,34% (=0,021)
=0,05

(=0,001) 10,71% (=0,002) 3,92 3,75 , 15 8,41%

4,45 4,63 .
1- 2- -

147,83 136,17 , 11,48% (<0,001) 15,42% (=0,003)

6,87% (=0,012) 3,69%

(=0,499) . , 15 30
171,00
194,67 , 6,56% (=0,348) 5,04% (=0,074).
128,17 150,50 .
5- , 210,50 ,
10,04% (=0,003).
3,27% (=0,485).
1 7
405,00 491,67 ,
19,72%
(<0,001) 13,31% (=0,014).
, 5,24% (=0,340) 8,66%
(=0,123). 3- 4- 485,33
604,33 . 10,70% (=0,203) 5,45%
(=0,066), 6,08% (=0,)
4,46% (=0,) 60
783,83 , 3,51% (=0,435),
8,24% (=0,006).
- 1 15
274,60 /100 281,86 /100 .
9,31% (=0,078) 4,89% (=0,102),
, 1,26% (=0,804) 0,19%
(=0,961). 4- 5-
311,41 /100 373,58 /100 .
60
7,73% (=0,130)
4,00% (=0,565).
-
. , 7 15
32,11 34,72 , 5,78%
(=0,422) 4,88% (=0,373),
, - 5,66% (=0,374) 2,87% (=0,703)
3- 4- 0,49% (=0,851)
2,25% (=0,788).
4,13% (=0,201) 3,90% (=0,571).
60
8,93 , 2,08% (=0,515),
3,36% (=0,559).
2- 3-
7,01% (=0,020), -
4,76% (=0,029)
, 6,67% (=0,016).
3,98 4,00 (. 2).
. , 1, 7 15
233,50; 202,17 210,17 ,
21,42% (<0,001), 21,16%

(<0,001) 19,65% (=0,058). , 30 60
215,50 , 231 234 217,50

- 21,24% (<0,001) 26,32% (=0,001).

1 7
154,33 /100 , 17,24% (<0,001) 15,47% (<0,001) 168,85 /100
1-
2- 175,05 /100 164,77 /100 .
3- 4- 126,99 /100
115,77 /100 , 16,83% (=0,031) 14,05% (=0,001)
60
105,85 /100 ,
15,16% (=0,007)

112,19 /100 94,85 /100 .

1- 2-
15,88 15,63 8,42% (=0,039) 9,02% (=0,281)
17,25 17,57 .
15 30
8,62% (=0,006)

6,28% (=0,133). 5-
15,15 , 7,11% (=0,318)

1 7
10,47 9,88 , 11,01 10,32 ,
7,83% (=0,039)
8,77% (=0,028). 15
30
6,05% (=0,133),

- 4,87% (=0,387). 5-
9,17 , 5,46%

(=0,107) . 1- , 2- 3-
2,85; 2,55 2,32
9,52%

(=0,017), 10,84% (=0,009) 8,30% (=0,049).
30 60

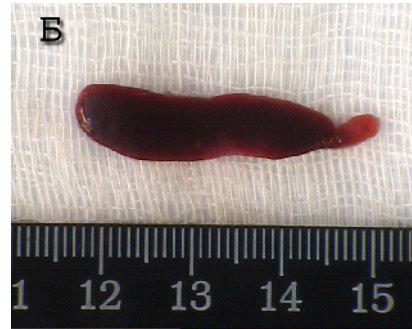
2,61 2,16 , 6,45%
(=0,254) 7,30% (=0,040).

1- 2-
269,33 230,33 .
1 7

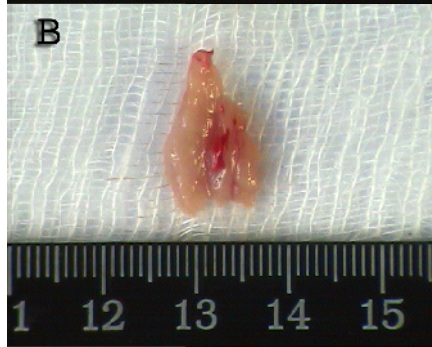
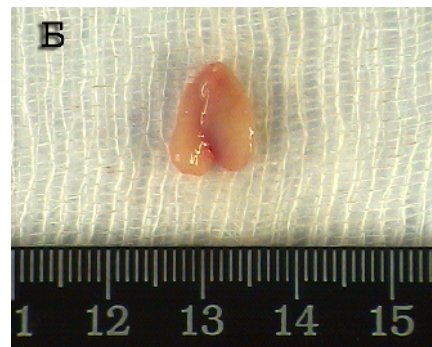
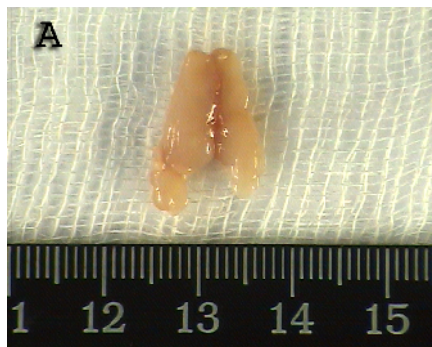
(<0,001) 21,57% (=0,003), 20,90%
13,93% (=0,101). - , - 15,34% (<0,001)
60 30

19,20% (=0,025) 234,67 236,33 , 15,03% (=0,005)

7,89% (=0,168) 9,67% (=0,224).



