

## EV1437

**Alcohol-related cue-reactivity predicts abstinence duration in individuals with severe alcohol-use disorders**S. Karthik<sup>1,\*</sup>, B. Holla<sup>1</sup>, R.D. Bharath<sup>2</sup>, G. Venkatasubramanian<sup>1</sup>, V. Benegal<sup>1</sup><sup>1</sup> National Institute of Mental Health and Neurosciences, Psychiatry, Bangalore, Karnataka, India<sup>2</sup> National Institute of Mental Health and Neurosciences, Neuro Imaging and Interventional Radiology, Bangalore, Karnataka, India  
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**Introduction** Alcohol use disorder (AUD) is an important global public health problem with complex aetiology and relapsing remitting course. Clinical measures of alcohol dependence severity and alcohol-craving, are largely unreliable in identifying individuals at high-risk for relapse. Functional human neuroimaging methods that employ symptom provocation paradigms have shown promise in identifying critical brain regions with cue-elicited alcohol-craving response.

**Objective** The present study aimed at examining the utility of fMRI cue-reactivity (CR) in predicting relapse risk.

**Methods** The study was conducted on inpatients of a tertiary care neuropsychiatric hospital. Thirty-two treatment-seeking right-handed men were recruited for the study after informed consent. Following detoxification and 3-day drug-washout period, they underwent a task-based fMRI while viewing images of alcohol-related and control cues presented to them using a previously validated fMRI paradigm. All patients received anti-craving medications (baclofen: 60–80 mg/d,  $n = 16$ ; naltrexone: 50–100 mg/d,  $n = 16$ ) and were prospectively followed-up till their first alcohol lapse.

**Results** Random-effect analysis using one-sample test revealed significant CR to alcohol-related cues (relative to implicit baseline) with activation in salience-reward related regions [insula, cingulate, dorsal striatum (DS)], visual-attention regions [occipito-temporal] and deactivation of default-mode regions [posterior cingulate (PCC)] (all significant at  $P_{FWE} < 0.05$ , whole-brain corrected). Cox-proportional hazard regressions revealed that greater CR in Insula ( $\text{Chi}^2 = 10.33$ ;  $P = 0.001$ ; HR = 3.1; 95% CI = 1.5–6.3) and DS ( $\text{Chi}^2 = 10.87$ ;  $P = 0.001$ ; HR = 2.8; 95% CI = 1.5–5.2) predicts faster subsequent time to first drink after accounting for the role of clinical measures.

**Conclusion** These findings indicate that CR can serve as potential marker to identify individuals at high-risk for relapse. Further examination of intervention-related CR change may aid in personalizing treatment of AUD.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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## EV1438

**Modafinil: A smart drug with psychiatric implications**H. Saiz Garcia<sup>1,\*</sup>, L. Montes Reula<sup>1</sup>, A. Portilla Fernández<sup>1</sup>, V. Pereira Sanchez<sup>2</sup>, N. Olmo Lopez<sup>3</sup>, E. Mancha Heredero<sup>1</sup>, A.S. Rosero Enriquez<sup>1</sup>, M.E. Martinez Parreño<sup>1</sup><sup>1</sup> Complejo Hospitalario Navarra, Psychiatry, Pamplona, Spain<sup>2</sup> Clínica Universidad de Navarra, Psychiatry, Pamplona, Spain<sup>3</sup> CSM Salburua, Psychiatry, Vitoria, Spain

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**Introduction** Modafinil is approved to treat excessive somnolence but it is also off-spec used as a treatment for ADHD and as a cognitive enhancer. Research on the effects of modafinil on cognitive function have yielded mixed results. Modafinil interact with dopamine, noradrenaline, serotonin, glutamate, orexin, histamine and GABA levels. The regulation of these neurotransmitters

is widely known to be implicated in most of the neuropsychiatric disorders.

**Methodology** A review was conducted aiming to clarify the biological mechanisms of action of modafinil; its effects on attention, learning, executive functions and creative thinking; as well as possible neuropsychiatric disorders associated to its intake. The literature search was conducted in PubMed data reviewing articles dating between 2015 and 2016.

**Results** (1) Empirical evidence for cognitive enhancing effects of one of the most frequently used substances, modafinil, is sparse. Studies suggest that with more protracted and complex testing, more benefits are associated to modafinil use.

(2) Modafinil may be implicated in alterations of reward-related behaviour. Compared to placebo, modafinil leads to an enhanced tendency to make previously rewarded choices compared to the avoidance of previously punished choices. This pattern of altered choice behaviour is probably induced by an increase of the dopamine level and a potential contribution of elevated noradrenaline.

**Conclusions** Some people share information about this drug in social network. Off-label use of this drug may be implicated in alterations of reward-related behaviour and patients with previous psychiatric disorders should be aware of its possible adverse effects.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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## EV1439

**Nootropics: Emergents drugs associated with new clinical challenges**H. Saiz Garcia<sup>1,\*</sup>, L. Montes Reula<sup>1</sup>, A. Portilla Fernandez<sup>1</sup>, V. Pereira Sanchez<sup>2</sup>, N. Olmo Lopez<sup>3</sup>, E. Mancha Heredero<sup>1</sup>, A.S. Rosero Enriquez<sup>1</sup>, M.E. Martinez Parreño<sup>1</sup><sup>1</sup> Complejo Hospitalario Navarra, Psychiatry, Pamplona, Spain<sup>2</sup> Clínica Universidad de Navarra, Psychiatry, Pamplona, Spain<sup>3</sup> CSM Salburua, Psychiatry, Vitoria, Spain

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**Introduction** The “nootropic” or simplified as a “smart drug”, is a common term that will tag along with the compound responsible for the enhancement of mental performance. Certain individuals with a history of mental or substance use disorders might be particularly vulnerable to its adverse effects.

