

**Conclusions** High levels of anxiety symptoms may influence various underlying pathophysiological factors and modulate the inflammatory response and course of illness, affecting treatment planning.

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

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#### EV481

### The effectiveness of various potential predictors of response to treatment with SSRIs in patients with depressive disorder

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**Introduction** The substantial non-response rate in depressive patients indicates a need to identify predictors of treatment outcome.

**Objective and aims** The aim of the open-label, 6-week study was: – to compare efficacy of a priori defined predictors:  $\geq 20\%$  reduction in MADRS score at week 1,  $\geq 20\%$  reduction in MADRS score at week 2 (RM  $\geq 20\%$  W2), decrease of prefrontal theta cordance value (RC) and increase of serum/plasma brain-derived neurotrophic factor (BDNF) at week 1;

– to assess whether the combination of these factors yield more robust predictive power than when used singly.

**Methods** All patients ( $n = 38$ ) were hospitalized and treated with various SSRIs. Areas under curve (AUC) as well as predictive values were calculated to compare predictive effect of single and combined predictor model.

**Results** Twenty-one patients (55%) achieved response. The RM  $\geq 20\%$  W2 (AUC-0.83) showed better predictive efficacy compared to all other predictors with exception of RC. Other significant differences were not detected. The identified (logistic regression) combined predictive model (RM  $\geq 20\%$  W2 + RC) predicted response with accuracy of 82% (AUC-0.92) and was significantly better than other predictors but not RM  $\geq 20\%$  W2 and RC.

**Conclusions** Our findings indicate that the RM  $\geq 20\%$  W2 alone and in combination with RC may be useful in the prediction of response to SSRIs. Serum/plasma BDNF did not show strong predictive potential.

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

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#### EV482

### Seasonal affective disorder associate with common chronic diseases and symptoms in a population-based study

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**Background** Seasonal affective disorder (SAD) is a recurrent mood disorder with 22%–42% of the patients experiencing symptoms even after 5–11 years after diagnosis, and 33%–44% developing non-seasonal symptoms. The purpose of this study was to assess how seasonality is associated with some of the most common non-communicable diseases in the general Finnish population.

**Methods** The global seasonality score (GSS) and the experiences of problems due to the seasonal variations from FINNRISK 2012 dataset were used to measure the seasonality in 4689 Finns aged 25–74 years living in five geographical regions in Finland, and assess their association with common non-communicable diseases (NCDs). The regression models and odds ratios were adopted to analyze the associations adjusted for covariates.

**Results** The prevalence of SAD in the Finnish general population is 21%. Seventy percent of the participants had seasonal variations in sleep duration, social activity, mood and energy level, while 40% had seasonal variations in weight and appetite. Angina pectoris and depression were significantly associated with seasonality, including seasonal variations in sleep duration, mood, weight, appetite, social activity and energy level. Depression was significantly associated with the increased odds for experiencing a problem due to the seasonal variations (OR = 4.851,  $P < 0.0001$ ) and SAD symptoms (OR = 4.075,  $P < 0.0001$ ), and with the GSS ( $P < 0.0001$ ).

**Conclusion** Our data suggest that seasonality is associated with depression and angina pectoris. The co-occurrence of the seasonal variations in mood and behavior with common NCDs warrants the need for future research to have insights into the etiology and potentially shared pathways and mechanisms of action.

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

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#### EV483

### The presence of chronic pain in patients with major depressive disorder and its inter-correlation

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**Introduction** Chronic pain is a common experienced symptom among patients diagnosed with major depressive disorder (MDD). The intensity of depression and chronic pain inter-correlated, having negative impact on the daily functioning of the patients.

**Objectives** Our aim was to explore the presence of chronic pain in patients diagnosed with MDD (single episode or recurrent), correlation between intensity of depression and chronic pain, its interference on daily functioning, as well as sex differences regarding the explored variables.

**Methods** The study sample consisted of 51 (62.2%) female and 31 (37.8%) male patients diagnosed with MDD ( $n = 82$ ), aged between 18 and 65 years old (mean age of 46.21). Assessment instruments included The Beck Depression Inventory-II (BDI-II), The Brief Pain Inventory-Short Form (BPI) (consisting of BPI-I factor of pain intensity, and BPI-II-factor of pain interference with daily functioning), and semistructured questionnaire for sociodemographic characteristics.

**Results** The presence of chronic pain was found in the 51 (62, 2%) of patients with MDD. The mean score on the BDI-II for the whole sample was 22.5 (SD 12.8). There was a positive correlation between intensity of depression (BDI-II) and intensity of chronic pain (BPI-1), and its interference on the level of daily functioning (BPI-2) ( $P < 0.01$ ). Women diagnosed with MDD experienced

chronic pain of higher intensity and with greater interference on daily functioning.

