Possible association of β2- and β3-adrenergic receptor gene polymorphisms with susceptibility to breast cancer

ABSTRACT

The risk of breast cancer may be linked to polymorphisms in the ADRB2 and ADRP3 genes; further studies with larger samples and/or in diverse ethnic groups are needed to explore this possibility.

INTRODUCTION

Context: Familial and epidemiological studies have shown that diabetic (Diabetic) nephropathy is an "important" genetic factor in the development of diabetes, with apoE being found to be a plasma protein involved in lipoprotein metabolism. Recently, it has been suggested that the APOE gene, which is polymorphic, may be a risk factor for micro- and macrovascular complications in diabetic patients. The presence of both lower cholesterol and higher triglyceride levels in individuals with apoE2 is linked to their elevated plasma cholesterol levels, which is also associated with having a higher number of fatty acids than those with high TG levels. There is an increased incidence of cardiovascular disease and Alzheimer's disease. Apolipoprotein E polymorphism may influence the metabolism of lipolipids in diabetic patients. A number of recent studies have indicated that this polymorphism may be linked to a genetic predisposition for diabetic nephropathy. As such, APOE is now considered an important candidate gene for microvascular complications in Type I diabetes patients. The objective of this research was to determine the role of APOE gene polymorphism in the development of diabetic nephropathy and retinopathy in Type I diabetes patients.

CONCLUSION

Findings This report describes the rapid identification of RAR agonists with new structural properties, by virtue of a powerful virtual ligand screening approach and research strategy whereby no existing 'ligans' are considered. Here, we present one of the molecules as a suitable foundation for developing novel receptor-activated (RAR) ligands with specificity and toxicity profiles that could be useful in cancer treatment.