

Accepted Manuscript

Title: Association of polymorphisms of Peroxisome Proliferator Activated Receptors in early and late onset of Type 2 Diabetes Mellitus

Authors: Resal Raj, Jasvinder Singh Bhatti, Sanjay Kumar Bhadada, Pramod W. Ramteke



PII: S1871-4021(16)30296-X
DOI: <http://dx.doi.org/doi:10.1016/j.dsx.2017.03.004>
Reference: DSX 710

To appear in: *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*

Please cite this article as: Raj Resal, Bhatti Jasvinder Singh, Bhadada Sanjay Kumar, Ramteke Pramod W. Association of polymorphisms of Peroxisome Proliferator Activated Receptors in early and late onset of Type 2 Diabetes Mellitus. *Diabetes and Metabolic Syndrome: Clinical Research and Reviews* <http://dx.doi.org/10.1016/j.dsx.2017.03.004>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Association of polymorphisms of Peroxisome Proliferator Activated Receptors in early and late onset of Type 2 Diabetes Mellitus

Resal Raj¹, Jasvinder Singh Bhatti², Sanjay Kumar Bhadada³ Pramod W. Ramteke⁴

Institutions

¹Department of Computational Biology & Bioinformatics, Sam Higginbottom Institute of Agriculture, Technology and Sciences, Allahabad.

²Department of Biotechnology & Bioinformatics, SGGS College, Sector L26 Chandigarh.

³Department of Endocrinology, PGIMER, Chandigarh.

⁴Department of Biological Sciences, Sam Higginbottom Institute of Agriculture, Technology and Sciences, Deemed to be University, Allahabad.

Corresponding Author

Dr. Resal Raj

Department of Computational Biology & Bioinformatics,

Higginbottom Institute of Agriculture, Technology and Sciences, Allahabad, UP

Email: resalraj@yahoo.com

Phone: +919915804438

Abstract

Objective: Genetic variation of disease susceptible genes is different in different ethnic groups and there is an evidence of association of polymorphisms of Peroxisome Proliferator Activated Receptors (PPARs) in Type 2 Diabetes Mellitus (T2DM). This research analyses the association of PPARs in early and late onset of T2DM in North Indian Population (NIP). **Methods:** Total of 703 subjects were recruited from north of India and subjects were further divided into subjects of early onset (less than 25 years of onset, 26 T2DM and 26 controls) and late onset (more than 25 years of onset, 326 T2DM and 325 controls). **Result:** The onset of T2DM begins from 15 years and continues further to maximum T2DM subjects to the age of 50 (76% of T2DM). High BMI and WHR, high blood pressure leading to early onset of hypertension, early mortality due to T2DM (7% of T2DM is above 75 years and 3% of T2DM has 20 years duration of onset) and high hyperglycemic NIP were the few outcomes of this research. **Conclusion—**There is a strong association of PPAR γ , PPAR α and PPAR δ genes on the susceptibility of T2DM in late onset but not with the early onset of T2DM subjects in North Indian Population. Dual association of PPAR γ was observed with its genotype G/G (Ala/Ala) favoring protection against T2DM and genotype C/C (Pro/Pro) favoring susceptibility to T2DM. Association of intron7 polymorphism of PPAR α and +T294C polymorphism of PPAR δ on the susceptibility to T2DM requires further analysis.

Key words: Genotype, Susceptible genes, PPARs, Early onset,

Download English Version:

<https://daneshyari.com/en/article/8659053>

Download Persian Version:

<https://daneshyari.com/article/8659053>

[Daneshyari.com](https://daneshyari.com)