

Poster Session I– Advocacy and Patient Organisations

P-001 | Using Qualtrics for interactive screening tools to provide evidence-based recommendations and resources for mood disorders globally

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Background and Aims: We have an ocean of options for assessment of mood disorders, yet there has been little dent in the rate of people thirsty for the benefits. There are more than 200 depression measures, and dozens for mania. Which are best? Where would clinicians find them? Are they affordable? Feasible? Would patients understand the results or what to do next? Therefore, our group's goal is to make these "best of the free" measures more readily available online. **Method:** We searched the literature to create a directory of the most accurate and free measures, contacted other researchers to obtain any published translated versions, and spearheaded the translation and validation process for new measures. Furthermore, we created electronic screeners (via Qualtrics) so that individuals can complete them, receive a score, and be directed to mental health recommendations and resources.

Results: This spring, we partnered with the DBSA to revamp their Mental Health Screening Center, and our surveys will be available for individuals to take, free of charge, and gain a better understanding of their mood symptoms. We have approximately 25 screeners, obtained translated measures in over 30 languages, and links to various resources (psychoeducation, finding a clinician, support groups).

Discussion: We will present these tools, demonstrate our translated measures, present statistics to demonstrate impact (e.g., number of hits on screener links, visitor demographics), and future directions to disseminate these resources to help us guide people to seek help and reduce the suffering from mood disorders.

P-002 | Systemic challenges in bipolar disorder management: A patient-centered approach

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Background and Aims: As part of a series of Patient-Centered Outcomes Research Institute-funded large scale retrospective observational studies on bipolar disorder (BD) treatments and outcomes, we sought the input of patients with BD and their family members to develop research questions. We aimed to identify systemic root causes of patient-reported challenges with BD management to guide subsequent studies.

Method: Three focus groups were conducted where patients and their family members (total n=34) formulated questions around the central theme, "What do you wish you had known in advance or over the course of treatment for BD?". In an affinity mapping exercise, participants clustered their questions and ranked the resulting categories by importance. The research team and members of our patient partner advisory council further rated the questions by expected impact on patients. Using a Theory of Constraints systems thinking approach, several causal models of BD management challenges and their potential solution were developed with patients using the focus group data.

Results: 369 research questions were mapped to 33 categories revealing 10 broad themes. The top priorities for patient stakeholders involved pharmacotherapy and treatment alternatives. Analysis of

causal relationships underlying 47 patient concerns revealed two core conflicts: for patients, whether or not to take pharmacotherapy, and for mental health services, the dilemma of care quality versus quantity.

Conclusion: To alleviate the core conflicts identified, BD management requires a coordinated multidisciplinary approach including:

improved access to mental health services, objective diagnostics, sufficient provider visit time, evidence-based individualized treatment, and psychosocial support.

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Poster Session II–

Bipolar Disorders in Children and Adolescents

P-003 | Evaluation of bipolar disorder in children and adolescents referred to a mood service: diagnostic pathways and manic dimensions

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Background and Aims: Few studies have examined pediatric mental health services for early-onset bipolar disorder (BD). The goal of this study was to describe diagnostic pathways and manic dimensions in BD among referred children and adolescents.

Method: Data were obtained from a review of the charts of 814 subjects, aged 2-17 years, with a complaint of mood disturbances who were referred to a university-based child and adolescent clinic that specializes in mood disorders. Eligible participants (N=494) were systematically assessed and followed to determine diagnoses on the basis of criteria in the DSM-IV-TR in accordance with the best-estimate approach. Manic symptoms were subjected to principal component analysis to investigate the dimensional bipolar profile of the sample.

Results: Among the total help-seeking sample, one third of the participants dropped out at intake and, after an average follow-up of 1.7 years, one third had been determined to meet criteria for BD and one third did not fulfill operational criteria for BD. The diagnostic status was changed in 35% of patients: approximately 10% were false positive and nearly 25% were false negative for BD. Most patients who converted to a bipolar diagnosis were initially labeled with major depressive disorder or attention-deficit/hyperactivity disorder and had a longer follow-up period. Relevant manic dimensions were elation, grandiosity, and disruption, which explained 41.4% of total variance.

Conclusion: Regular reappraisal and follow-up of children and adolescents with mood disturbances provides a window for detection of BD. A coordinated and hierarchical connection among pediatric mental health services with different degrees of specialization is recommended.

P-004 | Consumption of opiates and maniac episode. A case report

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Background and Aims: We are going to explain a clinical case about a female patient of 16 years old who suffered a maniac episode in relation with consumption of methadone. Our Objective is to show the risk of suffering affective disorders in relation with the consumption of opiates and their derivatives.

Method: Review of the consumption of Methadone. Report of a case that shows how dangerous could this substance can be.

Results: After 3 weeks the patient recovered and she could leave the hospital.

Conclusion: We can conclude there is a possible relation between opiates consumption and suffering a maniac episode.

P-005 | Bad adherence is related with unemployment and lack of recovery in first episode bipolar patients

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Background and Aims: The occurrence of a first episode of mania marks the diagnosis of a chronic mental illness such as bipolar disorder type I. An early approach is essential to avoid the long-term disability of the patient. One of the most important problems when treating this first manic patients is lack of drug adherence, that can be related with long-term outcome.

In this work, we evaluate the drug adherence in a sample of patients with a first episode of mania (FEM) and its long-term consequences in relation with functionality.

Method: Seventy-two FEM patients were included in the study. Drug adherence was evaluated as good or bad according to Morisky Green Scale. The sample was reevaluated 1, 2 and 3 years later, assessing the presence of manic symptoms (Young scale) and their general functioning (Strauss scale).

Results: Fifty per cent of the sample had bad compliance with treatment. Men took medication significantly worse than women.

Bad adherence was significantly related to higher score in Young scale 1 year after the FEM and also to less full-time employment 2 and 3 years later.

Conclusion: Improving adherence to pharmacological treatment can be an excellent tool to improve medium and long term outcome in the early stages of BD.

P-006 | Paediatric bipolar disorder: Co-Development of first UK post diagnostic support groups using participatory design methods

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Background and Aims: The UK National Adolescent Bipolar Service (ABS) based in North East England involves families in service development. At an Engagement Day, 13 families requested post-diagnostic group sessions for young people (less than 18 years) and their parents following a diagnosis of Bipolar Disorder (BD). The authors employed participatory design methodology to inform the co-development of the format and content of the post-diagnostic group.

Method: Three workshops were held in October 2017 where families developed an exemplar family to share how each member may have felt:

- Following a diagnosis of Bipolar Disorder
- How friends, family and services could support them
- The group format and the content the family may benefit from

Results: The families requested:

- The group is initially facilitated by professionals but as the group develops, young people and parents lead
- A father shared the parent group would be a space to talk about emotions and day to day life for a family
- Young people felt it would be good to learn from others experience of situations such as transitions, as well as telling friends about their diagnosis and negotiating prom

Conclusion: The ABS team will hold workshops in January 2018 to further develop the content with an aim of starting the groups in July 2018.

P-007 | Effectiveness of long-term treatment with lurasidone in children and adolescents with bipolar depression: week 28 results of a 2-year open-label extension study

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Background and Aims: To evaluate the long-term effectiveness of lurasidone in children and adolescents with bipolar depression.

Method: Patients 10-17 years with a DSM-5 diagnosis of bipolar I depression were enrolled in a 2-year, open-label lurasidone (LUR) treatment study after completing a 6-week, double-blind, placebo-controlled study of lurasidone 20-80 mg/d. The primary efficacy measure was the Children's Depression Rating Scale, Revised (CDRS-R). We report data from a week 28 interim analysis. Treatment response was defined as $\geq 50\%$ reduction from double-blind baseline in the CDRS-R total score.

Results: 347 patients were randomized to lurasidone or placebo (mean age, 14.3 years). At the primary Week 6 endpoint, treatment with lurasidone was associated with statistically significant improvement vs. placebo on the CDRS-R total score (-21.0 vs. -15.3 ; $P < 0.0001$; effect size, 0.45). A total of 223 patients entered the open-label study, and 155 (69.5%) completed 28 weeks of treatment; 0.9% discontinued prior to Week 28 due to lack of efficacy. In the subgroup of patients who continued into the open-label study, mean improvement in CDRS-R total score, from double-blind-to-open-label baselines was greater for the Lur-Lur group vs. the Pbo-Lur group (-23.4 vs. -17.4). On the CDRS-R, mean change from open-label baseline to Week 28 for the Lur-Lur and Pbo-Lur groups was -7.3 and -12.5 , respectively. Responder rates, from double-blind baseline to Week 28, for the Lur-Lur and Pbo-Lur groups were 84.0% and 86.1%, respectively.

Conclusion: In children and adolescents with bipolar depression, long-term treatment with lurasidone was associated with continued improvement in depressive symptoms.

P-008 | Safety of long-term treatment with lurasidone in children and adolescents with bipolar depression: week 28 results of a 2-year open-label extension study

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Background and Aims: To evaluate the long-term safety and tolerability of lurasidone in children and adolescents with bipolar depression.

Method: Patients 10-17 years with a DSM-5 diagnosis of bipolar I depression were enrolled in a 2-year, open-label lurasidone (LUR) treatment study after completing a 6-week, double-blind, placebo-controlled study of lurasidone 20-80 mg/d. The primary efficacy measure was the Children's Depression Rating Scale, Revised (CDRS-R). We report data from a week 28 interim analysis. Treatment response was defined as $\geq 50\%$ reduction from double-blind baseline in the CDRS-R total score. We present here safety results of an interim analysis at Week 28.

Results: A total of 223 patients entered the extension study, and 155 (69.5%) completed 28 weeks of treatment (mean daily dose, 52.6 mg). A total of 8.1% of patients discontinued due to an adverse event, consisting of psychiatric disorders (N=18), akathisia (N=3), abdominal pain (N=1), and pruritus (N=1). Eight patients (3.6%) met criteria for treatment-emergent mania. A total of 4.5% of patients reported suicidal ideation, and 5 patients (2.2%) made a suicide attempt. The 3 most common adverse events on lurasidone were headache, nausea, and anxiety; akathisia and extrapyramidal symptoms (non-akathisia) were each reported by 7.2% of patients. Few changes were observed in weight, lipids, glycemic indices, or prolactin.

Conclusion: In children and adolescents with bipolar depression, up to 28 weeks of treatment with lurasidone was generally well-tolerated, with headache, nausea and anxiety being the most common adverse events. Minimal effects were observed on weight, metabolic parameters, and prolactin levels.

P-009 | Symptom improvement associated with lurasidone treatment of children and adolescents with bipolar I depression: results of a short-term placebo-controlled trial

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Background and Aims: To evaluate change in specific depressive symptoms in children and adolescents presenting with bipolar depression who received short-term treatment with lurasidone.

Method: Data in this secondary analysis were derived from a study of patients 10-17 years (N=343) with a DSM-5 diagnosis of bipolar I depression who were randomized to 6 weeks of double-blind treatment with lurasidone 20-80 mg/d or placebo. The primary endpoint was change from Baseline to Week 6 on the Children's Depression Rating Scale, Revised (CDRS-R) total score. Change from Baseline to Week 6 for each individual CDRS-R item was assessed with an ANCOVA using an LOCF approach. Cohen's *d* effect sizes were also calculated at Week 6.

Results: At the primary Week 6 endpoint, treatment with lurasidone was associated with significant improvement vs. placebo in the CDRS-R total score (-21.0 vs. -15.3 ; $P<0.0001$; effect size [d]=0.45). A total of 13 CDRS-R items (76%) were significantly improved on lurasidone: impaired school work ($P=0.023$; $d=0.25$), difficulty having fun ($P=0.004$; $d=0.31$), social withdrawal ($P<0.0001$; $d=0.43$), sleep disturbance ($P=0.0001$; $d=0.43$), appetite disturbance ($P<0.05$; $d=0.22$), irritability ($P=0.026$; $d=0.24$), excessive guilt ($P=0.0032$; $d=0.32$), low self-esteem ($P=0.012$; $d=0.27$), depressed feelings ($P=0.0068$; $d=0.29$), excessive weeping ($P=0.014$; $d=0.27$), depressed facial affect ($P=0.0009$; $d=0.36$), listless speech ($P<0.0001$; $d=0.43$), and hypoactivity ($P=0.012$; $d=0.27$). The remaining CDRS-R items were not significant.

Conclusion: In this placebo-controlled study of children and adolescents with bipolar depression, 6 weeks of treatment with lurasidone was effective in treating a wide range of depressive symptoms assessed by the CDRS-R.

P-010 | Lurasidone in children and adolescents with bipolar depression associated with mixed (Subsyndromal Hypomanic) features: post-hoc analysis of a randomized placebo-controlled trial

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Background and Aims: To evaluate the efficacy and safety of lurasidone in the treatment of children and adolescents with bipolar depression presenting with mixed (subsyndromal hypomanic) features.

Method: Patients 10-17 years of age with a DSM-IV-TR diagnosis of bipolar I depression, were randomized to 6 weeks of double-blind treatment with flexible dose lurasidone 20-80 mg/d or placebo. The presence of mixed features was defined as a YMRS score ≥ 5 at study baseline. Efficacy analyses included change from baseline to week 6 in Children Depression Rating Scale, Revised (CDRS-R) score, and Clinical Global Impressions-Bipolar Severity of Depression Score (CGI-BP-S).

Results: Treatment with lurasidone (vs placebo) was associated with significantly greater reduction in CDRS-R score at week 6 in pediatric bipolar depressed patients with mixed features (-21.5 vs -15.9 ; $P<0.01$; effect size, 0.45), and without mixed features (-20.4 vs -14.8 ; $P<0.01$; effect size, 0.45). Similar significant improvement was observed for reduction in CGI-BP-S score at week 6 in the mixed features group (-1.6 vs -1.1 ; $P<0.001$; effect size 0.57), and in the group without mixed features (-1.3 vs -1.0 ; $P=0.05$; effect size 0.30). Rates of protocol-defined treatment-emergent hypomania or mania were comparable for lurasidone and placebo in patients with and without mixed features.

Conclusion: In this post-hoc analysis of a placebo controlled trial, lurasidone was found to be efficacious in the treatment of child and adolescent patients with bipolar depression presenting with and without mixed (subsyndromal hypomanic) features.

P-011 | Physical anhedonia is neither an endophenotype nor a candidate symptom in paediatric bipolar disorder

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Background and Aims: Various studies have identified physical anhedonia as a potential candidate symptom and an endophenotype in schizophrenia. One study in adult bipolar disorder has failed to obtain such results. The current study was aimed at characterizing physical anhedonia in euthymic paediatric bipolar disorder patients and their relatives.

Method: Thirty patients fulfilling the ICD 10 diagnostic criteria for bipolar affective disorder currently in remission were recruited from the outpatient department of a tertiary care center in India. One healthy first degree relative of each patient and thirty healthy controls were also recruited. All participants in the study were below 18 years of age and informed written consent was obtained from their parents. All participants were evaluated on Chapman's Revised Physical Anhedonia Scale.

Results: Among three groups mean physical anhedonia score was highest for the first degree relatives and minimum for the patient group; no significant difference was noted across the groups. When individual cases and their first degree relatives were paired together using sibling pair analysis, an intrafamilial correlation coefficient of 0.063 ($P=0.369$) was obtained suggestive of absence of significant intrafamilial correlation for physical anhedonia. Further there was no significant difference in clinical characteristics of anhedonic and hedonic patients.

Conclusion: Similar physical anhedonia scores across three groups suggest that physical anhedonia cannot be regarded as an

endophenotype in paediatric bipolar disorder. Further physical anhedonia also fails to identify a homogeneous clinical or familial subgroup of paediatric bipolar patients and thus it cannot be considered as a candidate symptom.

P-012 | Patient health questionnaire-9 modified (Phq-9 m) as a screening tool in adolescent depression and its correlation with other depression assessment tools

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Background and Aims: The Patient Health Questionnaire-9 Modified (PHQ-9M) is a depression screening tool widely used in primary care and psychiatric settings, notably not validated in adolescents or compared to other assessments. Child Depression Rating Scale-Revised (CDRS-R) and Quick Inventory of Depressive Symptomatology (QIDS) in adolescents are validated depression assessment tools widely used in clinical practice. This project sought to compare PHQ-9M with CDRS-R and QIDS in a sample of treatment seeking adolescents.

Method: Adolescents ($n=146$) aged 13-18 with a history of unipolar/bipolar depression based on a clinical interview and semi-structured interview (KSADS-PL) were assessed with PHQ-9M self-administered screening and evaluated with QIDS adolescent self-report and CDRS-R assessments. Parents were interviewed separately using QIDS and CDRS-R parent reports and composite scores were given based on interviewer's impression. QIDS and CDRS-R aggregates were compared with PHQ-9M total using statistical correlations.

Results: Pearson correlation coefficient for PHQ-9M total scores and QIDS aggregates were 0.63($P<0.001$) (adolescent), 0.07($P=0.492$) (parent) and 0.46($P<0.001$) (composite) whereas with CDRS-R were 0.32($P=0.002$) (adolescent), 0.14($P=0.191$) (parent) and 0.21($P=0.038$) (composite). Spearman correlation for PHQ-9M total scores and QIDS were 0.62($P<0.001$) (adolescent), 0.09($P=0.401$) (parent) and 0.45($P<0.001$) (composite), whereas with CDRS-R were 0.29($P=0.004$) (adolescent), 0.14($P=0.177$) (parent) and 0.20($P=0.056$) (composite).

Conclusion: The PHQ-9M scores showed statistically significant positive correlation with adolescent QIDS and CDRS-R reports, and to a lesser extent with composite QIDS and CDRS-R reports but did not demonstrate significant correlation with parent QIDS and CDRS-R. Further examination of the PHQ-9M in clinical populations is critical to determine if it is a sensitive, specific and valid assessment tool.

P-013 | Youths' usage of and response to criticism in the family: predictors of pediatric bipolar symptomatology

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Background and Aims: Perceived criticism (PC) and sensitivity to criticism (SC) correlate with adult bipolar disorder (ABP), but less work has focused on pediatric (PBD). Understanding criticism in parent-child interactions is crucial for developing effective family-based treatments.

Aims: 1) Test association between PC and SC for youths, consistent with ABP, 2) test whether PC and SC predict worse clinical presentation for PBD, and 3) examine whether PC and SC relate differently to manic and depressive symptoms.

Method: 828 youths (ages 5-18) and their caretakers, mostly low SES, participated. Families completed the Schedule for Affective Disorders and Schizophrenia for Children and Adolescents (KSADS-PL; Kaufman et al. 1997) PLPlus version. Caretakers completed the Global Family Environment Scale (GFES; Rey et al., 1997), General Behavior Inventory (GBI; Depue et al. 1981), Children's Global Assessment Scale (CGAS; Shaffer et al. 1983), and the Perceived Criticism Scale (PCS; Hooley & Teasdale, 1989).

Results: Youths with PBD were significantly more critical of their caretakers and more distressed when criticized than youths without PBD. PC and SC predicted significantly worse clinical presentation, including increased scores on the YMRS, CDRS, CMRS, GBI hypo-biphasic and depression scales, GFES, CGAS, suicidality, substance use, rapid cycling, and KSADS depression, mania, and mood lability scales. Greater youth criticalness and sensitivity when criticized predicted greater depressive versus manic symptoms.

Conclusion: PC and SC play similar roles in PBD as they do in ABP, significantly worsening clinical presentation. Youth with PBD and high levels of PC and SC are likely to benefit from interventions reducing interpersonal conflict.

P-014 | Sleep latency and nocturnal awakenings in bipolar offspring's versus controls

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Background and Aims: To compare the sleep wake cycle profile between Bipolar offspring's (BO) and Parent Controls Offspring's (PCO).

Method: A descriptive, comparative cross-sectional study was carried out. Subjects were selected from a previous study comparing 127 BO versus 150 PCO. All parents and decedents were from the genetic isolate ("Paisa"). All subjects were ascertained with the K-SADS-PL (mean age: 13,7 years old). Questionnaires were applied to the participants: "Children Sleep Habits Questionnaire" and to their caregivers: "School Sleep Habits Survey". This research was approved by the local ERB.

Results: A total of sixty subjects were evaluated: 32 belonged to the BO group and 28 to the PCO group. Clinical differences were found in sleep latency time: PCO group with a mean of 21.4 minutes versus BO group with a mean of 13.1 minutes ($P=0.074$). Also, the frequency of nocturnal awakenings was higher in the BO group (50%) versus PCO group (5%). Compared to the PCO group, the BO group had higher frequency for bipolar spectrum symptoms 19% ($P=0.016$) and psychotic symptoms associated with affective episodes 22% ($P=0.020$) with a clinically and statistically significant difference. The BO group had also a higher frequency for social phobia 28% ($P=0.093$), MDD 25% ($P=0.064$), BD-NOS 13% ($P=0.053$) and BD 9% ($P=0.096$).

Conclusion: A shorter sleep latency time and a greater number of nocturnal awakenings were found in the BO group compared to PCO group regardless any associated psychopathology.

P-015 | Effect of lurasidone on neurocognitive performance in children and adolescents with bipolar depression: interim analysis at week 52 of a 2-year open-label extension study

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Background and Aims: To evaluate the long-term effects of lurasidone on cognitive performance in children and adolescents with bipolar depression.

Method: Patients 10-17 years with a DSM-5 diagnosis of bipolar I depression were enrolled in a 2-year, open-label lurasidone treatment study after completing a 6-week, double-blind (DB) study of lurasidone 20-80 mg/d. Cognitive performance was assessed with the Cogstate computerized battery, which assessed five domains: processing speed (detection task), attention/vigilance (identification task), learning/memory (one card learning task, accuracy), working memory (one back task, accuracy), and working memory (one back task, speed). Based on normative data for children and adolescents, an overall cognitive composite z-score was calculated as the average of the standardized scores for each of the cognitive domains. We present here the results of an interim analysis at week 52.

Results: A total of 491 patients completed the 6-week DB study and entered the extension study. CogState data were available on 486 patients at OL baseline and 220 patients at week 52. Among extension phase patients, impairment was noted at DB baseline on the cognitive composite z-score (-1.03) and on all 5 Cogstate domain scores. Improvement was observed at week 52 on the Cogstate composite z-score ($+0.27$), and on processing speed (detection task [$+0.10$]), attention/vigilance (identification task [$+0.14$]), learning/memory (one card learning task, accuracy [$+0.54$]), working memory (one back task, accuracy [$+0.45$]), and working memory (one back task, speed [$+0.31$]).

Conclusion: Children and adolescents with bipolar depression had notable levels of cognitive impairment at baseline, which showed some improvement during long-term treatment with lurasidone.

P-016 | Secrecy, adaptation, and liminality: The experience of identity development in early-onset bipolar disorder

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Background and Aims: As the investigation into early-onset bipolar disorder (EOBD) continues to grow in scope and depth, incorporating qualitative data becomes an essential component of obtaining a complete understanding of the impact and experience of the disorder.

Method: Semi-structured interviews were conducted with eight participants ages 18-25 ($N=8$) to examine their experience of EOBD during adolescence (ages 13-17). Qualitative analysis identified emerging themes and sub-themes of participants' experiences of EOBD between ages 13-17.

Results: Participants described an experience in which the process of normative adolescent cognitive, moral, and psychosocial identity development was altered due to the impact and implications of EOBD on their identity and sense of self. Participants described experiencing an altered sense of self due to EOBD that included viewing themselves as different or defective and feeling the need for secrecy and selective disclosure of EOBD diagnosis. Participants described difficulty distinguishing and maintaining a sense of self apart from EOBD illness, including difficulty trusting their own thoughts, emotions, and reactions. Participants described a process of adaptation and integration of EOBD illness into their sense of self that occurred throughout adolescence. Specific sub-themes: secrecy, emotional adjustment, and adaptation.

Participants additionally described interactive dynamic between identity development and interpersonal relationships, stigma and labeling, and EOBD course of illness.

Conclusion: EOBD presents significant challenges to identity development in adolescence. Implications of findings for further research and practice address incorporation of interventions directed at identity development, interpersonal functioning and support system, resilience, and environmental and protective factors.

P-017 | Childhood, emotional dysregulation and suicidal risk

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Background and Aims: Evolution and treatment in one child with comorbidity between odd, ADHD, impulsivity, emotional dysregulation and bipolar spectrum in the context of family dysfunction.

Introduction: Irritability and Emotional Dysregulation are causes of consultations that increase day by day in our services of Child & Adolescent Mental Health. Irritability and impulsivity dysfunction in Children must be studied in its entirety.

Background: There is a high comorbidity between impulsivity, frequent irritability, outburst of anger, inattention, hyperactivity and greater degree of oppositional defiant behavior seen in Externalizing disorders, and Bipolar Spectrum or Bipolar disorder (BD). This poses a challenge to diagnosis and treatment in children.

Method: Objectives: Demonstrate by reviewing a case, the diagnosis comorbidity between Oppositional Defiant Disorder (ODD), Externalizing Disorders, Attention Deficit Disorder with Hyperactivity (ADHD) and suicidal risk associated with a pattern of Bipolar Spectrum.

Results: Methodology/Results: A ten-years-old child had a four-year history of hypoprosia, hyperactivity, inattention, and impulsivity in the context of family dysfunction. There was also occasional hyperphagia. He had received psychotherapeutic and psychopharmacological treatment to ODD, then to ADHD and increased symptoms. We needed to change the psychopharmacological treatment, because there still were symptoms of irritability, distractibility, restlessness, anger outburst, hyperactivity, grandiosity and dysphoria. In the test of Young-Mania-Rating-Scale and HCL-32, results were compatible with BD. The new pharmacological treatment was with Antipsychotic and We had doubts for mood stabilizer. He had psychotherapeutic management: Dialectical-Behavioral-Therapy-DBT & social skills- and family therapy. Now the prognosis is excellent (CHIP-AE), and irritability as vanished.

Conclusion: The emotional dysregulation and impulse control deficit have a high etiopathogenic relationship with Bipolar disorder in children. In the same time, suicidal risk might be higher. The same psychotherapeutic treatment could be effective. However, psychopharmacological treatment is a challenge and should be monitored step by step.

P-018 | Emotional dysregulation vs. Bipolar spectrum disorder. Is there a relationship with suicidal ideation or self-destructive behaviors in adolescents?

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Background and Aims: Emotional dysregulation is present in mental disorders suffered by children and adolescents. The evidence in child & adolescence mental health highlights similarities between a possible softer Emotional Dysregulation spectrum or a bipolar spectrum disorder and sub-threshold forms of self-destructive behaviors in adolescents in the context of family dysfunction.

Method: Objectives: To evaluate the possible relationship between emotional dysregulation-vs-Bipolar spectrum disorder as triggers of suicidal ideas or suicidal conducts in adolescents. To assess suicidal ideation and/or self-destructive behaviors in adolescents. Their association with emotional dysregulation and the family climate, in a population diagnosed with an externalizing/internalizing disorder in outpatient treatment, compared to a control school population.

Results: Methods: This analytical, transversal, case-control-study investigates a group of patients between 12-and-18 years old, who have been diagnosed with externalizing/internalizing mental disorders and received outpatient treatment(n=20), against school adolescents, undiagnosed mental illness(n=20). This research is evaluating emotional dysregulation(measured with the Difficulties in Emotion-Regulation-Scale/DEERS), Bipolar-Spectrum(measured with the HCL-32) and Family environment(measured by:Mc. Master-Family-Assessment-Device/FAD) and their repercussion on suicidal ideation and/or self-destructive behaviors(measured by:Columbia-Suicide-Severity-Rating-Scale/C-SSRS).

Conclusion: Results & Conclusions: Bipolar Spectrum Disorder both interpersonal and cognitive, as well as emotional dysregulation into the family nucleus and intrinsic, are factors of worse prognosis of possible suicidal behavior. The suicidal ideation is presented in a common pattern in both externalizing and internalizing nosological groups. It is striking that sub-syndromic emotional dysregulation in school-age adolescents becomes a precursor of this suicidal ideation and therefore of suicidal behavior. Furthermore, this dysregulation being more frequently and with more psychopathological commitment. Finally, it is recommended to include more cases in this study.

Poster Session III- Bipolar Disorders in the Elderly

P-019 | New onset bipolar disorder with severe suicidal ideation in the elderly: a case report

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Background and Aims: Diagnosis and management of bipolar disorder in late-life remains as a challenging and complex endeavor. Its appearance in the geriatric population is not always attributable to a secondary organic cause. Using a case of bipolar depression with psychotic features and severe suicidal ideation in a geriatric patient, we aim to highlight the challenges in the integral approach of this population in an outpatient setting.

Method: Mrs. L, a 65 year-old pastor and retired general practitioner from a northern Mexican border town with well controlled prediabetes and no past psychiatric history was referred to our Department of Psychiatry by her husband who reported a two-year history of untreated, self-limited recurrent episodes of decreased need for sleep, severe anxiety, religious-themed grandiose ideas and depressive symptoms with occasional suicidal thoughts. Six months prior to her visit, Mrs. L began treatment with sertraline, alprazolam, quetiapine and donepezil with good initial response but presented, afterwards, severe suicidal ideation and planning and self-harming

behavior, delusions of religious-related guilt, vocal tics, weight-loss, marked social and occupational impairment, anhedonia, hopelessness and sadness.

Results: Due to high self-harm risk, inpatient care was offered but was refused by the patient and her family, which led to treatment in a crisis intervention model and quetiapine XR titrated up to 150 mg/qd with gradual remission of symptoms in a 2-month period.

Conclusion: In the elderly, bipolar disorder's differential diagnosis is quite broad and demands a ruling out process. This case demonstrates that bipolar disorder in the elderly can emerge as a primary psychiatric disorder.

P-020 | Lithium continuation for a patient with bipolar disorder and chronic kidney disease

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Background and Aims: Lithium is the mainstays of treatment for patients with bipolar disorder(BD). Studies have shown an association between lithium and chronic kidney disease(CKD). There is a

controversy regarding treatment with lithium after diagnosis of CKD due to the risk of end-stage-renal-disease(ESRD).

Method: We present a case of 66-year-old female with bipolar-I-disorder, euthymic on lithium for 41 years. She gradually developed CKD (GFR=39 mL/min/1.73 m²) and lithium was discontinued after an episode of acute kidney injury. She also had hypothyroidism, stable on levothyroxine. In the next 18-24 months, she tried multiple antidepressants (venlafaxine, desipramine, bupropion and buspirone) and mood stabilizers (valproate, lurasidone, aripiprazole, ziprasidone) mild improvement (treatment response scale score[TRSS]=3). Lamotrigine caused rash, atypical antipsychotics caused parkinsonian symptoms. She refused electroconvulsive-treatment. Due to the severity of her depression, we carefully reinitiated lithium at 150 mg daily and optimized the dosage to 300 mg daily. She had remors and gait instability at level 0.6, which improved after discontinuation of valproate. Her depression improved significantly within 4-6 weeks (TRSS=9) and was stabilized on lithium monotherapy. Her GFR stayed stable (37-40).

Results: Lithium has shown benefits in both reducing number and severity of relapses. Due to concerns regarding progression of CKD a lot of patients discontinue lithium. Recent data suggests that after an initial diagnosis of CKD, patients who continued lithium treatment may not necessarily have an increased risk of developing ESRD.

Conclusion: Lithium can be used safely in patients with BD and CKD with careful monitoring of renal functioning. This case highlights the importance of patient-education and the importance of team-based individualized approach.

P-021 | The Association between serum uric acid levels and cardiovascular diseases in patients with older-age bipolar disorder

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Background and Aims: Evidence suggests that dysregulations of purinergic system play a role in the pathophysiology of bipolar disorder. Furthermore, studies from general population showed that elevated levels of serum uric acid can increase the risk of CVDs. The aim of this study was to examine the association between serum uric acid levels and CVDs in patients with older-age bipolar disorder (OABD).

Method: We enrolled DSM-IV BD-I patients who aged over 50 years and had at least one psychiatric admission to the teaching hospitals of Taipei Medical University. The diagnosis of CVD was determined by a board-certified cardiologist blinded to psychiatric data. Each case subject (i.e. the OABD patient with CVD) was matched with

one control (i.e. the OABD patient without CVD) based on age, sex, and date of the most recent psychiatric admission (± 2 years) (the index hospitalization). Clinical data of the index hospitalization were obtained by chart review.

Results: The data of 57 case subjects and 57 age- and sex-matched controls were utilized in this analysis. The mean age at the index hospitalization was 60.2 ± 5.6 years for the cases and 60.0 ± 5.4 years for the controls. After adjusting body mass index, diabetes mellitus, and hyperlipidemia, the levels of serum uric acid were significantly associated with CVDs in patients with OABD (95% C.I. for OR=1.12-1.94, $P=0.006$).

Conclusion: Elevated levels of serum uric acid may possibly increase the risk of CVDs in patients with OABD. Further longitudinal studies are needed to examine the association between serum uric acid levels and CVDs in this at-risk group of patients.

P-022 | A comparative study of photoplethysmography on alzheimer's dementia with severe depression and without depression

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Background and Aims: Heart rate variability(HRV) is fluctuation of the heart beat interval and is controlled by the autonomic nervous system(ANS).The frequency and time domain parameters of HRV are calculated and used to understand the autonomic condition. The severity of depressive symptoms has been correlated with a reduction in parasympathetic activity. We investigated ANS function and its abnormalities in severe depressive disorder in AD.

Method: 40 patients had AD with severe depressive disorder (ADwD) and were matched for age and gender with 50 patients with AD without depressive disorder (ADwoD).ANS was evaluated using HRV, measured with photoplethysmography. Frequency domain measures were obtained at low(LF) and high(HF)frequencies. Time domain measures were obtained from the standard deviation of normal to normal intervals (SDNN) and the root mean square of successive differences in the NN interval(RMSSD).

Results: In the frequency domain, LF and HF were significantly lower in ADwD ($P<0.001$) and the LF/HF ratio was significantly higher than in ADwoD ($P<0.001$).In the time domain, SDNN and RMSSD were significantly lower in ADwD than in ADwoD ($P<0.05$).The frequency and time domain parameters of HRV were significantly lower in ADwD than in ADwoD.

Conclusion: In ADwD, HF, LF, and SDNN were reduced, while the LF/HF ratio was increased. Therefore, autonomic imbalance reflecting reduced parasympathetic activity relative to sympathetic activity was associated with ADwD. Compared with ADwoD, ADwD showed that the complexity of heart rate fluctuation is relatively impaired. The severity of depressive symptoms has been correlated with a reduction in parasympathetic activity. Therefore, severe depressive

disorder may predispose patients with early AD to a heightened risk of cardiovascular disease.

P-023 | Mood instability and symptomatic density in the long-term course of bipolar disorders

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Background and Aims: Mood instability (MI) and symptomatic density (SD) would be better measure for functional outcome in Bipolar Disorders (BD) than number of episodes. Prevalent hypotheses suppose a progressive cycle acceleration as standard form of BD evolution. At the moment there are scarce data about the evolution of MI and SD in long-term course. We compared MI and SD during a five-year observation period in two subsets of BD patients: one composed by young adults and the other by older adults.

Method: Two samples of patients were selected, one of young adults (YABD) and other of older adults with BD (OABD). Morbidity course was assessed with a life chart technique. MI was assessed using Mood Instability Factor (MIF).

Results: 52 YABD and 38 OABD were included. Median time of follow-up was 5 years (IQR: 3.6-7.9). The samples differed significantly in the duration of illness (16.0 ± 7.1 vs. 30.7 ± 8.7 years; $P < 0.01$). There were no statistically significant differences in SD and MIF between YABD and OABD during follow-up after adjusting for markers of disease severity.

Conclusion: We did not find any differences in MI and SD between these two samples but these data also failed to show a decrement in this scores.

Limitations include small size of sample, the risk of selection bias in the OABD group and measurement error in accounting for symptomatology in life charts.

All in all, these data show that prospective studies remain critically needed to have a proper description of long-term clinical evolution of BD.

Poster Session IV- Brain Structure and Brain Function

P-024 | Effects of rTMS on brain volumes in bipolar disorder

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Background and Aims: TMS is known to be an effective treatment for unipolar depression and to less extent in bipolar depression disorder (BDD). Some Studies in suggested neuroplasticity effects of this medication. Less is known about rTMS neuroplasticity effect in BDD, functional brain imaging have identified critical neural circuits involving the amygdala and other limbic structures, prefrontal cortical regions, that modulate emotional behavior and are disturbed in mood disorders.

The present study aims to assess brain volume change in bipolar depression patient before and after rTMS.

Method: 41 untreated BDD patients (Age: 13.63 to 63.12 years) underwent a baseline clinical assessment, a structural MRI, Local brain volume changes measured by deformation-based morphometry. Brain volumes were corrected for intracranial volume, and analyzed using repeated measures ANCOVAs with bipolar depression as factor, and age and gender as covariates.

Results: A total of 41 bipolar patients were randomized to an active (n=21) or sham (n=20) 10-Hz rTMS intervention applied 5 days per

week for 3 weeks to the left DLPFC. Volume gains in the left hippocampal, parahippocampal and precuneal cortices predicted symptom improvement in the active rTMS group ($r = -0.431$, $P < 0.008$), but not the sham rTMS group ($r < 0.221$, all $P > 0.188$).

Conclusion: These findings suggest that, along with remission, patients receiving rTMS to the left dorsolateral prefrontal cortex (DLPFC) show increase of left hippocampal, parahippocampal and, Posterior middle frontal gyrus and right rostral anterior cingulate cortex volumes. These regions are involved in cognitive and emotional processes, which are typically impaired in BDD.

P-025 | Relation between white matter hyperintensities, clinical variables and functioning in bipolar patients

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Background and Aims: Bipolar disorder (BD) is a chronic mental illness, characterized by an episodic course involving mood, sleep,

behavior and cognition disturbances. In spite of recent advances in treatment, many BD patients will eventually develop chronicity with significant general disability. Investigations have observed that White Matter Hyperintensities (WMH) are one of the most consistently reported abnormalities in BD; and it is supposed that they are associated with a greater number of hospitalizations, poorer response to treatment and high burden disease. This study aimed to compare clinical characteristics and functioning between bipolar patients with and without WMH.

