

*Oryctolagus cuniculus*

(2007/2/26 2006/9/26 )

**Effect of Different Periods of Exposure to Passive Smoking on  
Internal Diameter and Thickness of Lung Arterioles  
in Rabbit *Oryctolagus cuniculus***

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**ABSTRACT**

In the present work, the effect of different periods of exposure to passive smoking on arterioles of rabbit lung were investigated. Results showed changes in internal diameter and wall thickness of arterioles when exposed to passive smoking at different periods. Decreasing in internal diameter and increasing in thickness of arterioles have been also demonstrated histologically and statistically.

.(1987 )

) :

:(

...

.(Sanner and Dyping, 1996)

.(2000 )

.(1976 )

( )

.(Watter and Israel, 1979)

( )

.(1987 )

.(2005 )

...

( )

*Oryctolagus cuniculus*

(1.4 - 1.2)

( 6)

<sup>3</sup> 1

75 × 35 × 35

(10)

( )

( )

(6 4 2)

(Humason, 1972) (Alcoholic Bouins Fluid)

<sup>3</sup> 1

(Hart's Stain)

6-5

(Luna, 1968)

(Galigher and Kozloff, 1964) Ocular Micrometer

visopan riechert optische werke AGA 171 Wein, Austria

.(2001 )

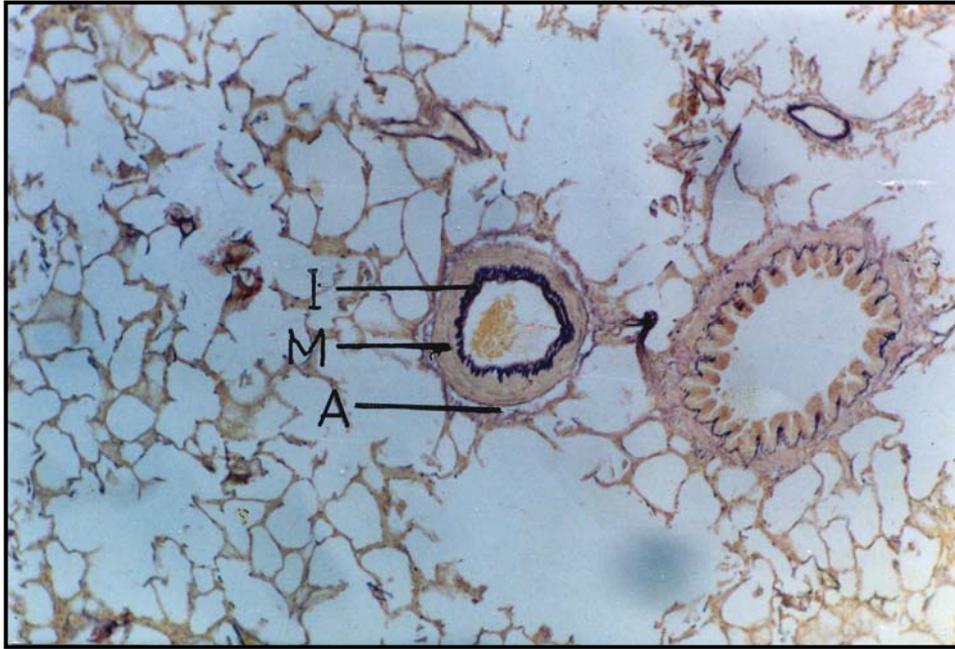
.(Binocular microscope, Olympus and Japan)

Factorial C.R.D

% 1

.(1980 )

