Département de psychiatrie
Centre de neurosciences psychiatriques
Site de Cery
CH-1008 Prilly - Lausanne

Centre de Neurosciences Psychiatriques

CNP SEMINAR

ANNOUNCEMENT

Friday, May 20, 2016, 11 a.m.

"Therapygenetics in anxiety disorders"

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Invited by Erwin van den Burg & Ron Stoop
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While genetic tests since long are established in predicting the response to pharmacotherapy, especially in cancer therapy, analogous applications in non-pharmacological therapies are still in their infancies. Nevertheless, there is no principal obstacle to predict response to e.g. psychotherapy by using biological predictors including not only neuropsychology, but also neuroimaging, proteomic or (epi-)genetic markers. Affective and anxiety disorders (including OCD and panic disorder) are worthwhile candidates for such studies. In this talk, the present data on "therapygenetics" in anxiety disorders will be summarized and discussed, with emphasis on own data from the German Panic-Net multicenter study. Here, we initially focused on genes encoding components of the serotonergic system such as the serotonin transporter, monoamine oxidase and the 5HT1a receptor. Despite the fact that studies are mostly underpowered and (probably because of this) provide heterogeneous results, variation in the MAOA and SLC6A4 genes seems to influence the response towards CBT. This should be followed up in further, controlled studies and complemented by epistatic and epigenetic analysis as well as machine learning tools.

Selected Publications:

1. Weber H, Richter J, Straube B, Lueken U, Domschke K, Schartner C, Klauke B, Baumann C, Pané-Farré C, Jacob CP, Scholz C-J, Zwanzger P, Lang T, Fehm L, Jansen A, Konrad C, Fydrich T, Wittmann A, Pfleiderer B, Ströhle A, Gerlach AL, Alpers GW, Arolt V, Pauli P, Wittchen H-U, Kent L, Hamm A, Kircher T, Deckert J, **Reif A** (2015) *Allelic variation in CRHR1 predisposes to panic disorder: Evidence for biased fear processing*; Mol Psychiatry advance online publication, 1 September 2015; doi:10.1038/mp.2015.125.

2. **Reif A**, Richter J, Straube B, Höfler M, Lueken U, Gloster AT, Weber H, Domschke K, Fehm L, Ströhle A, Jansen A, Gerlach A, Pyka M, Reinhardt I, Konrad C, Wittmann A, Pfleiderer B, Alpers GW, Pauli P, Lang T, Arolt V, Wittchen HU, Hamm A, Kircher T, *Deckert J. (2013) MAOA and mechanisms of panic disorder revisited: from bench to molecular psychotherapy;* Mol Psychiatry, 19, Page 122 – 128.

3. Domschke K*, **Reif A***, Weber H, Richter J, Hohoff C, Ohrmann P, Pedersen A, Bauer J, Suslow T, Kugel H, Baumann C, Klauke B, Jacob CP, Maier W, Fritze J, Bandelow B, Krakowitzky P, Rothermundt M, Erhardt A, Binder EB, Holsboer F, Gerlach A, Kircher T, Lang T, Alpers GA, Ströhle A, Fehm L, Gloster A, Wittchen HU, Arolt V, Pauli P, Hamm A, Deckert J (2011) *Neuropeptide S (NPS) gene – converging evidence for a role in panic disorder* (*, equal contribution); Molecular Psychiatry 16, Page 938 – 948