Method: A sample of 52 euthymic bipolar patients and without cardiovascular or nervous system disease that could generate WMH were evaluated in the Affective Disorders Clinic in "Instituto Nacional de Psiquiatría" in Mexico City. We grouped the patients according to the presence or absence of WMH in the last magnetic resonance imaging made in the last 5 years. Functioning were evaluated using the Functioning Assessment Short Test (FAST). A regression analysis was performed.

Results: The number of affective episodes were related only with FAST in leisure time area ($P=0.006/r=0.38$). Rapid cycling was related with Autonomy ($P=0.003/r=0.40$), Financial issues ($P=0.007/r=0.37$) and Leisure time ($P=0.003/r=0.40$). WMH were only related to evolution time of the BD ($P=0.006/r=0.42$).

Conclusion: Clinical variables did not differ between patients with or without WMH. Functioning impairment was conditioned by a high number of affective episodes.

P-026 | Spectroscopy MRI brain myoinositol changes in depressive bipolar patients treated with lithium vs healthy controls taking oral inositol

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Background and Aims: To identify the effects of oral inositol on myo-inositol (MI) concentrations in bipolar I depression using proton magnetic resonance spectroscopy (1H-MRS).

Method: Eight adult patients with bipolar I current episode depressed, under treatment with lithium carbonate (within therapeutic serum levels) and 8 healthy controls received open-label oral inositol 4 to 12 gr/day. The MI concentration in the medial and lateral prefrontal areas, front-orbital areas, insula, basal ganglia, thalamus and temporal and occipital cortex were measured before and after 6 weeks of inositol treatment. Changes in MI concentration were analyzed with 1H-MRS over time. MI was normalized with respect to the peak of creatinine (Cr) (MI/Cr ratio).

Results: Statistically significant changes were observed for MI concentration in left ventrolateral prefrontal cortex $t=2.20$, $P=0.045$ (patients: mean=0.39, SD=0.31; controls: mean=0.14, SD=0.07), and right thalamus $t=2.24$, $P=0.045$ (patients: mean=1.75, SD=1.48;

controls: mean=-0.22, SD=0.85). While we observed a reduction in depressive symptoms (MADRS $P=0.05$, HAMD $P=0.009$, BeckD $P=0.003$).

Conclusion: This study showed changes in MI in several brain area associated with oral inositol treatment in bipolar depression treated with lithium. Further investigations of inositol effects on brain MI and its antidepressant properties are needed to corroborate our finding.

P-027 | Negative association between the neurotoxic 3-Oh-kynurenine to kynurenine ratio and fractional anisotropy in euthymic bipolar I disorder - a tract-based spatial statistics study

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Background and Aims: Since from animal models it is known that oligodendrocytes are responsive to kynurenine catabolites (Trypcat), both being involved in bipolar disorder pathophysiology, we hypothesize a negative association between neurotoxic Trypcat enzymatic activity and white matter microstructural integrity.

Method: In this post-hoc MOODINFLAME study, we performed 3T diffusion tensor imaging (DTI) and measured the levels of tryptophan (Trp), kynurenine (Kyn) and its main catabolites consisting of hydroxykynurenine (3-OH-Kyn), kynurenic acid (KynA) and anthranilic acid (AA) in 20 patients with euthymic bipolar I disorder (BD-I) and 20 healthy controls (HC). We compared the end-products to substrates ratios (Kyn/Trp, 3-OH-Kyn/Kyn, KynA/Kyn, AA/Kyn) between patients and control groups. Subsequently, we analyzed the association between Trypcat ratios and DTI measures within the patient group, using FSL Tract Based Spatial Statistics (TBSS).

Results: There was no difference in sex and age between the groups. The mean 3-OH-Kyn/Kyn ratio was significantly higher in the BD-I group, compared to HC (HC: 2.15×10^{-2} (CI: 1.76×10^{-2} - 2.57×10^{-2}); BD-I: 3.35×10^{-2} (CI: 2.35×10^{-2} - 4.52×10^{-2} ; $t=-2.33$; $P=0.025$). There was no statistical significant difference between the groups in the other Trypcat ratios.

Within the patient group, the TBSS analyses demonstrated widespread clusters that associated negatively between fractional anisotropy and the 3-OH-Kyn/Kyn ratio. No associations were demonstrated with the other DTI measures or with the other ratios.

Conclusion: Our findings add to the growing evidence that neurotoxic tryptophan catabolites play a role in the pathophysiology of BD and

support the hypothesis that the immune system dysregulation and white matter microstructural aberrations are associated in this disorder.

P-028 | Blood-brain barrier integrity during the first episode of mania: long-term clinical implications

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Background and Aims:

- To evaluate the functionality of the Blood-Brain Barrier (BBB) in a sample of patients with a First-Episode of Mania (FEM)
- To assess the impact of BBB dysfunction on the clinical evolution of FEM patients during a follow-up period of 3 years

Method: Patients with a FEM were recruited from the Psychiatry Department of the Araba University Hospital in Vitoria (Spain). MMP2 and MMP9 levels were measured in peripheral blood at baseline and clinical evaluations were performed both at baseline and 1, 2 and 3 years later.

Results: A hundred and two FEM patients and 96 healthy controls were included in the study.

MMP2 was significantly higher in FEM patients ($T=-2.29$; $P=0.02$). Those patients with higher levels of MMP2 at the beginning of the illness have more positive, negative and general psychotic symptoms ($B=0.13$; $P=0.01$, $B=0.13$; $P=0.01$, $B=0.2$; $P=0.004$), more depressive symptoms ($B=0.18$; $P=0.02$) and worse functionality ($B=-0.47$; $P=0.02$) after 3 years.

Baseline levels of MMP9 were positively and significantly related to a higher number of episodes during the 3 year follow-up period ($B=1.52$; $P=0.049$).

Conclusion: FEM patients show a dysfunctional BBB which is reflected in a worse evolution of the patients in the long-term.

P-029 | Abnormalities in White Matter and Response to Treatment with Lithium in Patients with Bipolar Disorder I

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Background and Aims: White matter abnormalities constitute one element of the network dysfunction that underlies affective disorders: differences between the white matter of subjects with affective disorders and control subjects have been identified using neuroimaging techniques. Lithium treatment has been proposed as a neuroprotection factor nevertheless only few studies relate this treatment to the integrity of white matter tracts.

Method: A cross sectional and descriptive study was done at the National Institute of Psychiatry at Mexico City in order to identify white matter abnormalities. We did Magnetic Resonance with diffusion tensor imaging in 30 subjects with BD I between 18 and 60 years of age. Fractional Anisotropy (FA) and Apparent Diffusion Coefficient (ADC) were measured in 12 white matter tracts that previously have been implicated in BD. We wanted to know if the treatment with lithium has relationship with white matter integrity.

Results: A positive correlation was found between the FA of the left anterior cingulum and the time of treatment with lithium. We also found a negative correlation between ADC of posterior forceps of the corpus callosum and scholarship.

Conclusion: An association between white matter integrity and treatment with lithium was found in this sample. The structure associated has been closely related with BD in previous studies also.

P-030 | The implication of thalamus in bipolar disorders: expanding knowledge about the disease

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Background and Aims: It is estimated a 5% prevalence of bipolar spectrum in the general population with high comorbidity with other psychiatric disorders. The thalamus has traditionally been considered a simple neuroanatomic relay structure for information. Recent research has shown that it plays an important role in different mental disorders.

The aim of this study is to recognize the role of thalamus in Bipolar disorder (BD).

Method: Compilation, analysis and synthesis of scientific publications making reference about involvement of the thalamus in BD, included in the PubMed database.

Results: The thalamus plays an important role in the physiopathology of BD in the management of information, connection between cortical and subcortical areas, it is a "critical node" in the functioning of the anterior brain and integrates the activity within areas of the forebrain, limbic system and processing emotions. The number of structural neuroimaging studies has increased in BD, with the evidence that the younger age at onset of disease the major is the dysfunction in white matter, phospholipids, glutamatergic and

interleukins system, axonal damage or demyelination. Total brain volume seems to be preserved. The reduction of white matter volume reflects genetic factors predisposing to the disorder.

Conclusion: The implication of thalamus in bipolar disorder is beyond what was previously believed. Continuing the study of the role of the thalamus in BD will help to improve the understanding of physiopathology, inflammatory processes and neurotoxicity, implementing early detection from the first symptoms in bipolar patients, detection measures in patient relatives or suicide prevention.

P-031 | Epigenome wide association study of suicide attempt in schizoaffective bipolar subjects

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Background and Aims: Schizoaffective disorder represents a major clinical problem and represents a major risk factor for suicide. The molecular mechanisms of suicidal psychosis remains poorly understood, although it has been hypothesized that regulatory genetic processes are involved in the etiology of both psychosis and suicidality.

Method: In this study, epigenome-wide patterns of DNA methylation were measured in schizoaffective suicide attempters (n=52) compared with schizoaffective non suicide attempters (n=72) using white blood cells.

Results: Analyses focused on identifying differentially methylated CpG sites and regions. We identified the CpG site cg19647197 within the CCDC53 gene, which is characterized by significant differential methylation in WBC in schizoaffective disorder attempters.

Conclusion: Our results suggest that there is variation in DNA methylation associated with suicide attempt that may offer novel highlights into the molecular mechanisms linked to suicide attempt associated with schizoaffective disorder.

P-032 | Brain perfusion during manic episode in patients with bipolar disorder, correlation with cognitive functions and treatment response

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Background: Correlation has been found within cognitive function and brain cerebral perfusion alterations in patients with Bipolar Disorder (BD). There is limited knowledge about the correlation from both and with clinical improvement.

AIMS: Look for brain perfusion alterations and its relationship with cognitive Impairment in BD patients during a manic episode and at follow up period.

Methods : Observational, prospective, comparative study.

Patients (N=10) with BD type I (DSMIV-TR) during a moderate to severe manic episode, with less than 5 years of the condition beginning. Age 18-60 years old.

Socio demographic variables were assessed, clinical rating scales were applied.

Perfusion SPECT was obtained at baseline to all participants and to 3 participants during the following up period.

Results: Bilateral Brodmann areas (BA) comparison showed significant statistic difference at 11 and 22 BA.

BA 25 was correlated with the Montgomery-Asberg Depression Rating Scale.

Some BA were correlated with cognitive function.

Brain perfusion reduction were observed in 3 follow up participants at 10, 21 left BA, and at the 22 right BA.

Conclusions: Participants during manic episode, showed hyperperfusion at limbic related areas, and cognition related areas, those also related to the severity of manic episode.

At follow up period, SPECT studies, showed hypoperfusion areas.

At the literature, it is established a 6 months period for total recovery after a manic episode, however findings at this study, might suggest that longer time periods are needed to find brain perfusion normalization and cognitive improvement in this group of patients.

P-033 | Correlations between endogenous hormones and resting-state functional connectivity in bipolar disorder with and without comorbid premenstrual dysphoric disorder

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Background and Aims: Hormonal fluctuations associated with the menstrual cycle may precipitate or worsen affective episodes in women with bipolar disorder (BD). Studies show women with BD report higher rates of premenstrual dysphoric disorder (PMDD) than controls, and this subset of women display a worse course of their bipolar illness. However, the influence of menstrual cycle hormone fluctuations on resting state functional connectivity (Rs-FC) has not been studied in this population.

Method: Forty (BD: n=21, BDPMD: n=19) regularly cycling women, not on hormonal contraception, underwent two MRI scans during their mid-follicular and late luteal menstrual phases. We investigated the correlation of endogenous levels of estradiol, progesterone, allopregnanolone and dehydroepiandrosterone on Rs-FC in each

menstrual phase. Subjects were euthymic for at least two months prior to study entry. PMDD was confirmed with two months of prospective charting.

Results: The BDPMD group displayed a greater number of correlations between endogenous levels of sex hormones and patterns of Rs-FC than the BD group, in both menstrual phases. The most robust correlations were seen with progesterone in the late luteal phase in the BDPMD group. Further, using a ROI-ROI approach we found increased Rs-FC in the late luteal vs mid-follicular phase between the right-anterior superior temporal gyrus and left-lateral parietal lobule, in BDPMD.

Conclusion: Women with BD and co-morbid PMDD displayed distinct patterns of Rs-FC associated with endogenous levels of sex hormones in each menstrual phase. Further investigation is needed to determine the impact of hormones on the clinical presentation of BD.

P-034 | Brain age in early stages of bipolar disorders or schizophrenia

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Background and Aims: The greater presence of neurodevelopmental antecedents may differentiate schizophrenia from bipolar disorders (BD). Machine learning/pattern recognition allows us to estimate biological age of the brain from structural magnetic resonance imaging scans (MRI). The discrepancy between brain and chronological age may be relevant to early detection and differentiation of BD and schizophrenia.

Method: We estimated brain age in 2 studies focusing on early stages of schizophrenia or BD. In the first study, we recruited 43 participants with first episode of schizophrenia spectrum disorders (FES) and 43 controls. In the second study, we included 96 offspring of bipolar parents (48 unaffected, 48 affected) and 60 controls. We used relevance vector regression trained on an independent sample of 504 controls to estimate the brain age of study participants from structural MRI. We calculated the *BrainAGE* score by subtracting the chronological age from the biological age.

Results: Participants with FES had higher *BrainAGE* scores than controls ($F(1, 83)=8.79$, corrected $P=0.008$, Cohen's $d=0.64$). Their brain age was on average 2.64 ± 4.15 years greater than their chronological age (matched $t(42)=4.36$, $P=0.00008$). In contrast, participants at risk or in the early stages of BD showed comparable *BrainAGE* scores to controls ($F(2,149)=1.04$, corrected $P=0.70$, $\eta^2=0.01$) and comparable brain and chronological age.

Conclusion: Early stages of schizophrenia, but not early stages of BD, were associated with advanced *BrainAGE* scores. Participants with FES showed neurostructural alterations, which made their

brains appear 2.64 years older than their chronological age. *BrainAGE* scores could aid in early differential diagnosis between BD and schizophrenia.

P-035 | Neuroimaging findings in lithium response groups in bipolar 1 disorder: an exploratory magnetic resonance imaging study

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Background and Aims: Magnetic Resonance Imaging (MRI) studies in bipolar disorder (BD) have shown neurotrophic and neuroprotective effects of lithium, suggesting that this could be a pathway of its therapeutic effects. However, little is known about the neuroimaging differences among lithium response groups and its correlation with treatment efficacy. The aim of this study is to assess neuro-anatomical and neurofunctional differences among lithium response groups and healthy subjects.

Method: An exploratory study of 30 subjects is being carried out. Euthymic BD-I patients in current treatment with lithium and healthy subjects matched by sex and age have been included. The instruments used are DIGS, HDRS, YMRS, GAF and Alda Scale. Based on the Alda Scale score, patients are divided in 2 groups, Lithium responders and non responders. MRI have been acquired in 3T scanner. Volumetric analysis, structural connectivity analysis with DTI and functional connectivity analysis with rs-fMRI will be performed and compared among the groups.

Results: To identify the neuroimaging, both structural and functional, differences between BD-I lithium responders and non responders compared with healthy controls could give an insight of lithium's efficacy pathways and its effects in brain anatomy and function in bipolar disorder based on its therapeutic efficacy and clinical response.

Conclusion: This study could finally provide a better understanding of lithium's mechanism of action and its therapeutic efficacy based on clinical and MRI findings, and will also allow an approach to understand the biological mechanisms underlying the disease.

P-036 | Identifying the origins of emotional disorders

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Background and Aims: The emergence and onset of emotional disorders, such as anxiety, depression and bipolar disorders remains a

mystery. These disorders are a prelude to serious lifelong illnesses that often take hold in adolescence and early adulthood. By understanding the precursors and early signs of emotional changes that forecast the development of psychiatric disorders it may be possible to alter illness trajectory or even achieve true prevention.

Method: This keynote will review research pertaining to these questions and present the findings from novel research that has examined the neural correlates of emotional disorders, in a unique set of studies conducted over a period of several years, involving adolescents aged 12 to 18 years old. The presentation will focus on findings from fMRI scans performed on nearly 300 school-aged children in Sydney (Australia).

Results: The extant literature has been systematically synthesised to provide a suitable backdrop against which data from a series of fMRI studies conducted from 2010 to 2017 is presented. Analyses from this body of research reveal nascent but discernible changes in brain function across both task-related and resting state fMRI involving recognised emotional and cognitive neural networks.

Conclusion: Insights that can be drawn from these studies, and the implications and clinical impact of these findings, especially with respect to future research and potential avenues of treatment, will be discussed.

P-037 | Hippocampal subfields in suicide attempters with bipolar disorder

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Background and Aims: Structural abnormalities in the hippocampus have been reported in suicide attempters with bipolar disorder (BP), but the effect of suicidality on the hippocampal subfields is still unknown in this population. Our aim is to investigate the relationship between history of suicide attempts and hippocampal subfield volumes in subjects with BP.

Method: We measured hippocampal subfields and total hippocampal volumes in 15 patients with BP and a lifetime history of suicide attempts (BP-SUI), 15 patients with BP without such history (BP-NSUI), and healthy controls (HC). Hippocampal subfield volumes were obtained with 3T scans using FreeSurfer. Differences among groups were investigated using ANOVAs followed by post-hoc Scheffé test.

Results: Groups do not differ on any demographic and clinical variable. HC showed greater bilateral total hippocampal volumes than both BP-SUI and BP-NSUI. BP-SUI demonstrated smaller bilateral

total hippocampal volumes than BP-NSUI. With respect to the hippocampal subfields, HC showed greater bilateral CA1, CA2/3, pre-subiculum, and left fimbria volumes than BP-SUI and greater left fimbria and bilateral subiculum volumes than BP-NSUI. BP-SUI demonstrated smaller right CA1, CA2/3, CA4/DG and bilateral subiculum volumes than BP-NSUI.

Conclusion: Outcomes could represent the indirect evidence of a generalized hippocampal damage in subjects with BP, possibly due to the failure of emotional and stress regulation mechanisms. The greater hippocampal damage in suicidal patients could explain the higher reactivity to emotional stressful stimuli in this sub-population, that could lead to suicidal behavior.

P-038 | Cerebral blood flow in bipolar disorder: A systematic review

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Background and Aims: Bipolar disorder (BD) and cardiovascular risk have been linked, with earlier morbidity and mortality in BD than in healthy controls (HC). The study of cerebrovascular function with investigation of cerebral blood flow (CBF) could inform our understanding of BD pathophysiology. Studies using various methods have investigated CBF in BD, but there is no review of the literature on BD and CBF across methodologies.

Method: A systematic review of the literature was performed using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA). Studies included measured CBF by single-photon emission computerized tomography (SPECT), perfusion weighted imaging (PWI), positron emission tomography (PET), arterial spin labeling (ASL) or transcranial doppler in a distinct group of BD patients.

Results: Thirty-one studies with a total of 491 subjects with BD were included (n=7 ASL; n=1 PWI; n=8 PET; n=13 SPECT; n=2 other). The majority of studies in BD depression reported widespread resting hypoperfusion in cingulate gyrus, frontal, and anterior temporal regions in comparison to HCs. Findings in mania and euthymic BD subjects were less consistent, in the context of limited number of studies. Blunted CBF response to cognitive and emotional stimuli in BD subjects in comparison to HC or other psychiatric groups was found.

Conclusion: Based on this preliminary literature, the most consistent finding is hypoperfusion in BD-depression and hyporeactivity to emotional and cognitive challenges. Future studies examining the CBF-CVD link and examining CBF as a treatment target are warranted.

Poster Session V-

Comorbidity Between Bipolar Disorders and Medical Disorders

P-039 | The differential association between history of childhood sexual abuse and body mass index in early and late stages of bipolar disorder

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Background and Aims: History of distal stressors such as childhood trauma is a well-established, non-specific vulnerability factor for multiple mental illnesses. The objective of this study was to investigate the possible association between history of childhood trauma and body mass index (BMI) in individuals in early and late stages of bipolar disorder (BD) and to verify if there was any difference in the association of sexual abuse history and obesity in early versus late stages of BD.

Method: Seventy-one euthymic BD-type I patients and eighty-one healthy controls were evaluated using the Childhood Trauma Questionnaire (CTQ) and body mass index (BMI). The association between BMI and CTQ total and subscores were evaluated dividing BD population in early-stage BD-I (less than 10 years since onset of disease) or late-stage BD (more than 10 years).

Results: BD individuals had higher rates of history of childhood trauma than HC, especially sexual and emotional abuse, after adjusting for confounders. We observed a moderating effect of group on the association between BMI and sexual abuse (SA), but not on other modalities of childhood trauma, after adjustments for age, gender, ethnicity, education, alcohol and tobacco use.

Conclusion: There is a relationship between childhood sexual abuse and BMI, but the direction of the association varies across the different stages of BD-I.

P-040 | Less and lighter caffeine consumption in patients with bipolar disorder: a case-control study

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Background and Aims: Objectives: To evaluate caffeine consumption in bipolar disorder (BD) patients and relate it to sociodemographic, clinical and evolutive variables, determining which is associated with greater caffeine consumption (> 200 mg per day). To compare the prevalence of caffeine consumption with a control group of healthy subjects.

Method: A descriptive, retrospective, longitudinal study was conducted by interviewing a sample of 108 outpatients diagnosed with BD. Sociodemographic data and clinical variables on the patient's current condition were collected, in addition to variables on how the disorder had evolved, treatment subtype, adherence to treatment, caffeine consumption and smoking habit. The control group comprised 290 subjects not diagnosed with psychiatric disorders.

Results: Most of the patients were female, married, had children and were diagnosed with type I BD; 48% regularly consumed caffeine. High caffeine consumption (> 200 mg per day) was associated with smoking (OR 9.1; 95%CI: 2.2-37.7) and a university education level (OR 1.6; 95%CI: 1.6-40.0). In comparison to the control group, high caffeine consumption was associated both with moderate (1-20 cigarettes/day) (OR 5.8; 95%CI: 2.4-14.0) and heavy (>20 cigarettes/day) smoking (OR 15.5; 95% CI: 5.0-47.5) and alcohol consumption (OR 2.2; 95%CI: 1.0-4.8). The interaction between alcohol and smoking was significant, with a lower percentage of high caffeine consumers among the patients who consumed alcohol.

Conclusion: There is a tendency among BD patients to smoke and consume caffeine. High caffeine consumption is associated with smoking and vice versa. Caffeine consumption does not appear to have clinical or prognostic implications in BD evolution.

P-041 | The association between childhood maltreatment and adult medical illnesses: bipolar disorder compared to unipolar depression

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Background and Aims: The medical burden in mood disorders is high, particularly for bipolar disorder, a myriad of factors are thought to drive this pattern. Little research has been dedicated to exploring the role of psychosocial stress such as childhood maltreatment in this context especially comparing unipolar depression to bipolar disorder.

Aim: The aim of this study is to investigate the role of childhood maltreatment in the medical burden in bipolar disorder compared to unipolar depression, examining the impact of abuse and neglect in combination and separately.

Methods: The participants consisted of 354 psychiatrically health controls, 248 unipolar and 72 bipolar cases. Participants completed the Childhood Trauma Questionnaire and received a medical history interview.

Results: Childhood maltreatment was associated with being diagnosed with at least one and a greater number of medical illnesses among participants with mood disorders. However, these associations were only significant for participants with bipolar disorder not those with unipolar depression. The experience of child abuse was more strongly related to medical illnesses than child neglect. No association between childhood maltreatment and medical morbidity were observed within controls.

Conclusion: The results of this study indicate that childhood maltreatment may play a stronger role in the development of medical illnesses in people with bipolar disorder relative to those with unipolar depression. Maltreated individuals with bipolar disorder may benefit most from prevention and intervention efforts surrounding physical health.

P-042 | Targeted intervention to promote treatment adherence of bipolar disorder patients at risk of cardiovascular disease

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Background and Aims: Nonadherence to treatment is a serious concern that affects the successful management of Bipolar Disorder (BD) patients. A culturally sensitive intervention is designed to promote treatment adherence in Latinos BD patients who are at risk of cardiovascular disease (CVD). The aim of this study is to develop and pilot test a psychosocial intervention to increase adherence to medication and health behaviors targeting CVD risk factors in BD.

Method: An open single group design was used to assess the feasibility and acceptability of the intervention. A total of 24 patients ranging from 25 to 60 years old were recruited from Carlos Albizu University and from a governmental health agency outpatient sites in Puerto Rico. IRB approved this study. All subjects signed written informed consent. Participants had BD, Type I/II and CVD risk factors. Baseline demographic measures were taken. We also obtained preliminary effect sizes related to pre-post change on measures of self-reported adherence to psychiatric medication, depressive and manic symptoms, and pharmacy records.

Results: At baseline, 67% of participants reported recent nonadherence to psychiatric medications. A total of 71% of participants

completed the intervention. Pre-post improvement by medium effect sizes (Cohen's $d=0.52-0.76$) was seen in medication adherence, attitudes toward medication, and mania symptoms. Participants reported high levels of satisfaction with the intervention.

Conclusion: A culturally sensitive psychosocial intervention for Puerto Rican BD population was feasible and acceptable. Improvement in key outcomes was found in this small preliminary study. Further research is needed with a large sample size.

P-043 | Bipolar disorder and cancer. Management at end of life. Case report

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Background and Aims: Bipolar disorder (BPD) is a serious mental illness that has the risk to suffer multiple non-psychiatric comorbidities, such as metabolic syndrome, cardiovascular disease and cancer. Patients with BPD have a higher risk of dying from cancer compared to the rest patients, probably due to the stigma that carries a poor non-psychiatric care, difficult access to preventive and early diagnosis processes, treatment access, poor follow-up of the oncologic treatment. When this population presents advanced cancer, a trans-disciplinary approach between psychiatry and palliative medicine is required to understand the needs of patients affected by this stigma, and thus provide a treatment for the control of physical, psychic, social and spiritual symptoms.

Method: Case Report

Results: A 72-year-old female with a long-term diagnosis of BPD. She is referred to the Instituto Nacional de Cancerología de México with a recent diagnosis of advanced colon cancer, without treatment, sent to the Palliative Care Service where she was treated by the interdisciplinary team for the control of physical, affective and neuro-cognitive symptoms (manic episode, mixed delirium, and a severe depressive episode with psychotic symptoms), and was treated with second generation antipsychotics. The patient died with progression of oncologic disease, free of psychiatric symptoms.

Conclusion: Patients with BPD require greater access to preventive and early diagnosis processes of cancer. The care for cancer treatment, regardless of the stage should be performed in conjunction with interdisciplinary palliative care where psychiatry plays an important role in contributing symptom control, providing a good quality of life and death.

P-044 | A randomized clinical trial to reduce cardiovascular risk in adults with bipolar disorder or schizophrenia

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Background and Aims: People with serious mental illness (SMI) (bipolar disorder or schizophrenia) die 25 years earlier than their peers; cardiovascular (CV) disease is the predominant cause. The primary aim of our study is to assess the impact of a web-based clinical decision support tool that displays within the electronic health record, termed CVWizard, on CV risk factor control in adults with SMI. Our secondary aims are to explore the impact of CVWizard on CV risk factor identification, treatment initiation and intensification, medication adherence, outpatient and inpatient utilization, risk prescribing events, and CV events.

Method: 84 primary care clinics across 3 healthcare organizations in the U.S. were randomized to receive or not receive CVWizard. Primary care physicians (PCPs) were educated about the high rates of CV morbidity and mortality in patients with SMI and on the use of CVWizard. Rooming staff print PCP and patient interfaces for PCPs to review with patients with SMI.

Results: To date, 7628 patients with SMI have been randomized in the study, including 5112 patients with bipolar disorder. CVWizard interfaces have been printed in 65.9% of eligible encounters. There have been no significant differences in depression scores, emergency room visits, inpatient hospital stays or suicide attempts between groups. A high majority (83%) of PCPs would recommend CVWizard to their colleagues.

Conclusion: CVWizard has been successfully implemented and is being used at high rates across three healthcare systems. Effectiveness of the intervention on CV risk factor control and other outcomes will be determined after the intervention ends in July, 2018.

P-045 | Prevalence of folate deficiency, vitamin B12 deficiency and hypercysteinemia in patients with bipolar spectrum disorders

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Background and Aims: Epilepsy patients who use anticonvulsants show lower folate- and vitamin B12- and higher homocysteine levels than controls. Patients with bipolar disorder use certain anticonvulsants as mood stabiliser. In a small pilot study (N=62) we found abnormal levels in 21.0%, 19.6% and 21.7% of patients respectively. We wanted to determine the prevalence of these aberrations in a bigger cohort with bipolar spectrum disorders and to investigate a possible correlation with their medication.

Method: Outpatients of two polyclinics for bipolar disorders were offered a measurement of folate, vitamin B12 and homocysteine together with their regular annual laboratory checks. Use of vitamins and medication were recorded. Patients already treated for the respective deficiency were counted as deficient.

Results: One hundred fifty two patients entered the study and 141 patients had laboratory data. The prevalence of folate deficiency (<7.5 nmo/L) was 5.0% (95% CI 2.4-10.1%), vitamin B12 deficiency (<148 pmol/L) 13.5% (95% CI 8.7-20.2%) and homocysteinemia (>15 µmol/L) 28.9% (95% CI 20.7-38.6%).

Conclusion: Hyperhomocysteinemia is a risk factor for cerebrovascular disease and cognitive decline. Vitamin B12 deficiency may cause spinal cord degeneration. Both deficiencies are associated with cognitive decline and a cause of megaloblastic anemia. Folate deficiency predicts a low response to antidepressants. Several studies show a beneficial effect of folate addition in antidepressant treatment. We found an even higher prevalence of hyperhomocysteinemia in our new cohort than in our pilot study, but the prevalences of folate- and vitamin B12 deficiency were lower. Nevertheless screening for folate, vitamin B12 and homocysteine in bipolar patients may be valuable in order to treat abnormalities adequately.

P-046 | Cognitive functions and bipolar disorder: The role of metabolic syndrome

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Background and Aims: Numerous studies have shown the presence of cognitive deficits during the euthymic periods of Bipolar Disorder (BD). Several factors can contribute to the genesis of such alterations, but such determinants are not yet fully understood. The purpose of this study is to explore the association between Metabolic Syndrome (MS) and cognitive abilities.

Method: We recruited 81 patients in the euthymic periods of BD. The diagnosis of MS was formulated according to the NCEP ATP III A 2004 criteria. Cognitive functions of each patient were evaluated through a battery of psychometric tests that included the tests MATRICS™, Trail Making Test B, Frontal Assessment Battery, Starkstein Apathy Scale.

Results: About 21% of patients are affected by MS, defined in accordance with NCEP ATP III A 2004 criteria. Patients with MS achieved worse scores in the following cognitive domains: processing speed (P-value 0.010), working memory (P-value 0.001), verbal learning (P-value 0.012), visual learning (P-value 0.003), total composite score (P-value 0.004).

Conclusion: It is well known in literature that the presence of MS correlates negatively with cognitive abilities even in non-psychiatric samples. The results of our study, consistent with the evidence of previous work, show that in subjects with BD, the presence of comorbidities with the MS causes an impairment of cognitive performance, especially in the domains of processing speed, working memory, verbal learning and visual learning.

P-047 | Evaluation of cancer incidence among bipolar patients in a specialized mood clinic

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Background and Aims: Although cancer has become a serious public health problem around the world, studies have not consistently shown relationship between bipolar disorder (BD) and cancer risk. The incidence of varied types of cancers with BD is controversial. The rate of any cancer in BD patients is reported to be 0.2 to 7%. We aimed to evaluate the cancers among bipolar patients in a specialized mood clinic in Turkey.

Method: Clinic characteristics of BD patients with cancer among 880 BD patients (550 female, 330 male) followed since 2003 in Raşit Tahsin Mood Clinic in Turkey were presented.

Results: During the 14-years follow-up period, 9 (1%) bipolar disorder patients (7 female, 2 male) developed any cancer (3 lung cancer, 2 breast cancer, 1 gastric cancer, 1 over cancer, 1 rectum cancer, 1 brain cancer). The mean duration of BD was 29.8 ± 10.5 years (min:15, max:45). Three of the 9 patients were died (median age:57 years; min:51, max:62). The median age of other 6 patients was 56 years (min:50, max:63).

Conclusion: Our findings were similar to the general population. Since the number of women in our mood clinic is high, more female patients with cancer may have been found. The high rates of smoking, low rates of childbearing, increased prolactin levels, the sedentary lifestyle as well as other reasons are risk factors for the cancer in BD patients. But not more having time to develop cancer due to the shorter life duration in BD may compensate this ratio.

P-048 | Prevalence of modal subcomponents of metabolic syndrome in the mayo clinic bipolar disorder biobank

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Background and Aims: Bipolar disorder (BD) patients have a high prevalence of metabolic syndrome (MS). The aim of this study was to determine the prevalence rate of MS and its modal components in patients from the Mayo Clinic Bipolar Disorder Biobank.

Method: We manually evaluated the Electronic Medical Records of subjects with BD recruited at the Mayo Clinic (n=1156), to record MS variables, using the American Heart Association/National Heart, Blood and Lung Institute criteria. MS was defined as having ≥ 3 criteria including: increased waist circumference (WC), elevated

triglycerides, increased fasting glucose, elevated blood pressure (BP), and decreased HDL. WC was only available in 192 (16.60%) patients.

Results: 143/1156 (12.37%) met criteria for MS, which included 68 women (age= 49.26 ± 13.73) and 75 men (age= 50.27 ± 14.48). MS sub-components were as follows (mean \pm SD): WC 110.4 ± 17.2 , plasma triglycerides 251.5 ± 138.2 , HDL cholesterol 38.8 ± 9.8 , systolic BP 132.6 ± 18.4 , diastolic BP 82.7 ± 10.7 , and fasting glucose 125.1 ± 40.8 . The most prevalent positive criteria were WC [overall (54.7%), women (73%)] and BP (33%).

Conclusion: The BD patients in this cohort showed MS prevalence lower (12.37%) than previous reports (29.4%; 33%; 49%), likely attributable to WC data being available in only portion of the patients. This study suggests that WC should be a part of a standard clinical practice for patients with BD in order to avoid MS underreporting. Future studies should also include covariates analysis for mood stabilizer use.

P-049 | Epidemiological profile of patients with fibromyalgia and bipolar disorder that are been treated in chronic pain unit. Descriptive research

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Background and Aims: Fibromyalgia is chronic pain disorder with important medical comorbidity. Mood disorders are frequently related with fibromyalgia. The 12% aprox of patients with fibromyalgia are suffering bipolar disorder. The epidemiological characterization of this patients is unknown.

Aim: Epidemiological Characterization the patients with fibromyalgia and bipolar disorder that are in treatment in chronic pain unit.

Method: Analysis of medical records and clinical interviews of those patients. Descriptive statistical analysis.

Results: 15/130 (11,5%) patients has fibromyalgia and bipolar disorder. All patients are women. 13/15 has bipolar disorder type 2 criteries diagnosis (87%), 2/15 (13%) has bipolar type 1 criteries diagnosis. 12/15 (80%) has stress post traumatic disorder criteries diagnosis. obsessive, anxious, somatization, inestable affectivity and dependence are the most frequent personality traits, 5/15 (33%) has personality disorder criteries diagnosis. High Alexitimia level is caraterizing in all patients. Autonomy/care-need and submission/control are most prevalent OPD 2 conflicts. Medium and Medium-high level are most frequent Structural functionality in analysis of OPD 2. Corporal OPD2 analysis showed that the most importants disfunctions are connectivity mind-body, hypercontrol and hyper repression of emotions to inner the body, expression emotions problems, problems for use the body for regulation the relationships with others, problems for recognizing positive emotions about own corporality. Principal attachment style is anxious-ambivalent. Analysis of coping skills demonstrated that affective isolated and over emotional expression

are the most frequent mechanisms. Risk commit suicide is not severe, only three patients tried commit suicide with mechanisms of low lethality.

Conclusion: Those patients are multi-complex and need multi-integrative initial evaluation.

P-050 | Bipolar disorder screening diagnosis protocol in women with fibromyalgia in treatment in chronic pain unit

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Background and Aims: Fibromyalgia is relation to with important medical comorbidity. 12% suffer bipolar disorder (BD). No researches of screening protocol of BD exist.

Describe BD screening diagnosis protocol in women with fibromyalgia.

Method: Elaborate protocol. Protocol has four steps; First step: self-applicable evaluation. Fill MODQ, PHq9, TAS20, IPDE, CAMIR, Sheehan anhedony and functionality scale.

Second: psychiatry interview searching hipomanía-mania and mixed episodes, and soft indicator of BD. If important doubts of diagnosis exists continue to step three.

Third: A close relative is interviewed searching elements of BD in the index case.

Fourth: Build a biographical life-line and analysis.

Results: 22/130 had MODQ(+), 15/130(11,5%) had BD. 7/22 were false positives. 13/15 have BD2(87%), 2/15(13%) have BD1. 84/130(65%), 12/15 (80%) have post traumatic disorder stress(PTDS). The most frequent diagnoses with false positive MODQ were Personality disorder, PTSD. 20/130(18%), 5/15(33%) has PD. most frequent are Dependent, somatoform, obsessive and affectively unstable.

Three patients were diagnosed BD during treatment due to switch on to mix symptoms or Secondary hypomania caused by use of dual AD in high doses without mood stabilizers in optimum doses.

Conclusion: These patients are multi-complex and require a multi-integrative initial evaluation, screening for BD is extremely necessary before using dual Anti-depressive drugs in combination with mood stabilizers in high doses for chronic pain relief, being lamotrigine 300-600 mg/d, and coadyuvants mood stabilizers with effect in the pain management kind pregabalin 150-300 mg/d, topiramate 300-600 mg/d, ziprazidone 5-20 mg/d. Without use of mood stabilizers in optimum doses with AD, the switch on risk in those patients is evident.

P-051 | Change in corporality functions and global functionality in women with fibromyalgia and bipolar disorder that received dramatics interventions therapy

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Background and Aims: The 12% of patients have bipolar disorder (BD). Dramatics techniques are unusual in the management of these. Measure the change in the corporality functions and global functionality in women with fibromyalgia and BD that received dramatics interventions during 1 year.