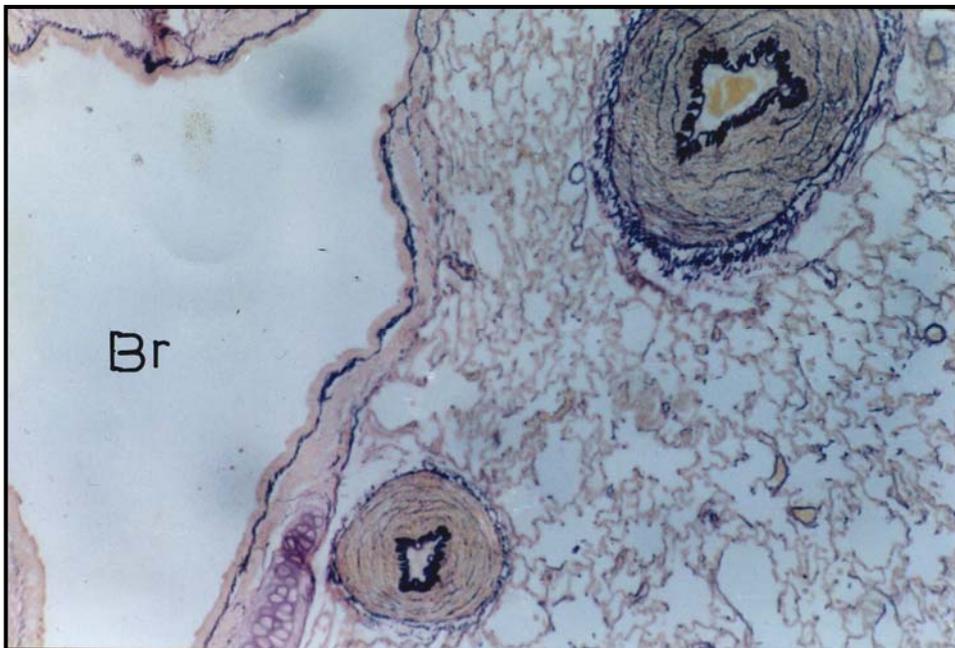




: 1

(M) Media, (I) Intima, (A) Adeventitia .

.(460x)



: 2

.(460 x)

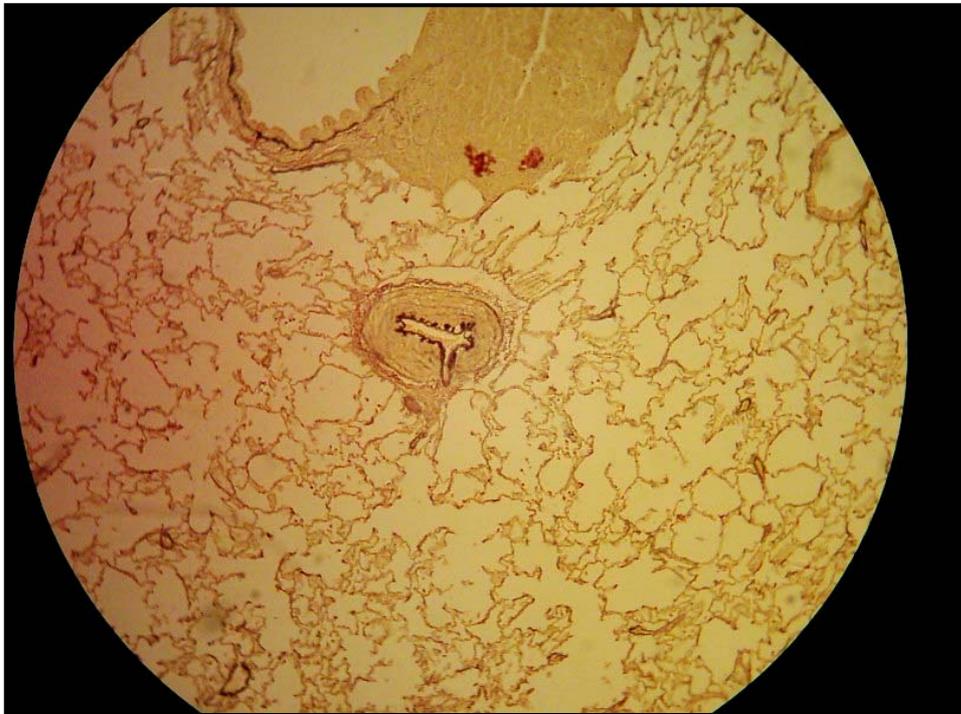
. Br .( ) ( 6)



.( 6)

: 3

.(460x)



( )

: 4

.(460 x)

.( 6)

...

