

on the assumption that the genes are interconnected by functional or physical interactions. However, the brain is composed of numerous cell-types, each expressing specific genes related to their function (e.g. oligodendrocytes express genes involved in synthesis of myelin). Thus, some of the differentially-expressed genes might be specific to different cell-types, rather than represent general transcriptional changes. Alternatively, the observed differential expression might result from alterations in cellular populations, for example as a result of cellular death. Indeed, evidence has accumulated regarding the involvement of neurodegeneration and neuroinflammation in psychiatric disorders (e.g., bipolar disorder and schizophrenia). Therefore, identifying the affected cell-types is crucial for proper analysis and interpretation of the gene expression data.

**Objectives:** Given that the cell-type specific transcripts are known, changes in cellular populations can potentially be inferred from bulk-tissue expression data. However, reliable cellular markers don't exist for numerous cell types in the brain. To address this issue, we used publically available cell-type specific expression data from mouse brain to compile a marker-gene database for major brain cell-types. Interestingly, some of these genes (e.g. Cox6a2), are currently considered to be not expressed in the brain.

**Results and Conclusions:** Using statistical methods, we inferred changes in several cellular populations in bipolar disorder and schizophrenic patients (170 bipolar and 160 schizophrenic samples in total). The inferred changes were similar across six different datasets analyzed, supporting the robustness of our method and are partially supported by previous studies using direct cell counting methods. The inferred changes were much more prominent in schizophrenic patients than in subjects with bipolar disorder.

## DEPRESSION: PS74 – PS244

### PS74

Antidepressant prescribing patterns and adherence to treatment in one tertiary care university hospital

So Hyun Ahn, Ik Sung Chee, Jeong Lan Kim, Sun Woo Lee  
Chungnam University Hospital, Republic of Korea

#### Abstract

**Objective:** This study aimed to explore antidepressant prescribing patterns and define which factor affects adherence to treatment.

**Methods:** Data were obtained from retrospective chart review from January 1<sup>st</sup> to December 30<sup>th</sup> 2013 who visited psychiatric department in tertiary care university hospital outpatient service for the first time. Persons over the age of 18 years who were diagnosed to depressive disorder and treated with antidepressants were included in this study. Patients who had ever been on any antidepressants during last six month were excluded. Medical records of 2 years after the first visit date of psychiatric department were reviewed which include gender, age, past history, treatment duration, adherence to treatment, initially prescribed antidepressant, coprescription of benzodiazepine or hypnotics, and switching, or combination of antidepressant. Logistic regression was done to define the factors associated with adherence to treatment.

**Results:** Total 304 samples were eligible for this study. Male were 107 (35.2%) and female were 197 (64.8%), and the mean age of this sample was 53.3±16.4. Mean duration of treatment was 239 (±253) days. In this study, 75.5% of initially prescribed

antidepressant was selective serotonin reuptake inhibitors (SSRI). Among SSRI, 75.5% of the patients were on escitalopram initially. 83.2% of patients were treated with combination of benzodiazepine and 25% of patients were treated with combination of hypnotics. 10.2% of the patients switched to another antidepressant, and 8.6% of the patients were augmented with other antidepressants. In this study, adherence was better in the group switched to another antidepressant (OR 2.49, 95% CI 1.14–5.44, p=0.022).

**Conclusions:** The most commonly prescribed class of initial antidepressant in one tertiary care university hospital outpatient service was SSRI. Switching to another antidepressant might have positive effect on adherence to treatment.

### PS75

Psychopharmacoeconomics of Major Depressive Disorder in European Tertiary Psychiatric Treatment Centers

Lucie Bartova<sup>a</sup>, Markus Dold<sup>a</sup>, Alexander Kautzky<sup>a</sup>, Ulrich Rabl<sup>a</sup>, Daniel Souery<sup>b,c</sup>, Julien Mendlewicz<sup>d</sup>, Stefano Porcelli<sup>e</sup>, Alessandro Serretti<sup>f</sup>, Joseph Zohar<sup>g</sup>, Stuart Montgomery<sup>a</sup>, Siegfried Kasper<sup>a</sup>

<sup>a</sup> Department of Psychiatry and Psychotherapy, Medical University of Vienna, Vienna, Austria <sup>b</sup> Université Libre de Bruxelles, Bruxelles, Belgium <sup>c</sup> Psy Pluriel Centre Européen de Psychologie Médicale, Bruxelles, Belgium <sup>d</sup> School of Medicine, Free University of Brussels, Bruxelles, Belgium <sup>e</sup> Department of Biomedical and NeuroMotor Sciences, University of Bologna, Bologna, Italy <sup>f</sup> Psychiatric Division, Chaim Sheba Medical Center, Tel Hashomer, Israel <sup>g</sup> Imperial College, University of London, London, United Kingdom

#### Abstract

**Specific objective of the study:** Assessment of the current prescription trends and psychopharmacotherapeutical options for Major Depressive Disorder (MDD) applied in tertiary psychiatric treatment centers throughout Europe.

**Methods:** This international multicenter (9 academic sites in 8 European countries), cross-sectional study applied retrospective evaluation of treatment response in 1181 adult in- and outpatients suffering from MDD. The thorough clinical assessment included evaluation of socio-demographic, clinical, and medication data, as well as the present symptom severity, which was measured by the Montgomery and Åsberg Depression Rating Scale (MADRS). The clinical improvement in the course of the present major depressive episode (MDE) was quantified according to retrospective MADRS measurements. Epidemiological data were analyzed using descriptive statistics. In order to determine the influence of symptom severity and treatment response on the prescription patterns analyses of variance (ANOVA) and Spearman correlation analyses were applied.

**Summary of results:** Selective serotonin reuptake inhibitors (SSRIs) were administered in 53.4% of all MDD patients as a first-line treatment, followed by serotonin-norepinephrine reuptake inhibitors (SNRIs) in 23.6% of all MDD patients. Polypharmacy was applied in 59.4% of all MDD patients, whereby the median represented 2 psychiatric compounds per patient. Furthermore, a significant correlation was detected for the number of individual drugs with the current MADRS total score and the MADRS total score change in the course of the present MDE. Concerning the most frequently prescribed adjunctive agents, benzodiazepines were administered in 33.2% of all MDD patients, followed by antidepressants in 29.0%, antipsychotics in 24.2%, and mood stabilizers in 10.1% of all participants. No significant differences were found between the different psychopharmacological classes used as augmentation strategies with regard to symptom severity and treatment response.