**Keywords:** Mood disorder; Biomarkers; GSK-3; Differential Diagnosis

## EPP0706

### Mitochondrial ATP production is impaired in neural stem/progenitor cells derived from olfactory neuroepithelium of patients with schizophrenia

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**Introduction:** Neural stem/progenitor cells derived from olfactory neuroepithelium (hereafter OE-NS/PCs) are emerging as a viable proxy and a valuable tool for translational studies on severe mental illnesses (SMI). In this respect, the use of OE-NS/PCs as a surrogate cellular model of schizophrenia (SZ) has enabled insights into cell signaling and cell cycle dynamics in this disease.
**Objectives:** We explored whether mitochondrial dysfunction, which has been already associated with SZ, may have a role in the altered proliferation pattern previously observed in OE-NS/PCs of SZ patients.
**Methods:** OE-NS/PCs were collected from 20 patients and 20 healthy controls (Hcs) by nasal brushing, cultured in proper medium and expanded. Fresh OE-NS/PCs at passage 3 of both groups underwent BrdU proliferation assays or were frozen for later use. Mitochondrial ATP production was measured in both fresh and thawed OE-NS/PCs by using the ATPlite Luminescence Assay kit.
**Results:** Fresh OE-NS/PCs of patients grew at a higher rate than those of HCs (M-W U=0; p<0.001), whereas the proliferation of thawed OE-NS/PCs of both groups exhibited an opposed pattern (at passage 6, p=0.002). Mitochondrial ATP production was significantly lower in OE-NS/PCs of patients than in those of HCs (M-W U=0; p=0.02), regardless of freeze-thaw conditions (M-W U=6; p=0.77).
**Conclusions:** Mitochondrial ATP production is negatively affected in OE-NS/PCs of SZ patients as compared to those of HCs. This evidence does not differ in fresh OE-NS/PCs and OE-NS/PCs undergoing freeze-thaw cycles, which instead perturb the proliferation pattern of SZ OE-NS/PCs.

**Keywords:** cellular models; mitochondria; schizophrénia; translational psychiatry

## EPP0707

### Drug-induced metabolic syndrome hasn't associations with 5-HT receptor genes polymorphisms in patients with schizophrenia

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**Introduction:** Metabolic disturbances are common in patients maintained on neuroleptics. These abnormalities significantly increase the physical comorbidity and mortality rates due to cardiovascular disease. We hypothesized that 5-HT receptor genes polymorphisms have associations with drug-induced metabolic syndrome development in schizophrenic patients.
**Objectives:** To investigate the role of polymorphic variants of serotonin receptors genes in the development of antipsychotic-induced metabolic syndrome.
**Methods:** 467 patients with schizophrenia receiving long-term antipsychotic therapy were investigated. The mean age was 40.0±11.6 years. The standard phenol-chloroform method for DNA isolation was used. Genotyping was carried out on eight SNP's of genes HTR1A, HTR2A, HTR3A and HTR2C with the MassARRAY® Analyzer 4 (Agena Bioscience™) using the set SEQUENOM Consumables iPLEX Gold 96 on the base The Core Facility "Medical Genomics", Tomsk NRMC.
**Results:** The prevalence of metabolic syndrome was 26.1%. In the study sample, there were significantly more women with metabolic syndrome (56.6%) than men (43.4%) (p=0.002). The majority of patients with metabolic disturbances were aged >40 years (62.3%), versus 40.9% in the group without metabolic disorders (p<0.001). The duration of the disease was statistically significantly higher in the group of patients with metabolic syndrome (p=0.003). We did not find statistically significant associations of polymorphic variants of the studied genes with the development of the drug-induced metabolic syndrome.
**Conclusions:** Our results do not demonstrate any significant association between allelic variants of serotonin receptor genes and metabolic syndrome in patients with schizophrenia. Conflict of interest. The authors declare no conflict of interest. Supported by Grant of RSF 19-75-10012.