Method: Prospective Cohort research. Operationalization of corporality functions and structure level using the OPD2 model. OPD2 semi-structural Interview and fill out corporal and structure form, at the beginning, 6 and 12 month of treatment and use of scales self-applied.

Results: Damaged functions of corporal module:Self-regulation of corporal-self: Tolerance to relative affections of the body, self-esteem regulation in relation to one's own body. Communication with the inner body, empathy with another's corporal state. Body in the framework of internal and external objects attachment, establish affectionate corporal contact, receive and provide corporal support. Damaged functions in structural module: Self-destructive and self-devaluative tendencies. Over-regulation and loss of regulation of self-esteem. Difficulties in regulation of affections and the body; to express one's own affections; to be touched by other people's affections; to take distance and regulate them from one's own affections; to separate from others.

All patients show improvement in global functionality, alexitimia, anxiety-depression symptoms, anhedonia and decrease of pain score at the 6 and 12 m. Improvements are ss ($P < 0.05$). OPD2 corporal functions are improving since 6 m of treatment at 12 m the improvements remain.

Conclusion: These techniques improvement statistical significant between beginning treatment at 12 m, alexitimia and corporality functions, global functionality. These could to modify the psiquical structure across the corporality function improvement.

P-052 | Greater food addiction in obese patients with mood symptoms: Mexican patients from an obesity and weight control clinic

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Background and Aims: The association between mood disorders and obesity has been widely examined. Clinical phenomena such as food addiction (FA) may be a link between obesity and mood disorders. We aimed to assess the prevalence of mood disorders and FA in obese and overweight patients; also, to compare the clinical presentation of patients with mood disorder symptoms (MDS) vs. patients with no mood disorder symptomatology (NMDS).

Method: Participants of a weight losing program from an Obesity and Weight Control Clinic in Monterrey, Mexico, were assessed using the Patient Health Questionnaire (PHQ-9), the Yale Food Addiction Scale (YFAS), and the Generalized Anxiety Disorder Assessment (GAD-7). Those with positive PHQ-9 scores were further consulted to establish a diagnosis of depression or bipolar disorder using the Mini-international Neuropsychiatric Interview (MINI). Other variables were assessed by a senior clinician.

Results: 89 patients (MDS= 43, NMDS= 45), most of them female (66.3%), with a mean age of 41.5 (SD = 13.04) and mean BMI of 36.3 (7.5 SD). 48.3% of patients had at least symptoms of mild depression and 41.6% of patients had at least mild symptoms of anxiety. 18% of patients had a major depression diagnosis, 4.5% of bipolar disorder and 3.3% had suicide risk by MINI. 34.8% rated positive for FA. MDS patients were significantly more females than the NMDS group (67.4% vs. 65.2 $P=0.049$), had significantly lower BMI (mean=34.1 SD vs. mean=38.4 SD, $P=0.005\%$).

Conclusion: Assessment of FA is important in populations with affective disorders and obesity in order to establish appropriate therapeutic strategies.

P-053 | Bipolar disorder and cannabis use in our district area

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Background and Aims: Bipolar disorder (BD) is the psychiatric pathology of axis I that presents greater comorbidity with substance abuse, being cannabis the illegal drug most consumed in our area.

Aim: To illustrate the higher prevalence of psychoactive substance use, especially cannabis, among patients diagnosed with BD in our region, as well as the relationship between this consumption and certain clinical outcomes.

Method: A descriptive observational study was carried out, through the retrospective review of the clinical histories. We selected a sample of patients diagnosed with BD treated in Baza Hospitalization Unit (Spain) during the year 2016, after the review of the histories and the classification of some patients collecting different clinical outcomes (N 44).

Results: The data obtained reveals that there is a statistical significance between cannabis use and BD with lower age of onset of the disorder, predominance of manic episodes and greater number of hospital admissions. There is no statistical significance among other toxic and cannabis use in BD.

Conclusion: The use of cannabis is more frequent among psychiatric patients, and especially those diagnosed with BD. Consumption is especially frequent among type I bipolar patients, and has related in the literature with an age of onset of the earliest disorder, a greater number of admissions and a predominance of manic symptoms throughout evolution. Despite the statistical significance found in our study, an extension of the study with a more powerful sample size is considered necessary.

Poster Session VI-

Comorbidity Between Bipolar Disorders and Other Psychiatric Disorders

P-054 | Primary sleep disorders in bipolar disorder

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Background and Aims: Sleep disturbance are common in bipolar disorder (BD). But the prevalence of primary sleep disorders as obstructive sleep apnea (OSA), and restless leg syndrome.

The aim of this study was to objective and subjective assessments of primary sleep disorders (obstructive sleep apnea (OSA), and restless leg syndrome) in bipolar disorders.

Method: Sixty-two patients with BD and 46 controls had comprehensive sleep assessment with video polysomnography, sleep

questionnaires. The patients were selected randomly from the Outpatients with BD type I or II. Healthy controls, matched by age and sex. All participants provided written informed consent before taking part in the research. Exclusion criteria were: verbal IQ, had any medical or neurological disorder that might interfere with sleep or substance misuse disorder (defined with DSM-V criteria).

Results: Thirty five (56%) patients with BD(8 BD I, 27 BD II) had sleep disorders, seventeen patient (48.57%)(4BD I, 11 BD II) had insomnia, twelve of them (34.2%) (3 BD I, 10 BD II) had obstructive sleep apneas and five patient (7.8%) (1 BD I, 4 BD II) had restless leg syndrome.

Conclusion: BD is associated with high rates of primary sleep disorders.

P-055 | Do symptoms of depression differ in depressed and bipolar patients? A longitudinal study

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Background and Aims: The difference between bipolar-BD and unipolar-MDD depression is discussed by clinicians since years; as we know, bipolar disorder does not necessarily imply a history of depression, but patients commonly comes to clinician during depressive episodes and this could lead to misdiagnosis BD.

Aim: To investigate if there are some differences between depressive symptoms in patients with MDD and BD Type I throughout the course of a 6-month drug treatment, without psychological intervention.

Method: 60 patients diagnosed with MDD (without any comorbidity) and BD Type I by psychiatrists and confirmed by the Structured Interview for DSM-IV (SCID-CV). Hamilton Rating Scale Depression-HAMD, Montgomery-Asberg Depression Rating Scale and Young Mania Scale. Patients were evaluated monthly with the semi-structured scales.

Results: Regarding the severity of depressive symptoms (HAMD and MADRS) were higher in patients with MDD, but the difference between groups was not significant. Nonetheless, there was noted that depressive symptoms in BD are more commonly related with anxiety symptoms of HAMD, and in MDD patients, with suicide ideation and sadness.

Conclusion: Results lead one to question if, in larger samples, depressive symptoms could significantly differentiate those groups.

P-056 | Therapeutic challenges in patients with bipolar disorder and binge eating disorder. Clinical case

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Background and Aims: Comorbidity of bipolar disorder and eating disorders is from 6 to 27%, of these disorders the most prevalent, is first of all the disorder by atracon. The objective is to review treatment alternatives of eating disorder in those patients comorbid with bipolar disorder.

Method: Not applicable.

Results: Twenty three years old female, that was diagnosed three months prior, to this consultation of bipolar disorder, manic type, with psychotic features, she was treated (neuroleptic) and one week later she was recovered. Two years prior, she had three binge eating episodes, who disappeared without medication. After this remission, she started with mild depressive symptoms that were gradually increased and suicidal ideation was added, so olanzapine and fluoxetine was started, and the depressive symptoms began to subside. One month after she started the recovery and because she gain 4 pounds, she induced vomiting and started to exercise, so we added topiramate 200 mg/day, which decreased appetite. The previous medication where stopped, and we added anfebutamone and aripiprazole. Six months later the patient is eutimic, but a binge-eating disorder of difficult management was installed. Bipolar patients due to the high morbidity, are difficult to treat, especially those where the treatment, as in this case. Liraglutide 3 mg/day (subcutaneous) is an alternative for the disorder, as there is no risk of complications.

Conclusion: Calls the attention that for the specialists it is imperative the control of the affective episodes, nevertheless, the experience of the patients is of much more anguish, secondary to the binge eating disorder.

P-057 | Bipolar disorder and borderline personality disorder. Therapeutic challenges

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Background and Aims: Thirty to 50% of patients with bipolar disorder have comorbid personality disorders, especially in type 2. BPD has a prevalence of 19.4%. It is not yet distinguished if they are separate entities or part of the same spectrum, or even that the borderline disorder is a variant, rather than comorbidity.

The aim of this work is to review the role of behavioral dialectic therapy in patients with both disorders.

Method: We studied 15 women with both disorders, with a group therapy session every 15 days for six months, plus the use of psychotropic medications.

Results: All the patients finished the study. It was observed that the group behavioral dialectic therapy, improved the therapeutic adherence, the control of the impulses, cognitive distortions and stable mood.

Conclusion: Behavioral dialectic therapy is an excellent adjunctive tool to psychopharmacological treatment, besides being a low cost option that can be linked to individual therapy and improve therapeutic adherence.

P-058 | Bipolar disorder with comorbid obsessive compulsive disorder. One treatment uncovers the other

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Background and Aims: Comorbidity is estimated between both disorders from 2 to 39%, of which 37% are associated with panic attacks. symptoms of OCD, worsen in depressive phases, more depressive episodes are observed, more mixed episodes, suicidal attempts, there is greater risk of mania, hypomania, mixed forms and substance abuse, so the prognosis is worse. In addition to the treatment of OCD, it obscures the prognosis of bipolarity.

The objective of this work is to review the safest therapeutic alternatives in this comorbidity.

Method: A revision was made in the literature about the therapeutic updates, and clinical experience in Mexico.

Results: The results obtained show that medications such as agomelatine, ondasetron, methylphenidate, topiramate, N-acetyl cysteine, have an effect in the treatment of OCD and lower risk of virage. Other treatments include almisulpiride, riluzole, ketamine IV and the use of aripiprazole, risperidone, quetiapine and olanzapine, although these last three have been associated with case reports with the

emergence of symptoms of OCD. Transcranial magnetic stimulation and psychosurgery techniques have proved to be an option.

Conclusion: This comorbidity is very difficult to treat, since the treatment of OCD can worsen the evolution and the prognosis of bipolarity, which is why some safer alternatives are presented.

P-059 | Famous mexican suicidal poem

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Background and Aims: Manuel Acuña, was a Mexican poet of the romantic period, of the Mexican intellectualism in the early nineteenth century. His career was brief but very productive, he fell in love with Rosario de la Peña, a highly intellectual woman of the time, one night before committing suicide by ingesting cyanide, he dedicated the poem "Nocturno a Rosario" which is a great representative of Latinoamerican romanticism.

Method: Not applicable.

Results: Not applicable.

Conclusion: The suicide note predicts a higher risk of death in the face of the suicidal act and there are many ways to write it. The most frequent, is where forgiveness is requested and the causes are explained, as in the case of Virginia Woolf, such as the haiku of the kamikaze and romantic ways of farewell.

Comorbidity Between Bipolar Disorders and Other Psychiatric Disorders

P-060 | MEXICAN goddess of suicide: IXTAB

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Background and Aims: In all polytheistic civilizations there are different gods and goddesses, but in none there is a deity of suicide. Mexico has different cultures, among them the Mayan culture that flourished in Mesoamerica, highlighted by its writing, architecture, mathematics and economy. was developed in the southeast of Mexico: Yucatan, Campeche, Tabasco, Quintana Roo, and the eastern zone of Chiapas and dates from the preclassic to the late post-classic period.

Method: Not applicable.

Results: It is known that the Mayan civilization, like all humans, created their gods in their image and likeness, which means that they were the direct and most deeply rooted expression of social relationships and values. According to the Mayans, divinities are born as men and their lives are marked by the same terms and conflicts,

friendships, intrigues, joys and sorrows. In the Mayan culture you can find the goddess Ixtab, the goddess of suicide.

Conclusion: For many cultures suicide is considered a death by honor, there are no gods to venerate this behavior. Ixtab is the wife of the god of death and is represented as a woman kneeling with a rope around the neck, which symbolizes the suicidal gesture, with closed eyes as a representation of death, she has a mark in her face which means putrefaction. The cult to Ixtab is reflected in the historical fact where the Chiapas Indians during the resistance to the Spanish invasion, realizing their defeat, decided to die with glory to continue living in captivity and they threw themselves into the "Cañon del Sumidero".

P-061 | Prevalence Of suicide in Mexico

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Background and Aims: Every 40 seconds a suicide is committed in the world. The psychiatric illness most associated with suicide is bipolar disorder, since it can be carried out in any of its forms: manic, depressive and mixed. And also mostly associated with BD, with alcoholism, personality disorders and anxiety.

Method: An extensive bibliographical search was carried out in the epidemiological bibliography that addresses the topic of bipolar disorder and suicide in Mexico.

Results: In Mexico, in 2015, there were 6285 suicides (5.2 deaths per 100 thousand inhabitants), as in other countries it is greater in men (8.5/100 thousand men) than in women (2.0/100 thousand women). The regions where there is a higher rate of suicide are: Chihuahua (11.4%), Aguascalientes (9.9%), Campeche (9.1%) and Quintana Roo (9.2%). Regardless of the role of mental illness, in our country it was found that 30.6% did not have work and in women 69.2% did not work. 8 out of 10 suicides were completed in their homes (76.2%) and the main method was hanging.

Conclusion: Teen suicide is observed more. There is a report of suicide with Werter's phenomenon in 5 adolescents in Jalapa Veracruz. Social networks begin to play an important role, since there are a series of reports of suicides announced and other consummated through them. In Mexico there are preventive measures of suicide, but even greater diffusion of these is required, because in rural areas it is difficult both, access to information and preventive measures.

P-062 | Correlation between depression/anxiety symptom severity, number of comorbidity, and quality of life in patients with bipolar disorder or major depressive disorder

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Background and Aims: To study the correlation between depressive/anxiety symptoms severity/number of comorbidity and the quality of life in patients with bipolar or major depressive disorder.

Method: The diagnoses of psychiatric disorders were ascertained with MINI. The severity of depression and anxiety was measured with the QIDS-16-SR and ARS (Zung Anxiety Rating Scale), respectively. The quality of life was measured with the Q-LES-Q short form. The relationship between Q-LES-Q and QIDS-16-SR, ARS scores, or number of comorbidity was explored with linear regression in bipolar (BPD) or major depressive disorder (MDD).

Results: The % of possible max scores of Q-LES-Q was 72.07% for euthymic MDD, 70.50% for euthymic BPI, and 67.61% for euthymic BPIL. The increases in QIDS-16-SR total scores were significantly correlated to the decreases in Q-LES-Q total scores, with a $R^2=0.6077$

for MDD, $R^2=0.5242$ for BPI, $R^2=0.4474$ for BPIL, respectively. The increase in ARS scores were also significantly correlated to the decrease in Q-LES-Q scores with a $R^2=0.1983$ for MDD, $R^2=0.02039$ for BPI, and $R^2=0.1207$ for BPIL, respectively. The significant differences between Q-LES-Q and ARS scores disappeared in MDD and BPD after controlling anxiety and other clinical variables, but the correlation between QIDS-16-SR and Q-LES-Q remained significance in MDD and BPD. There was no significant correlation between Q-LES-Q and number of comorbidities.

Conclusion: Patients with BPD or MDD had comparable % of max scores as general population when they were euthymia. Depression severity was the only independent variable negatively correlated to the quality of life. Aggressive treatment of depression should be the goal of treatment.

P-063 | Pattern of psychiatric morbidities and gaps in diagnosis among patients admitted at the Sierra Leone psychiatric hospital in Freetown, Sierra Leone

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Background and Aims: Sierra Leone, which emerged from decade-long civil war and recently suffered from the worst outbreak of Ebola virus, left many citizens of the nation mentally traumatised with high incidences of undiagnosed mental disorders. Timely and accurate diagnosis of mental illness is essential in the management of these disorders.

The aim therefore, was to determine the pattern of Psychiatric morbidities and gaps in diagnosis among patients at the Sierra Leone Psychiatric Hospital, Freetown, Sierra Leone.

Method: A cross-sectional descriptive design. 385 patients (277 inpatients and 108 outpatients) were screened for eligibility and approached for informed consent/assent. Patients working diagnosis was abstracted from patients' charts and interviewed using Mini International Neuropsychiatric Interview (MINI) Plus and researcher designed socio-demographic questionnaire. Comparisons made between working and MINI Plus diagnoses.

Results: Drug-Induced Psychosis, Substance Use Disorder, and Psychotic disorder were the commonest diagnoses on patient's charts with a substantial proportion (17.7%) undefined diagnoses. MINI Plus diagnosed all patients with the psychotic disorder the most common (74%), followed by Alcohol Use Disorder, Substance Use disorder and Post-Traumatic Stress Disorder. 91% of respondents had more than one psychiatric morbidities. There was variation between diagnosis in patient's charts and diagnosis by MINI Plus tool with 23.1% Substance Use Disorder, 22.8% psychotic disorder, 9.5% major depression and 0.5% of mania accurately diagnosed.

Conclusion: The MINI Plus observed significant discrepancies between working and MINI Plus diagnoses with a majority of patients inaccurately diagnosed and substantial proportion with undefined diagnoses. Results call for the training on the routine use of screening and diagnostic tools.

P-064 | Does comorbid obsessive-compulsive disorder influence suicidality in patients with bipolar disorder?

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Background and Aims: Nearly 50% of patients with Bipolar Disorder (BD) experience comorbid psychiatric conditions (Khrishnan et al., 2005), one of the most difficult to manage being Obsessive-Compulsive Disorder (OCD). The prevalence of OCD in BD patients is 11–21% in population-based studies (Amerio et al., 2014). Few studies have deepened the association of comorbid OCD and suicidality in BD: Baldassano and colleagues found more attempters among patients with comorbid OCD (Baldassano et al., 2006), while the Azorin et al. report could not find a similar association (Azorin et al., 2009). The aim of this retrospective observational study was to assess the correlation between comorbid OCD and suicidality in a large sample of patients with BD.

Method: 655 patients with BD were included in the study; the comorbid OCD ('OCD-BD') group and the 'non-OCD BD' group were compared in terms of suicidality.

Results: OCD was found in 8.9% of patients. There were no statistically significant differences between the OCD-BD and non-OCD BD groups in terms of history of suicide attempts and methods of suicide (violent vs non-violent). In the OCD-BD group the factors significantly associated to a greater risk of suicide attempts were related to the course of BD (number of life-time mood episodes and number of life-time depressive episodes).

Conclusion: We found no evidence that OCD influenced suicidality in BD. These findings support the model that approaches OCD-BD comorbidity giving hierarchical priority to BD; given their important clinical implications, these results should be supported by further studies.

P-065 | Bipolar patients in the us are quadrupally vulnerable and sensitized to a poor outcome: A national public health emergency should be declared

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Background and Aims: Aims: We define the vulnerabilities of bipolar patients for illness onset and progression in those from the United States (US) compared to the Netherlands and Germany (Europe).

Method: 956 outpatients with bipolar disorder (average age 41, and about 75% BP I) gave informed consent for participating in Network ratings, questionnaires, and follow-up. Those from 4 sites in the US (Los Angeles, Dallas, Cincinnati, Bethesda) were compared to those from 3 sites in Europe (Utrecht, Freiberg, Munich) on family history of psychiatric illness, psychosocial stress, age of onset, alcohol and substance abuse comorbidity, episodes and rapid cycling, and degree of response to prospective naturalistic treatment.

Results: Compared to the Europeans, the US patients were not only more ill on all of the variables noted above, but so were their parents, grandparents, spouses, siblings, and offspring on almost all of the illnesses assessed including: depression, bipolar disorder, suicide attempt, alcohol and substance abuse, and "other" illness, representing 1) markedly greater genetic vulnerability. In addition, 2) more psychosocial stress, 3) episodes of illness, and 4) substance abuse can each show sensitization or increased reactivity upon recurrence based on memory-like epigenetic mechanisms that further drive illness progression.

Conclusion: Genetic vulnerability and early onset illness are not readily amenable to treatment, but each type of sensitization to stressors, episodes, and bouts of substance abuse can be slowed or prevented. However, treatment in the US is catastrophically deficient. New clinical and public health strategies are needed to head off further tragic, but preventable, transgenerational poor outcomes.

P-066 | Lamotrigine-induced obsessive compulsive disorder in patients with bipolar disorder

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Background and Aims: Lamotrigine is an anticonvulsant commonly used in the treatment of bipolar disorder. Although there are reports of its effectiveness in the management of bipolar disorder comorbid with obsessive-compulsive disorder (OCD), lamotrigine has also been associated with obsessionality in patients with bipolar disorder. We describe the cases of eight patients with bipolar disorder who developed OCD for the first time following treatment with lamotrigine.

Method: We reviewed the charts of eight patients with bipolar disorder who had de novo onset of obsessions and compulsions after the use of lamotrigine. The Naranjo Adverse Drug Reaction Probability Scale was used to assess the likelihood that patients developed OCD due to lamotrigine use.

Results: Two and a half months to eight months after the initiation of lamotrigine, patients with no such prior history developed obsessions and compulsions meeting the DSM-5 diagnostic criteria for medication-induced OCD. In all except one patient, the symptoms resolved within a month of lamotrigine discontinuation. A rechallenge of lamotrigine in two patients subsequently reintroduced OCD symptoms.

Conclusion: Some patients with bipolar disorder may develop OCD after initiation of lamotrigine. Due to the inherent limitations of a case series, the findings should be interpreted with caution.

P-067 | Stuck song syndrome: Are there associations with bipolar disorder?

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Background and Aims: Stuck song syndrome, otherwise known as earworms, is a common phenomenon of involuntary mental repetition of songs. It is believed that most individuals experience these and usually find them minimally intrusive. However, some individuals report excessive repetition of songs to the point that it becomes a disabling symptom. Despite this, the condition has received little attention from the research community.

Method: We describe three cases of stuck song syndrome who were seen at a mood disorders clinic.

Results: All three cases met the DSM-5 diagnostic criteria for bipolar disorder and obsessive compulsive disorder (OCD) (without consideration of songs). The songs were perceived as intrusive, unwanted, and resulted in a great deal of functional impairment and emotional distress thus meeting part of the diagnostic criteria for OCD. However, unlike thoughts, urges and images DSM-5 does not allow counting of intrusive sounds or music toward a diagnosis of OCD.

Conclusion: Comorbidity of stuck sound syndrome and bipolar disorder has not been described in the extant literature. Large scale studies are needed to clarify the diagnostic status of stuck song syndrome.

P-068 | Impulsivity and neurocognitive functions in bipolar disorder with and without comorbid ADHD

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Background and Aims: Bipolar disorder (BD) and attention deficit hyperactivity disorder (ADHD) comorbidity is common. Both conditions present neurocognitive deficits and impulsivity. The aim of this study is to examine impulsivity and neurocognitive functions in adult BD with comorbid ADHD (BD+ADHD) in comparison to BD alone, ADHD alone patients and healthy controls (HC).

Method: Impulsivity and neurocognitive functions were assessed in adult patients with BD (n=37), ADHD (n=43), and BD+ADHD (n=21) in comparison to HC (n=51). All BD patients were euthymic for at least six months. Impulsivity was measured using Barrat Impulsivity Scale (BIS). Neurocognitive performance was measured using a set of neurocognitive tests. Non-parametric tests were used for comparing four groups; categorical variables were compared using Chi-square analysis.

Results: All patient groups displayed significantly higher impulsivity and lower performance on executive functions, attention, and processing speed in comparison to HC. BD+ADHD and ADHD patients had significantly higher impulsivity scores than BD alone patients. There was no significant difference on neurocognitive measures between BD and BD+ADHD patients. BD and BD+ADHD patients performed poorly on attention, processing speed and verbal fluency tests compared to ADHD patients.

Conclusion: In our sample BD with comorbid ADHD behaved similar to ADHD alone with regard to impulsivity and exhibited similar neurocognitive deterioration as BD alone pointing at a more difficult condition which may lead to treatment difficulties and poorer course of illness.

P-069 | Childhood trauma prevalence and clinical presentation in treatment resistant bipolar disorder patients

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Background and Aims: Childhood trauma has been widely associated to bipolar disorder (BD). Moreover, it is a predictor of higher psychiatric and metabolic comorbidity. We aimed to describe the

prevalence of childhood trauma and its clinical presentation in treatment resistant BD patients.

Method: Clinical data was captured from medical records of treatment resistant BD patients, consulted in 2016, from a Mood Disorder Clinic at the Universidad Autonoma de Nuevo León in Monterrey, México. A senior clinician performed the interview, and the Structural Diagnostic Clinical Interview of the DSM-IV was used to establish a BD diagnosis. Childhood trauma and other clinical features were self-reported. Body mass index was recorded at visit and used to establish overweight and obesity.

Results: We captured the records of 53 patients, 52% with BD type 1 diagnosis and the remaining with BD type 2. 66% were women, with a median age of 34.3 (± 12.8) and 52% were single. 80% of patients had a history of childhood trauma, of which, 72% was reported as emotional, 50% as physical, 38% as sexual and 26% as parental negligence. Substance related disorders and eating disorders were the higher psychiatric comorbidities. More than 60% of these patients were obese or overweight. A higher burden of abuse was associated with higher clinical severity.

Conclusion: The psychiatric and metabolic comorbidity we found in this study coincide with previous literature but the large prevalence of childhood trauma in treatment resistant BD patients is very concerning. Self-report of Childhood trauma is a limitation as in most studies of this topic.

P-070 | Bipolar disorder and premenstrual dysphoric disorder comorbidity: Apriori algorithm study

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Background and Aims: The comorbidity between BD and PMDD is associated with higher illness burden, earlier onset, higher number of episodes and less time spent in euthymic mood state.

Method: Apriori Algorithm (AA), an unsupervised data mining method was applied to 94 variables in a sample of 1.099 women with BD from the STEP-BD (Systematic Treatment Enhancement Program for Bipolar Disorder) and generated 621.062 rules. We selected rules based on: PMDD presence; Support (S) (how frequently the item-set appears in the dataset) with minimal accepted value of 10% and Confidence (C) (how often the rule has been found to be true) with minimal accepted value of 65%.

Results: Some of the rules found associated with PMDD were: White or Caucasian (C=90%,S=41%); Premenstrual irritability, depression or mood swings in the first 5 years after menarche (C=84%

=538.5%); Current Premenstrual irritability, depression or mood swing (C=100%;S=45.5%); Impact on work (C=100%;S=45.5%); Past PTSD Phobia (C=100%;S=13.5%); Past Alcohol abuse (C=76%;S=12,5%); Rapid Cycling (C=75.5%;S=13,5%g); BD I (C=71.5%;S=19,5%); Depressive BD Onset (C=70%;S=23.1%)and Mood Symptoms at PostPartum (C=72%;S=12,5%).

Conclusion: The rules found from data mining methods, specifically Apriori, can evidence associations in both number and reliability. It can be explored directly or as inspiration for other approaches through machine learning.

P-071 | Factor analysis of the eating disorder diagnostic scale in individuals with bipolar disorder

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Background and Aims: The goal of this study goal was to perform exploratory factor analysis of the Eating Disorder Diagnostic Scale (EDDS) in patients with bipolar disorder and examine the internal consistency of the resulting factors; a secondary goal was to examine differences in EDDS factor scores between eating disorder diagnosis and bipolar subtypes.

Method: Mayo Clinic Bipolar Biobank participants' (n=1031) clinical phenotype was identified with the Structured Clinical Interview for DSM-IV-TR. EDDS binge eating disorder was defined as binge eating ≥ 1 /week over the past three months, ≥ 3 of 6 behavioral disinhibition items, and no inappropriate weight loss behaviors; EDDS bulimia nervosa was defined as binge eating and inappropriate weight loss behavior ≥ 1 /week for the past three months.

Results: A three-factor solution was identified for the first factor analysis and gave clearly interpretable factors entitled shape/weight, binge eating behavior, and compensatory behavior. A four-factor solution identified for the second factor analysis and gave similar factors plus binge eating frequency factor.

Conclusion: The first analysis (all bipolar patients) yielded a three-factor solution describing constructs of shape/weight, binge eating behavior, and compensatory behavior (each factor corresponding to prominent eating disorder symptom domains associated with different eating disorder diagnoses). The second factor analysis (subset of bipolar patients endorsing binge-eating) produced a four-factor solution that included shape/weight, binge eating behavior, and compensatory behavior, and binge eating frequency.

P-072 | Post-psychotic depression: A review

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Background and Aims: The objective of this research work is reviewing the published literature on Post-Psychotic Depression (PPD) and to point out its importance either as a comorbidity or as an entity of its own. To do this, a historical review of the term will be carried out and a valid definition of PPD will be stated.

Method: For the present work, we followed the international recommendations according to the Preferred Items for Reporting of Systematic Reviews and Meta-Analyses (PRISMA). The databases used were Web of Science and PubMed, with February 1, 2017 as the deadline for articles inclusion.

Results: The search resulted in 60 articles, eliminating writings in languages other than Spanish or English, duplicates, or those that did not match the search terms. 13 articles were finally included in the review.

As an outcome of the results obtained in the review we see that despite its high prevalence, only 30% was the mean in different samples, this is very little research about the term post-psychotic depression.

Conclusion: There are enough data to proclaim that PPD is not a secondary effect to antipsychotics since it exists previously to the use of these in the treatment of psychosis. We can assume that PPD exists as a nosological entity itself, as it is treated different from the negative symptoms of psychosis and other clinical entities such as bipolar disorder, schizoaffective disorder or depression with psychotic symptoms. They also have differential clinical characteristics compare with other depressions types.

P-073 | Bipolar disorder type 1 and gender dysphoria comorbidity. A case report

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Background and Aims: It is estimated that the prevalence rate of bipolar disorder (BD) in gender dysphoria (GD) patients is 2.4%. It has been shown that mental comorbidity seems to relate with a more complicated clinical picture of BD. The aim of this report is to illustrate how the treatment of GD improved the symptoms of BD.

Method: We evaluate a 23 year old man with GD, his symptoms appear since 7 years old. Mood episodes started at the age of 15, with symptoms of atypical depression. Mainly manifesting recurrences of hypomania, he has presented about 7 mood episodes, previously

treated with unspecified doses of valproate, methylphenidate, risperidone and bupropion, with poor response to medication and non-adherence to therapeutic treatment.

In January 2017 is admitted in our hospital, after he attempted suicide by drug overdose during a mania episode. Is diagnosed with BD type 1, lithium carbonate 900 mg/day and aripiprazole 15 mg/day were started, having a good response.

We sought inter consultation with Endocrinology Department to plan a safety hormonal treatment. Psychoeducation of both disorders were provided to the patient and his family.

Results: We observe a good response in decreasing symptoms of BD and at discharge, symptoms of mania had subsided. Patient reported clinical improvement of mood symptoms after separate the affective process from GD.

Conclusion: In this patient, the psychoeducation and treatment of GD improved the symptoms of BD.

P-074 | Neuroimaging studies in autism spectrum disorder and bipolar disorder

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Background and Aims: Autism Spectrum Disorder (ASD) is a condition with a prevalence that is likely to be within the range of 30–60 cases per 10,000. It is characterized by patterns of delay and deviance in the development of social, communicative, and cognitive skills that arise in the first years of life. Given the severity of this symptomatology, it is possible to misdiagnose comorbid disorders such as Bipolar Disorder, what is present in a significant minority of patients (7%) with ASD.

Our objective is to identify abnormalities in ASD neuroimaging studies that could be shared with Bipolar Disorder, justify the comorbidity between these two conditions and help in the prediction of Bipolar Disorder in ASD population.

Method: To compare structural and functional findings of neuroimaging studies about Autism Spectrum Disorder and Bipolar Disorder.

Results: The similarities between both conditions are:

- reduced volume in hippocampus and amygdala
- reduced fractional anisotropy in the frontal area
- Abnormal activation of the amygdala

Conclusion:

- With the available data we cannot achieve a reliable conclusions because the findings purposed have not been consistent or replicated.
- More studies are needed to determine the relationship between ASD and Bipolar Disorder.

P-075 | Grandiosity and guilt in psychotic mood disorders cause delusional paranoia

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Background and Aims: This study aims to examine potential sources of delusion and paranoia among psychotic manic and depressed patients.

Method: This study uses a clinical, case-based hypothesis generation approach that warrants follow up.

Results: Two common mood-based symptoms, grandiosity and guilt, can underlie functional paranoia. Mania explains paranoia when there are grandiose delusions that one's knowledge and possessions are so valuable that others will kill to get them. Severe depression explains paranoia when delusional guilt convinces patients that they deserve punishment and death. In both cases fear for one's life becomes the overwhelming emotion but patient and physician may focus on the suspiciousness and delusions rather than on the underlying mood symptoms.

Conclusion: Paranoia, although no longer a sub-type of schizophrenia, is/was a common, if not considered diagnostic, symptom for schizophrenia. The DSM-5 has followed suit from the DSM-III with regard to restricting the diagnosis of schizophrenia. For example, all the sub-types of schizophrenia were eliminated from the DSM-5 after being codified since 1911. The sub-types had defined schizophrenia: they were critical since prior to the DSM-5 there could be no schizophrenia without the patient's sub-type named. The concept abbreviated above suggests that paranoia is an overriding symptom in psychotic mood disorders, both mania and depression. It is an easy decision regarding the position of schizophrenia in the DSM-6 in this author's opinion.

P-076 | Association in mood disturbance and eating behavior in patients with bipolar disorder in depressive episode

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Background and Aims: Eating disorders (ED) are common in patients with bipolar disorder (BD), the aim of the study was to investigate the presence of risk eating behavior in depressive phase of the disease.

Method: A group of ten participants in residential treatment, previously diagnosed with bipolar disorder, completed the Eating disorder inventory-three (EDI-3) and Beck's depression inventory (BDI). Pearson correlation analysis determined the presence of associations between each subscale of EDI-3 and severity of depressive symptoms.

Results: All the participants were female, the mean age was 22.3 years (SD=7.3), and all of them scored severe depression.

Two subscales: Bulimia ($r=0.8$, $P=0.005$) and body dissatisfaction ($r=0.68$, $P=0.028$), showed a positive correlation among the BDI score.

Conclusion: Limitations: We had a cross-sectional design and a small size of sample, which must be considered a limitation of the study.

Conclusions: Current results agree with previous findings that report a high risk of eating disorders, specifically bulimia in patients with bipolar disorder in depression phase, the comorbidity can worsen both pathologies, so the treatment should be directed to treat the symptoms of both disorders and specialists in eating disorders should be aware of the treatment of BD and the specialists in bipolar disorder should be aware of the treatment of ED.

P-077 | Bipolar disorder type 1 and obsessive compulsive disorder: Comorbidity and treatment. case report

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Background and Aims: The comorbidity of bipolar disorder (BD) with obsessive compulsive disorder (OCD) has been documented. From 17% to 24.6% of patients with BD showed a lifetime comorbidity for OCD. The optimal treatment is not defined.

Method: We evaluate a 39 year old female in October 2016, with first episode of mania at 21 years, and the beginning of OC symptoms at age of 23. Parents reported mood swings during their last 18 years, with exacerbation of OC symptoms prior to episodes of mania or depression. Previously treated with Olanzapine, Sertraline and Clonazepam with unspecified doses, without good response and bad therapeutic attachment. At time of evaluation the patient showed dermatitis in hands, verbiage, irritability, expansive mood, acceleration of thought, increase in goal-directed activity, decrease in the need to sleep, also psychotic symptoms. Its admitted and Olanzapine (30 mg/day), Clonazepam (6 mg/day) and Valproate Semisodium (1750 mg/day) was started, having a minimal response, we switch to Haloperidol (20 mg/day).

Results: A good response is observed in decreasing symptoms of mania as well obsessions and compulsions. At discharge, symptoms had subsided. On admission, Young Mania Rating Scale, with a score of 34, was performed, as well as the Yale-Brown Obsessive-Compulsive Scale with a score of 32, at the time of discharge after 7 weeks resulted in 25 and 24 respectively.

Conclusion: There is more evidence of benefit with treatments for BD. Treatments of OCD tend to be less effective, they can induce mood instability in BD. Haloperidol, Valproate Semisodium and Clonazepam, was shown to be effective.

P-078 | Trauma-associated symptoms in patients with bipolar disorders

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Background and Aims: Individuals with co-occurring bipolar disorder and PTSD experience high symptom burden and low quality of life. We wondered whether trauma-associated symptoms would show to be undetected and undertreated in outpatients of a treatment centre for bipolar disorders.

Method: We offered the Trauma Screening Questionnaire (TSQ) to a convenience sample of outpatients with bipolar spectrum disorders treated at Mental Health Services Noord-Holland-Noord, location Alkmaar, the Netherlands. A TSQ cut-off score of six has been shown to predict PTSD with high sensitivity and specificity in Dutch patients with psychotic disorders (de Bont et al. 2015).

Results: Seventyone patients filled out the TSQ. The prevalence of trauma exposure was 50.7% (N=36). Ten patients (14.1%) scored six or higher, nine of whom wished to be treated for their trauma-associated symptoms. The trauma-history of seven patients was known to their psychiatrists, in two patients this was unclear and in one patient unknown. No patient had been treated with a PTSD specific therapy (two patients unclear), although three patients had declined such treatment earlier. Nevertheless all but one of the patients were interested to start with therapy now.

Conclusion: In this pilot study 14.1% of patients scored positive on the TSQ which predicts a PTSD diagnosis in 6.4%. Ninety per cent of positively screening patients wished to receive PTSD specific therapy. TSQ may be a valuable screening instrument to detect PTSD and willingness for treatment of trauma-associated symptoms in patients with bipolar disorder.

Reference: de Bont et al. Br J Psych 2015;206:408-416.

P-079 | A double-blind, placebo-controlled randomized controlled trial of lamotrigine in adults with co-occurring bipolar disorder and alcohol dependence: Effects on drinking and mood outcomes

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Background and Aims: Alcohol use disorders are common in people with bipolar disorder and often associated with a more severe course of bipolar illness. Few treatment trials have been conducted in this clinical population. The present 12-week randomized controlled trial

evaluated effects of lamotrigine on drinking and mood outcomes in currently drinking bipolar alcoholics.

