

is expected that frequency of depression, neurocognitive disorders and effective antidepressant treatment will be found to correlate to the profile of immune biomarkers. These findings might help to understand the etiology of depression in HIV, and specifically the role of inflammation and immunological changes.

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#### W004

### Psychosocial screening of alcohol liver disease patients before liver transplantation

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In Europe, 30% to 50% of liver transplantations are currently due to alcoholic liver disease (ALD). In the United States, this percentage is 17.2%. Post-transplant survival and other predictors of clinical course do not differ significantly from those in other types of transplanted patients, as long as there is no relapse of drinking. However, 20%–25% of these patients lapse or relapse to heavy drinking post-operatively, which has been associated with an increased risk of liver damage and mortality. It is therefore crucial to design specific selection and follow-up strategies aimed at this particular type of patient. Several good and poor prognosis factors that could help to predict a relapse have been suggested, among them the duration of abstinence, social support, a family history of alcoholism, abuse diagnosis versus alcohol dependence, non-acceptance of diagnosis related to alcohol use, presence of severe mental illness, non-adherence in a broad sense, number of years of alcoholism, and daily quantity of alcohol consumption. In this article, we discuss these and other, more controversial factors in selecting ALD patients for liver transplantation. Abstinence should be the main goal after transplantation in an ALD patient. In this article, we review the several definitions of post-transplant relapse, its monitoring and the psychopharmacological and psychotherapeutic treatment.

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### Workshop: Women in psychiatry: Mind the gender gap

#### W005

### The current status of women in psychiatry in Europe

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For more than two decades, psychiatry has retained its position amongst the medical specialties with the highest proportion of women entering residency programs. The percentage of women in junior academic positions in psychiatry is also high and consistently higher than that of men. However, the number of women in positions of leadership remains disproportionately low at around 5% with no evidence of improvement over time. The phenomenon of female under-representation is not unique to psychiatry or academia. Women are under-represented in all fields of leadership and this is a matter of wider societal concern. In this presentation, I will discuss external and internal barriers that women face and detail positive actions that can help women succeed in their careers.

*Disclosure of interest* The author has edited and co-authored a book on “Women in Academic Psychiatry: A mind to Succeed”

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#### W006

### Barriers to gender equality in career advancement and leadership

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Life as a researcher includes a large amount of competition and a heavy workload. Professor's tasks comprise, besides their own research, to lead your research team, to have the responsibility for higher education, expertise in diverse contexts, review of scientific articles, to seek financial support, to work with national and international committees, to serve in administrative posts at the university and in international associations, to write articles, books and book chapters, to attend meetings and conferences, and to address the many other tasks that may arise throughout one's career. This makes one dependent on skillful co-workers, which should not be taken for granted. Given the constant flow of incoming requests, one has to think and choose before agreeing to commit to a task at hand, in order to not set aside your own research. This demands a high capability to prioritize. The choice of a life partner who can share both professional and private interests, a partner who understands, encourages and supports, while at the same time gives the necessary critical feedback, is a treasure. Freud said “love and work are the cornerstones of our humanness”, but work must be pleasurable thus try to combine work, love, and play.

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### Workshop: Mental health impact of SUDs on neurodevelopmental mental disorders

#### W007

### Neuroimage studies: The effect of methylphenidate in cocaine users with ADHD

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*Background* Attention deficit/hyperactivity disorder (ADHD) is an important contributing factor in the pathophysiology of substance use disorders (SUD), and ADHD occurs more often in populations with SUD compared to the general population. This high prevalence rate and comorbidity may relate to a shared neurobiological vulnerability, including a deregulation of the brain's dopamine system. This comorbidity directly impacts the treatment of ADHD: treatment with methylphenidate is less effective in patients with ADHD and SUD compared to ADHD patients without SUD.

*Methods* We investigate the underlying neurobiological background of reduced treatment effectiveness for adult ADHD patients with comorbid SUD.

*Results* We observed lower available dopamine transporters, as well as a reduced binding of methylphenidate to these transporters, and more neurocognitive dysfunction in adults ADHD patients with SUD compared to ADHD patients without SUD.

*Conclusion* Comorbid ADHD and SUD has a high prevalence rate and reduces ADHD treatment effectiveness, which makes it necessary to screen for the presence of ADHD in patients

seeking SUD treatment. Neurobiological and neurocognitive differences are present between ADHD patients with and without SUD, which together may partially explain the reduced effectiveness of methylphenidate in adult ADHD patients with SUD.