:

(F.C.R.D)

(1)

( )

% 1

.ANOVA

: 1

	11	119906.66	10900.60	812.26 ***	2.33
A	3	292.89	97.63	7.27 **	4.13
B	2	115648.81	57824.40	4308.82 ***	4.98
AB	6	3964.96	615.82	45.88 **	3.12
error	60	13.42	0.22		
	71	119920.08			

.( 6 4 2 ) (A)

.( ) (B)

.( 6 ) (R)

(2)

46.49

69.20

78.50

(2)

41.26 34.97 29.21

6 4 2

(25.32)

: 2

.( )

/			
	78.50a	25.32d	129.23a
2	69.20b	29.21c	128.45b
4	59.01c	34.97b	128.82ab
6	46.49d	41.26a	128.58ab

.% 1

\*

(Intimal –

(IMT)

% 50

Medial Thickness)

(IMT)

17.1 μm

5.9 μm

(IMT)

.(Howard et al., 1998)

(IMT)

.(Kawachi et al., 1997)

....

.(Stengel et al., 2000)

(1997) Deborah

(1997) Deborah

...

(6 4 2)

(6 4 2)

(1993) Zho

(Collagen)

(myointimal)

(Stevens and Lowe, 2005; Ross et al., 1995)

(2005)

(Collagen Fibers)

(Fibroelastasis)

(Elastic Fibers)

(IMT)

.1976

.2001

*.Oryctolagus cuniculus*

. 22 .

.2005

83-77 .7 16

.1980

. 488 .

.2000

.131-128

.1987

- Bergman, R.A., Afifi, A.K. and Heidger, P.M., 1996. Histology. W.B. Saunders Company, Philadelphia, U.S.A. 38 p.
- Deborah, J., 1997. Passive Smoking Double Risk of Heart Disease, *BMJ*. 314 : 1569 p.
- Galigher, A.E. and Kazloff, E.A., 1964. Essential of Practical Microtechnique.: Lead and Fibiger. Philadelphia, U.S.A.
- Howard, W., Wagenknecht, L.E. and Burke, G.L., 1998. Cigarette Smoking and Progression of Atherosclerosis, the Atherosclerosis Risk Communities (ARIC) Study. *JAMA*, Vol. 279, pp.119-124.
- Humason, L., 1972. Animal Tissue Technique, 3rd ed. Sanfrancisco. U.S.A.
- Kawachi, I., Coldlitz, G.A. and Spizer, F.E., 1997. Approspective Study of Passive Smoking and Coronary Disease. *Circulation*, Vol. 28, pp.2374-2379.
- Luna, L.G., 1968. Manual of Histological Staining Methods 3rd ed. McGraw. Hill Book Company. U.S.A., 79 p.
- Ross, M.H., Kaye, G.I. and Pawlina, W., 2003. Histology. 4th ed. LWW. Company, Philadelphia, U.S.A., 337 p.
- Sanner, T. and Dyping, E., 1996. Health Injury from Passive Smoking. *Tidsskr Nor. Loegeforen*, Vol. 116, pp.617-620.
- Stengel, B., Couchoud, C., Cenee, S. and Hemon, D., 2000. Age, Blood Pressure and Smoking Effects on Chronic Renal Failure in Primary Glomerulor Nephropathies. *Kidey Int.*, Vol. 57, No. 6, pp.2519-26.
- Stevens, A. and Lowe, J., 2005. Human Histology. 3rd edd. Mosby, Philadelphia, U.S.A. 150 p.
- Walter, I.B. and Israel, M.S., 1979. General Pathology. 5th edd., Churchill Livingstone and London U.K.
- Zho, B.O., 1993. Passive Smoking Increases Experimental Atherosclerosis in Cholesterol Fed Rabbits. *J. Am. Coll. Cardiol.*, Vol. 21, 225 p.