

(MRHO/IR/75/ER)

mmahmoodi@sina.tums.ac.ir :

|| : || :

(Experimental)

Balb/c

(% )

l ( )

(MRHO/IR/75/ER)

( ) ( )

Anova

LSD

(p> / )

(p< / )

Balb/c

Balb/c

(MRSA )  
 ( )  
 ( )  
 ( ) ( )  
 ( )  
 ( )  
 ( )  
 Fernandes 1995; Silici and Kutluca )  
 .(2005 )  
 Kettel 1995  
 Sforcin et al. ) .(Brown and Franklin 1987  
 .(2000; Fernandes 1995 (TDR)  
 .(WHO 2001)  
 Sforcin 2002; Mustonen 2001; Suchy 1978; )  
 Strazyk 1977; Savoia 1998; Klinghardt /  
 .(2005; Grange and Davey 1990 %  
 .(Scifo 2004; Hunter 1995) .(WHO 2006)  
 -  
 Bratter 1999; Marquele 2005 ; Ahn )  
 .(2004

Balb/c

In vitro

Balb/c

L.major

(Experimental)

Balb/c

( )

$$N = \gamma(Z_{1-\alpha/\gamma} + Z_{1-\beta})^2 \sigma^2 / (\mu\lambda - \mu\gamma)^2$$

Balb/c

MRHO/IR/75/ER

%

%

)

.(

:

:

( )

( )

:

%

)

.(

( / mg/kg)

( ) D) S=D+d/2  
 % .( S d  
 %  
 .( )  
 Paried (MRHO/IR/75/ER) L.major  
 In vitro  
 T- test :  
 .(p< / )  
 / ( )  
 /  
 (Schefeh) Anova  
 .(p> / )  
 )  
 ( )  
 ( )  
 .(p< / )  
 )  
 .(p< / )  
 / .(p< / )

Killer cell

(Sforcin et al. 1995)

/ /

(Hunter 2001)

Mustonen) In vitro

(2001

(Klinghardt 2005)

(EEP)

Suchy 1978; Staryzyk )

/

)

(1977

(Staryzyk 1977)

(

In vivo

(Fournot 1992)

)

(Koc 2005)(

( )

In vitro

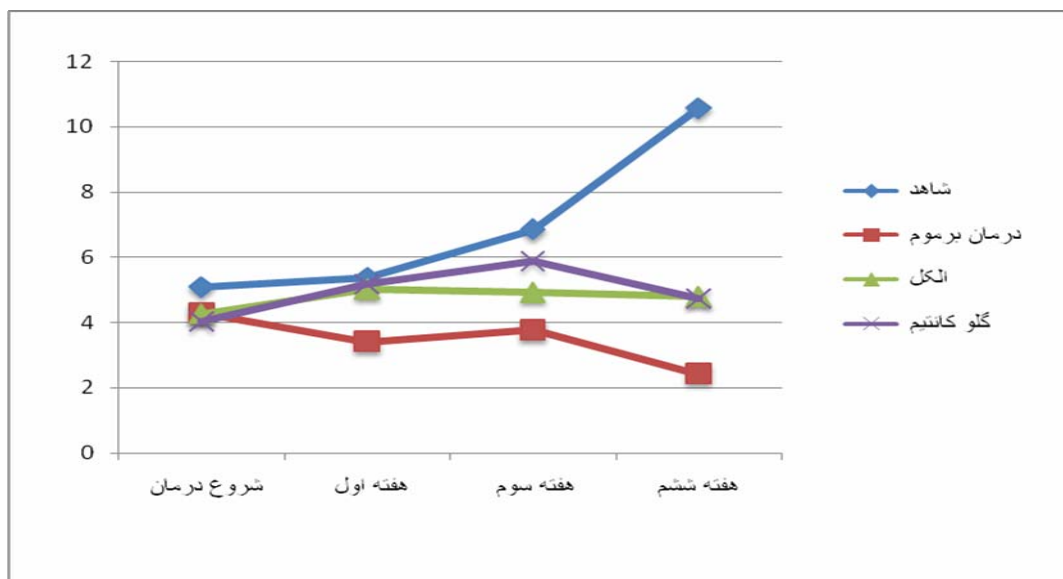
(Savoia 1998)

( )

(%) )

Balb/c

<i>P</i> value	$\bar{X} \pm SE$	$\bar{X} \pm SE$
< /	/ $\pm$ /	/ $\pm$ /
/	/ $\pm$ /	/ $\pm$ /
/	/ $\pm$ /	/ $\pm$ /
< /	/ $\pm$ /	/ $\pm$ /



### Schefe

Ahn, MR., 2004. Antioxidant activity and constituents of propolis collected in various areas of Korea. *J Agric Food Chem.* Dec 1; 52(24), pp. 7286-92.

