S152 E-Poster Presentation

normal BMI. Over the last year, she started a self-destructive behavior with slight improvement of BN symptoms.

Conclusions: Special attention should be given to patients suffering from BN and comorbid BPD as they present greater risk of recurrent suicide attempts and non-suicidal self-injury, as well as lower rates of remission. Early interventions that target impulsivity and problematic eating behavior may mitigate risk of future borderline personality features.

Disclosure: No significant relationships.

Keywords: Eating Disorders; Borderline Personality; Bulimia

nervosa

### Schizophrenia and other Psychotic Disorders 01

#### **EPP0078**

# Development of a self-replicating plasmid for non-toxic expression of CRISPR-repressors to study schizophrenia-risk genes

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**Introduction:** Genome-wide association studies revealed that polymorphisms located within non-coding regions significantly contribute to the genetic architecture of schizophrenia. Such regions may affect the expression of tens and hundreds of neuronal genes. Epigenetic CRISPR editors help to elucidate the causative polymorphisms. However, efficient CRISPR-repressors are highly toxic to neuronal cells, and their activity rapidly declines with time after transfection due to plasmid silencing. Therefore, less toxic, effective, and long-acting epigenetic CRISPR instruments are required to advance schizophrenia genetic research.

**Objectives:** We aimed at creating a less toxic and effective CRISPR-repressor for the investigation of schizophrenia-risk genes.

**Methods:** Plasmids were obtained used standard molecular cloning techniques and lipofected into the SH-SY5Y cell line. Cells were cultured using standard conditions and techniques. Cell viability and GFP-reporter fluorescence were observed using a fluorescent microscope.

**Results:** We obtained a set of plasmids encoding dCas9-KRAB-MeCP2 repressor under the control of different promoters (hEF1a, hPGK1, mPGK1, hSYN2, synthetic TRE). Non-toxic expression of the CRISPR-repressor was achieved using tetracyclin controllable TRE promoter. Moreover, the Epstein-Barr virus origin of replication (oriP) and its regulator EBNA were introduced to make the self-replicating plasmid. High activity of CRISPR-repressor was confirmed on a schizophrenia-risk gene DDC encoding L-DOPA decarboxylase catalyzing the last step of dopamine biosynthesis.

**Conclusions:** We have created a plasmid encoding the non-toxic and effective CRISPR repressor encoded by a self-replicating plasmid. The study was supported by the grant from the Russian Science Foundation №21-15-00124, https://rscf.ru/project/21-15-00124/.

Disclosure: No significant relationships.

Keywords: causative genes; schizophrénia; CRISPR editors

#### **EPP0079**

### Positive schizotypy is associated with amplified mnemonic discrimination and attenuated generalization

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**Introduction:** Tendency to experience inaccurate beliefs alongside perceptual anomalies constitutes positive schizotypal traits in the general population and shows continuity with the positive symptoms of schizophrenia. It has been hypothesized that the positive symptomatology of schizophrenia, and by extension, positive schizotypy, are associated with specific alterations in memory functions. Imbalance between memory generalization and episodic memory specificity has been proposed on several counts; however, the direction of the imbalance is currently unclear.

**Objectives:** We aimed to contrast two competing hypotheses regarding the association between positive schizotypy, and memory alterations in a general population sample (N=71) enriched for positive schizotypy from a larger pool of individuals (N=614).

**Methods:** Positive schizotypy was measured with the short-version of the O-LIFE questionnaire, and memory specificity and generalization was captured by the well-established Mnemonic Similarity Task. **Results:** Distortions in the behavioural memory performance indices were found to correlate with positive schizotypy: individuals prone to unusual experiences demonstrated increased discrimination and reduced generalization (explaining 10% and 17% of variance, respectively). Associations were robust when controlled for the disorganized, negative and impulsive-asocial dimensions of schizotypy and associated psychopathology.

**Conclusions:** Our findings show that people who are prone to irrational beliefs and unusual experiences also show measurable alterations in memory and likely have difficulty grasping the global picture and rather be overpowered by fragments of information.

**Disclosure:** No significant relationships. **Keywords:** episodic memory; schizotypy; pattern separation; pattern completion

### **EPP0080**

## Prevalence of treatment resistant schizophrenia according to minima TRRIP criteria in a mental health catchment area in southern Spain

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**Introduction:** The response to antipsychotic treatment in patients with schizophrenia varies from 14 to 34% in first episodes, and from 45 to 61% in more chronic patients. Nevertheless, the concept of treatment resistant schizophrenia (TRS) is still a matter of great controversy. Recently, an international group of experts has developed the TRRIP criteria to define treatment resistant schizophrenia (TRS), including an ultra-resistance category for clozapine resistant patients. Up till now, there is a scarcity of epidemiological data of TRS with TRRIP criteria.