**Methodology** A review was conducted aiming to clarify the mechanisms associated of how these drugs increase mental functions including memory, motivation, concentration, and attention; and which kind of individuals are at risk of developing adverse effects when taking these drugs. The literature search was conducted in PubMed data reviewing articles dating between 2015 and 2016.

**Results** – Glutaminergic Signalling, Cholinergic System, Amyloid Precursor Protein and Secondary Messenger may be related to the cognitive enhancement achieved by Nootropics. Others, like insulin and angiotensin receptor may involved too.

– Some of them, like Ginkgo biloba, seem to have neuroprotective effects observed in human and animal models, acting as antioxidant and antiapoptotic, also inducing inhibition effects against caspase-3 activation and amyloid-aggregation toward Alzheimer's disease.

– Synthetic nootropics, a lab created compound such as piracetam, especially in people with history of drug abuse, may be associated with psychiatric exacerbations of some patients.

**Conclusions** Young adults all over Europe, especially university students, are starting to use nootropic drugs to improve their academic results. Some of them seem to have beneficial effects over mental health but others are sometimes related with sudden and unexplained exacerbations in stable psychiatric patients. It is important to early identify symptoms and to treat them properly.

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#### EV1440

### What are the predictors of success in smoking cessation program?

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Smoking is the most important avoidable cause of morbidity and premature mortality in the European Union and other countries. Identification of individual characteristics that predict success in smoking cessation is highly desirable. Psychological determinants of smoking cessation, especially depression and anxiety disorders are associated with a higher prevalence of smoking, a higher rate of nicotine dependence, and elevated withdrawal symptoms. In this study, we aimed to identify the determinants that effect the smoking cessation program success. We scanned 232 patient files, who attended between February 2016–June 2016 in Smoking Cessation Program in a State Hospital. The patients who have applied at least two times to unit were included to study. Phone calls were done 6 months after first admission to check the status of smoking. Then we compared sociodemographic characteristics, nicotine dependence levels and psychological symptoms of patients. Sociodemographic Data Form, Fagerstrom Nicotine Dependence Scale and Symptom Check List-90 were done with every patient. It is important to determine the predictors to quit smoking for smoking cessation program. In many studies, the level of nicotine dependence has been identified as the main predictor of successful smoking cessation. It is known that the psychiatric co-morbidity is related with low success in this program. Determining psychiatric co-morbidity and treating this will be effective for success of smoking cessation.

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#### EV1441

### Alexithymia in patients with substance use disorders

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**Introduction** Alexithymia is considered as a deficit in emotion processing. It includes difficulty to identify and describe feelings as well as discriminate between feelings and physical sensations. Alexithymia may be a risk factor for substance use (SUD).

**Objectives** The objective of this work is to identify the prevalence and correlates of alexithymia among patients with SUD.

**Methods** This study concerns 40 subjects who were hospitalized in a rehabilitation center in Sfax. The subjects completed a form investigating sociodemographic and drug use characteristics. Alexithymia was assessed using the Toronto Alexithymia Scale TAS-20 a. The TAS-20 have three factors: difficulty in identifying feelings (F1), difficulty in describing feelings (F2), and externally oriented thinking (F3).

**Results** The mean age of 30.86 ± 8.07 years. The mean score of alexithymia was 65.39 ± 9.65 (42–83). The scores of its dimensions were 25.3 ± 6.10 for F1, 17.16 ± 3.3 for F2 and 23.16 ± 3.18

for F3. The prevalence of alexithymia was 62.8% among addicts. High alexithymic patients did not differ from low or moderate alexithymic patients in terms of, employment, education or the type of substance. TAS-20 was correlated to socio-economic status ( $P=0.002$ ). No correlation was observed between age and alexithymia (total TAS-20) when measured as a continuous variable ( $P=0.802$ ). High alexithymic patients exhibited a higher preference for poly-substance use compared with no alexithymic patients ( $P=0.05$ ).

**Conclusion** Findings suggest that alexithymia is frequent in SUD patients. It should be noted in clinical practice that many patients with SUD may have a reduced capacity to identify and describe feelings during detoxification.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1442

### An unusual case of 'laughing gas' addiction in Singapore

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**Objective** Recreational use of nitrous oxide (N<sub>2</sub>O) or 'laughing gas' inhalation is a common phenomenon in countries like UK and US where it is associated with music festivals and parties. However, as far as we know, recreational N<sub>2</sub>O use in Singapore has hitherto not been reported in the press or scientific journals. We report the first case of N<sub>2</sub>O use and addiction in a young Singaporean male who was introduced to it by a friend from a Western country where its use is prevalent.

**Methods** A 20-year-old Singaporean male with an existing psychiatric diagnosis of major depression, presented with a 3 year history of solitary regular N<sub>2</sub>O inhalation that escalated from infrequent low dose use to the current daily high-dose use which he was unable to control. He exhibited symptoms of dependence – including preoccupation, tolerance, withdrawal and difficulty in cutting down. No major adverse medical complications were noted so far.

**Results** The patient was assessed to have Nitrous Oxide Dependence; and is currently undergoing regular counselling sessions in an attempt to motivate him to cut down or stop his N<sub>2</sub>O use.

**Conclusion** This case is unique for 2 reasons:

– extant literature suggests that only anecdotal evidence exists for psychological dependence of N<sub>2</sub>O in Singapore; yet our patient clearly demonstrates psychological dependence;

– this is the first reported case of N<sub>2</sub>O use disorder in Singapore; and perhaps ASEAN, with the unusual presentation in a young male whose use is solitary and private.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1443

### Readiness to change, insight and motivation in hospitalized alcohol-dependent patients in three countries

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