



Simple Genetic Test for Predicting Major Depression in Women



DESCRIPTION

The lifetime frequency of major depression is twice as high in women as in men. Strong evidence suggests a significant genetic contribution to major depression in women. Many symptoms of major depression are consistent with hyperactivity of the cholinergic muscarinic receptors, which mediate critical pathways in the central nervous system, including REM sleep and stress response. The presence of a single nucleotide (T1890) in the gene encoding Cholinergic Muscarinic Receptor 2 (CHRM2) is linked to CHMR2 hyperactivity. Women with this version of the CHRM2 gene are at an increased risk of developing major depression.

This technology provides diagnostic screening methods for determining risk of developing major depression in women focused on the CHRM2 genotype. Compatible analysis techniques for this diagnostic approach include PCR and direct DNA sequencing, among others. This powerfully predictive tool allows for early detection of major depression, thus enabling prevention and efficacious treatment of this debilitating disease.

KEY ASPECTS

- Simple analysis of a CHRM2 gene in patient's DNA can predict risk for developing major depression
- Analysis is compatible with common genetic amplification techniques, including PCR
- This issued patent covers diagnostic kits for genetic analysis of CHRM2 gene

INTELLECTUAL PROPERTY

Title	US Patent Number	Issued
Association of the muscarinic cholinergic 2 receptor (CHRM2) gene with major depression in women	6,743,589	6/1/2004

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