2- : -2- ; -2- ;
 -2- ; -3-



3- : -2- ; -2- ;
 -2- ; -3-

1, 7 15

182,71 /100 , 169,99 /100 131,46 /100 .
 10,45% (=0,002); 6,89%
 (=0,310) 13,90% (=0,033),
 8,21% (=0,006); 10,15% (=0,197) 3,52% (=0,527).
 30 60
 120,68 /100 112,02 /100 .
 10,41% (=0,019) 10,21% (=0,123)
 4,24% (=0,331) 5,83%
 (=0,338)

1- , 2- 3-
 5,71% (=0,385); 5,88% (=0,404) 4,68% (=0,253)
 2,96%
 (=0,702); 3,45% (=0,540) 4,31% (=0,293)

30 60
 14,46
 15,52 ,
 4,37% (=0,476) 4,84%
 (=0,379), 2,05% (=0,720)
 2,44% (=0,639).

1 7
 10,83 10,25 ,
 4,67% (=0,270)
 5,36% (=0,354), 3,44%
 (=0,446) 3,74% (=0,526). 15, 30 60

10,39
 9,60 ,
 0,76% (=0,805) 1,03%
 (=0,862)
 4,32% (=0,443) 4,69% (=0,404).

1 2
 2,94 2,67 ,
 6,67% (=0,126) 6,64% (=0,263),
 3,16% (=0,493) 4,71% (=0,415). 30
 60
 3,86% (=0,501) (. 3). 3,58% (=0,261)

- 1.
- 2.
- 3.
- 4.

SUMMARY

EFFECTS OF ECHINACEA TINCTURE ON MORPHOGENESIS OF IMMUNE SYSTEM OF ORGANS OF IMMATURE RATS EXPOSED TO INHALATION OF EPIHLORHIDRIN

Voloshin V. N.

Lugansk State Medical University, Lugansk

It was investigated morphogenesis of the immune system - thymus and spleen at the immature white laboratory male rats after 60 days of inhalation exposure of ephlorgidrin at 10 mg/m³. In addition, it was studied the structure of these organs of animals exposed to combined action of Echinacea tincture and ephlorgidrin. It is shown that the influence of inhalation ephlorgidrin causes slowdown spleen and promotes more rapid involution of the thymus. Echinacea tincture application improves the growth of spleen and slows down involutive processes of the size of the thymus.

Key words: *thymus, spleen, ephlorgidrin, tincture of echinacea.*

1. (), - 2000. - 1. - 12.
2. () / . . . // . . . - 2001. - 7(39). - 18-37.
3. : . . . - 2003. - 37 . 03.00.11 « , » /, 2003. - 37 .
4. . . . : . . . , 2007. - 172 . // . . . ,
5. . . . - 2011. - 14, 3 (. . .) . - 25-27. // . . .
6. . . . - 2004. - 13, 1. - 28-37. . . . - // . . .
7. . . .) / . . . // . . . : (. . .) , 1993. - II. - 192-209.
8. . . . «Master of Morphology» / 9604, 19.03.2004.
9. . . . / . . . // . . . - 2003. - 9(2). - 427-428.
10. . . . / . . . // . . . - 2001. - 27. - 13-16.
11. Cesta M. F. Normal structure, function, and histology of mucosa-associated lymphoid tissue / M. F. Cesta // Toxicologic pathology. - 2006. - Vol. 34. - P. 599-608.
12. Cesta M. F. Normal structure, function, and histology of spleen / M. F. Cesta // Toxicologic pathology. - 2006. - Vol. 34. - P. 455-465.
13. Gage J. C. The toxicity of epichlorhydrin vapour / J. C. Gage // Br. J. Ind. Med. - 1959. - Vol. 16. - 11-14.
14. Maurer J. K. Morphometric assessment of thymic size variation in laboratory rabbits / J. K. Maurer, B. A. Gibbons, R. D. Bruce // Toxicologic Pathology. - 1990. - Vol. 18. - P. 407-411.
15. Mebius R. E. Structure and function of the spleen / R. E. Mebius, G. Kraal // Nat. Rev. Immunol. - 2005. - Vol. 5. - P. 606-616.
16. Megremis S. D. Spleen length in childhood with us: normal values based on age, sex, and somatometric parameters / S. D. Megremis, I. G. Vlachonikolis, A. M. Tsilimigaki // Radiology. - 2004. - Vol. 231. - P. 129-134.
17. Pearse G. Normal structure, function and histology of the thymus / G. Pearse // Toxicologic pathology. - 2006. - Vol. 34. - 504-514.
18. Rubio P. A. Tracheo-innominate artery fistula: successful surgical repair using a portion of the thymus as an arterial wrap / P. A. Rubio, E. M. Farrell, B. A. Alvarez // Vascular and endovascular surgery. - 1984. - Vol. 18. - P. 395-398.
19. Travlos G. S. Normal Structure, Function, and Histology of the Bone Marrow / G. S. Travlos // Toxicologic pathology. - 2006. - Vol. 34. - 548-565.
20. Xia X. Black carbon (BC) in urban and surrounding rural soils of Beijing, China: spatial distribution and relationship with polycyclic aromatic hydrocarbons (PAHs) / X. Xia, Y. Zhai, R. Wang et al. // Chemosphere. - 2011. - Vol. 82. - P. 223-228.

31 2011 .