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## W008

### Treatment of ADHD with cannabinoids

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**Introduction** Adults with ADHD describe self-medicating with cannabis, with some reporting a preference for cannabis over ADHD medications.

**Objectives** The experimental medicine in ADHD-cannabinoids study was a pilot randomised placebo-controlled experimental study of a cannabinoid medication, Sativex oromucosal spray, in 30 adults with ADHD.

**Methods** The primary outcome was cognitive performance and activity level using QbTest. Secondary outcomes included ADHD and emotional lability (EL) symptoms.

**Results** Thirty participants were randomly assigned to the active ( $n=15$ ) or placebo ( $n=15$ ) group. For the primary outcome, no significant difference was found in the ITT analysis although the overall pattern of scores was such that the active group usually had scores that were better than the placebo group (Est = -0.17, 95%CI -0.40 to 0.07,  $P=0.16$ ,  $n=15/11$  active/placebo). For secondary outcomes, Sativex was associated with non-significant improvements in hyperactivity/impulsivity ( $P=0.03$ ), a cognitive measure of inhibition ( $P=0.05$ ), inattention ( $P=0.10$ ) and emotional lability. Per-protocol effects were higher.

**Conclusion** Results did not meet significance following adjustment for multiple testing. One serious (muscular seizures/spasms) and three mild adverse events occurred in the active group and one serious (cardiovascular problems) adverse event in the placebo group. Adults with ADHD may represent a subgroup of individuals who experience a reduction of symptoms and no cognitive impairments following cannabinoid use. This provides some preliminary evidence in support of the self-medication theory of cannabis use in ADHD. A larger trial is warranted.

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## W009

### Guidelines for managing ADHD and substance use disorders

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Guideline for managing ADHD and substance use disorders (SUD) Frieda Matthys, MD, PhD.

**Background** Despite the high prevalence of ADHD in adults with SUD and the availability of an approved guideline, under diagnosis and inadequate treatment still persist. This comorbidity associates with reduced treatment effectiveness, making successful treatment in adults with ADHD and SUD a challenge.

**Methods** The guideline of 2010 for recognizing and treating adult ADHD in patients with SUD is updated in 2016, in cooperation

with caregivers, of the addiction centers in Belgium and based on research literature and clinical experience. The English translation is discussed by an international group of clinicians and experts to result in a consensus statement via ICASA (International Collaboration on ADHD and Substance Abuse).

**Results** This consensus presents a useful guide for the diagnosis and treatment of ADHD and SUD. Due to the lack of scientific evidence on some of the topics, the guide is a combination of evidence based and practice based recommendations.

**Conclusion** The management of ADHD in patients with SUD remains a challenge. Diagnosis is complicated by SUD symptoms and by the skepticism associated with the recognition of ADHD in adults. The treatment is hampered by high relapse rates and reduced effectiveness of the currently available pharmacotherapies. Combining psycho- and pharmacotherapy in an integrated treatment that covers both ADHD and SUD, may help to keep these patients in treatment.

A Dutch manual for the integrated treatment of ADHD and SUD is being developed.

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## Workshop: big data in psychiatry. unprecedented opportunities, new strategies

### W010

#### Permutations and computational power: A molecular cascade analysis to approach big data in psychiatry

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In the last few years, we conducted a number of molecular pathway analyses on the genetic samples provided by the NIMH. The molecular pathway approach accounts for the polygenic nature of the most part of psychiatric disorders. Nevertheless, the limits of this approach including the limited knowledge about the function of the genes, the fact that longer genes have higher probability to harbour variations significantly associated with the phenotype under analysis and the false positive associations for single variations, demand statistical control and bio-statistical knowledge. Permutations are a methodology to control for false positive associations, but their implementation requires that a number of criteria are taken into account: 1) the same number of genes and the same number of variations of the index pathway must be simulated in order to limit the bias of selecting significantly longer or shorter genes; 2) a sufficient number of permuted pathways is created (10E5 to 10E6 depending on computational resources) which demands higher computational power; 3) the correct statistical thresholds are identified and discussed; 4) some pathways might be over-represented and the source of information must be constantly updated. The tools for running a molecular pathway analysis (R Foundation for Statistical Computing, 2013) when interacting with a supercluster PC and the international bioinformatic datasets (Embase, NIMH and others), together with the critical steps of bioinformatics scripting (bash language) are described and discussed.

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