Method: Adults aged 18-65 with Bipolar I or Bipolar II disorder and current alcohol dependence maintained on mood stabilizing medications were randomized to add-on lamotrigine or placebo and evaluated weekly for 12 weeks. Lamotrigine was titrated over 5 weeks to a fixed dose of 200 mg/day (maintained through study completion). Drinking outcomes were assessed using the timeline follow back (TLFB) and carbohydrate-deficient transferrin (%dCDT). Mood outcomes were assessed using the Montgomery Asberg (MADRS) and Young Mania Rating Scale (YMRS).

Results: Of 43 subjects randomized, N=38 returned for at least one visit and N=25 completed all study visits. At baseline no group differences in demographic or clinical variables were evident. Over the course of the trial no treatment effects were detected in time to first drink/first heavy drinking day, in percent drinking days/heavy drinking days, or in proportion reporting 100% abstinence. A trend toward lower drinks/drinking day favoring lamotrigine did not reach statistical significance ($P < 0.16$). Similarly, no group differences in weekly MADRS or YMRS scores were evident. Lamotrigine was well tolerated with few reported adverse events.

Conclusion: Though safe and well tolerated, evidence for efficacy of lamotrigine in improving drinking or mood outcomes in bipolar alcoholics is not supported by the current results.

P-080 | Bipolar disorder, food addiction, and bariatric surgery

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Background and Aims: Bipolar disorder (BPD) is highly comorbid with eating and addictive disorders. Comorbid addiction to food has received less systematic study. The present study examined the prevalence of food addiction (FA) among patients who screen positive for BPD ("BPD positive") and FA's impact on bariatric surgery completion and outcome.

Method: 3,294 patients (72.6% female, 88.6% White, mean age=48.86, mean BMI=45.49) seeking obesity treatment completed The Mood Disorder Questionnaire and the Yale Food Addiction Scale, self-report screening instruments for BPD and FA, respectively.

Results: For the entire sample, the point prevalence of BPD was 6.2% and FA was 16.4% (mean FA severity = 2.56, range 0-7). For individuals who screened positive for BPD, FA prevalence (40.65%; OR=3.92, $P=0.00$) and severity (3.99; $F [2, 2,053] = 67.61, P=0.00$) were significantly greater than those who did not screen positive for BPD. For those who were BPD positive, screening positive for FA decreased odds of undergoing bariatric surgery (OR = -0.81, $P=0.00$).

Post bariatric surgery, there were no significant differences between BPD+FA vs BPD alone in annual percent weight loss up to 7 years.

Conclusion: FA is prevalent for patients who screen positive for BPD and can negatively impact completion of bariatric surgery. Yet, for

BPD positive individuals who undergo bariatric surgery, FA does not appear to impact weight loss outcomes. Future research should continue to identify barriers to treatment for patients with BPD to enhance obesity intervention outcomes.

Poster Session VII– Cultural Differences and Its Consequences

P-081 | Bipolar affective disorder in Nepal

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Background and Aims: The main aim of the study is to find out the socio demographic profile of patients with bipolar disorder and treatment of Bipolar affective disorders in hospitalized patients in an actual clinical set up in Nepal.

Method: This was a cross-sectional study which was conducted at Manipal teaching hospital, Pokhara, Nepal, a tertiary care hospital situated in Western Nepal. The diagnosis of the disease was based on ICD-10 (Tenth revision) Classification of mental and Behavioural disorders, Diagnostic Criteria for Research. We calculated odds ratio and their 95% confidence intervals (95% CI). $P < 0.05$ was considered as statistically significant.

Results: 62.1% of the patients were less than 40 yrs, 56.3% were male, 72.4% were unemployed and 75.9% of the patients were having monthly income <10,000/month. As far as ethnicity is concerned 37.9% of the cases were Brahmin and by occupation 29.9% of the patients were students followed by housewife 25.3%, labour 17.2%, retired 13.8% respectively. Among the mood elevators Sodium valproate was the commonest drug to be prescribed in 58.6% patients followed by Lithium in 34.5% cases and Carbamazepine in 6.9% cases. Sodium valproate was prescribed at 1,000 mg/day, Lithium was prescribed at 900 mg/day in and Carbamazepine was prescribed at 800 mg/day.

Conclusion: Among all the mood elevators Sodium valproate is the commonest drug prescribed for the treatment of bipolar affective disorder, recommended that there is a trend of using newer drugs like sodium valproate rather than the conventional mood stabilizers like Lithium for bipolar affective disorder in Nepal.

P-082 | Illness trajectories of Mexican persons with bipolar disorder

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Background and Aims: The lifetime prevalence of Bipolar I and II disorders in Mexico (BD) is of 1.9%. Chronic mental disorders disrupt material, emotional and cognitive resources of people that suffer them. To provide and account of illness trajectories of persons with BD in Mexico and explain how the process of being labelled with the disease causes a biographical rupture.

Method: Qualitative methodology, ethnography. Semi-structured in-depth interviews of 20 persons diagnosed with BD I or II at the National Institute of Neurology and Neurosurgery of Mexico were made.

Results: Eight women and 12 men with a mean age of 29 ± 9 were interviewed. Half of the participants were unemployed and single. Persons with BD are perceived as "problematic" even before the diagnosis of BD is made. The use of alternative therapies before receiving the diagnosis of BD from specialized medical services, and even after, is frequent. After the diagnosis, the use of psychiatric services becomes the most common in the acute episodes of the disease, but alternative medicine, religious/spiritual sources, common cultural remedies and "in vogue" practices are used interchangeably as copying ways.

Conclusion: The study of illness trajectories offer information about psychiatric and medication use patterns, alternative copying practices and management of health literacy. Persons with BD are social agents that construct and reconstruct their identity using the diagnosis of BD as a symbol. The diagnosis causes a biographical rupture, that can serve as a way to organize the experience of the illness, or as a label that undermines the subject.

P-083 | Is there a relationship between self-declared race and personality disorder in bipolar patients?

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Background and Aims: To investigate associations between self-declared race (SDR) and personality disorders (PDs) in bipolar I disorder (BD-I) patients.

Method: One hundred sixty-three BD-I euthymic patients were evaluated through: clinical and sociodemographic questionnaire, Hamilton Depression Scale, Young Mania Rating Scales, Barratt Impulsiveness Scale, World Health Organization Quality of Life-Brief Version and Structured Clinical Interviews for DSM-IV Axis I and II Disorders. The sample was divided into: SD-'white', SD-'black' and SD-'brown', according to the Brazilian Institute of Geography and Statistics. Logistic regressions and ANOVA-post hoc Bonferroni/Kuskal-Wallis tests were performed for dichotomous and continuous variables respectively.

Results: In the univariate analysis, cluster B PDs, suicide attempt (SA), age and comorbid axis I disorder were associated with SDR. In the logistic regressions (SDR and PDs/SDR and SA), after controlling other clinical and sociodemographic variables, none remained relevant. The SD-'black' and SD-'brown' patients presented a lower environmental quality of life (QoL) compared to SD-'white' ones ($P < 0.001$).

Conclusion: In the Brazilian general population, SD-'black' and SD-'brown' individuals present worse socioeconomic indicators than SD-'white'. Indeed, in our sample the income of SD-'black' patients was less than half the income of SD-'white', only 2% of the SD-'black' patients completed university, and both SD-'black' and SD-'brown' reported a poorer environmental QoL. Although literature shows the association between unfavorable socioeconomic indicators and PDs or SA, BD-I patients evaluated in this work, who declared themselves to belong to a particular race, even if this one is associated with unfavorable socioeconomic indicators, were not associated with PDs or SA.

P-084 | Postmodern bipolars: The digitalization era

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Background and Aims: Nowadays, sociability is constituted by digital means that are complemented with physical spaces. Social interactions are realized through complex interactions of personal and technological components. Sociologists propose that the postwar era was characterized by "anxious disorders", the period between 1980-1990 by "depressive disorders" and nowadays we are living times of "bipolar disorders". To analyze the impact of technology in the current forms of sociality of persons with Bipolar Disorder (BD). The objective of the study was to bring about the processes of signification that take place when persons with BD expose themselves to social networks and technology.

Method: Qualitative methodology, ethnography. Virtual ethnography was done along a year through a closed Facebook group of persons diagnosed with BD.

Results: The use of social networks provide a means that enables a resignification of the illness experience. For several persons with BD the impact of this means becomes the major space of socialization that enables immediate communication among peers, and constitutes a particular space of listening and understanding that cannot be found neither in traditional forms of communication nor in family and health institutions.

Conclusion: Given the immediate accessibility of information social networks provide persons with BD with a particular way to negotiate and take control of their illness including their relations with medications and psychiatric services among others. Along with the possibility of acquiring this knowledge, in social networks persons with BD find the possibility of communication and support with limitless space and time boundaries.

P-085 | Socio-demographic and clinical characteristics of completed suicides in Mexico City 2014-2015

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Background and Aims: Suicide is a leading cause of death in patients with bipolar disorder. Risk factors and prevention of suicide in this illness are the focus of considerable current research. The aim of this study is to analyze socio-demographic and clinical characteristics of individuals who completed suicide in Mexico City.

Method: Data on all suicide deaths of Mexico City from 2014 and 2015 were provided by the Forensic Sciences Institute of Mexico City, including socio-demographic, clinical variables and the characteristics of the suicidal act itself.

Results: 990 persons were recorder as suicides: 775 men and 215 women. There were differences in age between groups ($P = 0.0001$). Men were more prone than women to be employed at the time of death (65% vs 19.3%) and more women than men carried out household activities (26.5% vs 0.6%). Male and female differed in psychiatric disorders at the time they committed suicide (86.3% VS 80.5%, respectively). Furthermore, more males than females turned out to be positive in the toxicology test (40.8% vs. 18.1%). A marked use of alcohol was observed in the male group (54.3%) compared to the female group (24.7%). Nevertheless, there were more cases of smokers in the group of women (74.4%). Lastly, more victims died primarily by hanging. As many as 16% left a suicide note.

Conclusion: Our study is the first describing such associations in the suicides that occurred in México City. We believe that a better understanding of suicide can not only advance the research

literature, but also could have important implications for suicide prevention.

Poster Session VIII– Diagnosis and Classification

P-086 | Attention and reward-related decision-making deficits differentiate youth with bipolar disorder from healthy individuals: a machine learning study

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Background and Aims: Our previous work shows that young and old adults with bipolar disorder (BD) display poor reward-associated decision making (RDM). RDM in youth with BD is a largely unexplored research area. This study uses a component-wise gradient (CGB) machine learning algorithm to identify cognitive measures that can accurately differentiate youth with BD from a healthy comparison group.

Method: 108 healthy controls (HC; 10.36±3.28 yo, 67F) and 119 children and adolescents with BD (13.31±3.02 yo, 52F) completed the CANTAB cognitive battery. Available data was split into two partitions for algorithm training (80%) and testing (20%). The algorithm was tuned using 10-fold cross validation and evaluated using classification accuracy and area under the receiver operating characteristic curve (AUROC). Algorithm training provided variable selection and measures of variable importance for model interpretation.

Results: After algorithm tuning, CGB achieved accuracy of 73.2% and an AUROC of 0.785 in classifying individuals as either BD or non-BD on a held-out data set for testing. The strongest cognitive predictors of BD were selective and sustained attention, RDM deliberation time, and quality of RDM.

Conclusion: Performance on attention and RDM tasks differentiate youth with BD from HC. This finding will need to be replicated in independent cohorts for generalization purposes. Further studies in high-risk individuals are needed to determine whether deficits in these cognitive domains are related to the disorder or are markers of vulnerability to BD.

P-087 | Predominant polarity determination from a machine learning approach

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Background and Aims: Predominant polarity (PP) in BD has shown to be an important specifier for predicting the course of BD, but often relies on a patient's capacity to accurately recall the number and polarity of past episodes. The present study attempted to use machine learning (ML) algorithms to accurately determine a patient's PP using only demographic and clinical variables.

Method: From a cohort of 238 BD I and II patients, demographic and clinical variables were collected using a customized questionnaire and the SCID-CV (First et al., 1996). Predominant polarity was determined by the sum of lifetime episodes and their respective polarity. The ML approach was performed in R language, and the best classifier was the Random Forest, which was evaluated by 10 times 10-fold cross validation. The algorithm was preset to classify patients into either the depressive or manic predominant polarity categories.

Results: The classifier attained an accuracy of 67.16% and AUC ROC of 73.18% (95% CI = 71.73-74.62%) including the variables: type of BD, number of hospitalizations, age of 1st depressive episode, presence of psychosis in the 1st episode, presence of lifetime hallucinations or delusions, 1st episode polarity and nicotine addiction.

Conclusion: The results suggest that the ML approach could be effective in determining a patient's PP without the inclusion of a specific number and polarity of episodes.

P-088 | Relationship between romantic attachment styles and childhood adversity in patients with bipolar type I AND II

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Background and Aims: Insecure attachment styles in relationships have been linked to decreased proactivity and adherence in doctor-patient encounters and, are more prevalent in individuals with mood disorders compared to those without. Moreover, prevalence of insecure attachment styles differs among people bipolar type I (BPI) or type II (BPII). Childhood adversities have been associated with insecure attachment styles in adulthood, and are highly prevalent in mood disorder populations.

Aim: To examine the relationship between close relationship/attachment styles and different forms of childhood adversity in patients with BPI and BPIL.

Method: 145 participants were recruited from the Mood Disorders Program of the McGill University Health Center in Montreal, Quebec. Mood diagnoses were determined using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID). Relationship/attachment styles were assessed using the Experiences in Close Relationships Questionnaire, anxious and avoidant attachment styles were examined. Childhood adversity was assessed with the Childhood Experience of Care and Abuse Questionnaire which measures antipathy, parental loss, neglect, role reversal, and physical, psychological, and sexual abuse. Multiple linear regressions adjusting for age and sex were employed.

Results: Paternal antipathy was associated with anxious attachment style ($\beta = -0.020$, $P = .029$), as was role reversal ($\beta = 0.017$, $P = .049$). Paternal antipathy was also associated with avoidant attachment ($\beta = 0.545$, $P = 0.043$).

Conclusion: This study provides further support for the consideration of attachment style in the presence of specific forms of childhood adversity in clinical settings when issues such as treatment non-adherence arise.

P-089 | What are the definitions of treatment resistant depression? a systematic and critical review of the literature

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Background and Aims: To systematically and critically review current definitions of treatment-resistant depression (TRD).

Method: We searched PUBMED from inception to 2017 with terms "treatment-resistant depression" AND "definition," "staging" and "model" according to PRISMA guidelines.

Results: Four models were found and although useful in practice show some limitations. **Thase & Rush** (1997) delimits 5 stages of severity but does not establish the definition of therapeutic failure and implies some superiority of drug classes compared to others in a sequence without solid evidence-based background. **European Staging Model** (Souery et al., 1999) describes 3 stages and does not consider differences in effectiveness and tolerability among antidepressants. Time of treatment is relevant and failure of optimization strategies denotes severity. **MGH Staging Model** (Fava, 2003) includes 3 different stages defining treatment time and dosage. There is no hierarchical process related to different antidepressants which may undermines practical application. **Coway et al.** (2016) is the newest model and is based on a hierarchical model of resistance to antidepressant treatment derived from STAR*D. The two-phased

model develops a operational definition of refractory depression and indicates the best treatment for each stage. It is not based on an attempt to arbitrarily count failed trials but integrates duration and severity of symptoms. It outlines the need for antidepressant treatment with different mechanisms of action and potential risks.

Conclusion: The definition of TRD is still under debate. Different models and lack of consensus generates lack of compliance at various levels of severity and may delay the use of more aggressive and/or new therapeutic strategies.

P-090 | Illness episodes in relation to reproductive cycle events in women with bipolar disorder: Data from the bipolar disorder research network

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Background and Aims: Reproductive cycle events are associated with mood episodes in at least some women with bipolar disorder. We aimed to establish whether illness episodes in relation to menstruation, childbirth and menopause are associated with each other in women who have bipolar disorder.

Method: Participants were 339 post-menopausal women with DSM-IV bipolar disorder recruited into the Bipolar Disorder Research Network (www.bdrn.org). History of premenstrual mood change was measured using the self-report Premenstrual Symptoms Screening Tool (PSST). History of postpartum episodes was measured via semi-structured interview (Schedules for Clinical Assessment in Neuropsychiatry, SCAN) and inspection of case-notes. Participants self-reported illness episodes during the perimenopausal period via questionnaire.

Results: History of a postpartum episode within six months of delivery ($OR = 2.13$, $P = 0.03$) and history of moderate/severe premenstrual syndrome ($OR = 6.33$, $P < 0.001$) were significant predictors of the presence of a perimenopausal episode, even after controlling for demographic factors. When we narrowed the definition of premenstrual mood change to premenstrual dysphoric disorder it remained significant ($OR = 2.68$, $P = 0.007$). History of postpartum psychosis was a significant predictor of a manic ($OR = 2.84$, $P = 0.03$) but not depressive episode during perimenopause.

Conclusion: Some women who have bipolar disorder may be particularly vulnerable to illness episodes in relation to reproductive cycle events throughout their life. There is a need for prospective longitudinal studies of women with bipolar disorder providing frequent contemporaneous ratings of their mood across reproductive cycle events to overcome the limitations of retrospective self-report data.

P-091 | Rapid cycling prediction in bipolar disorder using clinical variables: A machine learning, proof-of-concept study

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Background and Aims: To predict the occurrence of rapid cycling at an individual level in patients with bipolar disorder using a machine learning approach.

Method: This cross-sectional study enrolled patients from our outpatient clinic at Hospital de Clínicas de Porto Alegre. Patients were included if they had a bipolar disorder diagnosis according to DSM-IV, regardless of type and current mood episode, and were over 18 years old. We applied random forest with recursive feature elimination to create a model able to predict which patients will develop rapid cycling during the course of the disorder. A 10-fold repeated cross-validation was used, and cross imbalance was corrected with down-sampling. We included in the model only variables prior to the onset of the rapid cycling diagnosis. Variables were selected based on a literature review and availability in the data set.

Results: We included 202 patients and achieved an AUC of 0.79, with 82.67% sensitivity and 63.33% specificity by using seven clinical and sociodemographic variables. The variables in the final model included patient age in the first episode, delay between age at first episode and diagnosis, presence of psychosis in the first episode, family history of antipsychotic use, gender, and family history of psychiatric hospitalizations and suicide attempt.

Conclusion: This finding suggests that rapid cycling can be predicted with a reasonable level of accuracy by using this set of accessible variables. Moreover, it indicates that poor outcomes can be predicted using machine learning techniques, which could improve prevention and promote personalized care for patients with bipolar disorder.

P-092 | Biological rhythms in bipolar disorder: Status and relationship with metabolic syndrome and functioning

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Background and Aims: Despite having numerous treatment options, Bipolar Disorder (BD) is characterised by disability even during the interepisodic period. Hence it is important to focus on the covert

links that could potentially improve the course of BD. Biological rhythm disturbances are increasingly being researched for its trait marker status in BD. The current study aimed to compare biological rhythm disturbance among euthymic, active cases of BD and healthy controls and to assess correlation of biological rhythm parameters with functioning and metabolic parameters.

Method: The study design is of cross sectional study over a period of six months assessing active cases of BD (40), euthymic cases of BD (36) and apparently healthy controls (39). Biological rhythms was assessed by *Biological Rhythms Interview of Assessment in Neuropsychiatry Questionnaire* (BRIAN). Functioning was assessed by *Functioning Assessment Short Test* (FAST). The severity of symptoms of depression and mania was assessed by *Hamilton Depression Rating Scale* (HDRS) and *Young Mania Rating Scale* (YMRS).

Results: Patients with active BD had significantly impaired biological rhythms in terms of total BRIAN compared to euthymic BD Patients with euthymic BD had significantly impaired biological rhythms compared to apparently healthy controls. LDL cholesterol was significantly higher in euthymic BD. Significant correlation was found between BRIAN, FAST, metabolic parameters and subsyndromal depressive symptoms in euthymic state.

Conclusion: Biological rhythm impairment is a trait marker in patients with BD in our study. The study also highlights intricate relationship between biological rhythms, metabolic parameters, subsyndromal depressive symptoms and functioning.

P-093 | Can rorschach test differentiate bipolar disorder from depressive disorder?: Comparison of rorschach test scores between bipolar depression and unipolar depression

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Background and Aims: Differentiating bipolar depression from unipolar depression in patients experiencing depressive episodes is quite difficult but very important in clinical setting. Some psychological assessments might reveal significant difference between them, therefore this study attempted to investigate Rorschach characteristics of bipolar depression and unipolar depression to find distinct features.

Method: Patients with bipolar disorder and depressive disorder who had taken Rorschach test were included. Participants were classified into three groups, unipolar depression (n=23), bipolar depression (n=34) and bipolar mixed (n=20) according to the diagnoses and clinical states. Rorschach scores using Exner Comprehensive System were compared among the three groups, and variables related to affect and cognitive errors were analyzed in depth to investigate distinct differences between bipolar depression and unipolar depression.

Results: Bipolar depression patients showed more color responses (WSumC), more perceptual distortion (X-%, S-) and more

whole perspectives and organization trials (W, Zf, Lambda) than unipolar depression patients. Bipolar mixed patients were not much different from bipolar depression patients in Rorschach scores, but revealed more active human movement responses (Ma) and less perceptually inaccurate responses (X-%, S-). Further analyses using variables related to affect, perception and cognitive errors showed that WSumC<2.5 and Sum6 were relatively distinct variables in differentiating bipolar depression from unipolar depression.

Conclusion: Our results showed that Rorschach characteristics of bipolar depression and unipolar depression were significantly different, and bipolar disorder patients could be assumed still emotionally active, cognitively less retarded but vulnerable to perceptual distortion even in depressed states.

P-094 | Differential biomarker signatures in unipolar and bipolar depression: A machine learning approach

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Background and Aims: To differentiate bipolar depression (BD), unipolar depression (UD) and healthy controls (HC) using serum biomarkers and machine learning techniques.

Method: We assessed serum levels of BDNF, IL-2, IL-4, IL-6, IL-10, TNF- α , IFN- γ , IL-17A, the content of lipid peroxidation and oxidative damage to proteins in 54 outpatients with BD, 54 outpatients with UD and 54 HC, matched by sex and age. Patients were recruited from outpatient programs of Hospital de Clínicas de Porto Alegre (HCPA), Brazil. The diagnosis of BD and UD were performed according to the diagnostic criteria of DSM-IV-Axis I (SCID-I). Depressive symptoms were assessed using the Hamilton Depression Rating Scale (HDRS). Variable selection was performed with Recursive Feature Elimination with a linear support vector machine (SVM) kernel, followed by a random forest model with the selected variables.

Results: BD vs. UD classification achieved and AUC of 0.71, with 0.61 sensitivity and 0.67 specificity using three selected biomarkers (IL-4, TBARS, IL-10). For the comparison BD vs. HC, the model retained five variables (IL-6, IL-4, TBARS, Carbonyl, IL-17), with AUC 0.73, 0.69 sensitivity and 0.61 specificity. Finally, UD vs. HC comparison retained seven variables (IL-6, Carbonyl, BDNF, IL-10, IL-17, IL-4, and TNF- α , with AUC of 0.77, a sensitivity of 0.72 and 0.70 specificity.

Conclusion: The present study showed the feasibility of differentiating UD from BD with a panel of serum biomarkers related to inflammatory and oxidative stress processes. This shows the potential of machine learning models to aid in clinical practice, leading to more personalized assessment and treatment of patients.

P-095 | Impact of predominant polarity on outcome in bipolar disorder: A 7-year longitudinal study

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Background and Aims: The study aims to investigate the impact of predominant polarity (PP) on the course of Bipolar Disorder (BD), employing longitudinal variables collected during a 7-years follow up period.

Method: The study included 87 BD patients. Participants were divided into 3 groups: 25 (29%) Manic (MPP), 42 (48%) Depressive (DPP), and 20 (23%) Indefinite Predominant Polarity (IPP) patients. Baseline clinical and demographic variables were collected using a customized questionnaire and the SCID-CV. Longitudinal data were collected through medical records, mood charts and mood symptom scales conducted throughout the 7-years follow-up period.

Results: MPP was associated with a significant higher number of hospitalizations ($P<0.001$), suicide attempts ($P=0.001$) and episodes with psychotic symptoms ($P<0.001$) throughout the 7-years observed period; DPP was associated with a later diagnosis ($P=0.038$), and IPP was associated with the presence of psychotic symptoms in the first episode ($P=0.025$). Furthermore, lifetime PP was associated with the 7-years observed longitudinal PP ($P<0.001$), with 67% of patients maintaining their PP both at baseline and after the 7-years follow-up.

Conclusion: The results revealed PP as an important specifier for predicting the course of the disorder. MPP was significantly associated with variables indicative of a worse outcome, suggesting that greater attention to preventive treatment should be disposed to this subgroup. Lastly, longitudinal 7-years PP was associated with retrospective evaluated PP, suggesting that patients tend to remain within the same PP throughout the course of BD.

P-096 | Relationship between childhood adversity and impulsivity in major depression and bipolar types I and II

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Background: Impulsivity in mood disorders has been associated with increased risk for substance misuse and suicide. Childhood adversity is also common risk factor for impulsivity in mood disorders. To date, there is data lacking related to the specific differences and predictors (including childhood adversity) of impulsivity among the mood disorder types.

Aim: To examine the prevalence of impulsivity in patients with major depression (MDD), bipolar type I (BPI) or bipolar type II (BP II). To examine childhood adversity as a modifier of the association between impulsivity and mood disorder type.

Method: Participants were recruited from the McGill University Health Center in Montreal, Quebec. Mood diagnoses were determined using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID). Barrett's Impulsivity Scale (BIS) was impulsivity in the attentional, motor and non-planning domains. Childhood adversity was assessed using the Childhood Experiences of Care and Abuse Questionnaire (CECA-Q). ANOVA and kruskal-wallis tests and linear regression models were conducted.

Results: Impulsivity in the attentional and non-planning domains was greater in BP II than MDD and BPI. However, when childhood adversity is examined, the association between mood disorder type was explained by maternal psychological abuse which is associated with greater impulsivity in the attentional domain. Similarly, for impulsivity in the non-planning domain, the association between mood disorder type was accounted for by (1) maternal psychological abuse and (2) maternal physical abuse. Psychological abuse by mother is associated with greater impulsivity in the motor domain.

Conclusion: Childhood adversity accounts for the differences in mood disorders types and impulsivity.

P-097 | Does common (hypo)mania rating scales measure similar symptoms?

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Background and Aims: Recent content overlap analysis of 7 widely used depression rating scales revealed substantial heterogeneity of the depressive syndromes and low overlap among scales. To our best knowledge there are no studies evaluating content overlap of (hypo) mania scales. The goal of our study is to quantify the overlap of items among 7 widely used (hypo)manic scales.

Method: A content analysis was carried out to evaluate symptom overlap among the 7 (hypo)manic scales via the Jaccard index (0=no overlap, 1=full overlap). In case of every scale, rates of idiosyncratic symptoms, and rates of specific vs. compound symptoms were calculated.

Results: The 7 scales gathered 64 disparate symptoms. Mean overlap among all scales was low (0.35), mean overlap of each scale with

all other ranged from 0.29-0.48, overlap among individual scales from 0.20 to 0.65, the highest being between mania-oriented scales (Young Mania Rating Scale, Bech-Rafaelson Mania Rating Scale, Clinician-Administered Rating Scale for Mania) – 0.63-0.65. 36% of symptoms appeared only in one scale. Only 6% of symptoms appeared in all of the instruments. Rates of idiosyncratic symptoms ranged from 0-32%.

Conclusion: We have shown that using (hypo)manic scales as interchangeable measurements may be problematic, especially in the studies using Hypomania Checklist 32, Mood Disorder Questionnaire, Bipolar Spectrum Disorder Scale, and Mood Swings Questionnaire for bipolar disorder screening and bipolarity assessment in clinical and non-clinical populations. Given the low overlap between both depression, as well as (hypo)manic scales may pose a threat to the generalizability and replicability of bipolar disorder research.

P-098 | Activity criteria of demyelination process

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Background and Aims: 396 multiple sclerosis patients from 15 to 33 years old were examined.

Method: Clinical methods, immunoassays, myelinotoxic activity (MTA), CT and MRI of cerebrum and spinal cord, myelinotoxic activity (MTA).

Results: A latent phase (the first group, 79 patients, 19.9%) is characterized by slight increase in MTA of blood serum (7.6 ± 1.2 units; control group – 3.9 ± 0.82 units; $P < 0.001$), decrease of CD4+ in blood ($34.8 \pm 1.64\%$, control group – $40.1 \pm 2.4\%$; $P < 0.001$) and by large increase in CIC levels (92.56 ± 3.1 optical units compared to 69.32 ± 4.28 in control group; $P < 0.001$).

A slow progradient phase of MS (second group, 156 patients, 39.4%) is distinguished by moderate evident (apparent) increase in MTA of blood serum (22.3 ; $P < 0.01$ in comparison with 1st group), significant decrease of T-lymphocyte in blood serum by 32.4%, CD22+ by 71.1%, CD4 + by 33.9%, CIC levels by 12.4%, along increase in CD8 + by 1.3 times, weak induction of TNF- α at 84.3%; IL-8 at 4.8% patients.

An acute phase (third group, 144 patients, 36.3%) coupled with significant increase in MTA of blood serum (40.4 ± 1.22 units) in comparison with 1st and 2nd groups. Acute condition of MS distinguished by significant increase in blood CD8+, IL-2P+, Ig G,A,M, CIC level along decrease of T-lymphocyte ($51.7\% \pm 1.56\%$) and CD22+ levels. Increase in IL-2P+ at 64.1% patients coupled with significant increased TNF- α и IL-8.

Conclusion: Measurement of blood serum MTA and immune reactivity in combination with clinical and MRI findings helps to correctly estimate the rate of demyelination in multiple sclerosis patients.

P-099 | Predominant polarity in bipolar I and II disorders: A five-year follow-up study

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Background and Aims: Predominant polarity is a relatively new concept, involving categorizing patients with bipolar disorder (BD) based on polarity of their preceding illness course, using cut-off of two-thirds of episodes. Few prospective studies have investigated its predictive validity, or associated clinical features. We examined them within a long-term cohort study of bipolar I (BD-I) and bipolar II (BD-II) patients.

Method: In the Jorvi Bipolar Study (JoBS), 191 BD-I and BD-II psychiatric in- and outpatients were carefully diagnosed at baseline using SCID-I/P-interviews, and followed using life-chart methodology up to five years. Predominant polarity could be defined for 188 (98.4% of all) patients, based on their preceding illness course. Information on their prospective illness phases was available for 175 (93.0%) of these patients.

Results: Predominant polarity was defined as manic in 30 (16%), intermediate in 90 (48%) and depressive in 68 (36%). The three groups differed in terms of their psychiatric comorbidity, with those with manic polarity having less anxiety, but more psychotic symptoms lifetime. Patients with manic polarity also spent significantly more time euthymic during follow-up. Analyses are ongoing, and the final results will be presented in the meeting.

Conclusion: Psychiatric in- and outpatients with BD I or II can be classified according to their predominant polarity, and this classification has at least some predictive validity in long term. Those with predominantly manic polarity may be the most distinct of the three groups. Patients in different polarity groups differ also in their other clinically relevant characteristics, such as psychiatric comorbidity.

P-100 | A review of neurological soft signs in patients with bipolar disorder

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Background and Aims: Neurological soft signs (NSS) have been vastly studied as a potential endophenotype for schizophrenia (SZ) spectrum disorders, however the scope of research focusing on NSS in patients with bipolar disorder (BD) is yet to be explored. This

presentation's objective is to review the literature currently existing in this field.

Method: The MEDLINE, Embase and PsychINFO databases from 1966 to December 2017 were searched using the phrases "neurological soft signs", "neurological signs", "soft signs", "neurological abnormalit*", "motor coordination", "sensory integration", "disinhibition", "complex motor sequencing", "Luria task", "fist-edge-palm", "bipolar disorder", "bipolarity", "mania", "manic depressi*", "manic". Only original studies, which included patients with BD, were selected.

Results: BD patients were found to score significantly higher on NSS scales than controls. Furthermore, healthy first degree relatives of BD patients were distinguished from healthy controls by higher NSS scores. The comparison between patients with BD or SZ showed contradictory NSS scores results with 8 studies finding differences and 10 not. High NSS scores in BD subjects occurred throughout the age range and were not age dependent. Studies investigating brain morphology showed structural abnormalities in patients with psychotic illness and high NSS scores. BD patients with higher NSS levels presented higher rates of cognitive impairment.

Conclusion: The current results suggest that NSS might not be specific for SZ. Most studies indicate higher rates of NSS in BD compared to healthy controls. There's a relationship between psychological and cognitive functions and NSS levels.

P-101 | Psychotic mood disorders explain schizophrenia; there is no schizophrenia or schizoaffective disorder

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Background and Aims: The validity of schizophrenia as separate from psychotic bipolar disorder was established in the early 1900's before chronicity and psychosis were recognized in mood disordered patients. The correct diagnosis for psychotic patients is critical for standard of care treatment. This paper aims to dispell the notion of the Kraepelinian dichotomy and the existence of schizophrenia as separate from psychotic mood disorder.

Method: A massive review of relevant data comparing these two disorders encompassing phenomenology, neuroanatomy, neurochemistry, neuroimaging, molecular genetics, cognitive function, heritability, and neuropsychological assessments has been relevant. Specht (1905), Blueier (1911), Kraepelin (1920), Kasanian (1933), Schneider (1949), Kendell and Gourlay (1970), Pope and Lipinski (1978), Craddock and Owen (2005) and Lake (2012) have contributed.

Results: The comparative data are persuasive in indicating a single disease, a mood disorder, to explain cases diagnosed with schizophrenia or schizoaffective disorder. Once it was recognized that

bipolar patients can incur a “progressively deteriorating course of incomplete symptom resolution between episodes accompanied by persistent and increasing degrees of cognitive dysfunction”, the concept of schizophrenia no longer has any symptom profile different from psychotic mood disorders (Post, 2010).

Conclusion: Schizophrenia and schizoaffective disorder are obsolete concepts and do not serve our profession well with regard to scientific rigor. The diagnostic criteria for these schizo-disorders are disease non-specific and are accounted for mood disorders. In contrast, the diagnostic criteria for bipolar disorder are very specific, highly unique in the classical form and have had a consistent history through centuries (Goodwin and Jamison, 2007).

P-102 | Convergent and discriminant validity of the HPS and GBI 7Up7Down

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Background and Aims: To explore the convergent and discriminant validity of the Hypomanic Personality Scale (HPS; Eckblad & Chapman, 1986) and the General Behavior Inventory 7Up-7Down (7U7D; Youngstrom, Murray, Johnson, & Findling, 2013) in young adults. Both instruments are designed to identify mood symptoms, with the HPS being specifically able to detect hypomanic personality traits and the GBI designed to detect both manic and depressive tendencies. We hypothesized that the HPS will show convergent validity and thus a stronger correlation with the 7Up (convergent validity) than with the 7Down (the discriminant validity criterion).

Method: Surveys were given to college students in psychology classes in Seoul, South Korea and Chapel Hill, North Carolina (2014-2017). We used Steiger's test of dependent correlations to evaluate whether the convergent correlation with 7Up was significantly higher than with the 7Down (Cohen & Cohen, 1983).

Results: The correlation between the HPS and 7Up scores was strong, $r=0.65$, $P<0.001$. The correlation between the HPS and 7Down scores was moderate, $r=0.29$, $P<0.001$. Steiger's test of the difference between dependent correlations found the difference between correlations to be very significant, $t=11.43$, $P<0.00005$.

Conclusion: These data suggest that the HPS and the 7Up have strong convergent validity, and that the HPS and 7Down have good discriminant validity. The Steiger test shows that although the dependent correlations were both positive and significant the difference between the two is still highly significant and supports the initial hypothesis, adding to the evidence for construct validity of all of the scales (Campbell & Fiske, 1959).

P-103 | Long-term actigraphy monitoring shows high temporal variability of circadian and sleep parameters in remitted bipolar patients compared to healthy controls

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Background and Aims: Findings from studies using actigraphs suggest that circadian rhythm and sleep are disrupted in patients with bipolar disorder (BD) even in remitted state. Most existing studies are based on a limited period (up to several weeks) of actigraphy monitoring and are therefore missing the opportunity to assess temporal variations in actigraphy parameters. This study focuses on temporal variability in circadian and sleep parameters using long-term actigraphy monitoring in BD patients and healthy controls (HC).

Method: Twenty-five BD patients and twenty-five HC, matched for age and gender were monitored for over 3 months using wrist-worn continuous actigraphy monitoring device (Mindpax Ltd.[®]). Patients were screened each month using YMRS and MADRS clinical scales. Data within and around clinical episodes were excluded from the study.

Results: In BD patients, we have found significantly higher variability of sleep duration ($P=0.0395$, $AUC=0.71$) and more variable intradaily variability (IV) parameter ($P=0.0022$, $AUC=0.79$) calculated from seven-day sliding windows, compared to HC. All presented P values are after Bonferroni correction ($n=8$).

Apart from variability analysis, classical approach can confirm differences in cosinor mesor (lower in BD. $P<0.0001$, $AUC=0.87$), sleep duration (higher in BD $P<0.0001$, $AUC=0.86$). We cannot confirm differences in Interdaily stability, IV, Chronotype and Acrophase.

Conclusion: Temporal variation of sleep and circadian parameters distinguishes remitted BD patients from healthy controls even in parameters in which the average values do not differ, such as the IV. Long-term actigraphy monitoring thus represents promising direction for estimating BD disorder state.

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P-104 | Detection study of bipolar depression through the application of model-based algorithm in terms of clinical feature and peripheral biomarkers

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Background and Aims: Assessment of depressive patients' conversion risk is of clinical relevance. The nature of the diagnostic classification problem of mood disorder is a typical dichotomous data problem with two outcomes: Major depressive disorder (MDD) or Bipolar disorder? It can be a difficult decision relying on clinical symptoms alone. In this paper, we are committed to provide a more reliable screening method by model-based algorithm for bipolar depressive disorder (BPD) combining different dimensions of evidences.

