

*International Conference on***PHARMACEUTICAL AND BIOMEDICAL ENGINEERING***October 16-17, 2017 Osaka, Japan***The effect of *Toxoplasma gondii* on DNA sequence alteration among breast cancer patients****Nazar Sh Mohammed**

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**T**oxoplasmosis is one of a risk parasite that invades all systems of human being and may causes modulation in the host cells. 40 tissues and serum samples were collected from patients complaining from cancer with *Toxoplasma gondii* infection and same serum samples were taken as a healthy control during the period from 1<sup>st</sup> September 2016 to 1<sup>st</sup> May 2017, in the Medical City Hospital-Unit of tumors/Iraq-Baghdad. Each sample was put in clean container and stored at -20°C till use. Ant-TOXO IgG and IgM antibodies levels were measured by ELISA technique. The results showed no significant difference between patients ( $25.845 \pm 7.971$ ) in comparison with the control group ( $29.03 \pm 10.001$ ), ( $P > 0.05$ ) and there was a significant difference between the rural-29 (72.5%) compared to the control group-20 (50%) and urban-11 (27.5%) in comparison to the healthy group-20 (50%) according to residency ( $P < 0.05$ ). While there was a highly significant difference between cancer patients which was positive-11 (27.5%) compared to control group 0 (0%) and negative 4 (100%) compared with control group-29 (72.5%), ( $P < 0.01$ ). Also, the findings showed that a highly significant difference in the level between anti-toxoplasma antibody IgM of patients ( $0.417 \pm 0.184$ ) and the control group ( $1.346 \pm 0.647$ ), ( $P < 0.01$ ) and there was a highly significant difference between anti-toxoplasma antibody IgG level of patients ( $0.425 \pm 0.139$ ) and the control group ( $1.357 \pm 0.638$ ), ( $P < 0.01$ ). PCR reaction was applied for determination of (BRCA1, ERBB2) genes. 2% Agarose gel was prepared in 1x TAE (Tris-Acetate-EDTANA<sub>2</sub>), Buffer (pH 8.3) and samples were run along with a 100 bp DNA marker (Thermo Fisher, Waltham, MA, USA). Electrophoresis was carried out at a fixed current of 100 mA for 40 min. Specific bands of amplified fragments of genes (BRCA1 in 490 bp and ERBB2 in 520 bp) were used. In the results, it was also detected, the mutation in 11<sup>th</sup> position of BRCA1 gene sequence of 10 samples of cancer patients infected with toxoplasmosis.

## References

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**Biography**

Nazar Sh Mohammed has his expertise in the field of advanced scientific research in the molecular biology of parasites and its effect on the human body and the determination of its metabolic potential and pathways by determining the genetic sequence of these parasites.

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