**Objectives:** This study attempts to identify the population diagnosed of schizophrenia that fulfils the minima TRRIP criteria for TRS in our mental health catchment area.

**Methods:** A descriptive and retrospective study has been developed on the patients diagnosed of schizophrenia (ICD.10, F.20) in the catchment area of the Mental Health Service at Jerez Hospital between 2018 and 2019. TRRIP criteria were applied for two independent researchers and, in case of disagreement, consensus was reached by using the LEAD procedure.

**Results:** The total number of ICD-10 schizophrenic patients identified was 590, from a population of 456.752 in 2019. A group of these, 206 patients (35%) qualified as TRS according to the minima TRRIP criteria, 50% were positive subtype and the rest the negative one. 46.8% were treated with clozapine.

**Conclusions:** Consensus criteria of TRS minimise the heterogeneity of epidemiological data in literature. Our data suggest a prevalence rate of TRS lower than that of similar studies. Accordingly, a comprehensive understanding of this population would undoubtedly contribute to improve preventive and therapeutic strategies.

Disclosure: No significant relationships.

Keywords: Treatment Resistance; clozapine; schizophrénia

#### **EPP0081**

### Consequence of the magnocellular dysfunction on processing facial affect recognition in Schizophrenia

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Introduction: Magnocellular deficit in visual perception and impaired emotion recognition are core features of schizophrenia, however their relationship and the neurobiological underpinnings are still unclear. **Objectives:** The aim of our research was to investigate the oscillatory background of perception and emotion recognition in schizophrenia and to examine the relationship between these processes. Methods: Thirty-nine subjects with schizophrenia and forty healthy controls subjects were enrolled in the study; the two study groups did not differ in age, gender and education. In the visual paradigm the participants viewed magnocellular biased low-spatial frequency (LSF) and parvocellular biased high-spatial frequency (HSF) Gabor-patches and in the second paradigm happy, sad and neutral faces were presented, while 128-channel EEG was recorded. Results: Significantly weaker theta (4-7 Hz) event related synchronisation (ERS) was observed in patients compared to controls in the LSF condition, whereas in the HSF condition there was no difference between the two groups. Event related changes in theta amplitude were also found to be significantly weaker in patients

compared to healthy controls in the emotion recognition task, which difference was disappeared after correction for ERS to LSF condition. In the correlational analysis theta activity in the magnocellular biased stimuli correlated significantly with theta activity in the emotion recognition task, while theta to parvocellular biased stimuli showed no similar correlation with emotion recognition.

**Conclusions:** In schizophrenia, emotion recognition impairments are closely related to the dysfunction of the magnocellular system, which supports the bottom-up model of schizophrenia.

**Disclosure:** No significant relationships.

**Keywords:** schizophrénia; Emotion recognition; theta ERSP; Perception

#### **EPP0082**

### A disorder in executive functions crosses traditional diagnostic borders of the schizophrenia-bipolar spectrum

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**Introduction:** Our series of studies in the spectrum of psychosis (schizophrenia, bipolar affective disorder, schizoaffective disorder) is based on the concept of the RDoC system.

**Objectives:** In this study, we were interested in knowing whether cross-diagnostic disturbances in cognitive functions can be found in the spectrum and whether they predict clinical symptoms.

**Methods:** In the study, N = 66 schizophrenic (M = 38.2  $\pm$  9.37 years, 26 women), N = 30 bipolar (M = 47.4  $\pm$  9.35 years, 19 women), N = 33 schizoaffective (M = 39.8 years $\pm$  11.3 years, 21 women) and N = 28 healthy subjects (M = 36.5  $\pm$  9.9 years, 14 women) participated. All subjects underwent the Wisconsin Card Sorting Test (WCST), Raven Test, Digit Span Test, Visual Patterns Test, Letter and Semantic Fluency tests, Metaphor and Irony Comprehension, Directed Forgetting, Stop Signal Test, and Lexical Decision Task. In addition, symptom rating scales were administered (PANSS, SANS, YMRS, MADRS).

**Results:** Based on our results, the performance of the WCST-deficient group lagged behind the WCST-non-deficient group and the healthy control group in most executive control tests. Importantly, this effect was independent of diagnosis, so it appeared in all three patient groups. Members of the deficit group had a higher rate of negative symptoms.

**Conclusions:** Disruption of executive functions is a transdiagnostic feature of the schizophrenia-bipolar spectrum, which could be associated with any diagnosis.

Disclosure: No significant relationships.

Keywords: Transdiagnostic; RDoC; Executive functions; WCST