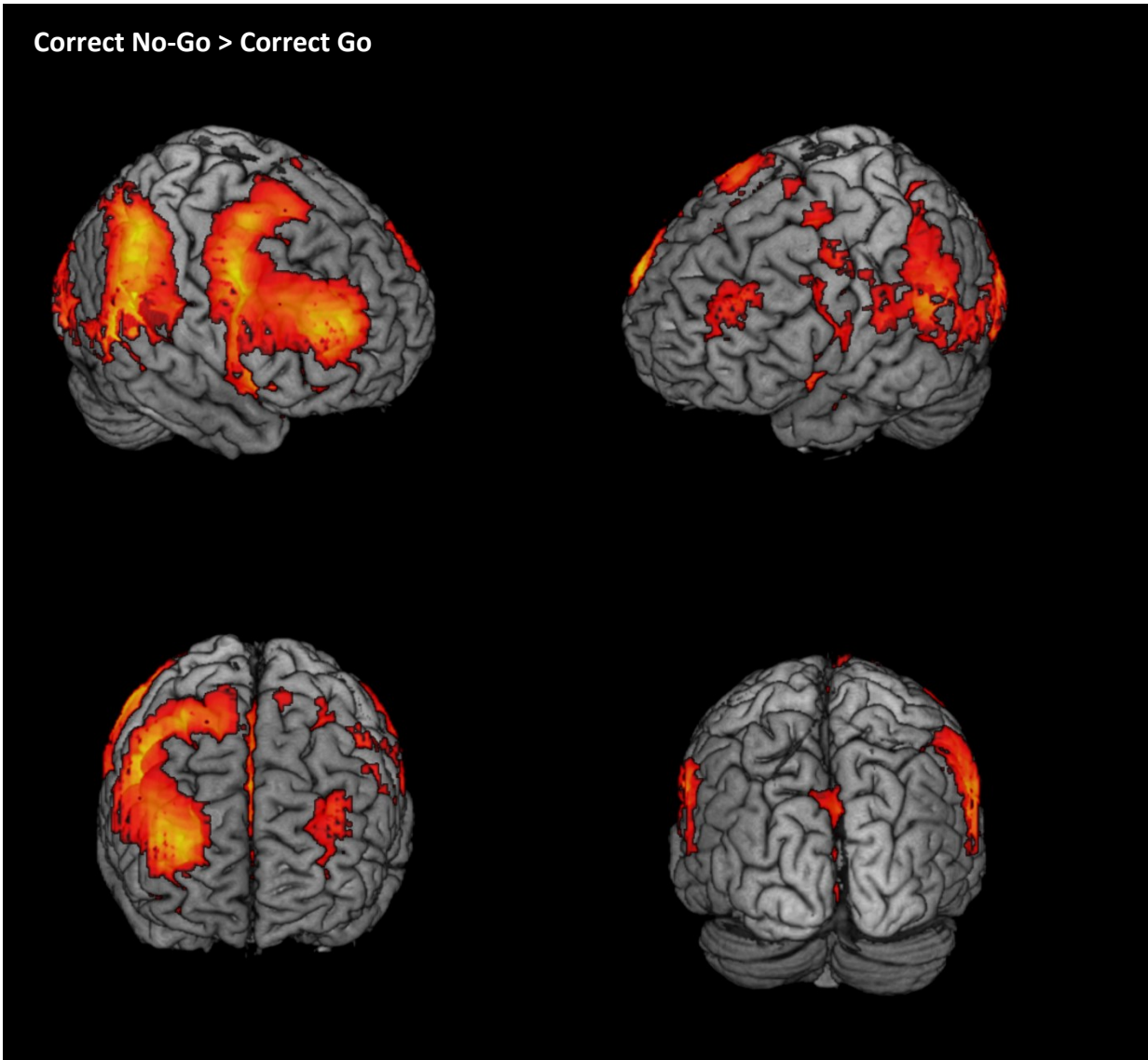


**Methylphenidate Effects on Brain Activity as a Function of *SLC6A3* Genotype and Striatal Dopamine Transporter Availability**

