

ANNUAL EPIGENETICS CONFERENCE

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International Conference on

November 28-29, 2018 | Tokyo, Japan

MECHATRONICS, AUTOMATION AND SYSTEMS ENGINEERING

A genomic study of type 2 diabetics attending the outpatient clinics of Egyptian National Institute of Diabetes and Endocrinology

Mohsen M Khalid

National Institute of Diabetes and Endocrinology, Egypt

In complex diseases like type 2 diabetes, obesity and cardiovascular diseases, multiple genetic and environmental factors as well as the interaction between these factors determine the phenotype. Although environmental influences, such as high-caloric fat- and carbohydrate-enriched diets and a sedentary lifestyle with markedly reduced physical activity, certainly accelerate disease development in those with genetic predisposition, it is of great clinical importance to explain the genetic variants that increase the risk of diseases like type 2 diabetes. A panel of established variant single nucleotide polymorphism (SNPs) in patients diagnosed with type 2 diabetes mellitus has been evaluated in many studies compared to a non-diabetic control population. These results were used as a basis of comparison to analyze risk-conferring genotypes in type 2 diabetes mellitus to demonstrate type 2 diabetes risk associated factors. The

results of this study provide a better understanding of the genetic epidemiology of type 2 diabetes in Egypt. Identifying genetic markers of type 2 diabetes will help to reduce disease onset and may ultimately adjust future risk factors through the early detection and healthy life style modification. Our study made an attempt to study the most common single nucleotide polymorphism (SNPs) genotypes associated with type 2 diabetic patients attending the outpatient clinic of Egyptian National Institute of Diabetes and Endocrinology. There was a significant increase in serum levels of FBS, HA1c, TG and LDL in patients group compared to normal healthy controls (P -value < 0.05). While there was no significant difference between patients group and normal healthy controls regarding bilirubin, ALT, AST, creatinine and potassium (P -value > 0.05).

m2khalid@hotmail.com