- pharmaceutical formulations.] Pharm Biomed Anal May 19.
- Mustonen, AM., 2001. Killing of Amastigotes of leishmania donovani and release of nitric oxide and tumor necrosis factor a in macrophages in-vitro. *Zeitschrift fur naturforschung*. **56**, pp. 437.
- Savoia, D., 1998. In-vitro activity of different substances on the growth of Leishmania major. The Journal of Eukaryotic Microbiology .Italian Section Society Of Protozoologist. *19th Annual Meeting*, pp. 27-28.
- Scifo, C., 2004. Resveratrol and Propolis as necrosis or apoptosis inducers in human prostate carcinoma cells. *Oncol Res*. **14**(9), pp. 415-26.
- Sforcin, JM., 2002. Absence of seasonal effect on the immunomodulatory action of brazilian propolis on natural killer activity. *J. Venom. Anim. Toxins* vol.8 n. Botucatu.
- Sforcin JM, Fernandes A Jr, Lopes CA, Bankova V, Funari SR ,2000. Seasonal effect on Brazilian propolis antibacterial activity. *J Ethnopharmacol*; **73**(1-2):243-9.
- Silici, S. and Kutluca, S., 2005. Chemical composition and antibacterial activity of propolis collected by three different races of honeybees in the same region. *J Ethnopharmacol*. **13**; **99**(1), pp. 69-73.
- Starzyk, J., 1977. Biological properties and clinical application of propolis .II. Studies on the antiprotozoan activity of ethanol extract of propolis. *Arzneimittelforschung*, **27**(6), pp. 1198-9.
- Suchy, H., 1978. Efficiency of propolis in the treatment of trichomonas vaginalis invitro and invivo. The third international symposium on apitherapy porotoroz, Yugoslavia, pp. 160-61, French, pp.161-62, German, pp. 16.
- WHO., 1993. Report of global surveillance of epidemic – prove infection disease leishmaniasis WHO/ Publication/CSR-LSK 2006.
- WHO., 2001. Tropical Disease Research. [www.who.int/dr/cd-publications](http://www.who.int/dr/cd-publications).
- Bratter, C., 1999. Prophylactic effectiveness of propolis for immunostimulation: a clinical pilot study. *Forsch komplementarmed*. **6**(5), pp. 256-260.
- Brown, H.W. and Franklin, A.N., 1987. Basic clinical parasitology. *Appleton - Century- crofts USA*, pp. 67-76 & 273-274.
- Fernandes, Jr.A., 1995. Invitro activity of propolis against bacterial and yeast pathogens isolated from human infections. *J. Venom. Anim. Toxins*, **1**(2), Botucatu.
- Fournot, A., 1992. Effect of natural naphthoquinones in Balb/c mice infected with Leishmania amazonensis and Leishmania venezulensis, *Trop. Med. Parasitol*, **43**(4), pp. 219-222.
- Grange, JM., and Davey, RW., 1990. Antibacterial properties of propolis (bee glue). *Journal of the Royal Society of Medicine*. **83**, pp. 85-9.
- Hunter, CA., 1995. Transforming growth factor-  $\beta$  inhibits interleukin -12-induced production of interferon -gamma by natural killer cells: a role for transforming growth factor- $\beta$  in the regulation of T cell-independent resistance to Toxoplasma gondii. *Eur. J. Immunol*, **25**, pp. 994-1000.
- Kettel, DS., 1995. Medical and veterinary Entomology - CAB International U.K. pp.177-191 & 627-637.
- Klinghardt K. ,2005. Lyme Disease :A look beyond antibiotics. *Explor, infection diseases*, **14**(2).
- Koc, AN., 2005. Comparison of in vitro activities of antifungal drugs and ethanolic extract of propolis against Trichophyton rubrum and T .mentagrophytes by using a micro dilution assay. *Mycoses*. **48**(3), pp. 205-10.
- Marquele, FD., 2005. Assessment of the antioxidant activities of Brazilian extracts of propolis alone and in topical