**Anna-Maria Kasparbauer, Dan Rujescu, Michael Riedel, Oliver Pogarell, Anna Costa, Thomas Meindl, Christian la Fougère, Ulrich Ettinger**

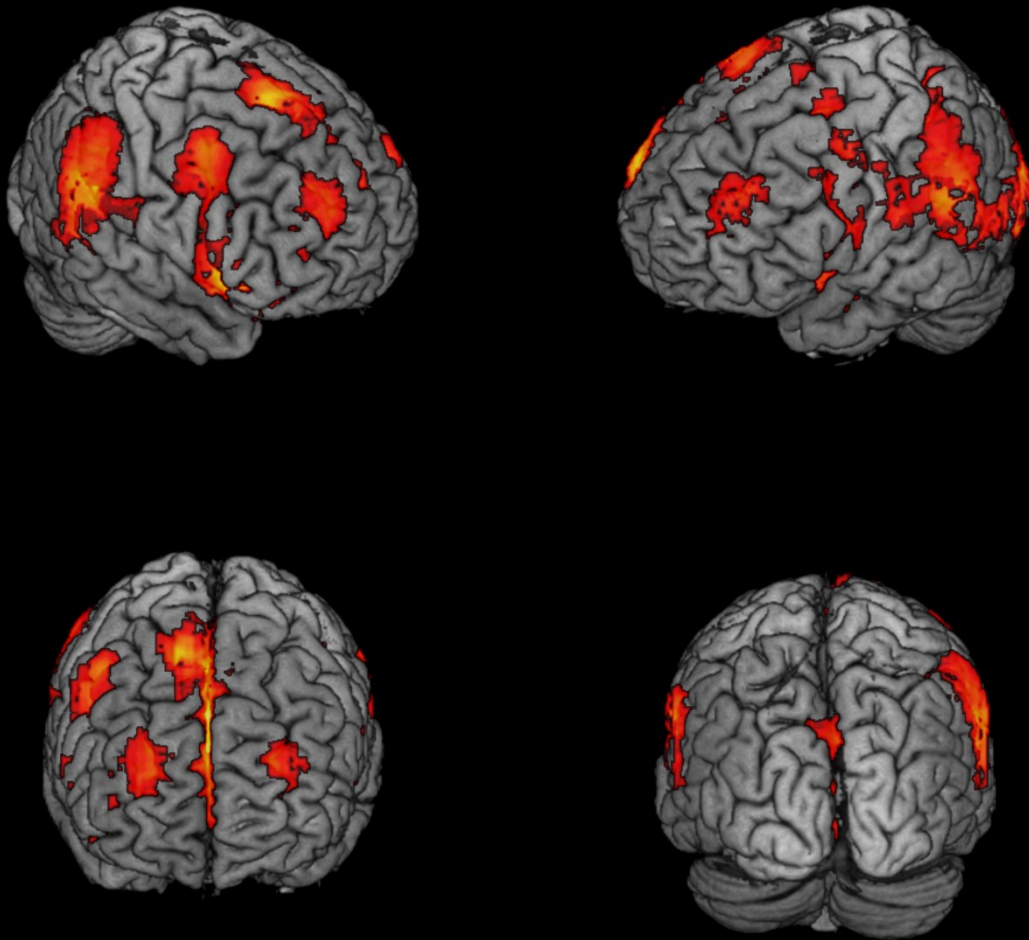