**Keywords:** Serotonin receptors; Metabolic syndrome; schizophrénia; Genes

## EPP0708

### Investigation of the role of polymorphic variants FTO gene in schizophrenia patients with metabolic syndrome

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**Introduction:** Medication is primary tactics in schizophrenia treatment. First and second generation antipsychotics (FGA and SGA respectively) affect on core symptoms. Unfortunately, it causes side effects. Metabolic syndrome one of them and includes large number of affections like body mass index changes, lipidemias, hypertension and others.
**Objectives:** To study the role of polymorphic variants FTO gene in metabolic syndrome in schizophrenia patients.
**Methods:** We were investigated 480 patients. Main criteria for inclusion in study was using antipsychotics, verified diagnosis of schizophrenia and metabolic syndrome. Mean age was 42,1±1,4 years. The metabolic syndrome was assessment based on clinical data. Standard phenol-chloroform protocol for DNA isolation was used. Genotyping was carried out on six SNP's of FTO gene with real-time PCR. Statistical analysis was carried out with R 3.6.2 with basic functions and SNPassoc package.
**Results:** The distribution of genotypes for variants rs7185735 and rs9939609 was not in according to Hardy-Weinberg equilibrium (a p-value less than 0.05) and excluded from further analysis. Patients with schizophrenia were divided into two groups: patients with metabolic syndrome and patients without it. We did not identify any statistically significant associations between genotypes and alleles of FTO gene and metabolic syndrome.
**Conclusions:** We did not find any associations of alleles and genotypes of FTO gene with metabolic syndrome in schizophrenia patients from Siberia region. Metabolic syndrome needs more further studies with larger number of samples and different populations. Conflict of interest. The authors declare no conflict of interests. Supported by Grant of RSF 19-75-10012.

**Keywords:** Metabolic syndrome; polymorpism; FTO gene; schizophrénia

## Guidelines/guidance

### EPP0709

### Policies, recommendations and training to respond to patient microaggressions and hate speech aimed at healthcare professionals: A systematic review

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**Introduction:** Patient microaggressions and hate speech affect practitioners in all fields of healthcare. In some facilities, 100% of healthcare workers report experiencing harassment and hate speech, with the aggressors most frequently being patients. To date, there has been no systematic review of policies, recommendations and trainings on patient microaggressions and hate speech against healthcare professionals.
**Objectives:** A systematic review was conducted to identify recommendations and solutions for healthcare professionals on responding to patient microaggressions and hate speech. Additionally, websites of major healthcare professional organizations and the 6 largest healthcare systems were checked for policy statements related to discrimination by patients towards healthcare providers.
**Methods:** A literature search of PubMed, PsycINFO, Medline, ERIC and MedEdPORTAL. Articles that contained recommendations and trainings for responding to microaggressions and hate speech were retained. 13 Leading professional organizations and 6 healthcare systems were checked for policies on discrimination by patients.
**Results:** Our review identified 27 studies providing recommendations and trainings for healthcare professionals to address patient hate speech and microaggressions. Three professional organizations but no healthcare systems had policies on discrimination by patients.
**Conclusions:** Seven trainings that equip providers with tools to address patient microaggressions and hate speech were identified. Trainings included the ERASE framework; Stop, talk, and roll; interrupting microaggressions; and the OWTFD tool. Nineteen studies outlined recommendations for healthcare professionals and systems on how to respond to patient offenses. Professional organizations and healthcare systems need to create policies to support healthcare professionals who face microaggressions and hate speech.
**Keyword:** Patient discrimination and microaggressions and hate speech and training

## Intellectual disability

### EPP0710

### Intellectual disability and antipsychotics.

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**Introduction:** Intellectual disability is a condition of cognitive impairment and deficit in adaptive skills. Mental illness is frequent in people with intellectual disability. As a result antipsychotics are often prescribed to treat not only mental illness but also problem behaviors.
**Objectives:** Perform a literature search about intellectual disability and antipsychotics.
**Methods:** A non-systematic literature review was performed on PubMed using the keywords "intellectual disability" and "antipsychotics". All papers published between 2015 and 2020 were evaluated.
**Results:** A review of the literature reveals that antipsychotics are the most frequently prescribed psychotropic drugs in people with intellectual disability. However, results from the studies are ambiguous. Several studies showed that antipsychotics are effective in improving problem behaviours, nevertheless some recent studies showed no significant difference in the outcomes between antipsychotics and placebo
**Conclusions:** Even though antipsychotics are prescribed in people with intellectual disability, evidence to support their use is lacking. In consequence, clinicians should consider the pharmacological approach as a part of an integrative treatment. Assessing adverse