



## The Genetic Base for Drug Addiction

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### Abstract:

**Objective:** There are many evidences about relationship between eating behavior and drug addiction. A number of susceptibility loci that point to shared higher order genetic pathways underling addiction were found in genetic studies. This study assumed that a genome-wide association study (GWAS) of food addiction would produce important enrichment in genes and pathways related to addiction.

**Methods:** This study done among 314 women of European ancestry, by using a GWAS of food addiction, which is determined by the modified Yale Food Addiction Scale (mYFAS). Results for enrichment of single nucleotide polymorphisms (SNPs) (n 5 44), genes (n 5 238), and pathways (n 5 11) involved in drug addiction were tested.

**Results:** Two loci met GW-significance ( $P < 2.5 \times 10^{-8}$ ) with no obvious roles in eating behavior, they are mapping to 17q21.31 and 11q13.4. GW results were significantly enriched for gene members of the MAPK signaling pathway ( $P = 0.02$ ). After adjustment for multiple testing, candidate SNP or gene for drug addiction was not linked with food addiction.

**Conclusions:** limited support was delivered for shared genetic underpinnings of drug addiction and food addiction, although the GWAS of mYFAS, need further investigation and follow up.

**Keywords:** gene, food, addiction



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### Publication of speakers:

1. Azaddin, Salem & Khalifa, Azaddin. (2001). Towards an Islamic Foundation of Strategic Business Management.