**Supplementary Material**

Correct No-Go > Correct Go



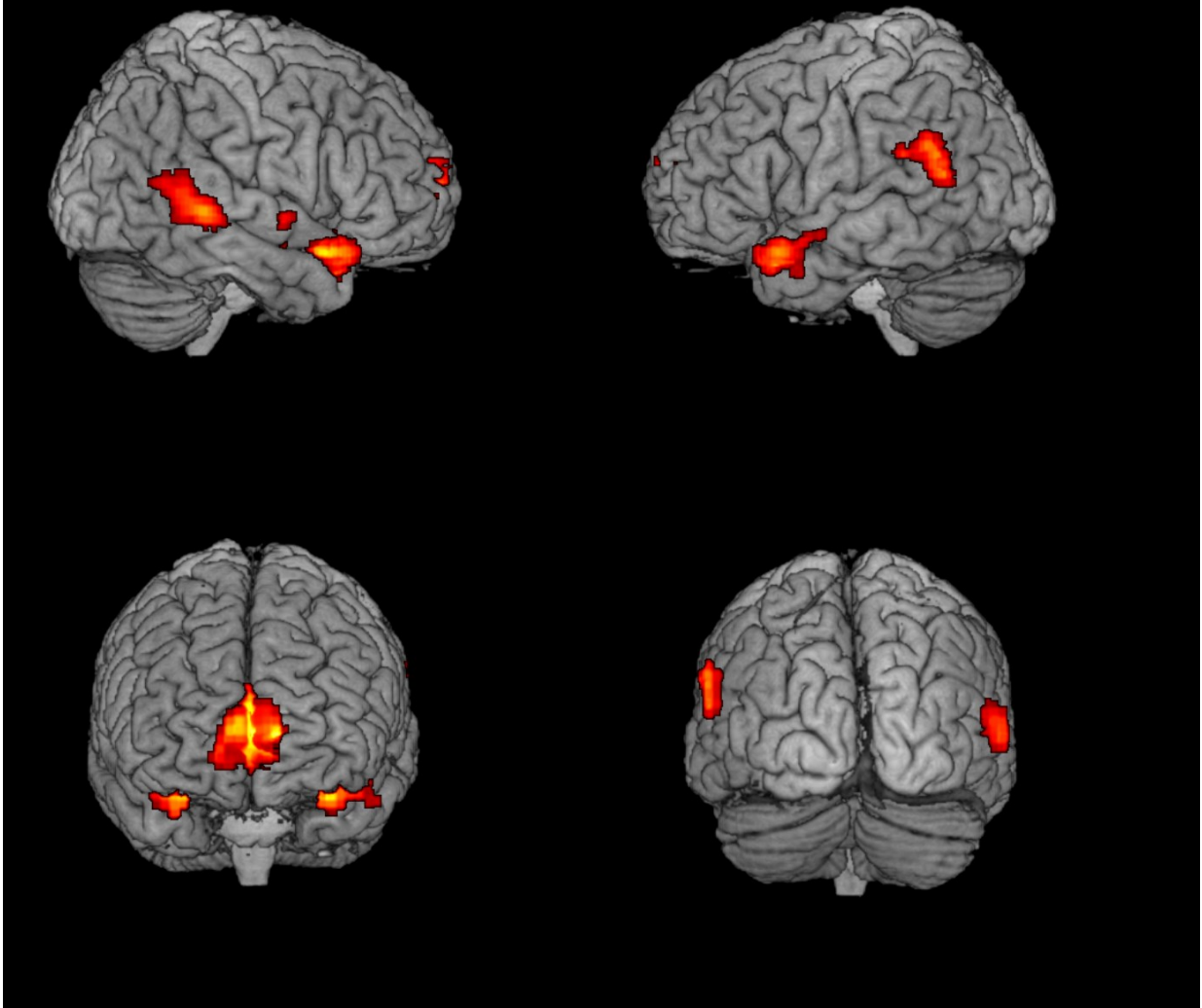
**Supplementary Figure 1.** Activation in the contrast correct no-go > correct go ( $P < 0.05$ , FWE); cf. Costa et al. 2013 Figure 1A.