Method: Patients in depressive episode, including 30 patients with MDD and 23 patients with BPD, were randomly selected at the Shanghai Mental Health Center. The demographic information was collected and scales of HAMD-24, MADRS and HAM-A were assessed before and after treatment. Serum levels of FGF-2, NGF, IGF-1, VEGF in patients were measured by ELISA. A generalized linear

model was conducted following a stepwise discriminant analysis by SAS 9.4 software.

Results: In the final regression model, 7 predictive variables (4 neurotrophic factors, 3 clinical and symptomatic characteristics) were included. The model based on the 4 neurotrophic factors alone got an acceptable discriminant performance with an ROC curve value of 0.77 compared to 0.80 for clinical and symptomatic model. And model performance enhanced to 0.91 when all the 7 predictive variables were included into the model.

Conclusion: A simple artificial system was approached for stably differential diagnoses. This model and its algorithm not only showed a good prospect about clinical application of neurotrophic factors of interest in mood disorder, but also potentially offered benefits of the identification for depressive episode which was bipolar or unipolar.

Poster Session IX– Disability/Cognition/Rehabilitation

P-105 | Relationship between childhood adversities, emotion dysregulation and cognitive processes in bipolar disorder and unipolar depression

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Background and Aims: Cognitive and emotional development are vulnerable to disruption by environmental distress. Emotion dysregulation and cognitive distortions may impair clinical course of bipolar disorder (BD) and unipolar depression (UD). We aimed to assess whether childhood maltreatment and emotion dysregulation impair automatic thoughts (ATs) and meta-cognitions (MCs) in BD and UD in this study.

Method: 85 patients with BD, 80 UD in remission and 86 healthy participants were enrolled. Automatic Thoughts Scale (ATS), Metacognition Questionnaire (MCQ-30), Childhood Trauma Questionnaire (CTQ-28), Difficulties in Emotion Regulation Strategies Scale (DERS) were the measures.

Results: There were significant differences between the groups in terms of ATS ($P<0.01$), meta-cognitions ($P<0.05$) and CTQ-28 ($P<0.05$). ATs were determined by CTQ physical abuse ($B=0.34$, $P<0.01$), DERS goals ($B=-0.37$, $P<0.01$), impulse ($B=0.53$, $P<0.01$) and non-accept ($B=0.23$, $P<0.05$) subscales in BD ($F=21.08$, $P<0.01$) and CTQ emotional neglect ($B=0.22$, $P<0.05$), DERS strategies ($B=0.39$, $P<0.05$) in

UD ($F=9.97$, $P<0.05$). MCs were determined by sexual abuse ($B=0.46$, $P<0.01$) in BD ($F=4.88$, $P<0.01$), sexual ($B=0.52$, $P<0.05$) and emotional ($B=-0.30$, $P<0.05$) abuse in UD ($F=7.02$, $P<0.01$).

Conclusion: MCs and ATs were significantly higher in BD and UD; and although there was strong association between ATs and both emotion dysregulation and childhood adversities, MCs were only determined by CTQ sexual abuse in patient groups. Emotion dysregulation is an innate trait which may distort ATs, whereas childhood trauma is an environmental factor which may distort both ATs and MCs in BD and UD.

P-106 | Emotional memory in bipolar disorder and major depressive disorder: a preliminary report

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Background and Aims: Bipolar disorder (BD) and major depressive disorder (MDD) are associated with memory recall deficits for emotional information. While emotionally positive and negative information is preferentially recalled by healthy controls (HC), individuals diagnosed with MDD display a recall bias towards emotionally negative information. Recall for emotionally positive and negative information in BD is blunted, and emotionally neutral information is preferentially recalled. We aimed to be the first to compare emotional memory performance between BD, MDD and matched HC.

Method: All participants completed clinical assessment measures to confirm their eligibility, including the SCID. All participants in the MDD and BD groups met criteria for past MDD and BD I, respectively, but were currently euthymic. Participants completed an encoding task that involved rating the emotional intensity of charged (positive, neutral and negative) images. Participants returned 1 week later for a surprise incidental recognition memory task.

Results: Each group reacted more intensely to positive and negative images versus neutral images. Overall memory accuracy scores revealed that the MDD group correctly recalled more negative images (73.6% versus 70.8% positive and 69.4% neutral), the BD group correctly recalled more neutral images (88.9% versus 86.1% negative and 84.5% positive), and the HC correctly recalled more positive images (81.9% versus 79.2% negative and 76.8% neutral).

Conclusion: The reactivity trends for MDD and BD did not align with the observed memory trends. Individuals with a history of MDD and BD may have an encoding/reactivity bias similar to HC and an emotional memory bias consistent with individuals who are currently depressed and/or manic.

P-107 | Poor quality of life, functionality and neuropsychological performance in Mexican bipolar patients

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Background and Aims: This study evaluated and compared the characteristics of perceived quality of life, functionality and executive functions in a group of bipolar patients and healthy controls.

Method: 30 euthymic bipolar I and II patients and 30 healthy controls participated in the study. Both groups were assessed with the Mexican versión of Behavior Rating Inventory of Executive Function adult Version (BRIEF), the Functioning Assessment Short Test (FAST) and the Quality of Life In Bipolar Disorder (QoL. BD).

Results: Significant differences were found between bipolar patients and healthy participants in the three assessments applied. Bipolar patients group showed low scores in quality of life and functionality associated with poor autonomy, cognition, social relationships, leisure and work performance. Likewise, bipolars presented significant deficits in executive functions related to inhibit, shift, initiate, working memory, plan/organize and metacognition scales evaluated with BRIEF.

Conclusion: Mexican bipolar patients present perceived low quality of life and functionality as well as executive functions impairments that highlight the importance to implement specific therapy strategies like "cognitive remediation" to complement the pharmacological and psychosocial treatment.

P-108 | Theory of mind deficits in bipolar disorder in remission

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Background and Aims: Theory of mind (ToM) is the ability to represent one's own and other's mental state. Studies in bipolar affective disorder show mixed results possible due to confounding factors like intelligence, attention, phase of illness and current mood. Purpose of this study is to study ToM in remittent bipolar disorder patients and compare with normal controls to find if there are residual deficits during remission.

Method: 40 bipolar patients in remission and 40 age and sex matched controls were recruited. Clinical remission for 3 months with YMRS <4 and HAM-D<7 was inclusion criteria. ToM was assessed by Faux Pas test. Data was analysed using SPSS-11.5 for Windows with parametric and non parametric tests as indicated. Level of significance taken as $P < 0.05$ (two tailed).

Results: Mean age of onset of illness in patient group was 23.8 years with duration of illness 11.3 years. Mean number of episodes 6.7 and duration of remission 4.15 months. ToM test result revealed deficit in recognising social cues in faux pas test by bipolar patients as compared to normal controls. There was no difference between both groups in test result on control stories.

Conclusion: Results suggest that ToM deficits are present in bipolar disorder patients even during apparent clinical remission, indicating it may be a trait marker of the illness. There is no deficit in understanding a regular social context without faux pas. It also revealed that there is no correlation with ToM and duration of illness.

P-109 | Clinical and immunological disorders in multiple sclerosis patients with the presence of food allergy

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Background and Aims: 102 multiple sclerosis patients 19 to 33 years old were examined against the control group of 20 healthy people.

Method: MRI and immunological studies.

Results: All patients on the level of IgE in blood serum of 20 basic food products are divided into four groups: the first (13 pers., 12.7%) with the absence of IgE in serum, second (29 pers., 28.5%) with the presence of IgE (threshold 0.35-0.69 IU / ml); third (45 pers., 44.1%) with a moderate increase in IgE (0.70-3.49 IU / ml); 4 st (15 pers., 14.7%) with a significant increase in IgE (3.50-17.49 IU / ml) in serum. Patients first group without clinical signs of apparent exacerbation of MS were observed in blood eosinophilia, and the brain MRI revealed hyperintense foci in a single T-2W mode, indicating the absence of active demyelinating process. Patients with the second

group with a slow chronic course of MS were determined by individual eosinophils (18.1%), indicating that they have a weak allergic reaction. Identification of individual hypo- and hyperintense lesions on brain MRI evidence of chronic course of demyelinating process in the presence of rare clinical exacerbations was seen by us as secondary progressive MS. In the third group investigated the apparent worsening of the process of clinical signs detected a moderate increase in serum IgE (45 pers., 44.1%) in the presence of explicit eosinophilia (11.8%).

Conclusion: Markers of exacerbation of MS is the simultaneous moderate increase in serum IgE eosinophilia, and the appearance of new lesions on MRI gipointensivnyh brain.

P-110 | Characteristics of patients in recovery versus patients with recurrence in a randomized placebo-controlled study with aripiprazole once-monthly as maintenance treatment for bipolar I disorder

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Background and Aims: To describe background and clinical characteristics of patients who did versus those who did not have a recurrence of a mood episode during up to 52 weeks of maintenance treatment with aripiprazole once-monthly 400 mg (AOM 400) for bipolar I disorder (BP-I).

Method: The study (NCT01567527) included outpatients aged 18-65 years with a DSM-IV-TR diagnosis of BP-I and a current manic episode at enrollment. Patients were stabilized on oral aripiprazole, then on AOM 400; those meeting stabilization criteria were subsequently randomized 1:1 to a 52-week double-blind, placebo-controlled withdrawal phase. Recovery was defined as mania and depression scale scores of ≤ 12 for 8 consecutive weeks. Recurrence of a mood episode was defined by criteria that included hospitalization; mania, depression and global clinical impression scale scores; disease or clinical worsening; discontinuation for lack of efficacy, or active suicidality. Baseline characteristics of the patients treated with AOM 400, including age, gender and key disease characteristics, are summarized by recovery/recurrence status.

Results: A total of 133 patients were treated with AOM 400. Of these, 26.3% (n=35) had recurrence whereas 68.4% (n=91) were in

recovery/remission. Most baseline characteristics in the two outcome groups were similar, including age, gender, age at diagnosis of BP-I and disease severity scores. Patients with recurrence had more mean life-time depressive episodes (11.7) at baseline than patients in recovery/remission (6.5).

Conclusion: Life-time depressive episodes were associated with recurrence; other baseline characteristics were similar between patients with recurrence and those in recovery/remission.

P-111 | Occupational functioning and employment outcomes in bipolar disorder: a Mexican study with gender perspective

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Background and Aims: People with Bipolar disorder (BD) have a functional impairment even when they are euthymic. Regarding occupation they present greater unemployment rates and more absenteeism than the general population, which can be explained by clinical and psychosocial factors.

A descriptive, cross sectional study was performed in the National Institute of Psychiatry in Mexico City, in order to identify the association between clinical evolution, cognition and gender identity with occupational function in Bipolar patients, as well to compare the results with those of general population using the data from national surveys

Method: We evaluated 95 participants with BD type I in euthymia. Occupational functioning was assessed with the work history questionnaire, motivation for work questionnaire and health and performance questionnaire from the WHO; the cognitive complaints in bipolar disorder rating assessment (COBRA) was used to assess cognition, and gender identity was assessed with the scale of gender stereotypes and the scale of gender roles.

Results: There were no differences between men and women in terms of gender identity and their association with work experience and motivation for work. Cognitive complaints were moderately associated with motivation for work and predicted a 26% of its variance. Although the Bipolar patients had a higher education level than the national rate, they had a lower employment rate, higher unemployment rate, as well as fewer hours worked per week and more absenteeism than those reported in the national rates.

Conclusion: Euthymic bipolar patients have lower employment outcomes than general population, in spite of their educational level. No gender association was found.

P-112 | Prevalence of cognitive impairment in bipolar disorder: a study of euthymic adults in Bahia, Brazil

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Background and Aims: Cognitive impairment associated with Bipolar Disorder (BD) is present between episodes; affects attention, episodic and working memory, processing speed, and executive functions, with moderate to large effect size when compared to healthy adults. Marked within-group variation on cognitive performance is also consistently reported in adults with BD, suggesting the presence of subgroups of affected individuals with multiple domain impairment, alongside those whose cognitive performance differs little from population norms. Aim: This study compared the proportion of impaired results between euthymic adults with type I BD (BD-I) and healthy controls (HC) in different cognitive domains using Brazilian normative samples parameters.

Method: Methods: 43 euthymic BD-I adults and 17 healthy controls were assessed with measures of IQ, verbal, visual and working memory, executive functions, visuospatial abilities and psychomotor speed. Z scores were obtained by using Brazilian age groups parameters. Impaired performance was classified by $Z \pm 1.645$ (approximately 5th percentile). Differences between groups were investigated with parametric and nonparametric tests, and variables potentially accounting for differences in cognitive performance in the affected group were assessed by hierarchical linear regression.

Results: Adults with BD-I performed worse in verbal, non verbal and working memory and visuospatial tasks when compared to HC, and were slower. In the BD-I group, worse performance was associated with older age, less education and number of affective episodes.

Conclusion: Concurrent with other international studies, a higher prevalence of impaired results was found in the euthymic BD-I group, especially in memory measures, and were associated to demographic and clinical variables.

P-113 | Configural and featural face processing influences on emotion recognition in schizophrenia and bipolar disorder

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Background and Aims: Emotion recognition impairments have been demonstrated in schizophrenia (Sz), but are less consistent and lesser in magnitude in bipolar disorder (BD). This may be related to the extent to which different face processing strategies are engaged during emotion recognition in each of these disorders. We recently showed that Sz patients had impairments in the use of both featural and configural face processing strategies whilst BD patients were impaired only in the use of the latter. Here we examine the influence that these impairments have on facial emotion recognition in these cohorts.

Method: 28 individuals with Sz, 28 individuals with BD and 28 healthy controls completed a facial emotion labeling task with two conditions designed to separate the use of featural and configural face processing strategies; part-based and whole-face emotion recognition.

Results: Sz patients performed worse than controls on both conditions, and worse than BD patients on the whole-face condition. BD patients performed worse than controls on the whole-face condition only.

Conclusion: Configural processing deficits appear to influence the recognition of facial emotions in BD, whereas both configural and featural processing abnormalities impair emotion recognition in Sz. This may explain discrepancies in the profiles of emotion recognition between the disorders.

P-114 | Predictors of functionality and quality of life in bipolar disorder

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Background and Aims: Introduction: Quality of life (QoL) and functionality are severely impaired in Bipolar Disorder (BD), even when euthymic. Clinical variables such as sub-syndromatic symptoms, cognitive impairment and comorbid anxiety have all been associated with poor prognosis.

Aims: The aim of the present study was to identify which clinical variables could predict current functionality and quality of life in euthymic bipolar patients.

Method: BD patients (I and II) attending the BD outpatient clinic, currently euthymic (HAM-D<9 y YMRS<7) were invited to assess perception of cognition (COBRA and Twamley scales), functionality (FAST scale), QoL (QoL-BD scale) and anxiety (ISRA and Beck scales).

Results: 76 patients were included, 57 women, 19 men, 65 had BD-I and 11 BD-II. Forty-two patients (55.3%) had a poor functionality and 66 (86.6%) a poor QoL. Women were more affected than men ($t=2.68$, $P<0.05$ y $t=-2.13$, $P<0.05$). Significant correlations (with Bonferroni correction) were found for FAST scores and YMRS, ISRA, Beck, COBRA, Twamley and QoL-BD scores and for QoL-BD scores and ISRA, BECK, COBRA, Twamley and FAST scores. A regression analysis was performed including significant variables and the model that could best explain current functionality was gender, YMRS, Beck, ISRA, COBRA and Twamley, explaining 59.4% of variance ($F_c=0.594$, $P<0.001$). The model that best explained QoL included gender, Beck, ISRA, COBRA and Twamley, explaining 43.9% of variance ($F_c=0.439$, $P<0.001$).

Conclusion: Most patients have altered functionality and poor QoL. Female gender, sub-syndromic symptoms, cognitive impairment and anxiety were important predictors of both functionality and QoL.

P-115 | Intact performance monitoring in bipolar disorder; a case control study

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Background and Aims: Patients with bipolar disorders are known to suffer from a deficit in performance monitoring, the cognitive function responsible for evaluating behaviour. Previous research using an electroencephalogram (EEG) has revealed a negative-going inflection following an error, termed the error related negativity (ERN). Prior studies have found that bipolar disorders patients are less likely to recognise errors, resulting in an attenuated amplitude of the ERN.

Aims: To evaluate performance monitoring in individuals with bipolar disorders.

Method: 35 bipolar disorders patients and 41 healthy controls were assessed using a Stroop task. Behavioural outcomes included number of correct responses, erroneous responses, non-responses and mean reaction time. Difference between groups was assessed using student t-test. ERN was analysed using repeated measures ANOVA testing.

Results: There was no significant difference in number of correct responses, erroneous responses, non-responses and mean reaction time between bipolar disorders patients and controls ($P=0.108$, 0.213 , 0.134 , and 0.063 , respectively). In both cases and controls EEG potentials generated after a correct response were significantly smaller than after a negative response ($P<0.001$). There was no significant effect of bipolar disorders ($P=0.134$) nor evidence of interaction between case status and change in EEG potential ($P=0.722$).

Conclusion: In line with prior research, both cases and controls exhibited ERNs. However, our findings show that individuals with bipolar disorders do not have a deficit in performance monitoring. Therefore, poor cognitive functioning in bipolar disorders is unlikely related to performance monitoring. Future research should explore other cognitive domains in bipolar disorders patients.

P-116 | Emotion regulation ability and emotional response in bipolar depression

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Background and Aims: Bipolar disorder is thought to be associated with emotion dysregulation that may lead to clinical symptoms and psychosocial impairments. We investigated whether decreased ability in emotional regulation was related to emotional responses to affective stimuli in patients with bipolar depression.

Method: Forty female patients with bipolar depression and 32 female healthy controls participated in the current study that measured the Emotion Regulation Skills Questionnaire (ERSQ), subjective responses to emotionally salient words and pictures, and performances on a Stroop Task using emotional words. Regression models were applied to test the relationship between the ERSQ scores and behavioral measures.

Results: The patients had a lower ERSQ score, lower pleasure and dominance ratings to positive and neutral affective pictures, and a higher arousal rating to neutral stimuli, compared to the controls. The patients were slower in the Stroop Task. The ERSQ scores were significantly related to pleasure and dominance ratings to positive pictures and reaction time to positive words.

Conclusion: Our results suggest that emotional dysregulation in bipolar depression may be associated to disturbed processing of positive emotion, supporting the positive attenuation hypothesis.

P-117 | The selective attention deficit in mania produces a disorder of thought and of emotion

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Background and Aims: The goal of this paper is to generate concepts to explain the variability found among manic patients in their ability to screen out extraneous low-stimuli while prioritizing the importance of more relevant data.

Method: The literature and clinical observations have provided a wide spectrum of manic patients with varying abilities to filter and prioritize incoming stimuli.

Results: When euthymic bipolar patients filter and prioritize in a healthy manner. As mania begins to occur, there may be a slight but beneficial breakdown in the screening of ideas that can lead to success and brilliance. Good ideas that were previously filtered now make it to consciousness. This stage of mania is usually short lived but if not, such individuals can make Google's list of famous bipolar individuals. As mania worsens, the filter/prioritizer becomes more porous and non-productive, extraneous and low priority ideas reach consciousness. The filter may completely break down in severe mania when all stimuli, both internally and externally generated hit consciousness without prioritization. This results progressively in hyperactivity, poor decisions, confusion and psychosis. The increased porosity of the filter is paralleled by the sensation of increasing of racing thoughts and can be observed as rapid, pressed to incomprehensible speech. Distractibility, tangentiality, disorganization extending to psychotic thinking summarizes the progression in the severity of mania.

Conclusion: The concept of a filter/prioritizer is useful in understanding and explaining the spectrum of manic thinking.

P-118 | Cognitive functioning impairment prediction in patients with bipolar disorder: a pilot study using machine learning techniques

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Background and Aims: To build a predictive signature with clinical variables to determine the individual risk of developing cognitive impairment in patients with bipolar I disorder using machine learning techniques.

Method: The present cross-sectional study included euthymic patients with bipolar I disorder according to SCID-I/DSM-IV, aged 18 years or older, who were enrolled in the Bipolar Disorder Program of Hospital de Clínicas de Porto Alegre. We applied random forest with recursive feature elimination coupled with clinical data to predict which patient would have cognitive functional impairment as assessed by the subdomain "cognitive functioning" of Functioning Assessment Short Test (FAST). We used leave-one-out cross validation and up-sampling to circumvent overfitting and cross imbalance.

Results: We included 67 patients and were able to differentiate patients with cognitive impairment (FAST ≥ 2) from those without with an AUC of 83.77%, 83.33% sensitivity and 76.74% specificity by using 10 selected variables from the 40 initially included. The most relevant variables were age at onset of disease, number of

previous suicide attempts, delay between first episode and diagnosis, use of benzodiazepines throughout life, and use of SSRIs throughout life.

Conclusion: Our findings show that it is possible to predict cognitive impairment based on clinical variables at an individual-level. Future longitudinal studies should replicate these findings and their utility in facilitating selection of interventions to prevent cognitive impairment.

P-119 | White matter integrity and cognitive functions in first episode bipolar patients: case control study

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Background and Aims: Bipolar disorder is characterized by white matter (WM) microstructural abnormalities and broad neurocognitive impairment, which may be present even before the first manifestation of mood symptoms; it persists across the different phases and even worsens during the course of the illness. Objectives: To correlate between the white matter microstructure abnormalities and neurocognitive impairment in first episode bipolar patients during euthymic phase.

Method: A sample of 30 subjects, fifteen bipolar patients and fifteen control of both genders aged between 18 and 55 were interviewed using Structured Clinical Interview for DSM-IV (SCID-I), Young Mania Rating Scale (YMRS), Wechsler Adult Intelligence Scale (W AIS), cognitive functions were assessed by Wisconsin Card Sorting Test (WCST), Trail Making Test (part A&B) Wechsler memory scale revised III (WMS-R III), and Continuous Performance Test. White matter integrity was measured by fraction anisotropy MRI.

Results: Bipolar group had significantly poorer executive functions, IQ, memory and attention, they also had significantly lower scores of fraction anisotropy of bilateral superior longitudinal fasciculus, bilateral inferior longitudinal fasciculus, bilateral uncinate fasciculus, bilateral cingulum bundles. Right inferior frontal area FA (fraction anisotropy) was positively correlated with performance IQ, verbal IQ, total IQ and with recall domain of Wechsler memory scale and negatively correlated with trail making test part A and total omission errors. Right superior longitudinal fasciculus FA was positively correlated with categories completed and negatively correlated with trail making test part A.

Conclusion: Patients with first episode bipolar disorder suffer from cognitive impairment which is correlated with white matter microstructure abnormality.

P-120 | The relationship between theory of mind (ToM) deficits and neurocognitive functions in euthymic patients with bipolar disorder

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Background and Aims: Bipolar disorder (BD) is a chronic psychiatric illness associated with social and neurocognitive impairment. Social cognition has been shown to exert a mediating role between social functioning and cognitive functions. However, the relationship between neurocognition and the two aspects of social cognition, the mental state decoding and the mental state reasoning in BD is yet to be explored.

Method: Performance on measures of neurocognitive and ToM tests was investigated among 24 euthymic patients with BD (mean age: 42.33±10.12 years; mean education: 13.08±3.3 years; 66.6% females). ToM assessment instruments were the "Reading the Mind in the Eyes Test (RMET)" which is known as a mental state decoding task and the "Hinting Task" as a mental state reasoning task. Participants also underwent a series of neurocognitive tests assessing executive functions, verbal, visuospatial and working memory, psychomotor speed, response inhibition, attention and information-processing speed. The correlation between social and neurocognitive test performances was assessed.

Results: The "Hinting Task" performance was significantly correlated with performance in verbal memory, response inhibition, attention and executive functions domains whereas the "RMET" correlated significantly with categorical fluency, short-term memory and capacity for information processing domains in addition to the above-mentioned neurocognitive domains.

Conclusion: Our results show that both mental state decoding and reasoning are significantly correlated with neurocognitive performance in a wide range of domains in euthymic patients with BD which points at the importance of neurocognition in social cognition, therefore social functioning.

P-121 | Reduced spectral powers of specific regions in the right hemisphere correlate with response to acute 20 Hz rTMS over left dorsolateral prefrontal cortex

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Background and Aims: Quantitative assessment of response to repetitive transcranial magnetic stimulation (rTMS) plays important role in developing efficient treatment for intractable depression. This study aims to determine the rTMS induced changes in relative and absolute spectral powers of different regions of the brain in different sub-bands EEG in major depression patients who responded to an acute rTMS protocol.

Method: In an open label clinical trial 12 patients with intractable major depression underwent ten sessions 20 Hz rTMS over left dorsolateral prefrontal cortex in an acute protocol consisted of daily two sessions of 60 trains (2.5 s inter-train of 17.5 s) at 120% MT for 5 consecutive days per week. The 19-channel EEGs were recorded prior and post intervention. The treatment response was evaluated with Hamilton depression rating scale (HAM-D). The absolute and relative powers in all electrodes for delta (0-4 Hz), theta (4-8 Hz), alpha (8-12 Hz), sensorimotor rhythm (SMR)(12-15 Hz), beta (15-20 Hz), and high beta (20-28 Hz) were calculated and compared between prior and post intervention in the responders.

Results: In the responders (n=4), relative power of delta sub-band at FZ significantly reduced post treatment ($P<0.05$). Theta and alpha sub-bands showed significant reductions respectively at T7, C4, and P8 and at CZ and P8 sites after rTMS ($P<0.05$). In the SMR and beta sub-bands the relative power significantly reduced in the P8 and F4 electrodes, respectively ($P<0.05$).

Conclusion: Reduced EEG activities in right hemisphere in specific regions are correlated with response to acute 20 Hz rTMS over left DLPFC.

P-122 | Cognition in euthymic bipolar disorder patients: results from subjective and objective evaluations in a Mexican sample

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Background and Aims: Cognitive dysfunction is a main feature of Bipolar Disorder (BD) even in euthymia. Instruments have been developed for evaluation of subjective complaints, with good correlations to neuropsychological testing. Digit Span Backward (DSB), Digit Span (DS), Stroop Test (ST), Hopkins Verbal Learning Test (HVLT) are the most used for research. The aim of this study was to assess cognitive deficits both through subjective and objective measurements in a sample of Euthymic BD patients.

Method: Euthymic (YMRS<7 and HAM-D<9) BD (I and II) outpatients were invited. Subjective deficits were assessed using the Cognitive complaints in BD rating assessment (COBRA). Objective evaluation was performed by trained neuropsychologists using the HVLT, ST, DS, DSB and Letter-Number Sequencing using normative standards for Latin population.

Results: 45 patients (40 BP type I, 4 type II) aged 20-70 yo (Mean 47.4), with a mean scholasticity of 13.4 years were evaluated. Mean COBRA score was 15.8, with 71.4% of patients perceiving deficits. All patients had deficits in at least one subtest. The worst performance was seen on the ST, with up to 73.3% of patients having below normal performance. Performance was low to very low in up to 51.1%. The Interference subtest was less affected: 44.4% had abnormal performance. A Correlation between COBRA score and Digit span forward was found ($Rho = -0.420$, $P > 0.05$).

Conclusion: Cognitive deficits are present in every patient of our sample. Most patients perceive such alterations. Objective evaluation detects special deficits in processing speed. These results confirm the relevance of cognitive evaluation in BD.

P-123 | Subjective cognitive deficits in bipolar disorder: a Mexican study

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Background and Aims: Bipolar Disorder (BD) is a chronic and disabling illness. Cognitive deficits are found in up to 60% of patients,

even when euthymic. A tool was developed by Rosa and colleagues to assess perception of cognitive deficits in bipolar patients, which correlated to neuropsychological testing. However, data on Mexican population is lacking. The aim of the present study was to evaluate cognitive complaints in patients from the Affective Disorders Clinic at the National Institute of Psychiatry compared to healthy controls using the cognitive complaints in bipolar disorder rating assessment (COBRA) before described.

Method: 158 patients with BD and 152 healthy controls were asked to answer the Spanish version of COBRA. Young Mania Rating Scale (< 8) and Hamilton Depression scale (< 9) were used to assess euthymia in Bipolar patients.

Results: In the BD group, mean age at evaluation of was 43.6 years (± 12.75), they had a mean of 14.32 years of schooling (± 3.56) and the mean COBRA score was 14.27 (± 9.28). In the control group, mean age at evaluation of was 44.3 years (± 16.56), they had a mean of 18.86 years of schooling (± 14.29) and the mean COBRA score was 11.81 (± 6.19). t test for independent groups was significant for differences in years of schooling ($t = 3.872$, $P > 0.001$) and COBRA score ($t = -2.731$, $P > 0.01$). No differences were found for age at evaluation ($t = .420$, $P = 0.675$).

Conclusion: Mexican patients with BD even in euthymia perceive a greater cognitive deficit compared to healthy controls. Years of schooling could have affected present results.

Poster Session X– Fighting Stigma

P-124 | A cross-sectional survey of stigma towards mental illness among medical students: a focus on bipolar disorder

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Background and Aims: Medical students are at greater risk of depressive symptoms or depression than the general population. A positive attitude towards mental illness is important and desirable in future clinicians as it may impact on the provision of healthcare.

Method: A cross-sectional, online survey was conducted to evaluate the attitudes and degree of stigma towards mental illness among pre graduate students. All second-year students were invited to complete the CAMI, RIBS and MAKs questionnaires before taking the Psychological Medicine course. Participation was kept voluntary and responses were anonymized.

Results: During the last two semesters, 518 of 602 students (response rate = 86.04%) completed the survey. Nearly a quarter (22.5%) of the sample would not be willing to work with someone with a mental health problem. Students currently or ever living with someone with a mental health problem were more likely to consider depression or stress as a mental disorder ($P < 0.05$). A third (33.1%) of the students did not know whether grief is a mental disorder. Moreover, virtually the whole sample (99.2%) agreed or strongly agreed that bipolar disorder is a mental health condition, whereas only 61.6% and 40.6% of the students supported that statement for drug addiction and stress, respectively.

Conclusion: Compared to other conditions, the concept that bipolar disorder is a mental illness is consolidated among pregraduate medical students. Anti-stigma evidence-based preventive measures could be implemented to educate and promote the next generation of healthcare professionals' competences to approach patients with a mental illness.

Poster Session XI-

Genetics and Proteomics

P-125 | Altered expressions of exosomal miRNAs in bipolar disorder

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Background and Aims: MicroRNAs (miRNAs) are small non-coding RNAs that mediate post-transcriptional and translational mechanisms. Growing evidence suggest a dysregulation in expressions of several miRNAs in bipolar disorder (BD). Exosomes are membrane-bound vesicles acting as "biological cargo carriers" of molecules including miRNAs. We hypothesized that exosomal miRNA profiles might show alterations between patients with BD and healthy controls (HC) and among different states of BD.

Method: Exosomes were precipitated from plasma samples of patients with BD (n=51; 10 depressed, 21 manic, 20 euthymic) and HC (n=31) using miRCURY Exosome Isolation Kit (Exiqon, Denmark). Total RNA was extracted from exosomes using the miRCURY[™] RNA isolation kit and reverse transcribed using the miRCURY LNA[™] Universal RT microRNA PCR, Polyadenylation and cDNA synthesis kit. Each microRNA was assayed once by qPCR on the microRNA Ready-to-Use PCR, Human panel I+II. The amplification curves were analyzed using the Roche LC software, both for determination of Cq and for melting curve analysis.

Results: There were no significant difference among groups with respect to age and gender. Forty of miRNAs were dysregulated in BD in comparison to HC. MiR-652-3p, -320d, -26a-5p, -150-5p, -126-5p were dysregulated in euthymia ($P<0.001$; $P<0.001$; $P=0.001$; $P=0.001$; $P=0.001$). MiR-484, -652-3p, -126-5p, -16-2-3p, -18a-5p were dysregulated in depression ($P<0.001$; $P=0.001$; $P=0.002$; $P=0.003$; $P=0.003$). MiR-484, -185-5p, -215-5p, -652-3p, and -320 d were dysregulated in mania ($P=0.004$; $P=0.005$; $P=0.007$; $P=0.007$; $P=0.007$).

Conclusion: Our results indicate significant alterations in forty exosomal miRNAs in BD. Exosomal miRNA expressions showed significant alterations across different states of BD, whereas miR-652-3p is the only miRNA which is dysregulated in all different states of BD.

P-126 | Genome-wide interactions with body mass index and bipolar disorder risk: a study from the psychiatric genomics consortium bipolar disorder working group

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Background and Aims: Bipolar Disorder (BD) is associated with higher body mass index (BMI). In a prior genome-wide association study (GWAS) of BD, we found that rs12772424 modified the association between BMI and BD. Additional studies are needed to determine the role of other clinical factors and genetic modifiers in the BMI-BD association.

Method: We utilized data from ten PGC sites (4332 cases, 3291 controls), to explore the association of BD with elevated BMI. For each site, SNP*BMI interaction GWAS analyses were conducted by determining if SNPs were associated with BMI in BD cases using linear regression. Additionally, for sites with available controls, SNP*BMI interaction effects were estimated directly with logistic regression. Sex-stratified analyses were also conducted. Results of the site-specific analyses were meta-analyzed for SNPs observed across all sites.

Results: No SNP-BMI interaction effects reached genome-wide significance. The top result in the case-control analysis was rs736893 in GLIS3 with a stronger result in males ($P=5.7E-6$). The top result in the case-only analysis was rs4285452 in GSDMC ($P=3.3E-6$), with similar results in males and females. Case-only, sex-stratified, analyses showed rs7994174 in DCLK1 ($P=4.5E-6$) as the strongest result in females.

Conclusion: GLIS3 has been associated with neonatal diabetes and pancreatic beta cell apoptosis. DCLK1 is involved in neuronal migration, neurogenesis and neural apoptosis; it is involved in carcinogenesis and it is upregulated by BDNF, widely implicated in BD. Further investigation is needed to determine the directionality of these

associations, the role of secondary phenotypes related to BMI, and medication effects.

P-127 | Brain derived neurotrophic factor (BDNF) VAL66MET variant is associated with early onset bipolar disorder on the genetic level and epigenetic level

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Background and Aims: We recently identified an association between Brain-derived neurotrophic factor (BDNF) variation rs6265 (Val66Met) and early onset bipolar disorder (BD) (diagnosis ≤ 19), and showed BDNF methylation changes in subjects with BD. Val66met (G196A), creates a CpG site when the Val/G allele is present. We sought to study the methylation of BDNF and its interaction with Val66Met.

Method: Sex and age matched DNA samples with available Val66Met SNP genotypes from BD-Type1 cases (N=190: N=95 early onset and N=95 Late onset) and controls (N=186) were studied. Pyrosequencing of 4 CpGs in promoter I, 4 CpGs in promoter IV, 2 CpGs in promoter IX (CpG2 includes the G of the Val allele) was performed. Statistical analyses were performed using logistic regression adjusting for batch effect to compare cases vs controls including stratification by onset and Val66met genotype.

Results: Comparing BD vs controls, BD cases have significantly higher methylation in Promoter IX/CPG-2. This was driven by early onset cases; early onset BD (but not late onset) vs controls have significantly higher methylation ($P=0.048$). Also, comparing early onset vs late onset BD cases, early onset BD cases have significantly higher methylation at IX/CPG-2. These results remained significant after adjusting for Val66Met genotype, with higher difference when comparing AG genotype, allowing for possible gene (Met allele) X methylation interaction.

Conclusion: Early onset bipolar disorder is associated with the Met allele and the methylation of the Val allele associated CpG island. Further analyses on the association of methylation with previously identified BD onset stressors and psychotropic medications are under investigation.

P-128 | Data mining study of microRNA expression datasets from the post-mortem frontal cortex examining redox modulation pathways in patients with bipolar disorder

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Background and Aims: The etiology of redox (reduction and oxidation) alterations in bipolar disorder (BD) is largely unknown. We aimed to explore if microRNAs targeting redox enzymes may be contributing to these alterations.

Method: We examined 3 publicly available post-mortem frontal cortex microRNA expression datasets (Perkins [2007], Vladimirov [2009], and Miller [2009]; N for BD= 30-36 per dataset, N for controls= 28-34 per dataset) deposited in the Stanley Neuropathology Consortium using data mining methods. The ability of these microRNAs to differentiate BD and healthy controls was analyzed using feature selection and classification, and microRNAs in the top 10th percentile were entered into pathway enrichment analysis. Each dataset was analyzed separately because they were generated using different high-throughput platforms.

Results: Redox enzyme-targeting microRNAs in the top 10th percentile in feature selection could together differentiate BD and controls at above chance level, and targeted the cellular nitrogen compound metabolic process pathway in all 3 datasets ($P=6.67 \times 10^{-130}$ in Miller; $P=1.97 \times 10^{-48}$ in Perkins; $P=1.54 \times 10^{-158}$ in Vladimirov).

Conclusion: While preliminary, our findings suggest that microRNAs that target redox enzymes in the cellular nitrogen compound metabolic process pathway, such as those of the mitochondrial electron transport chain or the glutathione system, may be good candidates for the exploration of causative factors that are contributing to redox alterations in BD. Future studies validating these findings in a separate set of post-mortem brain and peripheral samples are warranted.

P-129 | Cognitive functions and bipolar disorder: the role of apolipoprotein E gene polymorphism

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Background and Aims: The identification of genetic determinants that can affect cognitive functioning in subjects with Bipolar Disorder (BD) can be useful in clarifying the pathophysiological processes at the basis of the symptoms of the disorder and of the worst cognitive performance that was found. A gene that could explain the relationship between cognition and bipolar disorder is the gene that encodes for apolipoprotein E (APOE).

Method: We recruited 77 patients in the euthymic periods of BD. Cognitive functions of each patient were evaluated through a

battery of psychometric tests that included the tests MATRICS™, Trail Making Test B, Frontal Assessment Battery, Starkstain Apathy Scale. The APOE gene polymorphism was analyzed by DNA amplification with polymerase chain reaction (PCR) and the use of allele-specific primers (ASPs).

