



The Effect of Barometric Pressure on Rats Sex Hormone Binding Globulins

Fayig Elmigdad^{*}

Department of Biochemistry, Qassim University, KSA

Editorial

In our previous studies had shown that Jordan Valley (JV), located at about 280 meters to 400 meters below sea level had a profound effect on blood levels of testosterone [1-4]. These studies were on humans. Another study using rats had also suggested similar effect on serum testosterone [5]. Unlike human studies, in these experiments utilizing rats, environmental factors such as temperature and humidity as well as food were controlled. The barometric pressure of the JV was not controlled. In regards to androgen production, Santner et al. [6] suggested that environment is responsible for the differences between Caucasian and Chinese men. Our data are in line with these findings in man.

Data on the effect of barometric pressure on rats Sex Hormone Binding Globulins (SHBG) is still in question. As shown in our previous studies, SHBG levels in male rats at the JV were lower than those in male animals growing at above sea level in Irbid City (IC), where rats had gained more body weight (392.13 ± 11.667 g vs. 349.63 ± 11.262 g) [1-4]. Clearly, data from serum determination of SHBG suggested different conclusion with rats growing in the JV have higher serum levels of SHBG compared to those growing in IC. However, these data are not likely conclusive, since there was a profound loss of SHBG during preparation of serum from trunk blood of experimental animals. In addition, the loss of SHBG during this process of serum preparation seems to influence more the female rats than the males.

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*Correspondence:

Fayig Elmigdad, Department of Biochemistry, Molecular Genetics and Medical Education, Unaizah College of Medicine, Qassim University, PO Box 991 Unaizah, Qassim, 51911, KSA, Tel: 966163640424;

E-mail: elmigdad@gmail.com

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