**Incorrect No-Go > Correct Go**

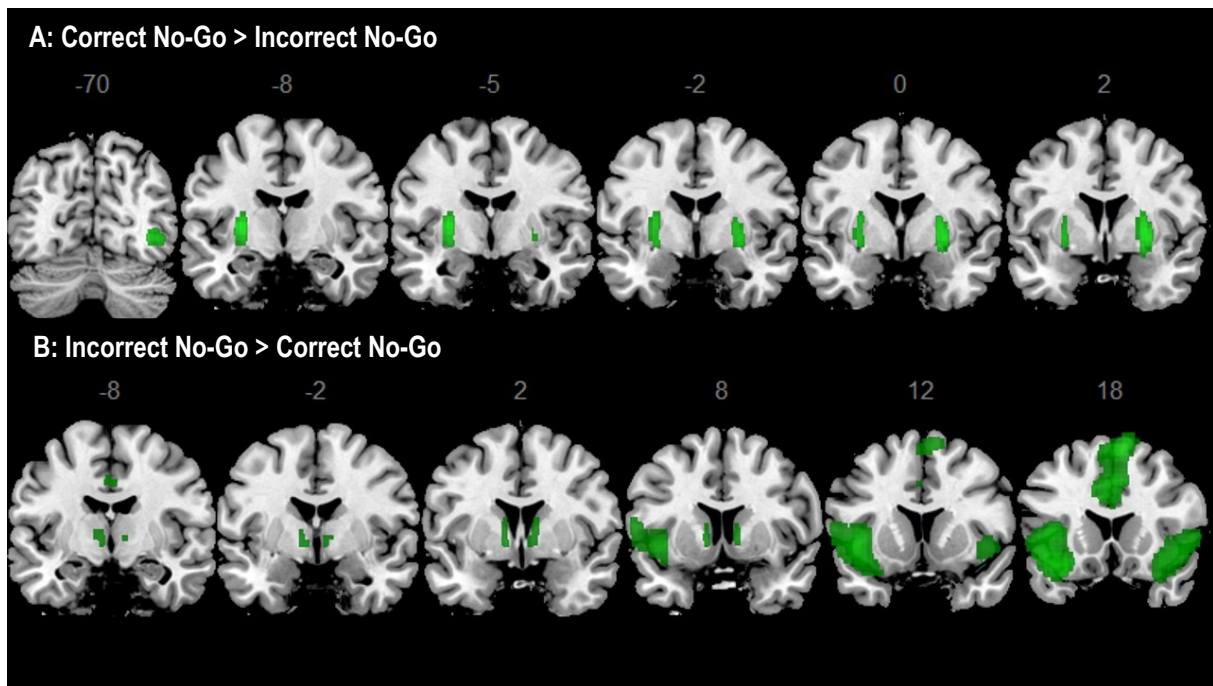


**Supplementary Figure 2.** Activation in the contrast incorrect no-go > correct go ( $P < 0.05$ , FWE); cf. Costa et al. 2013 Figure 1B.

Correct No-Go > Correct Odd

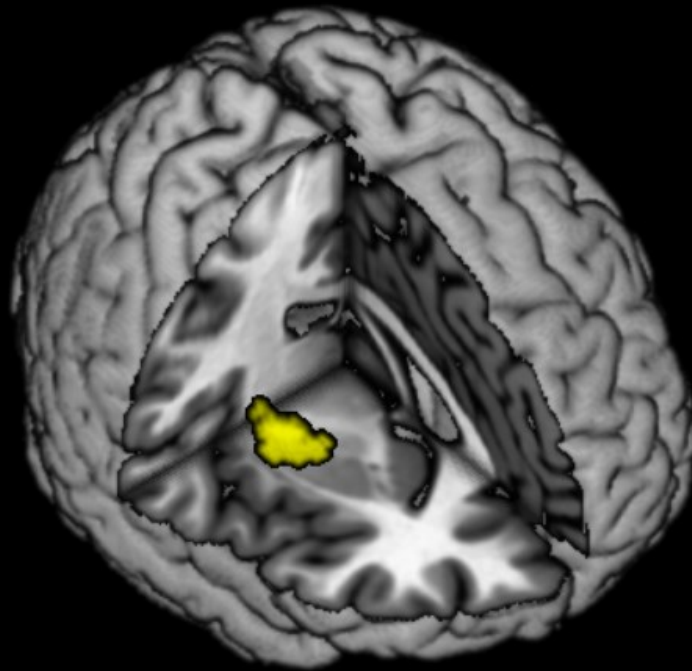


**Supplementary Figure 3.** Activation in the contrast correct no-go > correct odd (FWE ( $p < 0.05$ ) correction at cluster extent and peak voxel threshold of  $P < 0.001$  uncorrected).

