**Speaker 1: Dan Stein, South Africa**  
**Title: Nosology of compulsive and impulsive disorders**  
**Abstract**  
The classification of compulsive and impulsive disorders remains in some flux, perhaps reflecting uncertainty in our understanding of the psychobiology and treatment of these conditions. This talk will review characteristic symptoms and traits of the range of compulsive and impulsive conditions, and address some of the relevant nosological issues. While a broad range of mental disorders are characterized by signs and symptoms of impulsivity, DSM-IV included a specific chapter on impulse control disorders not otherwise specified, while ICD-10 had a similar chapter on habit and impulse disorders. The revised DSM-5 has a new, rather broader, category of disruptive, impulse-control, and conduct disorders, as well as a new chapter on obsessive-compulsive and related disorders. In contrast, the proposal for ICD-11 is to retain a section on impulse control disorders, but to add compulsive sexual disorder and to move trichotillomania into a new section on obsessive-compulsive and related disorders. The Research Domain Criteria (RDoC) framework may also contribute to the assessment and evaluation of patients with compulsive and impulsive conditions. Future advances in the neurobiology and treatment of compulsive and impulsive disorders may well influence future editions of the nosology and improve its diagnostic validity. In the interim, the constructs of compulsivity and impulsivity already have considerable clinical utility, and deserve wider clinical dissemination.

**References**

Dalley JW, Everitt BJ, Robbins TW (2011) Impulsivity compulsivity and top-down control. Neuron 69, 680–694.

Robbins, T.W., Gillan, C.M., Smith, D.G., de Wit, S. & Ersche, K.D. (2012) Neurocognitive endophenotypes of impulsivity and compulsivity: towards dimensional psychiatry. Trends in Cognitive Sciences, 16, 81–91.

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**Speaker 4: Joseph Zohar, Israel**  
**Title: The importance of the neuroscience-based nomenclature**  
**Abstract**  
Current psychopharmacological nomenclature remains wedded to earlier period of scientific understanding, failing to reflect contemporary developments and knowledge, does not help clinicians to select the best medication for a given patient, and tending to confuse patients as they are being given a drug with a different name compared to their identified diagnosis (e.g. “Antipsychotic” for depression).

Four major colleges of Neuropsychopharmacology (ECNP, ACNP, Asian CNP, and CINP together with IUPHAR) proposed a new pharmacologically-driven nomenclature focusing on Pharmacological Domain and Mode of Action. It includes also 4 dimensions of additional information: 1—Approved Indications; 2—Efficacy and side effects; 3 — Practical note; and 4—Neurobiology. Several surveys in four different continents were conducted in order to examine satisfaction with the current psychopharmacological nomenclature, as well as test the NbN. A significant proportion of the participants in the surveys were in favor of the proposed nomenclature.

It seems that clinicians found the available nomenclature system dissatisfactory and many times confusing for them and the patients. The proposed nomenclature seeks to up-end current usage by placing Pharmacology and Mode of Action rather than indication as the primary driven force.

In the session live demonstration of using NbN in key medications and also examples of the capabilities of its search engine will be presented.

**References**

Zohar J, Nutt DJ, Kupfer DJ, Moller HJ, Yamawaki S, Spedding M, Stahl SM. 2014. A proposal for an updated neuropsychopharmacological nomenclature. Eur Neuropsychopharmacol. Jul;24(7):1005–14. doi: 10.1016/j.euroneuro.2013.08.004. Epub 2013 Sep 18.

Zohar J, Stahl S, Moller HJ., Blier P, Kupfer D., Yamawaki S., Uchida H., Spedding M., Goodwin GM., Nutt D., A review of the current nomenclature for psychotropic agents and an introduction to the Neuroscience-based Nomenclature, European Neuropsychopharmacology, Volume 25, Issue 12, December 2015, Pages 2318–2325.

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**S4: Compulsive and Impulsive Disorders: A Translational Perspective**

**Chair: Dan Stein, South Africa**  
**Co-Chair: Ho-Suk Suh, Republic of Korea**

**Speaker 2: Trevor Robbins, UK**  
**Title: Basic Neuroscience of Compulsive and Impulsive Disorders**  
**Abstract**  
Impulsivity and compulsivity are behavioural constructs hypothesetically underlying a range of impulse-compulsive disorders, including ADHD, drug addiction and OCD. These constructs may represent dimensional neurobehavioural endophenotypes, analogous to the NIMH Research Domain Criteria of proposed relevance to neuropsychiatric research and drug discovery.

Impulsivity is the tendency to act prematurely without foresight. Behavioral and basic neurobiological analysis of this construct, with evidence from both animal and human studies, defines several dissociable forms, including ‘waiting’ and ‘stopping’ impulsivity, depending on distinct fronto-striatal substrates; a medial prefrontal-accumbens system controls ‘waiting’ impulsivity in the context of reward, and a lateral orbitofrontal-dorsomedial striatal system in rats controls a ‘stopping’ form of impulsivity involving inhibitory response control. Impulsivity can arise from exposure to drugs of abuse but may also contribute to the tendency to compulsive drug-taking, both in rodents and in human stimulant drug abusers. Hypothetically, this corresponds to a shift in control from goal-directed to more habitual behaviour, paralleled by shifts in fronto-striatal functional ‘loops’.

Compulsivity, the maladaptive repetition of behaviour, can be postulated on the basis of heterogeneity in reversal learning in rats, some animals exhibiting excessive perseveration. This form of cognitive flexibility depends on serotonergic mechanisms of the orbitofrontal cortex and striatum in rodents, monkeys and, hypothetically, humans, including those with OCD or exhibiting compulsive cocaine seeking behaviour. I will review evidence of a similar imbalance of control from goal-directed to habitual behaviour in OCD to what may occur in addiction. I will also survey common psychopharmacological treatments for impulsivity and compulsivity, possibly relevant to the treatment of other psychiatric or neurological disorders.

**References**

Cognitive Sciences, 16, 81–91.