Association between the *SNAP-25* gene and attention in a twin sample

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**Introduction**

The synaptosomal associated protein of 25 kD (*SNAP-25*) gene, located on chromosome 20p12-20p11.2, has been associated with ADHD in clinical samples.

*SNAP-25* is differentially expressed in the brain and is during development involved in synaptic plasticity, dendrite formation and axonal growth.

In this study we tested for an association with attention (problems) in a normal population sample.

**Results**

We genotyped twelve tagging Single Nucleotide Polymorphisms (SNPs), that cover the *SNAP-25* gene.

Using a family based association test, one SNP (SNP rs363050) showed a significant association with Attention Deficit scores on the SWAN (p = 0.017), and two SNPs rs362552, rs362602 showed a trend for association (p < 0.10).

**Method**

From all individuals scores on the Strength and Weakness of ADHD symptoms and Normal behavior scale (SWAN) were available.

The SWAN contains two scales, Hyperactivity/Impulsivity and Attention Deficit, which can be rated on a continuum, ranging from severe attention problems to excellent attention skills.

Subjects were 255 subjects (aged 8-14) from 137 families.

**Conclusion**

We found a significant association between the *SNAP-25* gene and attention and attention problems in an normal population sample. The results of this study fit in a range of positive associations between the *SNAP-25* gene and attention problems that have been reported lately. However, replication in a larger sample is needed.

**Figure 1:** 12 Tagging SNPs of the *SNAP-25* gene

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