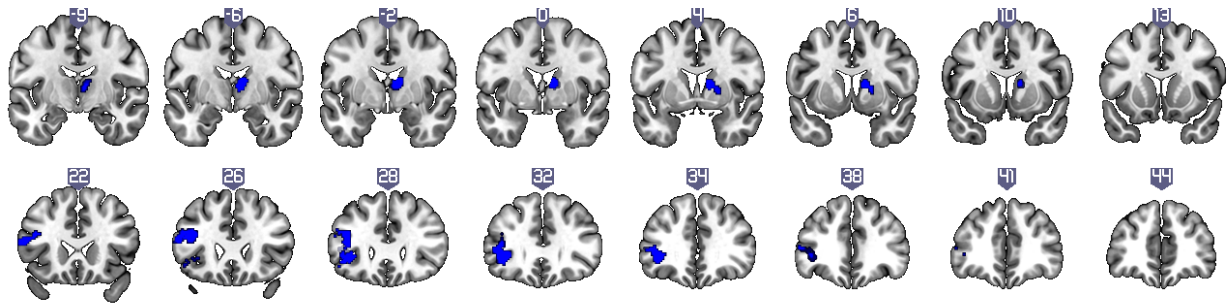


**Supplementary Figure 4** (A) Bilateral activation of the putamen in the contrast correct no-go > incorrect no-go; (B) Activation of the contrast incorrect no-go > correct no-go ( $P < 0.05$ , FWE); cf. Costa et al. 2013 Table 2 and Figure 3. Slices in neurologic convention (right side = right side; MNI space).

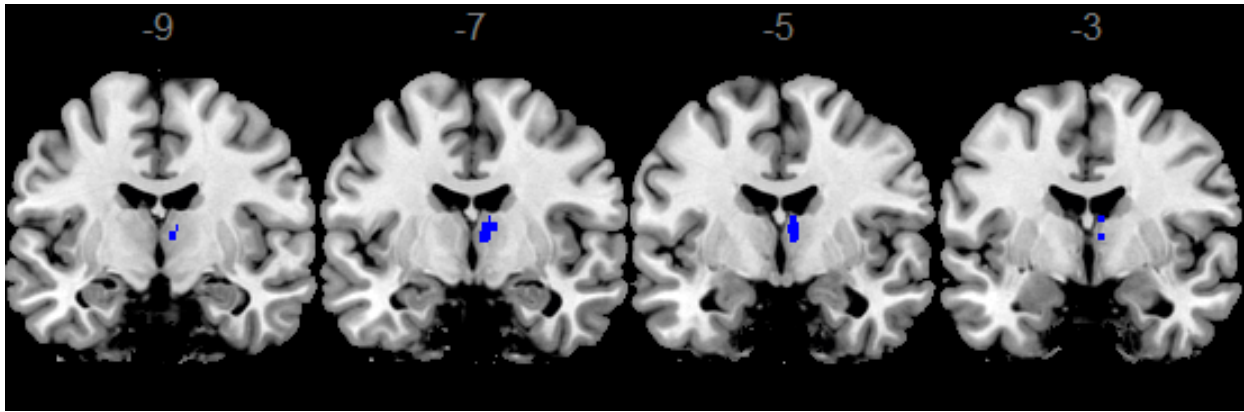
**The Interaction between Drug and Inhibition (correct no-go vs incorrect no-go)**



**Supplementary Figure 5.** The Drug effect (methylphenidate, placebo) on the contrast incorrect no-go trials as compared to correct no-go trials ( $P < 0.05$ , FWE cluster and voxel corrected); cf. Costa et al. 2013 Figure 3A.