Results: 1 subject presents the genotype E2/E2, 11 subjects present the genotype E2/E3, 1 subject presents the genotype E2/E4, 44 subjects present the genotype E3/E3, 19 subjects present the genotype E3/E4, 1 subject presents the genotype E4/E4. The only correlation between APOE gene polymorphisms and cognitive abnormalities is related to the Frontal Assessment Battery scale, with better results associated with E2-carriers.

Conclusion: APOE polymorphism can influence cognitive functions of BD patients, given its critical role in synaptic and myelinic function and structural integrity. Further studies with larger samples are needed to clarify the role of the APOE gene variants on cognition in bipolar disorder.

P-130 | Met allele of the RS6265 (VAL66MET) SNP of the BDNF gene presence and its relation with perception of cognition

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Background and Aims: Cognition is affected in up to 60% of BD patients. The BDNF gene promotes survival of nerve cells and its protein is active in the synaptic regulation, and therefore affection in its function can be assumed to affect cognition. There is evidence that Val66Met polymorphism of BDNF gene might be linked to cognitive performance in Bipolar Disorder patients.

This study aims to determine if there is an association between Val66met polymorphism of the BDNF gene and perception of cognition in bipolar disorder patients.

Method: Euthymic patients with BD (I and II) were invited to answer the COBRA (cognitive complaints in bipolar disorder rating assessment) scale and to give a blood sample for genotyping.

Results: 52 patients were included, 44 TBP I and 8 TBP II, 18 men and 36 women. 50 patients completed the COBRA scale and 45 patients were genotyped. The mean COBRA scale score was 13.29±10.1. When considering a cut-off point of 10, 57.7% (30/50) perceived diminishment in their cognition. The risk allele A was present in only 30% of our sample, and 1 participant was homozygote for this allele (AA=1, AG= 14, GG= 32). The present results did not find a statistically significant association between the presence of the risk allele and an altered COBRA scale ($X^2=1.46$, $P>0.05$).

Conclusion: Perception of impaired cognition was found in most patients in our sample, confirming previous findings. The risk allele is poorly represented in our population and we estimate a larger sample size is required before conclusions can be drawn on this subject.

P-131 | SHANK2 harbors potentially pathogenic mutations associated with bipolar disorder

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Background and Aims: The SHANK gene family (SHANK1, 2&3) encodes master scaffolding proteins which regulate synaptic development and function by assembling postsynaptic proteins. Mutations in the SHANK family are linked to various neuropsychiatric disorders and SHANK3 duplication has been shown to contribute to BD. Recent data also indicated that deficiency of *Shank2* in mice led to BD-like phenotypes. However, little is known about the connection between SHANK2 and BD in humans. We thus hypothesized that BD patients harbored pathogenic mutations on the SHANK2 gene.

Method: 96 BD patient genomic DNA samples were obtained from NIMH. SHANK2 on each was amplified, sequenced and aligned with the reference sequence (AB208025). Meaningful point mutations were identified. We then sub-cloned SHANK2 cDNA into pEGFPC1 vector and induced the point mutation to create the mutant SHANK2 genotype. We transfected COS-7 cells with GFP, SHANK2-wildtype-GFP and SHANK2-mutant-GFP and investigated changes in protein localization patterns.

Results: We identified 4 heterozygous mutations, including a non-synonymous mutation (c.3979G>A, p.Ala1321Thr) which is potentially pathogenic.

Mutation	Synonymous	Common Variant
c.3979G>A	No (p.Ala1321Thr)	No
c.2900A>G	No (p.Tyr967Cys)	Yes (1.830%)
c.4461C>T	Yes	NA
c.4926G>A	Yes	NA

Transfection experiments has not shown difference in protein localization patterns between SHANK2-wildtype-GFP and SHANK2-mutant-GFP.

Conclusion: c.3979G>A is likely pathogenic. Alanine is a hydrophobic amino acid whereas threonine is hydrophilic. The change in hydrophilicity could alter the structure of the SHANK2 protein and change its function. So far, no change in protein localization has been observed. Further study is still warranted to examine if and how this mutation might the function of the SHANK2 protein.

P-132 | Evidence of the genetic-circadian contribution to the variability of the bipolar disorder phenotype in Mexican individuals

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Background and Aims: One of the most obvious conditions in people with bipolar disorder (BD) are changes in the sleep-wake cycles, even in euthymia. Genetic variations related to the molecular machinery of the circadian rhythmicity (CR) have been targets of the study of this disorder. The identification of genetic markers that help predict the variability and chronicity of BD remains unclear due to genetic-environmental diversity. This work aims to present some of the genetic variables that may be associated with endophenotypes in BD.

Method: For this study, 130 Mexican participants diagnosed with BD were included. A subgroup was evaluated to determine their chronotype and their sleep. Nine Clock gene SNPs were genotyped. We analyzed Possible associations between SNPS, chronotypes and sleep associated behaviors, as well as with clinical variables of the participants.

Results: Significant differences in the age at diagnosis were identified according to the type of BD. There was an association between rs3903529 and subjective sleep hours ($P=0.008$) as well as an association between rs11932595 and the age of onset of BD ($P=0.002$). Regarding metabolic variables, there were differences in blood pressure according to rs6832769 ($P=0.001$).

Conclusion: Differences in the age of diagnosis may be attributed to the differential symptoms of BD-I and BD-II. Clock genetic variants may be associated with the onset and the phenotype of BD. Our study may help identify risks in vulnerable groups with comorbidities resulting from circadian maladjustment.

P-133 | The study of the urine metabolome in Schizophrenia and bipolar disorder through a systems biology approach of the psychiatric disease

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Background and Aims: The combination of genomic information together with a detailed molecular analysis of the samples of the patients will be important to predict, diagnose and treat psychiatric diseases and to understand the initiation, progression and prevalence of their disease states. Metabolomics provides an approach to understanding the biochemical regulation of metabolim and networks in a biological system.

Objective: To study the composition of metabolites in urine from patients with psychiatric diseases as schizophrenia and bipolar disorder, whose were previously genotyped with the Infinium PsychArray Bead Chip of ILLUMINA®, integrating the metabolomic and genomic data by a System Biology approach.

Method: The study used samples from 37 patients with schizophrenia and 31 patients with bipolar disorder. Control samples (24 patients) from donors without psychiatric disease were used for development, feasibility and standardization of the methods. We studied the composition of the metabolites in urine of healthy individuals and patients with schizophrenia and bipolar disorder. The patient samples were analysed by liquid chromatography- mass spectrometry available at CINVESTAV LANGE BIO. The blood samples also were genotyped with the Infinium PsychArray BeadChip Illumina® at the National Institute of Genomic Medicine (INMEGEN, Mexico), which allowed obtention of both metabolomics and genomics data.

Results: Data analysis combined genomic and metabolomic data by using a bioinformatics approach of the Systems Biology. The data led to identify metabolites associated to both psychiatric illnesses and identified metabolic pathways that are relevant to discriminate between bipolar disorder and schizophrenia.

Conclusion: This knowledge will contribute to improve the diagnosis of patients with these two psychiatric diseases.

P-134 | A post-mortem analysis of the prefrontal cortex proteome of individuals with completed suicide

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Background and Aims: Suicide is a public health problem worldwide, which has gained importance over the last few years due to the increase in the prevalence rate. Proteomics facilitates the analysis of a large number of proteins at the same time, allowing to observe the changes between different conditions, thus being able to analyze different pathologies from a biochemical approach. The aim of

this study was to determine the changes of protein in the prefrontal cortex in individuals with completed suicide.

Method: We extracted the protein of 7 brains from individuals with completed suicide. We obtained control samples from 6 brains of people that died by other causes. We compared suicide and controls, pairing them by age and toxicological status. For the protein analysis we made 2D gels and these were analysed with the PDQuest software powered by Bio-Rad, in order to obtain better results at the comparison of gel images. The proteins of interest were identified by mass spectrometry.

Results: We identified proteins that could be involved in the neurobiological function of the suicide. The proteins we obtained can be related to biological process as redox metabolism and cellular cycle

Conclusion: Identifying the alterations in the brain proteins of individuals with completed suicide will increase the knowledge of this health problem and could help in its prevention and diagnosis.

P-135 | Study of the single nucleotide polymorphisms associated with schizophrenia and first psychotic episode and the lipid profile in plasma

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Background and Aims: Schizophrenia is a developmental disorder caused by a combination of environmental factors and genetic vulnerability. Given the multi-factorial complexity of this disease, the identification of molecular markers sensitive to the underlying factors in this type of disorder would be of great importance, not only for its detection but also for its early diagnosis, disease surveillance and response to the treatment. The aim of this study was to determine the presence of the genotype associated with schizophrenia and first psychotic episode patients, and to evaluate its relationship with the plasma lipid profile of patients with this disease.

Method: This study included 16 patients with schizophrenia, 16 control patients and 16 first psychotic episode. The analysis of the fatty acids was carried out by CG-MS. For the sample genotyping, the PsyChArray BeadChip microarray was used. A Systems Biology approach was used to integrate genomic and lipid concentration data.

Results: The samples of patients with schizophrenia and first psychotic episode were genotyped. We selected 52 genes that have

polymorphisms in genes related to fatty acid metabolism. The concentrations of the fatty acids in plasma were quantified, finding differences among the controls and the prodromes and schizophrenia. Among the fatty acids that are modified in patients with schizophrenia but not in prodromes is palmitic acid.

Conclusion: The information derived from the integration of the genetic data of patients together with the information derived from the lipid profile will enhance the proposal of mechanisms of the disease and biomarkers that may be used in clinical practice.

P-136 | Evaluating the clinical utility of pharmacogenomic testing in psychiatry: trial design

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Background and Aims: Combinatorial pharmacogenomics (PGx) can guide psychiatric medication selection by determining the severity of gene-drug interactions. This may reduce the number of failed medication trials to ultimately reduce side effects and improve response. While clinical trials are important to establish clinical utility, trial designs must include considerations specific to combinatorial PGx testing. Here we evaluate two common clinical trial designs.

Method: The design of open-label and randomized control trials (RCTs) for the evaluation of combinatorial PGx testing in psychiatric medication selection is assessed.

Results: Double-blind RCTs traditionally include two arms: a study arm and a placebo arm. In PGx testing, this translates to one arm where the genetic information is used to inform medication selection and one where it is not. Unlike pharmaceutical RCTs where physicians can administer treatment while blinded, the treating physician must be un-blinded in combinatorial PGx RCTs in order to utilize the test result. With both the patient and rater blinded, the RCT design enables evaluation of the pure genetic component to reduce medication trials and improve outcomes without a placebo effect. In open-label trials, patients and providers are un-blinded to the test result. This provides additional information regarding the real-world utility of pharmacogenomic testing, which may include a placebo effect.

Conclusion: Both RCTs and open-label trials provide valuable information about the utility of combinatorial PGx testing. While RCTs are considered the gold-standard, the combination of both trial types in PGx testing, and evaluation of other treatment interventions, provides a more complete understanding of clinical utility.

P-137 | Prediction of functional impact of variants in FTO and association with bipolar disease and body mass index

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Background and Aims: In the last years, there has been an alarming increase in obesity prevalence worldwide. Genetic variants in *FTO* (fat-mass and obesity associated gene), are one of the strongest genetic association with polygenic obesity and body mass index (BMI) modulation in different populations, including Mexican population. In epidemiologic studies, has been established a narrow relationship between mood disorders and obesity. Nevertheless, the relationship between variants in *FTO*, obesity and mental diseases, has been explored barely. The present work, has the aim to analyze the association of genetic variants in *FTO*, with bipolar disorder (BD) and BMI.

Method: A total of 446 Mexicans mestizos were included in the analysis, divided in two groups, patients with BD and another group without a mental illness diagnose, considered as control group (CT). SNP sequence kernel association test and linear mixed models, were implemented for set-based and individual markers genetic association, respectively. The functional impact prediction was performed in Variant Effect Predictor software.

Results: In the set-based analysis, the promoter flanking region in the intron 1 of *FTO*, was statistical significant associated with differential effects on BMI (*P*-value: 0.0453). In the single-variant analysis, the rs7205859, was statistical significant associated with both BD and obesity.

Conclusion: The analysis revealed a possible association of *FTO* intron 1 variants with obesity and bipolar disorder.

P-138 | Whole genome sequencing in families with bipolar 1 disorder implicates the synaptic neurotransmission pathway, SORCS2, GYP A, and DOK6

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Our endeavor was to discover novel gene variants that co-segregate or confer statistical association with Bipolar 1 Disorder (BP-I) to nominate as potential drug targets to prevent, diagnose or treat BP-I. We hypothesize that rare variants within and across genes and families collectively contribute to BP-I. In this research study, we generated whole-genome sequence data for 27 psychiatric diagnosed patients (18 BP-I, 7 Schizophrenia, 1 Unipolar Depression, 1 Schizoaffective) and 27 unaffected relatives, among thirteen Bipolar-I and 2 Schizophrenia disorder families. We followed a two-prong analysis approach assuming allelic and locus heterogeneity in our families. Since BP-I is a highly heritable disorder we hypothesize that rare variants would be shared among affected relatives in either a dominant, recessive, or de-novo mode of inheritance and would not be observed in the remainder of the study subjects and in subjects not diagnosed with Bipolar or Schizophrenia from other studies. Furthermore, to discover novel common variants that may be associated with risk or protection we performed transmission disequilibrium tests (TDT) to access linkage disequilibrium with a disease predisposing-locus. We identified six variants (missense, deletions, and intronic) that co-segregate with disease status in six genes (*SORCS2*, *ABCA13*, *GRM7*, *SLC1A1*, *BCL9*, *TSHR*) reported in OMIM (i.e. Schizophrenia, Depression, and Amyotrophic Lateral Sclerosis). Although our study was not highly powered for statistical testing, several variants approached a genome-wide significant association level ($P < 1 \times 10^{-6}$) in our TDT analyses. The most promising variants from our co-segregation analysis are in genes involved in transmembrane transport (*SLC1A1*, *ABCA13*), transmission of nerve impulse (*GRM7*), and neuropeptide receptor activity (*SORCS2*). Of specific interest is the effect of an exonic variant located at chr3:7732930 (in family-3004) in the G protein-coupled receptor gene family (i.e. *GRM7*) that plays a role in the synaptic neurotransmission pathway. As a follow-up study, we are generating whole-genome sequence data for 270 additional subjects (140 affected and 130 unaffected individuals) from 85 Bulgarian families through our collaboration with Cardiff University.

Poster Session XII-

Integration of Pharmacological, Somatic and Psychological Treatment

P-139 | Long-term effects of valbenazine on tardive dyskinesia in patients with a mood disorder

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Background and Aims: Valbenazine is FDA-approved for the treatment of tardive dyskinesia (TD), a hyperkinetic movement disorder associated with prolonged exposure to antipsychotics. Data from two clinical studies were analyzed to evaluate the effects of valbenazine in TD patients with a primary mood disorder.

Method: Data were pooled from KINECT 3 (NCT02274558: 40 or 80 mg, 6-week double-blind, placebo-controlled period; 42-week double-blind extension; 4-week washout) and KINECT 4 (NCT02405091: 40 or 80 mg, 48-week open-label treatment; 4-week washout). The Abnormal Involuntary Movement Scale (AIMS) total score was used to evaluate TD after treatment (Wk48) and washout (Wk52). Safety assessments included treatment-emergent adverse events (TEAEs), Young Mania Rating Scale (YMRS), and Montgomery-Åsberg Depression Rating Scale (MADRS).

Results: The pooled mood disorder population included 121 participants (40 mg=46; 80 mg=75). At Wk48, mean changes from baseline (CFB) in AIMS total score (40 mg, -4.2; 80 mg, -5.8) and percentage of participants with AIMS response ($\geq 50\%$ score improvement from baseline: 40 mg, 33.3% [6/18]; 80 mg, 56.0% [14/25]) indicated TD improvements with long-term treatment. AIMS CFB and response results at Wk52 indicated a return to baseline levels after washout. 74.4% of mood participant had ≥ 1 TEAE, 11.6% had a serious TEAE, and 12.4% discontinued due to a TEAE. Psychiatric stability was maintained, as indicated by mean total score CFB in the YMRS (Wk48, -0.9; Wk52, -1.0) and MADRS (Wk48, 0.0; Wk52, +0.5).

Conclusion: Long-term TD improvement was demonstrated in participants with a primary mood disorder who received up to 48 weeks of once-daily valbenazine. Treatment was generally well tolerated, and psychiatric stability was maintained.

P-140 | Efficacy and tolerability of divalproex sodium plus adjunctive quetiapine, lithium, or placebo for hypomanic or manic episodes in outpatients with bipolar I disorder

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Background and Aims: Many patients with bipolar I disorder do not respond to monotherapy treatment with mood-stabilizing medications, yet combination regimens are commonly used in both inpatient and outpatient settings for the acute and maintenance treatment of bipolar disorder. We studied whether combination therapy is more effective than monotherapy for the acute treatment of subjects with bipolar I disorder and manic symptoms. We hypothesized that combination treatment would be associated with greater reduction in symptoms of mania and hypomania, along with fewer persistent or emergent depressive symptoms than monotherapy alone.

Method: A 12-week, double-blind, placebo-controlled ambulatory trial of open-label divalproex plus adjunctive blinded lithium carbonate (DVP+Li), quetiapine (DVP+QTP), or placebo (DVP+PBO) for the treatment of manic symptoms during hypomanic, manic, or mixed episodes in subjects (N=75) with bipolar I disorder.

Results: Mixed model analyses of mean change from baseline demonstrated no significant difference in reductions of YMRS scores [$F(2)=2.47$, $P=.09$] or HAM-D scores [$F(2)=.87$, $P=.42$] between the three treatment arms. Monotherapy treatment group had fewer side effects and dropouts. These results suggest that monotherapy treatment with divalproex sodium may be as efficacious and better tolerated compared to combination therapy for the acute treatment of ambulatory patients with bipolar I disorder.

Conclusion: Treatment with divalproex sodium plus adjunctive placebo was as effective as divalproex sodium plus lithium carbonate or quetiapine, while the monotherapy groups had fewer side effects and dropouts. These data add to a growing literature that suggests that for some patients, simpler treatments may have equivalent efficacy with better tolerability.

P-141 | Benefits and harms of atypical antipsychotics in the treatment of bipolar depression: a systematic review and meta-analysis

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Background and Aims: The aim of this systematic review and meta-analysis was testing whether atypical antipsychotics (AAPs) are associated with different clinical benefits and harms for the acute treatment of bipolar depression.

Method: We conducted systematic review and meta-analysis of randomized placebo-controlled trials (RCTs) assessing the efficacy and adverse effects of AAPs in acute bipolar depression to compare clinical benefits and harms. We assessed clinical benefit and harm of AAPs for major depressive episodes associated with bipolar disorder, using number needed to treat (NNT), number needed to harm (NNH), and likelihood of being helped or harmed (LHH, ratio of NNH to NNT).

Results: We identified 22 RCTs with a total sample size of 8,823 patients. Some antipsychotics (cariprazine, lurasidone, olanzapine, olanzapine+fluoxetine and quetiapine) had significantly higher response rate compared with placebo and they had single digit NNT. Aripiprazole and ziprasidone, however, were not significantly different from placebo in treatment response.

Cariprazine, lurasidone, olanzapine, and olanzapine+fluoxetine appeared to be well tolerated as there was no significant difference between these AAPs and placebo in adverse effect-related discontinuation rates. Aripiprazole, quetiapine, and ziprasidone had significantly higher discontinuation rate due to adverse effect. Lurasidone, Olanzapine and Quetiapine showed favorable profile for benefit and harm balance in the treatment of bipolar depression with lurasidone demonstrating most favorable LHH among all.

Conclusion: In conclusion, results from this meta-analysis suggest that there are some significant differences in the clinical benefit and harm among AAPs in the treatment of bipolar depression. New drug development needs to focus on trade-offs between clinical benefit and harm.

P-142 | Laboratory monitoring during lithium use in outpatients in the netherlands – a retrospective cohort study

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Background and Aims: Lithium monitoring is essential to prevent toxicity or side effects and recurrence of disease symptoms among its users. The Dutch Multidisciplinary Guideline Bipolar Disorders recommends that lithium serum levels and renal function are monitored at least biannually and TSH annually during lithium use. Our aim was to determine whether patients using lithium were monitored accordingly.

Method: A retrospective cohort study was conducted using data from the PHARMO Database Network, a population-based network of electronic databases from primary and secondary healthcare settings in the Netherlands. We identified all patients having at least one dispensing for lithium for six months in the period 2010-2015 that could be linked with laboratory data. We defined monitoring as according to the guideline if lithium serum levels and renal function were determined at least every six months, and TSH at least annually during lithium use.

Results: Data of 1583 patients were analyzed that used lithium for an average duration of three years, in which patients were monitored for lithium serum levels in 65% of the time on lithium and in 73% for renal function. In 73% of years of lithium use, TSH was monitored. About one-third (36%) of patients were monitored correctly for all three parameters during their total period of lithium use.

Conclusion: A considerable number of patients are not monitored according to the Dutch guideline. We recommend health care professionals to improve monitoring of patients using lithium in order to ensure patient safety.

P-143 | Coping strategies for prostate cancer patients with bipolar disorders

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Background and Aims: Up to 390 thousand men find out to have prostate cancer every year, such event is accompanied by stress and leads to changes in affective sphere. Such stress could be managed by use of coping strategies.

A group of 56 men of age of 65.7 ± 6.1 years. Average period of prostate cancer is 3 ± 2 months with bipolar disorders, depression first episode.

Aim: to examine coping mechanisms in prostate cancer patients with bipolar disorders, depression first episode.

Method: "Life style Index", "Spielberger State-Trait Anxiety Inventory".

Results: Data obtained by the use of 'Ways of Coping' Test Booklet by Susan Folkman and Richard. S. Lazarus showed that the coping strategies repertoire of prostate cancer patients with bipolar disorders, depression first episode manifested constructive coping strategies, such as "planning problem-solving" coping strategy, "self-control" and "search for social support" coping strategies. Escape-avoidance strategy correlated with increase in personal anxiety ($P < 0.05$; $r = 0.488$) and situational anxiety ($P < 0.05$; $r = 0.306$), meanwhile the "planning problem-solving" coping strategy, on the contrary, correlates to the decrease of the indications ($P < 0.05$; $r = -0.300$; $r = -0.340$), it confirmed ineffectiveness of escape-avoidance strategy for stress coping of the observed patients group.

Conclusion: Conclusions Prostate cancer patients with bipolar disorders, depression first episode prefer to use constructive coping strategies, that led to stabilization of psycho-emotional state of men and encouraged more effective adaptation in terms of stress caused by prostate cancer treatment process.

P-144 | A meta-analysis of efficacy and safety of treatments in bipolar depression in randomized controlled trials

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Background and Aims: The aim of this research was testing whether treatments including antipsychotics, antidepressants, anticonvulsants, and lithium are associated with different clinical benefits and harms for the acute bipolar depression.

Method: We conducted systematic review and meta-analysis of randomized placebo-controlled trials (RCTs) assessing the clinical

benefit and harm of treatments for bipolar depression, using number needed to treat (NNT), number needed to harm (NNH), and likelihood of being helped or harmed (LHH, NNH/NNT).

Results: We identified 42 RCTs (antipsychotics=22, antidepressants=6, anticonvulsants=13, and lithium=1).

Some antipsychotics (cariprazine, lurasidone, olanzapine, olanzapine+fluoxetine, and quetiapine) had significantly higher response rate compared with placebo and they had single digit NNT though aripiprazole and ziprasidone were not. Cariprazine, lurasidone, olanzapine, and olanzapine+fluoxetine appeared to be well tolerated as there was no significant difference between these antipsychotics and placebo in adverse effect-related discontinuation rates. Aripiprazole, quetiapine, and ziprasidone had significantly higher discontinuation rate due to adverse effect.

Antidepressants except for fluoxetine were not significantly different from placebo in treatment response though they were well tolerated. Anti-convulsants were effective, but significant difference from placebo was observed only with lamotrigine and valproate, and they were well tolerated. Lithium appeared to be poorly effective but well tolerated in only one trial.

Conclusion: Meta-analysis results suggest that there are significant differences in the clinical benefit and harm among treatments for bipolar depression. Some antipsychotics, anticonvulsants and fluoxetine seemed effective for acute bipolar depression, but most antidepressants were not. Lithium remain inadequately tested. New drug development needs to focus on trade-offs between clinical benefit and harm.

P-145 | Residual depressive symptoms in bipolar 1 disorders patients: impact of physical activity

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Background and Aims: The aim is to evaluate the association between PA practice and residual symptoms (RS) in euthymic bipolar I disorder (BD-I) patients.

Method: Cross-sectional study, conducted with 152 BD-I patients (mean=44 years, aged 18-74 years). The sample was divided into: without PA practice and with PA practice. The assessment included: clinical and sociodemographic questionnaire, Hamilton Depression Rating Scale (HDRS), Young Mania Rating Scale (YMRS), Barratt Impulsiveness Scale, and Structured Clinical Interviews for DSM-IV Axis I and II Disorders. RS was defined by 1 to 7 symptoms in HDRS and YMRS, and PA practice by at least 150 min/week. Correlations between PA practice and clinical and sociodemographic variables were made by Pearson's correlation coefficient and logistic regression was employed to confirm associations.

Results: Among 152 patients, 111 (73%) did not practice PA, 31 (20.4%) presented mania RS, 73 (49%) depressive RS and 81 (53.3%) presented some kind of RS. In the univariate analysis, depressive RS were

associated with no PA practice ($P=0.014$). Mania RS were not statistically significant. In the logistic regression, after controlling clinical and sociodemographic variables, $P<0.20$ (rapid cycling, monthly income \leq US\$ 285 and any RS), depressive RS remained significant ($P=0.017$).

Conclusion: The majority of the sample did not practice PA and presented some RS, mainly depressive, even following the criteria of euthymia. On the other hand, the practice of PA was associated with the absence of depressive RS, showing no association with RS of mania.

Poster Session XIII—

Physiological, Molecular, Cellular Markers and Models

P-146 | Antidepressants-mediated increase in GDNF release leads to increased neurogenesis

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Background and Aims: Evidence suggests a pivotal role of neurotrophic factors in the pathophysiology of affective disorders. Glial cells play an important role in trophic support to neuron metabolism, and the formation of synapses and neurotransmission. Glial cell-derived neurotrophic factor (GDNF) has been implicated in the mechanism of action of antidepressant (AD) and antibipolar (AB) drugs. We hypothesized that these drugs enhance neurogenesis at least partly through β -arrestin-mediated regulation of glial GDNF production and secretion. Thus, we investigated the potential effect of GDNF-containing growth medium collected from AD-treated C6 glioma cells on the activation of neurogenesis processes in SH-SY5Y neuronal cells, as measured by established neuronal markers and the brain-derived neurotrophic factor BDNF.

Method: C6 glioma cells were treated for 3 days with 10 mM imipramine, medium was collected (conditioned medium) and used as a supplement to the regular growth medium of SH-SY5Y neuroblastoma cells for 48 hours. SH-SY5Y cytosol was fractionated and analysed by Western blot for effects on various neurogenesis markers: NSE, NeuN, GAP43, MAP2, on BDNF and β -arrestin1 protein levels. **Results:** SHSY5Y neuroblastoma cells exposed to glial GDNF-conditioned medium induced a significant increase in the neurogenesis markers listed above, and in both BDNF and β -arrestin1 protein levels.

Conclusion: The increase in SH-SY5Y β -arrestin1 protein levels following exposure to GDNF indicates that these proteins might be involved in the mediation of GDNF regulation of neurogenesis processes in these cells thus providing further support to the role of β -arrestin1 in neuron-glia interactions and their role in the pathophysiology and treatment of bipolar disorder.

P-147 | Identification of peripheral biomarkers for potential differential diagnosis between schizophrenia and bipolar disorder by NMR-based metabolomics and lipidomics

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Background and Aims: The objective of this study was to investigate the potential of ¹H NMR data treated by chemometrics, principal component analysis (PCA) and supervised partial least-squares discriminant analysis (PLS-DA) in separate serum samples from individuals with Schizophrenia (SCZ) and Bipolar Disorder (BD) into two independent groups.

Method: Fifty patients with SCZ, 50 euthymic outpatients with BD type 1 and 50 healthy controls, with age between 18 to 65 years old, took part in this research. ¹H-NMR spectra were recorded as three independent measurements for each sample. ¹H-NMR data were transported to a data matrix, and chemometrics analyses, based on principal component analysis (PCA) and partial least-squares discriminant analysis (PLS-DA), were performed using MATLAB (The MathWorks, Natick, MA), Pirouette (Infometrix, USA) and Metaboanalyst software.

Results: The identified metabolites (close to 10 different compounds) may represent potential biomarkers to support the diagnosis of these disorders, as their presence or absence in the blood serum samples determined by NMR-based method enabled the categorization of 150 independent samples into three groups of study. It is worth to note that there were no outliers or no erroneous classification, in addition to a high accuracy, sensitivity, and specificity achieved.

Conclusion: Some of the reported metabolites suggest possible differential disturbances in metabolic pathways in SCZ and BD, which might lead to new insights in understanding the pathophysiology underlying these mental disorders.

P-148 | The immunoassay of blood serum in multiple sclerosis patients

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Background and Aims: 438 multiple sclerosis patients 15 to 38 years old were examined against the control group of 20 healthy people.

Method: CT and MRI of cerebrum and spinal cord, radioimmunobiological assay for measuring the myelinotoxic activity (MTA) of blood serum.

Results: 4 groups of patients were distinguished: (1) latent phase with low MTA level (7.6 ± 1.2 units against 3.9 ± 0.82 in control group), (2) slow progradient phase (20.4 ± 0.68), (3) acute phase (40.7 ± 0.83) and (4) fast progradient phase (75.6 ± 4.9). In group 1 the increase of T-a lymphocyte (from 28.0 ± 2.9 to $41.6 \pm 2.1\%$), CD22 (from 9.56 ± 0.81 to $28.5 \pm 0.15\%$) and circulating immune complex (CIC) level was observed (from 69.32 ± 4.28 in healthy people to 91.16 ± 3.42 optical units; $P < 0.001$). In group 2 the significant decrease of CD22 ($16.0 \pm 0.58\%$; $P < 0.001$), CD4 ($25.7 \pm 1.29\%$) and CIC (84.34 ± 3.88) levels in blood serum was observed whereas CD8 level increased ($31.4 \pm 1.1\%$) and a small induction of inflammation cytokines was noted ($\text{TNF-}\alpha = 39.7 \pm 2.9$ pg/ml; $\text{IL-8} = 412.0 \pm 12.4$ pg/ml). In group 3 the increase of CD8 ($29.6 \pm 2.41\%$), IL-1.2 ($16.6 \pm 0.7\%$), IgG (15.3 ± 1.9), IgA (2.57 ± 0.22), IgM (2.41 ± 0.15 pg/ml), CIC (94.65 ± 3.1) levels were observed while CD22 level decreased ($17.0 \pm 0.63\%$; $P < 0.001$). The increase of IL-2R⁺ level in 41.2 to 63.2% patients was coupled with the pronounced increase of $\text{TNF-}\alpha$ level to 3525.7 ± 29.2 pg/ml.

Conclusion: The quantitative assay of MTA factors of blood serum in combination with overall assessment of immune response and other clinical data of the patient help to correctly assess the progress of demyelination process.

P-149 | Study of the levels of serotonin and the transport protein 5-HT2A in platelet enriched plasma of individuals with paranoid schizophrenia disorders and first psychotic episode

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Background and Aims: Studies have shown that platelets and serotonergic neurons share the 5-HT2a membrane transporter and similarities in their mechanisms of capture, storage, release and degradation of serotonin. Therefore, platelets can be used as a model

to know the approximate concentration of serotonin and 5-HT2a protein in individuals with schizophrenia and first psychotic episode (PEP). The aim of this study was to determine differences in the concentration of serotonin and 5-HT2a protein in patients with a first psychotic episode (PEP), patients with paranoid schizophrenia and a control group.

Method: The study was formed by four groups; a group of 20 patients with paranoid schizophrenia, a group with 19 individuals with PEP. Two control groups; 19 individuals with schizophrenia and PEP discarded and 12 individuals with depressive symptoms as a negative control. The serotonin concentration present in platelet-enriched plasma and in platelet-free plasma was studied in all groups, using the ELISA methodology (BioAssay kit for human serotonin) and the 5-HT2a protein in platelet-enriched plasma by using western blotting.

Results: Data analysis combined the values obtained of serotonin concentration and 5-HT2a to compare these values between patients and controls. The difference in these concentrations allowed us to identify a different pattern in each group and to propose platelet protein and serotonin concentrations for separating patients with paranoid schizophrenia and PEP.

Conclusion: The serotonin transporter protein and the concentration of serotonin in platelets contribute to elucidate the mechanisms and biomarkers that lead to the diagnosis of paranoid-type schizophrenia and other psychiatric diseases.

P-150 | The gut microbiome and linkage to brain function in patients with bipolar depression: a preliminary study

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Background and Aims: The aim of current study is to 1) investigate the characteristics of gut microbiome and alterations following treatment in bipolar depression patients, 2) evaluate the brain function and its correlation with the gut microbiome.

Method: Totally 36 patients with bipolar depression and 27 healthy controls were recruited. The severity of depression was evaluated by Montgomery-Asberg Depression Rating Scale (MADRS). At baseline, the fecal sample was collected from all participants and analyzed with quantitative PCR technique. The T lymphocyte subsets and cytokines were examined in all patients. The brain function of all participants was assessed by near-infrared spectroscopy. All patients received a four-week quetiapine treatment (300 mg/d). After treatment, the fecal microbiome and immune profiles were reexamined. The brain-gut coefficient of balance ($B-G_{CB}$) was introduced to analyze the linkage and balance between gut microbiome and brain function.

Results: At baseline, the CD3⁺ and CD8⁺ T cell proportions were both positively correlated with log₁₀ Enterobacter spp count. The MADRS score was positively associated with the log₁₀ Bifidobacteria count. Log₁₀ B-G_{CB} was positively correlated with CD3⁺ T cell proportion. Five dominant bacteria were higher and the prefrontal function and the log₁₀ B/E were lower in patients. After treatment, MADRS scores were decreased, and the Lactic acid bacteria, Bifidobacteria and B/E (microbial colonization resistance) were increased.

Conclusion: The composition of gut microbiome and its linkage to brain function were altered in bipolar depression patients, which may be related to inflammatory process. Quetiapine treatment may also influence the gut microbiome in this population.

P-151 | Dynamic change of gut microbiota characteristics following quetiapine treatment in patients with bipolar depression

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Background and Aims: Our study aims to investigate the characteristics of gut microbiota in BD patients, and the dynamic change of gut microbiota following quetiapine treatment.

Method: Totally 72 BD patients and 16 healthy controls were enrolled, the fecal samples of all participants were collected and analyzed with 16S ribosomal RNA gene sequencing. Montgomery-Asberg Depression Rating Scale (MADRS) was used to evaluate the severity of depression. Serum inflammatory profiles were also examined in patients. Meanwhile, all patients received a four-week quetiapine treatment. After treatment, the fecal samples and inflammatory profiles were reexamined in 23 of the patients.

Results: The taxonomy composition of gut microbiota was different between BD patients and controls, such as *Dorea* and *Veillonella*. Following quetiapine treatment, the abundance of *Bifidobacterium*, *Lactobacillus*, *Klebsiella*, *Veillonella* and *Halomonas* was enriched in treated BD patients, while *Blautia* was enriched in controls. Furthermore, *Klebsiella* and *Brevundimonas* abundance was increased, but *Blautia* was decreased after treatment in patients. Regardless of quetiapine treatment, *Faecalibacterium* and *Fusobacterium* abundance was negatively correlated with MADRS scores. Serum level of IL6 was positively correlated with *Enterobacter* abundance, but negatively with *Cloacibacillus* abundance. TNF- α was positively correlated with *Parabacteroides* and *Bilophila* abundance. CRP value was positively correlated

with *Prevotella* abundance, but negatively with *Butyrivibrio*, *Lachnospiraceae-incertae-sedis* and *Dorea* abundance. Besides, *Clostridium* IV, *Dorea* and *Holdemania* abundance was negatively correlated with BMI value.

Conclusion: These findings indicated that the characteristics of gut microbiota was changed in depressed BD patients, which was possibly related to the inflammatory, metabolic pathways, the severity of disease, and even the pharmacological treatment.

P-152 | Validity and reliability of semi-automated video-tracking free software in analyzing drug-induced locomotor activity as animal model of bipolar mania

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Background and Aims: Software 'Kinovea' (Version 0.8.24 <http://www.kinovea.org>) that tracks the motion in a video screen semi-automatically was used to analyze motion-related tasks in several studies. However, the validation of this software in the open field test to assess locomotor activity has not been studied yet. Therefore, we aimed to examine the validity and reliability of this software in drug-induced locomotor activity.

Method: Thirty male Institute Cancer Research (ICR) mice were subjected for the validation of this software. We compared the results examined by this software with the classical method which counts the number of lines crossed by animal front legs as a measurement of locomotor activity. Pearson's correlation was used to analyze the validity of this software. Furthermore, we assessed test-retest reliability and inter-rater reliability using Pearson's correlation and intraclass correlation coefficient (ICC).

Results: There was a significant correlation between Kinovea analysis and classic methods (Pearson's correlation coefficient=0.954, $P<0.001$). This software has also showed good test-retest reliability and inter-rater reliability (test-retest reliability: Pearson's correlation coefficient=0.993, $P<0.001$; ICC=0.997, $P<0.001$; inter-rater reliability: Pearson's correlation coefficient=0.971, $P<0.001$; ICC=0.971, $P<0.001$).

Conclusion: This study demonstrated that when Kinovea software is used to analyze drug-induced locomotor activity as an animal model of bipolar mania, it has good reliability and validity. This software can be effectively used in animal studies for bipolar disorder.