**Conclusion** Our research data show a high frequency of chronic pain among patients diagnosed with MDD and its positive inter-correlation which results in negative impact on daily functioning, especially in females.

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#### EV484

### Augmentation strategies in the treatment of major depressive disorder

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Augmentation strategies for the treatment of Major depressive disorder (MDD) are needed when patients with MDD have a partial, or not responded to antidepressant monotherapy. The focus of augmentation therapy has been combining an antidepressant (AD) medication with another AD. Atypical antipsychotics (AAP) are becoming commonly used to augment antidepressants. Beyond AD and AAP, alternative augmentation strategies include mood stabilizers (MS).

**Aim** To analyze the characteristics of therapy in patients with diagnosis of MDD and to investigate the frequency of augmentation therapy.

**Method** Study included 28 patients hospitalized during one year with MDD diagnosis. Statistical analysis was performed with x2 and t-test.

**Result** Among patients with MDD there were 18 (64.28%) women with an average age 57.5 and 10 (35.71%) men with an average age 53.5. Of the 28 patients with MDD, 25 (89.28%) were treated with a combination therapy, and monotherapy in the remaining 3 patients (10.71%). Of 25 patients with augmentation strategy treatment, 22 (88%) used two medications and the remaining 3 (12%) tree psychotropic medications (AAP, AD, MS). The most frequent combinations were a combination of AD and AAP (17 patients, 68%). Beyond that frequent combination were AD and MS (6 patients, 24%). Two patients used combination two AAP, and one patient with two AD and one patients used AAP and MS.

**Conclusion** Augmentation strategy is often used in patients with MDD. There is no significant difference in the use combination therapy based on gender and age.

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

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#### EV485

### The Mini-Spadin, an efficient alternate to Spadin in the depression treatment

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**Objectives** We previously discovered spadin as a new antidepressant drug concept. Spadin exerts its antidepressant actions on the TREK-1 potassium channel, a new antidepressant (AD) target. We have shown that spadin acts more rapidly in comparison to other ADs. We have pointed out that spadin induced neurogenesis after only 4-day treatments. We have demonstrated that spadin did not display side effects at the cardiac level and on TREK-1 controlled functions such as stroke, epilepsy or pain.

**Objectives** With the final goal to make spadin a drug for human clinic, our objective was to find analogs of spadin demonstrating a better affinity or a better in vivo stability or both.

**Methods** Several analogs of spadin were synthesized. Their ability to block the TREK-1 channel activity were first tested by electrophysiology on HEK293 cells stably transfected with TREK-1 channels. AD effects were measured by using the forced swim test and the novelty suppressed feeding test. Neurogenesis was investigated by measuring the expression level of the synaptic protein PSD-95 in in vitro cultured neurons.

**Results** Our data allow us to identify a shortened spadin, called mini-spadin, that displayed the same AD properties as spadin and a 400 fold increase in the TREK-1 affinity. Mini-spadin increased the synaptogenesis marker PSD95 levels after only 24 hours of treatment, suggesting that like spadin, mini-spadin was able to induce neurogenesis and synaptogenesis.

**Conclusions** Even if further experiments are required, the mini-spadin appears to be more efficient than spadin offering a very promising alternate to spadin as human drug.

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

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#### EV486

### Short-term study in patients treated with desvenlafaxine

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**Introduction** Desvenlafaxine is an antidepressant inhibitor of the reuptake of norepinephrine and serotonin (SNRI). Several publications support its efficacy in reducing depressive symptoms in the short term.

**Objectives** The objective of this paper is to estimate the effect of short-term (12 weeks) of patients with depressive disorder treated with desvenlafaxine.

**Methodology** This is a prospective observational study tracking a cohort of outpatients with depressive disorder treated with Desvenlafaxine for three months. To accomplish our goal we used the Montgomery-Asberg scale performing three measurements (baseline, one month and two months after initiate the treatment). The size of our sample was 24 patients.

**Results** We found that in about 80% of patients the treatment was effective, no significant differences in relation to sex, age or treatment dose were reported. Regarding the severity of the symptoms, in the initial assessment 16% of the patients had a mild depressive episode, 70% a moderate episode and about 12% had a severe episode; while in the last evaluation, almost 46% of patients were in recovery, nearly 42% had mild symptoms, 8% moderate symptoms and only 4% had mild symptoms.

**Conclusion** We can conclude that the treatment with Desvenlafaxine has been effective at improving in the short-term the depressive disorder, independently of gender, age and dose administered.

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

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#### EV488

### Facing depression with botulinum toxin: Literature review

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