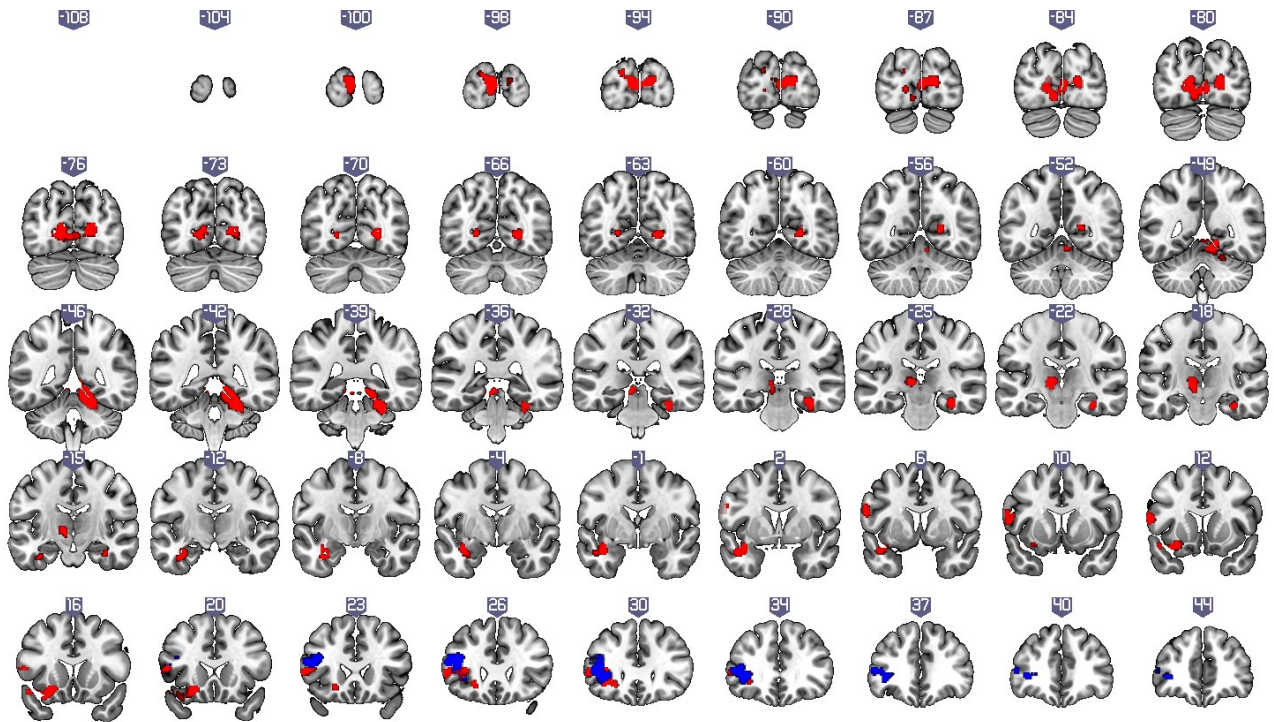


**Supplementary Figure 6.** The figure illustrates in blue those areas that show an interaction of Drug and Genotype for correct no-go > go-baseline (FWE ( $p < 0.05$ ) correction at cluster extent and peak voxel threshold of  $P < 0.001$  uncorrected). Results are based on the entire sample ( $N = 50$ ). Slices in neurologic convention (right side = right side; MNI space).



**Supplementary Figure 7.** The figure illustrates in blue those areas that show an interaction of Drug and Genotype in both contrasts: correct no-go > correct go and correct no-go > correct odd trials. Slices in neurologic convention (right side = right side; MNI space).





**Supplementary Figure 8.** The figure illustrates in red those areas that show an interaction of Drug and Genotype in the SPECT subsample (N = 35) for the contrast correct no-go > correct odd and in blue those for the contrast no-go > go-baseline (FWE ( $p < 0.05$ ) correction at cluster extent and peak voxel threshold of  $P < 0.005$  uncorrected). Slices in neurologic convention (right side = right side; MNI space).

## **Bibliography**

Costa A, Riedel M, Pogarell O, Menzel-Zelnitschek F, Schwarz M, Reiser M, et al (2013). Methylphenidate effects on neural activity during response inhibition in healthy humans. *Cereb Cortex* 23: 1179–1189.