P-153 | Characteristics of quinpirole-induced locomotor activity as an animal model of bipolar mania

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Background and Aims: Quinpirole, a selective agonist for inhibitory dopamine D2 and excitatory dopamine D3 receptors, has been tried as mania-inducing drug for bipolar animal model. However, there is controversy that quinpirole-induced locomotor activity can be manic-like behavior. In this study, we aimed to investigate characteristics of quinpirole-induced locomotor activity as a potential animal model of bipolar mania.

Method: Thirty male Institute Cancer Research (ICR) mice were subjected. Quinpirole-induced locomotor activity was measured for 1 hour by the open field test. Quinpirole was injected intraperitoneally at concentrations of 0.05 mg/kg, 0.5 mg/kg, 1 mg/kg, and 2 mg/kg. Control group was injected with normal saline.

Results: Quinpirole-induced locomotor activity showed biphasic pattern. Initially, mouse showed higher locomotor activity than control group. During the final 30 minutes, quinpirole injected mice showed more increased locomotor activities than those of the control group.

Conclusion: This study showed the locomotor activity in the later part (30-60 min) might be interpreted as manic-like behavior, in spite of the biphasic pattern of quinpirole-induced locomotor activity. In the future, it is needed to investigate that if initial suppression of locomotor activity could be interpreted as decrease of escape behavior due to the loss of fear by quinpirole.

P-154 | Cytomegalovirus/toxoplasma antibody titers in bipolar disorder

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Background and Aims: The goal of this investigation was to analyze antibodies to common infectious agents including Cytomegalovirus (CMV) and Toxoplasma (Toxo) gondii in serum samples from bipolar patients and controls.

Method: Bipolar cases (n=1207) and controls (n=745) were selected from the Mayo Clinic Bipolar Disorder and Community

Biobanks, respectively. Antibody quantification included CMV IgG, CMV IgM, Toxo IgG, and Toxo IgM. Antibodies were expressed as a plate-adjusted z-score and categorically as titer + vs - based on expected prevalence in the US population. The seropositive status of each antibody was modeled using logistic regression with case-control status as the predictor and adjusting for sex and age. We also studied antibody differences among our cases taking vs not taking anti-toxoplasmic activity (TATA+ =270 vs TATA-=903) medications.

Results: The rate of CMV+/Toxo- was higher for cases than in controls (OR=1.36, P=0.002). Higher rates of CMV+/Toxo- were also observed for the sub-phenotypes manic psychosis (OR=1.49, P=0.002) and non-early onset bipolar disorder (1.44, P<0.001) compared with controls. Cases taking TATA+ medications had significantly lower Toxo IgM levels than those not on TATA+ medications (P=0.034).

Conclusion: In this large sample, exposure to CMV IgG and non-exposure to Toxo IgG were associated with bipolar disorder and the sub-phenotypes of manic psychosis and non-early onset, suggesting early-onset bipolar disorder may be less dependent on environmental exposure. Further work is encouraged to ascertain bipolar subtype patterns associated with this infection immune activation.

P-155 | Transactive response DNA-binding protein 43 as a neuromarker of bipolar disorder

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Background and Aims: Bipolar Disorder (BD) and frontotemporal dementia (FTD) share specific clinical manifestations, including early psychiatric symptoms in FTD and progressive cognitive decline. Presence of transactive response DNA-binding protein 43 (TDP-43) in the cytoplasm of neurons is one the major neuro-markers of frontotemporal dementia (FTD). TDP-43 is associated with cellular stress, including oxidative stress, which is strongly implicated in BD. Both, biological and clinical findings led us to

investigate as to whether TDP-43 could be implicated in the pathophysiology of BD.

Method: Post mortem brain samples were obtained from the Brain Bank of the Brazilian Aging Brain Study Group (BBBABSG). Diagnosis of BD was made using SCID through an interview conducted with an informant close to the deceased subject. TDP-43 levels were measured in the hippocampus using Elisa-sandwich method. Biological pathways associated to TDP-43 function in BD were explored using microarray of total RNA transcripts.

Results: BD (n=15) were compared to non-psychiatric controls (n=19). We found a significant between-group difference in TDP-43 (Kruskal-Wallis Test, $P=0.005$), where higher TDP-43 levels were found in the hippocampus of BD compared to non-psychiatric controls. Our bioinformatics analysis showed 386 differentially expressed genes between BD and controls. Enrichment analysis showed pathways related to the known roles of TDP-43 in the cell, such as regulation of DNA-templated transcription in response to stress.

Conclusion: Our results suggest TDP-43 may be implicated in the pathophysiology of BD. In our next steps, we will focus on exploring TDP-43 levels in additional brain regions, investigate TDP-43 subcellular localization and compare with RNA microarray data.

P-156 | Discovery of possible genes and miRNAs responsible for the response to lithium treatment in patients with bipolar disorder

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Background and Aims: The aim of this study was to model the transcriptional interactions in response to lithium in blood cells of patients with Bipolar Disorder and to determine possible miRNAs that interfere in this response.

Method: We analyzed differentially expressed genes (DEGs) in the RNA-Seq experiments published by Lowthert (2012) and Beech (2014) and placed them as input data for the discovery of other gene products that would aid in the construction of an interaction network. For that, we used the database STRING and determined as selection method the interactions of the parameters from "experiments" and "databases" containing a confidence interval of 0.4. Subsequently, we performed a R-programming to find proteins that grouped the DEG products. Finally, we use the Cytoscape program to perform topology analysis: betweenness centrality and node degree distribution. For the discovery of miRNA, we used the DEGs negatively and searched in the database miRTarBase, having as parameter the experimental validation.

Results: The 150 DEGs found led to a network containing 211 proteins, which performed 653 interactions. Of the 98 repressed genes, 606 miRNAs and 441 miRNAs were found in each study, with 182 similarities. Six showed strong evidence of action on target genes. By checking the target genes of these miRNA, repression was observed in 19 genes, which interact with other 25 present in the network.

Conclusion: The network constructed allows a new vision for the other genes/proteins discovered, which may help in the construction of Lithium action mechanism. These target genes have high topology values in the assembled network.

P-157 | Sleep spindle characteristics in patients with bipolar disorder compared to healthy control subjects

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Background and Aims: Bipolar Disorder is associated with insomnia, but objective markers of alterations in sleep architecture have been difficult to replicate. More recently patients with schizophrenia have been found to have a reduced density of sleep spindles during N2 sleep. The characteristics of sleep spindles in patients with bipolar disorder have so far not been studied.

Method: 48 participants (BP=23; HC=25) were investigated using all night polysomnography. Sleep spindles from EEG derivations F3, F4, C3 & C4 were scored manually and subsequently analysed with regard to density, frequency, amplitude and coherence.

Results: Patients with bipolar disorder have a significantly reduced density of fast spindles (>13 Hz) and significantly lower average frequency. No differences in amplitude or coherence were found.

Conclusion: Reduced fast spindle density may be a shared endophenotype for both schizophrenia and bipolar disorder.

P-158 | Alterations in TSPO-mediated mitophagy signaling pathway in bipolar disorder: New insights into pathogenesis

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Background and Aims: Bipolar disorder (BD) is a chronic, debilitating illness with a global prevalence of up to 4.8%. Accumulated evidences suggest that mitochondrial deficit is implicated in BD, and TSPO plays an important role in regulating mitochondrial function, including the mitophagy pathway. Thus, we aimed to investigate the

protein levels of TSPO and mitophagy pathway in peripheral blood mononuclear cells (PBMCs) from BD-I patients and healthy controls.

Method: Twenty five patients with BD type I (BD-I) and 25 age- and sex-matched controls were enrolled for this study. PBMCs were separated using LeucoPREP brand cell separation tubes and the TSPO and mitophagy-related pathway were interrogated by PCR and Western Blotting.

Results: Our results showed an up-regulation of the TSPO pathway proteins (TSPO and VDAC) and a significantly down-regulation of the mitophagy pathway proteins (Parkin, p62 and LC3B), both in terms of gene expression and protein levels in PBMCs from BD-I patients. Moreover, we demonstrate that the ratio of TSPO to VDAC1 is higher in BD-I. Additionally, we found a negative correlation between Parkin mRNA levels and TSPO protein levels, as well as a positive correlation between TSPO and VDAC. Also, a negative correlation was found between TSPO and LC3, while a positive correlation was found between Parkin and LC3.

Conclusion: The data reported here suggest that TSPO interacts with VDAC, and inhibits mitophagy leading to an accumulation of dysfunctional mitochondria, altering the appearance of the network. Finally, our findings in PBMCs of patients with BD support a link between mitochondrial dysfunction and the pathophysiology of BD.

P-159 | Comparison of IL-6 levels between patients with maniac episode and controls

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Background and Aims: The aim of this study was to determine if there was a difference in cytokines serum levels between patients with BD type I (maniac episode) and normal controls. By measuring IL2, IL4, IL6, IL8, IL-10, IFN- γ , TNF- α and GM-CSF.

Method: This case-control observational study was conducted at National Institute of Neurology and Neurosurgery (INNN) from 2014 to 2016. We recruited adults aged 18 or over with bipolar disorder and maniac or mixed feature episodes according to the Diagnostic and Statistical Manual of Mental Disorders, fifth Edition. Young Mania Rating Scale (YMRS) was applied to rate severity. 27 healthy controls were matched by sex, age and level of education. Levels of IL-2, IL-4, IL-6, IL-8, IL-10, IFN- γ , TNF- α and GM-CSF were determined in serum samples using a kit of Bio-plex Pro human cytokine 8-plex assay. (Bio-Rad. Laboratories, Inc., Hercules, CA, USA).

Results: We included 25 patients and 25 controls. No difference was found in sociodemographic characteristics between groups, neither on IL2, IL-4, IL-8, IL-10, GM-CSF, INF- γ y FNT- α . An increase IL-6 serum concentration median in patients with manic

episode ($x=2.55$ (0.13-16.07)) compared to controls was found ($x=0.86$ (0-6.87)), $P=0.003^*$. A sub analysis of patients without treatment showed significant differences in IL-6 serum concentrations ($P=0.012$).

Conclusion: Patients with maniac episode have a higher significant IL-6 median compared to the control group, which increased when patients with treatment were excluded. This results are similar to previous studies suggesting that mania may be a proinflammatory state.

P-160 | The impact of body mass index on gene expression of reelin pathway mediators in individuals with Schizophrenia and Mood disorders: a postmortem study

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Background and Aims: The objective of this study was to compare the expression of genes involved in the reelin pathway, in the post-mortem brain of individuals with schizophrenia (SCZ) and mood disorders (MD) with a healthy control (HC) group; and to investigate the role of the body mass index (BMI) as a potential mediator of this association.

Method: The "Gene Expression in Postmortem dIPFC and Hippocampus from Schizophrenia and Mood Disorders" study holds microarray data on individuals with SCZ, MD and HCs (from whom 849 specimens are from the dIPFC and 579 from the hippocampus). mRNA data was obtained using HumanHT-12 v4 BeadChip arrays (Illumina). Multivariate analysis of covariance were used to investigate the main effects of group and relevant covariates on RELNm, NOTCH1, GRIN1 m, GRIN3A, CAMK2Gm, CAMK2A, CAMK2Bm, CAMK2N2, GRIN2Bm, GRIN2A, CREBBPm, APOE, LDLR and DAB1 gene expression.

Results: In the dIPFC, individuals with SCZ had higher expression, relative to HCs, of APOE. Individuals with MD had higher expression, relative to HCs, of CAMK2A, CAMK2N2, and GRIN2Bm. Moreover, individuals with MD had higher expression, relative to SCZ patients, of CAMK2N2. There were significant group by BMI effects for expression of RELN, CAMK2A, CAMK2N2, and GRIN2A. In the hippocampus, individuals with MD had lower expression, relative to HCs, of APOE.

Conclusion: The results of this study suggest that the expression of genes related to the RELN pathway could be different in individuals with MD, with a greater vulnerability associated with higher BMI.

P-161 | The effect of body mass index on glucagon-like peptide receptor gene expression in the post mortem brain from individuals with mood and psychotic disorders

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Background and Aims: There is an increasing interest in the putative role of glucagon-like peptide 1 receptor (GLP-1R) agonists as novel therapeutic agents for mental disorders. Herein, we investigated the expressions of GLP-1R and GLP-2R genes, and its relationship with body mass index (BMI), in the post-mortem brain tissue of patients with mood (MD) and psychotic disorders.

Method: Brain samples were localized to the dorsolateral prefrontal cortex (dlPFC) (n=459) and hippocampus (n=378).

Results: After adjustment for age, sex, ethnicity, post-mortem interval (PMI) and BMI, we observed significant differences, between healthy controls and MD subjects, in GLP-1R and GLP-2R gene expression in the dlPFC ($\beta = 1.504$, $P=0.004$; and $\beta = 1.305$, $P=0.011$, respectively); whereas in the hippocampus, only GLP-1R expression was significantly associated with MD ($\beta = -1.28$, $P=0.029$). No significant differences were found in relation to schizophrenia. In addition, we observed a moderating effect of MD diagnosis on the associations between BMI, GLP-1R and GLP-2R expression values in the dlPFC ($\beta = -0.05$, $P=0.003$; and $\beta = -0.04$, $P=0.004$, respectively). There was a similar moderating effect for GLP-1R in the hippocampus ($\beta = 0.043$, 95% CI 0.003; 0.08 $P=0.03$), but in an opposite direction than observed in the dlPFC.

Conclusion: This is the first evidence of abnormal gene expression of GLP-1R and GLP-2R in postmortem brain of individuals with MD, providing a rationale for further inquiry and proof of principle interventional studies.

Poster Session XIV–

Population Health, Epidemiology, Economics

P-162 | RE-KINECT: a prospective real-world dyskinesia screening study and registry in patients with mood disorders prescribed antipsychotic agents

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Background and Aims: Patients with a mood disorder (bipolar disorder, major depressive disorder) who take antipsychotic medications are at risk for developing tardive dyskinesia (TD), which may negatively affect treatment outcomes, daily functioning, and psychosocial recovery.

Method: RE-KINECT (NCT03062033) is designed to enroll patients from up to 70 US practices. Adult outpatients with currently prescribed antipsychotic(s), ≥ 3 months cumulative lifetime exposure to antipsychotic(s), and ≥ 1 psychiatric disorder are eligible for screening. Based on clinician assessment of abnormal involuntary movements in general body regions (head/face, neck/trunk, upper/lower limbs), patients are assigned to Cohort 1 or Cohort 2 (without or with visible signs of involuntary movements, respectively). Baseline assessments include: clinician's assessment of psychiatric severity,

EuroQOL 5-Dimensions, Sheehan Disability Scale, and 12-month retrospective chart review. Cohort 2 will also participate in a 12-month longitudinal evaluation. Recruitment is ongoing.

Results: Of 114 currently enrolled patients with mood disorders, 33 (28.9%) have possible TD (Cohort 2). Interim baseline characteristics include (Cohort 1, Cohort 2): mean age, years (47.7; 57.8); male (37.0%; 27.3%); full-time employment (25.9%; 18.2%); mean lifetime exposure to antipsychotic(s), years (4.9; 11.3). More Cohort 2 mood patients (vs Cohort 1) reported problems with mobility, self-care, and pain/discomfort. Among Cohort 2 mood patients, 42.4% had involuntary movements in ≥ 2 body regions with some/a lot of impact on productivity (48.5%), eating (42.4%), self-care (36.4%), talking (33.3%), socializing (33.3%), and usual activities (30.3%). Updated analyses will be presented at the meeting.

Conclusion: Data from this novel registry describes the characteristics and functional impact of TD in patients with mood disorders.

P-163 | Bipolar disorders and climatic changes

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Background and Aims: To detect there is a relationship among climatic changes, application period and subtype of bipolar disorders (BD).

Method: We have determined 63 BD patients from Community Mental Health Center (CMHC) in 2012-2014 at Rize, Turkey (latitude

41° 01' 29"). Climatic changes such as rainfall, humidity, temperature, sky cover have taken between 2012-2014 from Turkish Meteorologic Research Center.

Results: 49.2% of the cases were female, 50.8% were male. BD manic episodes were 74.6%, BD depressive episodes 14.3%, BD mixt episodes 11.1%. BD mixed episodes found winter admissions were most and rainfall is the most factor that effected of this episodes than BD manic and depressive episodes.

Conclusion: Seasonality is shown in all three subtypes of bipolar disorder mood episodes, although different seasonal patterns were observed in the admission rates. Climatic changes has clearly demonstrated seasonality among bipolar patients with different subtypes of mood episodes. Climatic variables such as rainfall, hours of sunshine and temperature have a significant association, in varying directions, with the admission rates for manic, depressive and mixed episodes. Mixed episodes, very little attention has thus far been afforded to seasonal variations in admissions for such episodes.

P-164 | Comparison of psychiatric hospitalization risk among bipolar disorder monotherapies

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Background and Aims: This large-scale retrospective observational study aimed to compare the risk of psychiatric hospitalization in 29 bipolar disorder monotherapies.

Method: Using the Truven Health Analytics MarketScan[®] administrative claims database, we analyzed data on 190,894 inpatient and outpatient adults who had at least two diagnoses of bipolar disorder or schizoaffective disorder during 2003-2015 and were newly prescribed one of 29 drugs of interest, including lithium, mood stabilizing anticonvulsants, first- and second-generation antipsychotics, or antidepressants. Competing risks regression was used to compare pharmacotherapies with respect to the risk of first psychiatric hospitalization after treatment initiation, adjusting for age, sex, inpatient/outpatient status, comorbidities, and concomitant drugs. The three competing risks were ER visit/hospitalization with psychiatric

code, ER visit/hospitalization without psychiatric code, and ending monotherapy.

Results: Aripiprazole, valproate and bupropion were associated with a longer time to psychiatric hospitalization as compared to lithium. Haloperidol, clozapine, ziprasidone, duloxetine, fluoxetine, venlafaxine, sertraline, and citalopram were associated with a shorter time to psychiatric hospitalization. Risk factors unrelated to drugs included previous mood episode hospitalization, comorbid substance misuse, baseline depressive mood episode and psychotic features, loop diuretics, non-mood stabilizing anticonvulsants, anxiolytics, sedatives, analgesics, pulmonary and cardiovascular diseases. Antibacterial and non-steroidal anti-inflammatory drugs appeared to be protective.

Conclusion: Our findings suggest that, with some exceptions, the drug-dependent risk of psychiatric hospitalization is lowest for mood stabilizing anticonvulsants and lithium, and highest with antidepressants and antipsychotics. The fact that the dopaminergic drugs aripiprazole and bupropion stood out relative to other members of their respective classes merits further mechanistic investigation.

P-165 | Presentation of affective disorders at a psychiatric emergency service in MEXICO

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Background and Aims: The use of Psychiatric Emergency Services (PES) has increased in several countries. Affective disorders are a frequent cause for attention at PES, and management of patients with such conditions can be challenging in an emergency setting. In Mexico, most of the data on emergency psychiatry comes from studies performed in the capital, with no data on affective emergencies in the rest of the country. This work attempts to provide epidemiological data on emergent affective disorders at a public psychiatric hospital in Northeastern Mexico.

Method: After IRB approval, we reviewed consultations made by psychiatrists and residents at our PES in the period between December 2015 and December 2016. Extracted variables: ICD-10 code, color of triage, sex, date of birth. Likewise, we reviewed hospital admissions in the same period, extracted variables: ICD-10 code, sex, age. An analysis of descriptive statistics was performed using Microsoft Excel 2013 software.

Results: Affective disorders are the most frequent cause for attention at our PES. Among individual diagnoses, major depressive disorder had the highest prevalence (15.2%). Bipolar disorder was the fifth cause for attention (9.2%); the majority of cases were mania. Other affective disorders were uncommon (0.3%). Bipolar disorder was a more common cause for admission to our hospital than major depressive disorder.

Conclusion: Affective disorders are a common cause for emergent attention and hospital admissions. Our findings are complimentary

to the current limited data on psychiatric emergencies in Mexico. The realization that affective disorders are frequent behavioral

emergencies might entail the creation of prevention programs at the state level.

Poster Session XV—

Prodromes, Early Recognition, and Staging

P-166 | Inflammatory mediators of cognition in bipolar disorder offspring: global mood and brain science initiative

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Background and Aims: Replicated evidence suggests that inflammatory disturbances are highly associated with cognitive deficits in individuals with bipolar disorder (BD); although the role of inflammation in mediating cognition has been insufficiently characterized in BD offspring. The objective of this study was to compare peripheral levels of interleukin (IL)-6 and high sensitivity C-Reactive Protein (hs-CRP) between BD offspring and healthy controls and to explore the associations between IL-6, hs-CRP, and cognitive performance.

Method: Serum concentrations of IL-6 and hs-CRP were assessed and compared between groups. General and social cognitive functions were assessed using the MATRICS Consensus Cognitive Battery; Tower of London (TOL); Mayer-Salovey-Caruso Emotional Intelligence Test, Managing Emotions subscale; and Test of Nonverbal Intelligence, Third Edition (TONI-3). Multivariate and univariate analyses of covariance were used to investigate the main effects and the interactions between group status, BMI, IL-6, and hs-CRP on cognition.

Results: Bipolar offspring performed worse on cognitive tests when compared to HCs. There was a significant interaction effect between group status and hs-CRP level on measures of visual learning ($P=0.029$), emotional intelligence ($P=0.017$), attention/vigilance ($P=0.040$), and MATRICS composite ($P=0.022$) performance. hs-CRP levels were correlated with better cognitive performance among HCs and worse cognitive performance among BD offspring. IL-6 levels were not correlated with cognitive performance.

Conclusion: BD offspring exhibit cognitive deficits when compared to controls; cognitive outcomes and hs-CRP were negatively associated among probands while the inverse was observed among controls.

P-167 | Emotional memory changes and its correlation with severity in bipolar disorder

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Background and Aims: Emotional memory (EM) is a type of memory which requires emotional arousal for acquisition and consolidation. EM is highly dependent of amygdala function and, therefore, the assessment of an abnormal EM in Bipolar Disorder (BD) could indirectly indicate dysfunctional hyperactivation of the amygdala. This study aims to correlate EM changes in BD with severity of disease.

Method: Thirty three BD and 20 paired Healthy Controls (HC) completed clinical questionnaire and EM scale. The EM assessment consisted of 20 lists of 12 words each, including Emotional (E), E-1 (precedes E), E + 1 (follows E), Perceptual (P), P-1 (precedes P), P + 1 (follows P) and Control (C). Participants should mention all recalled words from each list. T-test assessed which subject group had better general recall. Generalized estimating equations (GEE) assessed influence of diagnosis, of type and position of words in recall, and of number of previous mood episodes (NME).

Results: HC showed a better general recall of words than BD (52.05 ± 15.33 vs. 34.06 ± 15.92 , $P<0.001$). In statistical models, there was a significant fit only for group difference: BD showed an increased EM score despite of type or position of the word ($P=0.008$). When we added NME to the model, there was an association with EM ($P=0.042$). Correlation between EM and NME was significant ($r=-0.324$, $P<0.001$).

Conclusion: BD showed an enhanced memory for items either with negative valence or perceptual difference and for those words that surrounded them. This enhancement seems to decline with NME. Amygdala activation and function may be a promising marker of stages in BD.

P-168 | Age at menarche in patients with bipolar disorder: results from a retrospective study

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Background and Aims: Bipolar disorder has shown to have a relation with the reproductive cycle of women. It is known that the postpartum period is a high risk period of recurrence: in our recent study carried on a group of non-medicated bipolar women during pregnancies, the postpartum rates amounted to 75% (Maina et al., 2014); indeed we found that lithium prophylaxis during pregnancy would help to avoid peripartum bipolar recurrences (Maina et al., 2016). However, the evidence that age at menarche, menstrual cycle and menopause play a significant role on the course of illness remains uncertain.

Method: The purpose of this multicenter study is to retrospectively examine the relationship between age at menarche and characteristics of bipolar disorder in a clinical sample of bipolar women, with particular attention to bipolar recurrences during the postpartum period.

Results: The analysis showed that in our sample the mean age at menarche is 12.6 (± 1.34) years. We found a positive correlation between age at menarche and total number of lifetime episodes depressive and hypomanic- and duration of untreated illness. To the contrary, we found a negative correlation with peripartum bipolar recurrences: 29.7% of women have at least one bipolar recurrence during the postpartum period and in this subgroup the mean age at menarche was significantly lower.

Conclusion: The age at menarche represents a potentially useful variable in order to predict the characteristics of bipolar disorder. Further studies would be essential to confirm our thesis and to identify suitable strategies in women with bipolar disorder.

P-169 | Specific delays in bipolar disorder diagnosis and treatment: is there a window for secondary prevention?

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Background and Aims: More than 70% percent of people affected by bipolar disorders (BD) suffer significant delays between they first health system contact and the moment to receive a proper diagnosis. Diagnostic delay (DD) in BD has been correlated with an increment in several measures of morbidity. This findings support the idea that early intervention would reduce BD burden. However, at the present very few adequate data regarding which would be the specific factors associated with DD impact in BD outcome. The aim

of this work was investigate times to achieve a proper diagnosis and treatment in a naturalistic sample of BD patients and to correlate them with several measures of morbidity.

Method: 200 BD I & II outpatients were consecutively included for a structured interview on which diagnostic times and general morbidity was assessed. Correlations and statistical control for confounders were done.

Results: 78% of patients suffered delays of more than one year between first contact and BD diagnosis (mean 7,64 8,92). Although a negative correlation between DD and time between first contact and mood stabilizer treatment with measures of morbidity were found, them did not remain significant after statistical control. More data are needed to develop a rational program of early intervention.

Conclusion: More data are needed to develop a rational program of early intervention.

P-170 | Executive functions and affective temperament

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Background and Aims: Specific affective temperaments are considered risk factors for developing bipolar disorder (BD). Still, the data regarding affective temperaments and their association with features of BD, such as cognition, are scarce. Particularly, executive functions are not yet widely explored. However, before assessing executive functioning in BD patients, we decided to focus on healthy population, since we do not have much data about these features depending on affective temperament in non-clinical sample.

We expect that depressive temperament is associated with more pronounced executive dysfunctions whereas hyperthymic temperament is associated with better reaction time but worse performance.

Method: 62 participants (39 women and 23 men) were recruited in this study. In order to assess affective temperament, we used Temperament Evaluation of Memphis, Pisa and San Diego Autoquestionnaire (TEMPS-A). To evaluate shifting, inhibition, and updating three tests were conducted – Berg's Card Sorting Task (BCST), Stroop task and N-back task, respectively. Correlational analysis were performed.

Results: Statistical analysis revealed significant positive correlation of hyperthymic temperament and response time while performing Stroop task, regardless of the condition. Irritable temperament was negatively correlated with number of incongruent errors and accuracy rate during congruent condition. Cyclothymic temperament proved to be negatively correlated with number non-perseverative error and errors in total. Analysis revealed no significant results for N-back task.

Conclusion: Results regarding hyperthymic temperament are consistent with previous studies. What was unexpected is that cyclothymic temperament is associated with better performance in shifting. Furthermore, depressive temperament appears to have no association with executive functioning.

P-171 | Comparison of affective temperaments in type I and II bipolar patients

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Background and Aims: Affective temperaments, considered by some authors as attenuated manifestations of bipolar disorder play an important role in outcome of bipolar disorder.

The aim of this study is to evaluate and compare affective temperaments in two groups of bipolar patients type I and II in order to identify the possible predictive temperaments of the evolution of these disorders.

Method: It's a retrospective descriptive study. It concern 42 inpatients with diagnosis of bipolar disorder. It was held in psychiatric unit in Farhat Hached General Hospital (Sousse).

Bipolar I disorder (Group I) was diagnosed by the MINI-PLUS (DSM 5 criteria).

Bipolar II disorders (Group II) were diagnosed by the MINI-PLUS after a first systematic screening using the Angst Hypomania Checklist-20 scale.

Socio-demographic factors, clinical and outcomes was obtained from the medical files of each patient. All patients were invited and we used the Akiskal TEMPS-A scale (110-items) Arabic version.

Results: The group consists of 42 bipolar patients (71.4% bipolar I and 28.6% bipolar II).

The mean age of our sample was 44.8 ± 11.4 years. They were married in 61.9% of cases.

The mean age of onset of bipolar disorder was 27.4 ± 9.4 years.

Bipolar I and II disorders were similar in socio-demographic and clinical characteristics.

Bipolar II disorder have higher depressive, cyclothymic and irritable temperament scores ($P=0.042$, 0.027 and 0.004).

Conclusion: Bipolar II subjects have more cyclothymic, depressive and irritable temperaments than bipolar I subjects. These temperaments make the worse prognosis and should be explored.

P-172 | Screening of bipolar II disorder

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Background and Aims: Patients with affective disorder are generally unaware of hypomania symptoms. The discovery of hypomania episodes remains difficult and the diagnosis of bipolar II disorder (BP-II)

is often unknown in patients treated for recurrent major depressive disorder (R-MDD).

The aim of our work is to detect hypomania episodes in patients followed for recurrent major depressive disorder (R-MDD).

Method: It is a cross-sectional study of 29 patients followed for R-MDD. They were recruited over a period of two months at the psychiatric department in Farhat Hached Hospital in Sousse.

Socio-demographic, clinical, outcome and severity were collected from the medical files of each patient.

For the screening of hypomania, we used the Angst Hypomania Checklist-20 scale (positive if score >10) and we explore with patient's families historic symptoms of hypomania.

Results: The mean age of our patients was 49.3 ± 13.1 years.

The majority were female (86.2%) and 69% of patients were married. The mean number of depressive episodes was 3.7 and 20% had at least one suicide attempt.

44.8% of patients who diagnosed bipolar II disorder have melancholic features and only 20.6% of them have personality disorder.

The majority of this patient were treated with tricyclic antidepressant. Eleven patients (37.9%) had a score >10 at the Angst scale. All of them have at least one hypomania episode.

Conclusion: For screening of bipolar II disorder, the Angst Hypomania Checklist-20 and the DSM 5 hypomania criteria are necessary. Melancholic feature and exposure to antidepressant seems to be associated with high risk transition.

P-173 | Staging and clinical characteristics of bipolar patients with subcortical hyperintensities on magnetic resonance imaging

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Background and Aims: Kapczinski's clinical staging model for Bipolar Disorder (BD) suggests the classification of subjects according to their functional impairment. Magnetic Resonance Imaging (MRI) findings such as hyperintensities are recommended to identify late stage bipolar patients, the former is based on the reported relationship between hyperintensities and the number of affective episodes, number of manic episodes, suicide attempts and cognitive impairment. However, there are no publications reporting that the presence of hyperintensities can in fact differentiate clinical stages of BD. In the present study, we aim to compare the clinical features and stage of subjects with and without subcortical hyperintensities.

Method: Cros-sectional study of BD outpatients from the National Institute of Psychiatry "Ramón de la Fuente Muñiz" in Mexico City assessed with a clinical interview for staging and brain MRI using Coffey's classification for hyperintensities. The statistical analysis was performed with Fisher's exact test and Wilcoxon Rank sum test.

Results: We evaluated 34 subjects, among them 12 with subcortical grey matter hyperintensities. In our population, there was no difference in clinical staging between groups with and without subcortical hyperintensities. Regarding clinical characteristics we found that the number of manic episodes [2 (1-3) vs. 3 (2-5), $P=0.04$] and hospitalizations [1 (1-2) vs. 2 (1-4), $P=0.01$] were different between groups.

Conclusion: The present study replicated the findings of previous research regarding some clinical features and hyperintensities in BD but failed to associate the presence of these MRI changes with the clinical stage of the subjects. Structural changes may not be as sensible as needed for staging classification.

P-174 | Quality of life is associated with clinical outcome in BD: a longitudinal study

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Background and Aims: To investigate the association between baseline WHOQOL-BREF scores and longitudinal clinical variables indicative of outcome in bipolar disorder.

Method: We evaluated 36 outpatients from the Bipolar Disorder Research Program (PROMAN). Inclusion criteria was age between 18 and 70 years old with a diagnosis of BD type I or II according to the DSM-IV-TR's requirements. The WHOQOL-BREF questionnaire was completed in 2009, 2015 and 2017. Baseline clinical variables were collected through the SCID-IV and a structured baseline interview for demographic and clinical assessments. Longitudinal clinical variables were collected through mood charts and mood symptoms scales.

Results: All three WHOQOL-BREF scores were positively correlated between themselves (2009 and 2015: $r=0.515$, $P=0.008$; 2009 and 2017: $r=0.681$, $P<0.001$; 2015 and 2017: $r=0.798$, $P<0.001$). WHOQOL-BREF scores were positively correlated with number of manic episodes for the 2009 measurement ($r=0.515$, $P=0.008$), and negatively correlated with number of depressive episodes both for 2009 and 2017 (2009: $r=-0.418$, $P=0.014$; 2017: $r=-0.518$, $P=0.011$). Furthermore, patients presenting substance abuse and anxiety disorders demonstrated significant lower scores in at least two observations.

Conclusion: The results suggest the WHOQOL-BREF scale is associated with the course of BD. WHOQOL-BREF scores were significantly associated with number of manic and depressive episodes, and presence of anxiety and substance abuse comorbidities. Finally, scores remained stable throughout the observed period, suggesting quality of life measure remained constant throughout the observed period.

Poster Session XVI-

Psychosocial Treatments and Self-Management

P-175 | Exploration of the helpfulness of an architecture of actions focused on mental skills. Does a single retrospective case demonstrate recovery or stand-by of symptoms?

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Background and Aims: The frequency of manic and depressive episodes is the hallmark of the weakening of the psychological factors of a bipolar person's self-determination. This study aims to provide insightful information on an intrinsic motivational boost program which reinforces mental health by pursuing therapeutic goals including intellectuality, rationality, kindness and wisdom.

Method: A person-centred approach was developed on the basis of exant literature. An individualized program of daily cognitive, psychological and physical exercises has been followed by a woman at the age of 50 for the last six years. She had a manic onset after a

psychological trauma associated with a long term of psycho-physical stress. During a three-year period she had two brief relapses. For five years she has received medication (atypical anti-psychotic; antidepressants; non-lithium mood stabilizer) from the Mental Health Department of Verona, Italy.

Results: Psychiatric assessment has shown mood stabilisation for three years. Attention, memory and critical thinking have incremented her self-confidence. Differences in her personality include greater reserve, less extraversion, improved self-control, increased tolerance to negative emotional experiences, and non-irritability. High work performance and adequate social life. No medication in the past year.

Conclusion: There are several limitations to this exploratory study and a single case cannot be generalized. As a result the satisfactory euthymic state suggests that a regular and healthy lifestyle in bipolar disorder has a role in actualizing the neuropsychological potential of the person as her change agent. This perspective may also contribute to consider the implication of psychosocial functioning in the neurobiology of mood.

P-176 | A feasibility study of a family focused treatment for adolescents with bipolar disorder

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Background and Aims: The Family Focused Treatment for Adolescents (FFT-A), evaluated in the USA, is a psychotherapeutic intervention, aiming to reduce distress and disharmony in the young person's family via psychoeducation and improving communication and problem solving skills. The primary aim of this study was to examine the feasibility of a randomised controlled trial (RCT) of Family Focused Treatment for Adolescents with Bipolar Disorder in the UK, with a focus on the service users and their family's views about taking part in the RCT.

Method: Fifteen qualitative interviews were undertaken with thirty participants, including young people with bipolar disorder between 12 and 18 years old and their family members. Willingness to participate and to be randomised, and overall trial experience were explored.

Results: Randomisation procedure was well understood. Intervention was well received with psychoeducation component being highlighted as particularly helpful by the siblings of young people with bipolar disorder as increased the understanding of the condition and improved within family relationships. The communication and problem solving components were beneficial, though sometimes difficult to put into practice. Timing of the intervention was often considered crucial, adolescents with a recent diagnosis of bipolar disorder and their families found it most helpful. In addition, families considerably appreciated the time spent together.

Conclusion: Rich and interesting information have been gathered through qualitative interviews. Service users found the intervention feasible, with psychoeducation, communication, and problem solving components perceived as helpful. To facilitate further practising newly gained skills, a booster session could be offered after the treatment completion.

P-177 | Collaboratively augmenting longitudinal monitoring in bipolar: calm bipolar

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Background and Aims: Young people with bipolar disorder are encouraged to chart their mood, medication adherence and sleep using pen-paper "mood charts", but completion rates are often low (~30%). This project used a participatory design methodology to co-develop and co-produce digital health technology to improve outcomes for adolescent bipolar disorder.

Method: In the initial stage of the project, six young people with EOBd (15-25 years) and their families (9 family members) attended eight weekly workshops with the CALM Bipolar Team to first understand how self-management works in EOBd, and then to identify key themes influencing the design and content of the App. The features most commonly suggested by young people were implemented in a prototype application available for both iOS and Android systems. The CALM Bipolar App has been tested by thirteen adolescents and young adults with EOBd between 16 and 22 years old (M=19.11, SD=1.92) for three months.

Results: The evaluation of the App has been assessed with the application usage log data. Furthermore, young people have been asked to complete both an 11-item Satisfaction and Usability Tool to assess general user satisfaction and App's usability; and a brief semi-structured interview to obtain more detailed, individualised feedback.

Conclusion: It is not only feasible to work with adolescents with bipolar disorder and their families but crucial in the successful uptake of digital health technologies, co-designed and co-produced. Young people found the App easy to use, discrete and helpful in their treatment. Some further changes have also been recommended, with personalisation of the App being most prominent.

P-178 | Fuzzy-trace theory as a framework for decision-making and risk-taking in bipolar disorder

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Background and Aims: Risky behaviors, often driven by instabilities in mood (particularly in manic periods), are characteristic of Bipolar Disorder (BD) and can have devastating consequences. Understanding these behaviors could help prevent and reduce their occurrence. Fuzzy-Trace Theory (FTT) (Reyna & Brainerd, 1994), a decision-making theory, juxtaposes two forms of reasoning, claiming that qualitative, bottom-line-based "gist reasoning" leads to more mature, less emotional decision-making than quantitative, detail-oriented "verbatim reasoning." We tested how FTT may explain risk-taking through decision-making in a population diagnosed with BD and whether the relationship was moderated by manic symptomatology.

