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Molecular Association ofangiotensin type II receptorgene (AT2R) with Diabetic type2 patients in women in Iraq

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Abstract: Objectives: This study aimed to investigate the molecular association of angiotensin type II receptor gene (AT2R)with diabetic disease in women (because AT2R gene is located on the chromosome X at the locus Xq23–26, therefore only women patients were taken in this study[5]).

Methods: Study include patient samples consisted of 70 patients, while the control group consisted of 40 healthy blood donors.Blood that collected in EDTA tubes, stored in - 40˚C (deep freeze) in order to be used later in DNA extraction for genomic analysis. It was estimated the molecular association of AT2R gene with diabetic patients using PCR-RFLP technique. The AT2R polymorphism was genotyped using polymerase chain reaction technique (PCR) and RFLP, and the PCR product with 120-bp.

ResultsThe results show the genotype of AT2Rgene in the two study groups control and patients (the control were 40 samples while the patients were 70 samples), AA homogenotype represented (120bp), AT heterogenotyperepresented (120bp, 91bp,and 29bp) and TT homogenotype represented (19bp,and 29bp)(6)**.**For patient groups the allele frequency of(A) variant allele was 0.41 , but(T) allele variant frequency was 0.59 according to Hardy-Wienberg equation. While for control groups the allele frequency of (A) variant allele was 0.4 , but (T) allele variant frequency was 0.6 according to Hardy- Wienberg equation.Results show that the *P-value* of the AA, At, and TT genotype of AT2Rgene in the two study groups control and patients has no significant value ($p \leq 0.05$).

Conclusion:Results indicate that there is no significant association btween the AT2R gene and diabetes.

Key words: Molecular Association, angiotensin type II receptor gene (AT2R), Diabetic type2.

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