Box 1

Translocation of the A3243G gene associated with maternally inherited diabetes and deafness (MIDD)

Mitochondria differ from other organelles in that they carry their own circular DNA.[2] Mutations in mitochondrial DNA (mtDNA) affect cells that are most metabolically active, such as: the pancreas, cochlea, and in other cases, the retina, muscle fibres, kidneys and brain.[2] These mutations can result in a number of conditions including: diabetes, deafness, macular pattern dystrophy and renal failure.[1]

One such mutation, associated with a translocation of the A3243G gene, first described in 1992[3] is more commonly known as maternally inherited diabetes and deafness (MIDD).