Method: Participants who reported being diagnosed with BD [$n=121$; age (Mean, SD)= $46,14$]; BDI/BDII/Other(%)= $33/43/24$; Male/Female(%)= $35.5/64.5$] completed questionnaires on demographics, clinical variables, symptomology, FTT gist and verbatim measures, risk-taking (RT), and risk-perception (RP).

Results: Regressions showed that gist and verbatim measures significantly explained 6-16% and 6-8% of variance in various risk domains. Sequential linear regression models incorporating gist, manic symptomology and impulsiveness indicated that the variances explained by gist (RT: $sr^2=0.09$, RP: $sr^2=0.05$), manic symptomology (RT: $sr^2=n.s.$, RP: $sr^2=0.05$), and impulsiveness (RT: $sr^2=0.10$, RP: $sr^2=0.06$) were quite similar. Manic symptomology and impulsivity did not moderate the relationship of FTT with risk.

Conclusion: Gist, as predicted, was negatively associated with risk measures, while the moderation model indicated the unique impact of FTT on risk-taking. These results support FTT as an independent mechanism for the conceptualization and reduction of risk-taking in BD. They also provide support for the consideration of decision-making processes as drivers of risk-taking in research and clinical contexts.

P-179 | Spouses and partners of individuals with bipolar disorder—What kind of specific support do they want?

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Background and Aims: Relatives and especially spouses and partners of individuals with bipolar disorder experience significant burden. While effective psychosocial interventions exist, these treatments are time-consuming, require trained clinicians, and are not easily accessible. Mobile health (mHealth) technology to manage illness has become a major research area because it provides users with readily available feedback and information in real-time. This might be helpful to decrease burden and increase well-being in informal caregivers.

To explore what are the specific topics spouses or partners of patients with bipolar disorder want to be covered when using mHealth technology.

Method: Using a qualitative design, we conducted focus groups to collect information from participants about what they would expect from such a device. We conducted four focus groups. Data was collected using minimally structured interviews. The method of analysis was content analysis independently done by two experts.

Results: Thematic content analysis indicated that the mHealth device may be helpful if it covered at least eight different areas of

support. This ranged from help with 'Communication' to 'Dealing with role conflicts' or 'Unavailability of mental health professionals when needed'. They also provided us with information how that information should be ideally delivered.

Conclusion: While some topics identified during the content analyses seemed obvious (e.g. information, communication), others would have been missed if not including spouses into the development of such a device (e.g. sexuality). The next step is to implement the identified content areas and to test the acceptability and feasibility in this specific population.

P-180 | Internet-delivered acceptance and commitment therapy (act) for bipolar disorder and co-existing anxiety

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Background and Aims: In a previous study of Acceptance and Commitment therapy (ACT) as a group treatment for patients with Bipolar Disorder and co-existing anxiety (Pankowski et al., 2017) we could conclude that ACT has the potential to be effective for this group of patients. The mean reduction in anxiety symptoms was 45% and 96% of the patients were classified as responders.

The aim of this open clinical trial is to examine the feasibility of a new internet-delivered treatment program based on ACT, designed for patients with Bipolar Disorder and co-existing anxiety.

Method: This is a pilot study with in-group design. 30 patients have been recruited from psychiatric clinics in Stockholm County, Sweden, and accessed at a clinic specializing in affective disorders. We have made a subsequent refinement of the previous ACT-treatment manual by developing it into an internet program with secure access. It consists of texts and illustrations, psychoeducational films, exercises and stepwise exposure via audio files and active guidance and feedback from psychologist 3 times per week. The ACT-treatment focuses on fostering acceptance-, mindfulness- and values-guided behaviour processes with the aim to increase psychological flexibility towards aversive internal experiences, instead of avoiding them.

Level of functioning, quality of life, psychological flexibility, symptom reduction and burden of disease are assessed at pre-treatment, post-treatment and at a 3-month follow-up. Adherence, achieved knowledge, credibility, satisfaction and negative experiences are also assessed.

Results: Results will be compared with the ACT group treatment.

Conclusion: Results and conclusions will be presented in a scientific article later this year.

P-181 | Avoidance symptoms in patients with depressive episode: a six month observational study

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Background and Aims: Avoidance, could be viewed as a combination of strategies (denying or maximizing the consequences or accepting the situation), problem solving style (passive avoidant styles) and a personality dimension, but, always resulting in distorted, incomplete or misleading view of the environment.

Aim: To investigate the avoidance behaviors commonly used by depressive patients.

Method: 32 patients diagnosed with Major Depressive Disorder (without any comorbidity) by psychiatrists and confirmed by the Structured Interview for DSM-IV (SCID-CV). Hamilton Rating Scale Depression-HAMD, Montgomery-Asberg Depression Rating Scale, Beck Depression Inventory and Depression Thoughts Scale were also applied. Patients were evaluated during the washout time and at final of month 6.

Results: The severity of depressive symptoms (HAMD and MADRS) decreased significantly at month 6, and also the behavioral strategies, letting patient return to do their daily activities, their thoughts remain distorted. Differences between sexes were also found, suggesting that women tend to use more passive styles than man.

Conclusion: Results lead one to question if passive avoidant styles can be interpreted as traits or condition, as well as the need for an investigation that also considers possible genetic printings.

P-182 | Relationship style in major depression and bipolar types I and II

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Background and Aims: Relationship style can influence the patient-physician relationship, adherence with treatment recommendations and course of illness. Insecure attachment styles are more prevalent in individuals with mood disorders and has been associated with worse clinical outcomes, whereas a secure attachment is linked to more positive health behaviors, such as greater adherence to health plans and preventive health behaviors. To examine the prevalence of close relationship/attachment styles in patients with major depression (MDD), bipolar type I (BPI) or bipolar type II (BPII).

Method: 219 participants were recruited from the Mood Disorders Program of the McGill University Health Center in Montreal,

Quebec. Mood diagnoses were determined using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID). Relationship/attachment styles were assessed using the Experiences in Close Relationships Questionnaire, anxious and avoidant attachment styles were examined. One-way ANOVA and Tukey post-hoc tests were conducted to examine the prevalence of attachment styles within each diagnostic group.

Results: The prevalence of anxious attachment differed in the MDD, BPI and BPII groups ($F(2, 180)=5.652, P=0.004$). There was no difference in prevalence of avoidant attachment style between the groups. Post-testing revealed that the BPII (4.5 ± 1.31) scored significantly higher than the BPI group ($3.73 \pm 1.25, P=0.003$).

Conclusion: Bipolar type I and type II groups may develop different type of relationships with their treatment team as a consequence of their attachment patterns. Modification of treatment approaches may be warranted.

P-183 | Characterization of care received during childhood and care given to the children of bipolar patients (full data)

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Background and Aims: In recent years there has been growing scientific studies focused on characterizing the dysfunctional parenting as a risk factor and incorporating guidance for parental care in psychoeducation guidelines.

Characterize the bipolar parental care given to the children and received during childhood focusing on variables such as rejection, over protection and emotional support.

Method: As experimental group (EG): 73 patients with children and BDI euthymic ($YMRS \leq 12, HAMD \leq 7$) aged between 18 and 65 years, treated at the clinic of the Affective Disorders Program (GRUDA) IPq-HC-FMUSP were evaluated. As control group (CG): 24 healthy volunteers from the physical and mental point of view, both between 18 and 65 years. Assessment tools: SCID - CV, YMRS, HAM-D, EMBU-S (to access adult memories of their parents rearing practices), EMBU-P (to assess adult's relationship with their children).

Results: Rejection memory: paternal ($P=0.615$) and maternal ($P=0.050$); Over protection memory: paternal ($P=0.767$) and maternal ($P=0.674$); Emotional support memory: paternal ($P=0.820$) and

maternal ($P=0.199$). Rejection ($P=0.180$), over protection ($P=0.049$) and emotional support ($P=0.084$) given to children.

Conclusion: The results showed us that the over protection given to children in the group of bipolar parents was lower than in the healthy control group. And the maternal rejection memory was higher in the bipolar group than in the control group.

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P-184 | The influence of care received during childhood in the care given to the children of bipolar patients (partial analysis)

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Background and Aims: Introduction: In recent years there has been growing scientific studies focused on characterizing the dysfunctional parenting as a possible risk factor and incorporating guidance for parental care in psychoeducation guidelines.

Objective: Check if there is a relationship between the care received during childhood and the care given to the children of bipolar patients.

Method: Method: As experimental group (EG): 73 patients BDI euthymic ($YMRS \leq 12$, $HAMD \leq 7$) with at least one child and aged between 18 and 65 years, treated at the clinic of the Affective Disorders Program (GRUDA) IPq-HC-FMUSP. As control group (CG): 23 healthy volunteers from the physical and mental point of view, aged between 18 and 65 years. Assessment tools: SCID - CV, YMRS, HAM-D, EMBU-S (to access adult memories of their parents rearing practices), EMBU-P (to assess adult's relationship with their child).

Results: Data are being analyzed and the results will be presented in the ISBD.

Conclusion: Data are being analyzed and the conclusion will be presented in the ISBD.

P-185 | Cognitive-behavioral rehabilitation vs. treatment as usual for bipolar patients – preliminary results

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Background and Aims: To investigate the effectiveness of a new psychological intervention named Cognitive-Behavioral

Rehabilitation (CBR) as an add-on treatment for bipolar disorder. The CBR was developed to address commonly cognitive and functional impairments associated with the disorder and to prevent new mood episodes.

Method: This is a RCT comparing CBR to treatment as usual (TAU) for bipolar patients. CBR is a combination of cognitive behavioral strategies and cognitive rehabilitation exercises, consisting of twelve weekly group sessions of 90 minutes each. To be included in the study, patients must be diagnosed with bipolar disorder, type I or II, between 18 to 55 years old, in full or partial remission and have an IQ>80. An automated neuropsychological battery, followed by mood, social functioning and quality of life assessments will occur in three moments: pre and post-intervention and after 12 months.

Results: We have included 54 participants so far (26 CBR, 28 TAU) and the clinical trial is underway. At baseline there were no statistical differences for age, gender, scholarship and psychiatric comorbidities. Three groups have already completed the post-treatment evaluation. We intent to include 10 more participants in order to reach the sample size previously estimated. All groups will be completed by the end of February 2018.

Conclusion: This is the first controlled trial assessing the validity and effectiveness of the new CBR intervention in preventing new mood episodes and improving cognitive and functional impairments. Trial registration: NCT02766361.

P-186 | Polypharmacy among bipolar disorder

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Background and Aims: Most patients with Bipolar Disorder(BD) receive more than one drug, which is commonly referred to as polypharmacy. It is known that although the combined use of drugs can improve the effectiveness of the treatment complex patterns, the increase of side effects could lead to a decrease in the adherence to it. Aim: To evaluate the pattern of use of psychotropic drugs in a sample of patients with BD in our area.

Method: The sample consisted of 44 subjects diagnosed with type 1 BD (64.4%) and type 2 BD (35.2%) in stable phase, collected in community teams from the Guadix and Baza areas (Spain) with no comorbid diagnoses for the most part.

Results: 71% of the subjects were at least in treatments with two drugs, being mainly a mood stabilizer (84.2%) and an antipsychotic (75%). 37.5% also had an antidepressant. A 51% also took benzodiazepines being only 10% those who had more than one included in their treatment.

Conclusion: The combination of drugs is used for the symptomatic control of patients with BD in phases of decompensation or in cases with difficult symptomatic control, being necessary to reevaluate the need to maintain it once it has been overcome. In our sample a

large percentage was found in treatment with more than one drug, the most frequent combination being that of a mood stabilizer with an antipsychotic. As a limitation for our work, we do not have the

time since the last decompensation. Polypharmacy in our environment is a highly widespread practice.

POSTER Session XVII– Suicide in Bipolar Disorder

P-187 | Bipolar disorder and suicide: risk factors to know in multiprofessional practice in health

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Background and Aims: This study analyzes the relationship between suicide and bipolar disorder.

Method: Literature review on bipolar disorder, suicidal behavior and suicidal ideation.

Results: Suicidal behavior includes three types of self-destructive acts: consumed suicide, attempted suicide and non-suicidal self-harm. Suicidal ideation includes suicidal thoughts and plans. Bipolar disorder is strongly associated with suicidal ideation and attempted suicide. Studies indicate: 14-59% of patients have suicidal ideation and 25-56% have at least one suicide attempt during life. Approximately 15% to 19% of patients with bipolar disorder die from suicide. In patients with bipolar disorder, multiple drug use, borderline personality comorbidity-related impulsivity, and polarity of the first episode of mood (depression or manic / hypomanic) are markers of suicidal behavior. Depressed patients have a lifelong history of more suicide attempts. Manic / hypomanic patients were more likely to attempt violent suicide.

Conclusion: Bipolar disorder is the psychiatric illness with the highest risk of suicide attempts and consummation of suicide. It is related to the use of combination therapy, impulsivity and type of first episode. Suicide traitors (non-violent and violent) belong to different phenotypic groups. Health professionals need to know the risk factors for suicidal behavior, in order to qualify the health care offered and prevent such behavior.

P-188 | Factors related to suicidal behavior in patients with bipolar disorder: the effect of mixed features on suicidality

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Background and Aims: The aim of the present study was to investigate various risk factors of suicidal behaviors, including the mixed features specifier, in patients with bipolar disorder.

Method: We retrospectively reviewed medical charts from 2005 to 2014. A total of 334 patients diagnosed with bipolar disorder using the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision were enrolled. Subjects were categorized into two groups according to their history of suicidal behavior and the demographic and clinical characteristics of the groups were compared, including the mixed features specifier. We reevaluated the index episode using Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria and classified subjects into an index episode with mixed features group and an index episode without mixed features group. Logistic regression was performed to evaluate significant risk factors associated with suicidal behavior.

Results: Suicidal behavior had an independent relationship to mixed features at the index episode using DSM-5 criteria [odds ratio (OR)=3.39; 95% confidence interval (CI): 1.57–7.34] and number of previous depressive episodes (OR=1.62; 95% CI: 1.34–1.95) in bipolar patients. The mixed feature specifier was the strongest risk factor for suicidal behavior in the present study.

Conclusion: This study may help clinicians understand potential risk factors and manage bipolar disorders with suicidal behaviors. Clinicians should carefully monitor patients with bipolar disorder who exhibit numerous depressive episodes or mixed features for suicidal behavior.

P-189 | Postmortem study of gene expression in the dorsolateral prefrontal cortex of subjects with completed suicide

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Background and Aims: Suicide is a common endpoint for many patients with severe psychiatric illness. The mood disorders (depression and bipolar manic-depression) are by far the most common psychiatric conditions associated with suicide. At least 25% to 50% of patients with bipolar disorder also attempt suicide at least once. The prefrontal cortex is the cerebral area responsible for decision making, inhibition and short-term memory, functions that have been altered in subjects with suicidal behavior.

Therefore, it is of special interest to evaluate gene expression in this cerebral area in order to identify genes expressed in suicide subjects compared with subjects with death by other causes to have a better understanding of the pathology of suicide and that could be used in the future as biomarkers of suicidal behavior.

Method: We collected samples from the dorsolateral prefrontal cortex (BA9) of subjects who committed suicide and of subjects with death other than suicide.

The expression of messenger RNA from 66 samples (43 subjects with consummate suicide and 23 subjects with death other than suicide) through the HumanHT-12 v4 BeadChip Array (Illumina, San Diego, CA) was evaluated.

Gene expression data was preprocessed by background adjust and quartile normalization on GenomeStudio software v2011.1.

We conducted canonical signaling pathway and molecular network enrichment analysis with Ingenuity Pathway Analysis (QIAGEN).

Results: We found 18 differentially expressed genes between subjects with completed suicide and subjects with death by other causes.

Conclusion: The differentially expressed genes participate in the immune response, interaction with serotonin and chemokine receptors and myelination process.

P-190 | Psychotic mass murderers; think mania

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Background and Aims: The Vegas murders on October 1, 2017 are another horrific tragedy like dozens before that have become a crisis. About a thousand innocent people including children die annually. Advancing efforts at prevention must focus upon understanding more about the perpetrators.

Method: This challenge relies on reviews by media, medical professionals, police and legal reports, and, when available, the communications of the killers before and after their act. Out of over 100 cases reviewed, 10 were selected for this presentation. Focus is on behaviors that suggest diagnoses.

Results: There have been about 20 mass rampages each year since 1976. About 5 to 10% of all killers are psychotic, but among mass murderers, the percentage is substantially higher. Nearly 50% of

these contacted a mental health professional before their rampage. Psychotic killers differ from non-psychotic ones; they usually: 1. Act alone, 2. Stay at the scene; Do not try to escape, 3. Act during the day, 4. Suicide (about 50% including "by cop"), 5. Are not intoxicated, 6. Are not radicalized, 7. Are single, caucasian, males. 8. Are educated, unemployed or retired. Of those given a diagnosis, schizophrenia was consistent. Yet pre-attack behaviors and activities were consistent with mania.

Conclusion: Psychotic mass murderers most likely suffer from psychotic mania or depression. Paranoid and grandiose delusions are inevitably driving these bipolar patients to a frenzy of murderous activity. Raised awareness of the potential for mass violence among psychotic bipolar patients can be accomplished by increased focus on behavioral threat assessment, risk mitigation and appropriate interventions.

P-191 | Association of age-at-onset with clinical features and outcomes in chinese patients with bipolar disorder

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Background and Aims: In view of very limited research to identify the association between age-at-onset (AAO) of Bipolar Disorder (BP) and clinical outcomes in Chinese population. The primary aim of our study was to investigate the effect of the AAO on the clinical course of BD.

Method: The study recruited 520 BD patients from 7 psychiatric hospitals and general hospital psychiatric units across China from January 2013 to January 2014. Patients' demographic and clinical characteristics were collected using a standardized protocol and data collection procedure. The subjects were divided into four age-at-onset subgroups: childhood and adolescent onset (ages <18), early adult onset (ages 18-40), late adult onset (ages 41-). Using analysis of covariance (ANCOVA) and ordinal logistic regression analysis with adjusting the effect of age, the relationships between clinical features and AAO of BD were evaluated.

Results: There was an apparent correlation between clinical features and AAO. Earlier onset BD was significantly associated with higher proportion of unemployed, more substance abuse, greater number of family history of psychiatric disorders, more episodes, and more previous suicide attempts.

Conclusion: Early-onset BD is associated with poorer clinical outcomes. Age at onset may be a promising clinical indicator for the clinical characteristics and outcome of BD. Prospective studies examining the long-term outcomes including functioning and quality of life in relation to age-at-onset are needed.

Poster Session XVIII– Technological Interventions

P-192 | Phototherapy for bipolar depression?

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Background and Aims: Bipolar disorder is a lifelong, episodic illness with a variable course that often results in functional and cognitive impairment and diminished quality of life. Population prevalence's are consistent across diverse cultures and ethnic groups, with a lifetime prevalence of 0.6% for bipolar I disorder, 0.4% for bipolar II, 1.4% for subthreshold versions, and 2.4% for bipolar spectrum disorders. Untreated, death by suicide among patients is 20 times higher than among the general population. Even with intervention, up to a half of subjects with bipolar disorder, attempt suicide at least once in their life; roughly 15–20% of attempts are fatal. Treatment option research is on-going. Because of the recurrence and chronicity of bipolar disorder, maintenance pharmacological and psychological approaches for prevention of further episodes are important.

Method: The data in this paper were acquired through a Pubmed literature search using the terms “phototherapy” and “bipolar depression”.

Results: Phototherapy has emerged as a treatment on behalf of people with mood disorders; it works by resetting the circadian clock. Bright light therapy has been prescribed for decades to minimize seasonal affective symptoms; efficacy is comparable to antidepressant medications. Such light therapy can also be effective in treating people with non-seasonal depression and other mood disorders.

Conclusion: The potential for light therapy as an intervention for a whole spectrum of mood disorders is appealing because it is safe, has few side effects, and noninvasive. Bright light therapy represents a non-pharmacological, efficacious, well-tolerated, and underestimated biological therapy which should be part of the therapeutic regimen in selected patients.

P-193 | Efficacy of lurasidone in preventing recurrence of bipolar disorder: results of a multistate outcome analysis of treatments (MOAT)

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Background and Aims: To assess the effect of maintenance treatment of bipolar disorder with lurasidone on a range of affective symptom severity states using MOAT methodology.

Method: A post-hoc analysis was performed on data from a 28-week, double-blind, placebo-controlled recurrence prevention study of lurasidone adjunctive with lithium or valproate in patients with bipolar I disorder. The analysis utilized MOAT methodology (Tohen et al, Bipolar Disord. 2016;18:282-7), in which survival time was partitioned into clinically distinct periods that were operationally defined by cut points on the MADRS and YMRS. In addition to remission, the clinical states analyzed included syndromal and subsyndromal levels of depression, mania, and mixed states.

Results: The analyzed sample consisted of patients randomized to lurasidone + Li/VPA (N=246), and placebo + Li/VPA (N=250). Lurasidone was found to be associated with a significantly greater (vs. placebo) mean number of days spent in remission (124.2 vs. 105.3; $P<0.01$; t-test using Cochran-adjusted P -value), and significantly greater mean percent of time spent in remission (73% vs. 62%; $P<0.01$; t-test using Cochran-adjusted P -value). Duration of time spent in other syndromal and subsyndromal clinical states were not significantly different for lurasidone vs. placebo. Lurasidone patients experienced a significantly greater mean number of days in the study before a mood recurrence event, discontinuation, or lost-to-follow-up (165.8 vs. 151.3 days; $P=0.018$).

Conclusion: The MOAT methodology found that adjunctive therapy with lurasidone was significantly more effective than placebo in maintaining patients in remission. However, differences in duration of time spent in syndromal or subsyndromal affective states were not significant.

P-194 | Potential audio treatment predictors for bipolar mania

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Background and Aims: Treatment resistance is still one of the big challenges for bipolar disorder. We aim to find biologic markers for predictors of treatment response via machine learning techniques to be able to reduce treatment resistance. During treatment period, these biologic markers can also help early detection of relapses. These markers have potential to differentiate bipolar patient from healthy controls. They will give an idea for personalized treatment of bipolar patients.

Method: A total of 51 bipolar manic episode (35 male and 16 female) patients and 40 healthy control (24 male and 16 female) are included into study. During hospitalization and after discharge on the 3rd month, presence of depressive and manic features was evaluated using YMRS and MADRS. Audiovisual recording is done by a video camera.

Results: The best estimation estimations of the models trained on three different descriptors (audio, appearance and geometric) are voted, best validation set UAR for bipolar/ healthy discrimination is found as 73% and three class classification (mania/ hypomania/ remission) success rate is found as 55.6%. When arousal and valence were regressed, slope and relative position of the least value of arousal can predict YMRS decline on the third day. After four affect score is added, standard deviation of neutral affect and mean value of sadness can predict.

Conclusion: Effective application of artificial intelligence techniques to identify and classify mood disorders have potential to both identify bipolar disorder and treatment response earlier. It will help to decrease the delay for diagnosis and treatment response which in accordance will decrease treatment resistance.

P-195 | Rhythms and you (RAY): an online intervention for managing bipolar disorder in primary care

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Background and Aims: Over a third of individuals with bipolar spectrum disorders (BD) are treated exclusively in primary care settings, and yet, primary care providers (PCPs) are ill-equipped to manage this complex and disabling illness. BD-specific psychotherapy is a key element of effective care, and yet, evidence-based BD-specific psychotherapies are typically unavailable in primary care settings. Rhythms and You (RAY) is a fully automated, Internet-based, intervention for BD designed for use in primary care settings. This preliminary report describes the development of RAY and plans for a future RCT.

Method: RAY is based on principles of Interpersonal and Social Rhythm Therapy, an evidence-based therapy for BD. The primary goal of RAY is to help individuals regularize their social rhythms to entrain underlying disturbances in circadian rhythms and sleep/wake regulation. These factors are increasingly recognized as playing important roles in the pathogenesis of bipolar disorder.

Results: Usability testing with 11 participants with BD permitted iterative refinement of RAY. The final version of the application consists of 12 interactive modules delivered over 12 weeks. Lessons are designed to be completed in 15-20 minutes. The Social Rhythm Metric tracking tool takes no more than 1-2 minutes to complete and is completed daily. Lessons consist of text-based didactic material ("slides"), videos/animations, and interactive exercises ("tools"). Badges ("clocks") are unlocked weekly when participants complete a lesson.

Conclusion: Feasibility of delivering RAY in primary care settings will be tested in a small randomized controlled trial comparing RAY (administered with and without a clinical helper) to written psychoeducational materials.

Poster Session XIX- Updates on Treatment Guidelines

P-196 | The use of antipsychotics in bipolar inpatients over a seventeen year observation period

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Background and Aims: Antipsychotics are commonly used in the treatment of bipolar disorder. They cover a broad spectrum of indications including acute psychotic, manic and depressive symptoms, and maintenance treatment. This study evaluates the changes in prescribing patterns of first and second generation antipsychotics at Innsbruck University Hospital for the treatment of bipolar inpatients between 1999 and 2016.

Method: In this retrospective chart review we included adult patients with a diagnosis of bipolar affective disorder (ICD-9: F296; ICD-10: F31) who were admitted as inpatients at the Department for Psychiatry and Psychotherapy between 1999 and 2016 for more than seven days. The study was approved by the local ethics committee. The complete medical histories were retrospectively searched for the prescription of psychotropic medications at the time of discharge, with a special focus on APs.

Results: We found a significant increase of the use of atypical antipsychotics (AAP), mainly attributable to the prescription of quetiapine for all types of episodes, followed by aripiprazole for manic and as add-on therapy for depressive episodes. The prescription rate of clozapine decreased significantly. The prescription rate of first generation antipsychotics (FGA) showed a small but not significant decrease for the treatment of manic and mixed episodes, and a significant decrease for depressive episodes.

Conclusion: These trends apparently mirror in part the evidence base for the use of AP, but also illustrate that clinicians still appreciate the effectiveness of FGA despite their inferior tolerability profile.

P-197 | What not to use in the treatment of bipolar disorder? An umbrella review of unrecommended treatments in current guidelines

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Background and Aims: To systematically review current bipolar disorder (BD) guidelines in order to assess evidence-based unrecommended treatments.

Method: We searched PUBMED for guidelines published between 2012-2017 using search terms "bipolar disorder", "guidelines", and "clinical practice guideline" according to PRISMA protocol. Guidelines were defined as statements that include recommendations intended to optimise clinical care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative options.

Results: Ten guidelines were identified after the review. Two were international guidelines (CINP and WFSBP), one jointly developed by Canadian and ISBD experts (CANMAT) and seven national/regional guidelines: two from UK (BAP and NICE), Australia and New Zealand (RANZCP), Germany (S3), Japan (JSMD), Taiwan (TSBPN) and USA (Florida BPPMG). Only NICE and Florida BPPMG stated the participation of non-medical professionals and most were directed toward mental health specialists. BAP and S3 guidelines do not mention unrecommended treatments. Most guidelines used the criteria of negative data on failed RCTs/metanalyses similar to the grading criteria used for recommendation of treatments. Most common unrecommended treatments were combination of carbamazepine plus antipsychotics (drug interaction), anticonvulsants such as topiramate and gabapentin as well as antidepressant monotherapy.

Conclusion: Despite extensive negative data on some agents in the treatment of BD not all current guidelines incorporate the approach of not recommending treatments. Since guidelines are important for implementation of evidence-based clinical care this issue must be taken into account when developing treatment recommendations.

P-198 | Comparison of efficacy of paliperidone palmitate between schizoaffective disorder and bipolar disorder in acute inpatients

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Background and Aims: This study compares the efficacy of paliperidone palmitate (PP) in schizoaffective disorder and bipolar disorder in usual clinical practice in acute inpatients.

Method: Data was gathered among 68 psychiatric inpatients sample treated consecutively with PP in acute inpatients. A description of the sample obtained was performed. Diagnostics among the sample were schizoaffective disorder (n=30) and bipolar disorder (n=38).

Results: The average inpatient stay was 16.7 days (18.9 days in group of schizoaffective disorder v. 14.9 days in group of bipolar disorder; t test, $P=0.123$). Between the two groups, no differences in gender were observed; if differences were observed in age (50.3 years in schizoaffective disorder vs. 39.5 years in bipolar disorder; t test, $P<0.0001$).

Between the two groups, no differences were observed in the rate of antipsychotic monotherapy (63% vs. 50%), the need for polytherapy (43% vs. 58%), the use of mood stabilizers, benzodiazepines or biperiden at discharge. Differences were observed in the interval between the two doses of PP (schizoaffective disorder 3.8 days vs. bipolar disorder 4.8 days; t test, $P=0.004$).

There was no lack of efficacy or side effects during treatment with PP in acute hospitalization.

Conclusion: Inpatients treated with PP have a short hospital stay and a high rate of antipsychotic monotherapy at discharge. In our usual clinical practice, patients with schizoaffective disorder receive the two PP doses with a shorter day interval than patients with bipolar disorder. The use of PP as antipsychotic monotherapy in acute inpatients may open new options of treatment for affective disorders.

P-199 | Profiles of use and efficacy of new long-acting injectable antipsychotics in affective patients

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Background and Aims: The aim of this study is to evaluate the utilization profiles and the efficacy of the new LAI antipsychotics in a population of schizoaffective and bipolar patients.

Method: The sample is composed of 27 schizoaffective and 19 bipolar patients on treatment with new LAI antipsychotics at outpatient setting. All patients were in clinical remission. 24 patients are being treated with paliperidone palmitate and 22 with aripiprazole LAI.

We measured the patient profiles, the need for concomitant treatments and the effectiveness in reduction of hospitalizations and average stay.

Results: 56.5% (N=26) of the sample has predominant manic polarity. Within the schizoaffective patients, the manic type represent the 44.4% (N=12) and the depressive type the 40.7% (N=11). Within bipolar patients, 73.7% (N=14) have a predominant manic polarity.

The use of mood stabilizers is 34.8% (N=16), the use of antidepressants is 15.2% (N=7). 82.6% (N=38) are on antipsychotic monotherapy. The use of polypharmacy is seen in the 37% (N=17) of the sample. There are no statistically significant differences between LAIs.

A reduction of the average stay of 4.3 days per patient/year during the first year of treatment was observed ($P=0.043$), but there were no differences between LAIs.

Conclusion: New antipsychotic LAIs seem to be useful in the treatment of schizoaffective and bipolar disorder with manic predominance.

In this sample we observed high rates of antipsychotic monotherapy and low rates of polypharmacy.

Low rates of antidepressant or mood stabilizers use have been observed.

The new LAIs reduce the average stay in this sample.

P-200 | Vitex agnus castus for premenstrual syndrome and premenstrual dysphoric disorder: a systematic review

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Background and Aims: The objective of this study was to evaluate whether Vitex agnus castus is a safe and effective treatment for PMS and premenstrual dysphoric disorder (PMDD) and to discuss the implications of these findings for clinical practice.

Method: A systematic review of literature was conducted using PubMed and Scielo databases. The inclusion criteria were randomized controlled trials (RCT) using V. agnus castus in individuals with PMS or PMDD that compared this intervention with placebo or an active comparator and included a description of blinding and dropouts/withdrawals. The search was conducted by two independent investigators who reached consensus on the included trials.

Results: A total of eight RCTs were included in this study. Most studies focused on PMS, and the diagnostic criteria of PMS and PMDD changed over the years. Three different preparations of V. agnus castus (VAC) were tested, and there was significant variability in the measurement of treatment outcomes between the studies. Nevertheless, all eight studies were positive for VAC in the treatment of PMS or PMDD and VAC was overall well tolerated. Main limitations were differences in definition of diagnostic criteria, the instruments used as main outcome measures, and different preparations of VAC extracts limit the comparison of results between studies.

Conclusion: In conclusion, the RCTs using VAC for treatment of PMS/PMDD suggested that the VAC extract is a safe and efficacious alternative to be considered for the treatment of PMS/PMDD symptoms.

P-201 | Analysis of the evolution of patients with affective disorders with psychotic symptoms stabilized with paliperidone palmitate monthly 36 months ago

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Background and Aims: Bipolar and schizoaffective disorders represent serious and chronic conditions that share the presence of both affective polarities and psychotic symptoms. The chronic course and the recurrent episodes make the follow up of these patients complex and require frequent revisions and pharmacological readjustments.

Method: Naturalistic retrospective descriptive study.

Objective: to evaluate clinical evolution and pharmacotherapeutic modifications in a sample of outpatients diagnosed with schizoaffective or bipolar disorder who were stabilized with PP1M 36 months ago.

Results: From the initial sample (n=21 patients), 77% remain in the follow up:- 12 patients continue with LAI treatment: 8 maintain treatment with Paliperidone Palmitate (4 with PP1M and the other 4 transitioned during the last year to the three monthly formulation). None of them have suffered neither rehospitalization or ER visits. 4 patients transitioned to Aripiprazole depot but 2 of them suffered relapse of their psychotic symptoms and at present they are under treatment with aripiprazole depot + PP1M. - 4 patients discontinued LAI treatment. Reasons for discontinuation: 1 patient refused treatment, 1 withdrawal for non-controllable EPS, and 2 withdrawal for other physical conditions. These patients suffered relapses that have required several rehospitalizations. Lost of follow up from the initial sample: 5 patients (2 died for reasons unrelated to treatment and the other 3 moved away from our sanitary area).

Conclusion: Results of these long term follow up, show that more than 50% of the sample remain stabilized under LAI treatment (Paliperidone Palmitate mainly). Patients who have discontinued LAI treatment suffered frequent relapses.

P-202 | Medication treatment practices in the maintenance phase of adults with bipolar disorder: a cross-sectional naturalistic observation study

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Background and Aims: This is a cross-sectional, naturalistic observation study examining maintenance medication treatment in bipolar disorder (BD) between the year 2000 and the present. The findings were contrasted with the applicable treatment guidelines and

evidence from randomised controlled trials. Here, we report baseline data from the 2000–2005 period.

Method: We conducted a chart review on a randomly selected group of 240 outpatients treated by community psychiatrists. Adult (18 years or older) patients with BD I and BD II, men and women were included. Medication treatment data was compared with the 1997 Canadian Network for Mood and Anxiety Treatments (CANMAT) clinical guidelines and the supporting research evidence of the time.

Results: The sample consisted of 90 men and 150 women in the age range of 33–92 years (mean 60 ± 12 years); 171 were diagnosed as BP I, 69 as BP II. A total of 82 individuals were on mood stabilizer monotherapy, 131 on combination treatments, 11 on antidepressants alone, 7 on antipsychotic monotherapy, and 9 received no medications. For those on combination treatments, 125 (95.4%) were on combinations not considered by the guidelines while 6 (4.6%) received treatments explicitly recommended by the guidelines (5 on lithium+divalproex, rated to have fair support for use in clinical practice and 1 on lithium+carbamazepine with poor support for clinical use).

Conclusion: A large proportion of BD patients in the community were receiving treatment for which there was insufficient evidence. This study will serve as a spring board to examine more recent treatment practices relative to available published guidelines.

P-203 | Ketamine for treatment-resistant unipolar and bipolar depression: are we ready?

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Background and Aims: More than a decade ago, ketamine was first shown to have rapid and lasting antidepressant effects. Since then, a vast number of studies have been conducted to try to explain the neurobiological mechanisms by which it exerts these effects, as well as explore other glutamatergic agents in the treatment of unipolar and bipolar depression.

The objective of this presentation is to show current evidence related to the efficacy and safety of ketamine for treatment-resistant depression, as well as initiate a debate of where psychiatric practice currently stands regarding its use.

Method: A review on the current evidence for the use of ketamine in unipolar and bipolar depression was made.

Results: Results have found promise in a new paradigm of treatment targets such as the glutamatergic system; alleviating treatment-resistant depressive symptoms and diminishing suicidality within hours, unlike current antidepressants and mood stabilizers.

Conclusion: Off-label use of ketamine for depression has grown over the past years, rising important questions when weighing benefits against harms. In the midst of growing evidence supporting its efficacy, it might be easy to be misled into potential risks of its

preliminary use outside of clinical trials, including public discouragement and a consequent rejection of the molecule.

P-204 | Unique pharmacology and clinical evidence supporting the antidepressant therapeutic potential of lumateperone; a novel agent in phase 3 development for bipolar depression

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Background and Aims: Lumateperone (ITI-007) is a first-in-class investigational agent which simultaneously modulates serotonin, dopamine, and glutamate, currently in clinical development for schizophrenia, bipolar depression and agitation associated with dementia.

Method: We report on the unique pharmacology of lumateperone, highlighting mechanisms supportive of antidepressant effects. We detail existing clinical data supporting antidepressant efficacy. Lumateperone has been evaluated for efficacy and safety in three late-stage trials in patients with acute schizophrenia and for safety in an open-label switching study in patients with stable schizophrenia; subgroup analyses were conducted in patients with comorbid depression. Lumateperone is being evaluated in three late-stage placebo-controlled trials in patients with depressive episodes associated with bipolar disorder.

Results: Lumateperone is a potent 5-HT_{2A} receptor antagonist, a mesolimbic/mesocortical dopamine phosphoprotein modulator (DPPM) acting as a pre-synaptic partial agonist and post-synaptic antagonist at D₂ receptors, a SERT inhibitor and an indirect glutamate enhancer downstream from dopamine D₁ receptor activation via both NMDA and AMPA current potentiation. Improvement in symptoms of schizophrenia was demonstrated for ITI-007 40–60 mg. Comorbidly depressed patients experienced meaningful improvements in depressive symptoms. Lumateperone had a placebo-like safety profile and was not associated with the adverse events (eg. weight gain, cardio-metabolic disturbances and movement disorders) typically seen with antipsychotics.

Conclusion: The potent 5-HT_{2A} receptor antagonism and D₂ receptor modulation of lumateperone coupled with inhibition of serotonin transporters and enhancement of glutamatergic neurotransmission suggest broad and rapid control of antidepressant symptoms. Lumateperone represents a potential new approach for the treatment of a broad array of neuropsychiatric symptoms, including the treatment of bipolar depression.