We measured bile acid content in urine with LC/MS/MS and serum o xo sterol with Q-TOF LC/MS in five patients with neurological symptoms. In addition, whole-genome sequences were analyzed in one patient by a particular company. The mRNA expression levels of NPC1 and NPC2 were measured using the TaqMan method and we performed their semi quantitatve assessment with beta-actin. The Mann–Whitney U test was performed to compare mRNA expression levels between patients with schizophrenia and normal controls by using SPSS Statistics.

**Results:** One patient had significantly high biological marker levels for NPC. No patients without this patient have significantly high biological markers as the disease. The mRNA expression levels of NPC1 and NPC2 in patients with schizophrenia were significantly higher than that in normal controls.

**Discussion:** The mRNA expression levels of both NPC1 and NPC2 in patients with schizophrenia were higher than those in healthy controls. Further investigation is required, including resequencing of NPC1 and NPC2, to understand the implications of the results.

**F18. PSYCHOPATHOLOGY AND SELF-CONCEPT IN A LONGITUDINAL COHORT OF CHILDREN WITH FAMILIAL HIGH RISK OF SCHIZOPHRENIA OR BIPOLAR DISORDER**

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**Background:** For both schizophrenia and bipolar disorder, the single largest risk factor for developing the disorder is having a positive family history of the disorder. Therefore, children of parents with schizophrenia or bipolar disorder constitute relevant study populations for studying etiological pathways and early antecedents of these severe mental disorders. The aim of this study was to explore potential differences in trajectories of psychopathology and self-concept from age seven to age nine in children with familial high risk of schizophrenia or bipolar disorder and controls.

**Methods:** A cohort of 522 children were recruited using the Danish nationwide registers. 202 children had at least one parent with a schizophrenia spectrum disorder, 120 had at least one parent with bipolar disorder and 200 were controls. Children in the control group were matched to children of parents with schizophrenia spectrum disorders on age, gender and municipality. Children in the control group could not have parents with schizophrenia spectrum disorders or bipolar disorder but were not excluded for any other reasons. At baseline, when the children were seven years old, they went through a comprehensive assessment including e.g. cognitive skills, motor functioning, psychopathology and self-concept. Psychopathology was examined with a variety of assessment tools including Child Behavior Checklist (CBCL). Self-concept was assessed with the ‘I Think I Am’ questionnaire, which measures five domains of self-concept. At the first wave of follow-up, at age nine the children’s psychopathology and self-concept were once again assessed with the CBCL and the ‘I Think I Am’.

**Results:** The differences in psychopathological profiles and self-concept as well as differences in trajectories from age seven to age nine between the groups will be presented at the meeting.

**Discussion:** The differences in trajectories of psychopathology and self-concept will be discussed in the context of possibilities for developing early intervention strategies towards children with familial risk of schizophrenia or bipolar disorder.

**F19. TREATMENT RESPONSE OVER THREE RANDOMIZATIONS IN THE TREATMENT OF EARLY-ONSET SCHIZOPHRENIA SPECTRUM DISORDERS STUDY (TEOSS)**

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**Background:** We sought to characterize the trajectory of symptom change in the Treatment of Early-Onset Schizophrenia Spectrum Disorders Study (TEOSS), the largest randomized control trial in early-onset schizophrenia.

**Methods:** TEOSS randomized 119 youths ages 8–19 years old to 8 weeks of treatment with molindone, risperidone, or olanzapine (First Randomization). TEOSS defined treatment response as: completion of 8 weeks of treatment with the randomized antipsychotic, a Clinical Global Impression-Improvement (CGI-I) Scale score of 1 (“very much improved”) or 2 (“much improved”), and a 20% reduction in symptoms on the Positive and Negative Syndrome Scale (PANSS). If participants did not respond to the initial randomized antipsychotic, participants were re-randomized to one of the two remaining antipsychotics (Second Randomization, n=50).

If participants did not respond to the second antipsychotic, participants received the remaining antipsychotic (Third Randomization, n=23). Prior work found there was no statistically significant difference in response rates in the First Randomization when comparing molindone (50%), risperidone (46%), and olanzapine (34%) [Sikich et al. 2008]. Our study extends prior work by reporting the response rates for the Second and Third Randomizations, and also by reporting how long it took for youths to improve clinically with each antipsychotic.

**Results:** When combining all three Randomizations, response rates were: molindone 36.8% (25/68), risperidone 48.4% (31/64), and olanzapine 33.3% (20/60) (p=0.19). Response rates for the Second and Third Randomizations were: molindone 14.8% (4/27), risperidone 40.9% (9/22), and olanzapine 33.3% (8/24) (p=0.28). For youths who responded in the First Randomization (n=55), those randomized to molindone took 5.4 weeks (SD=2.4), risperidone 4.4 weeks (SD=2.3), and olanzapine 4.1 weeks (SD=2.4) to achieve and sustain a CGI-I of 1 (“very much improved”) or 2 (“much improved”). When we combined the Second and Third Randomizations, it took youths randomized to molindone (n=4) 5.3 weeks (SD=2.8), risperidone (n=13) 4.8 weeks (SD=2.4), and olanzapine (n=4) 6.0 weeks (SD=2.2) to achieve and sustain a CGI-I of 1 or 2 (p=0.71). When we combined all three Randomizations, it took youths randomized to molindone (n=25) 5.4 weeks (SD=2.4), risperidone (n=33) 4.6 weeks (SD=2.3), and olanzapine (n=18) 4.6 weeks (SD=2.4) to achieve and sustain a CGI-I of 1 or 2 (p=0.39).

**Discussion:** This is the largest study in early-onset schizophrenia to look at response rates after failing randomized antipsychotic treatment. Furthermore, our study reports the average time it takes to achieve clinically-significant improvement in early-onset schizophrenia. ClinicalTrials.

**F20. THINK APP: A MOBILE APP-BASED INTERVENTION FOR ADOLESCENTS WITH FIRST-Episode PSYCHOSIS**

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**Background:** Early intervention programs for adolescents with first-episode psychosis have demonstrated a clinically-significant improvement in early-onset schizophrenia. ClinicalTrials.

**Methods:** A cohort of 322 children were recruited using the Danish nationwide registers. 202 children had at least one parent with a schizophrenia spectrum disorder, 120 had at least one parent with bipolar disorder and 200 were controls. Children in the control group were matched to children of parents with schizophrenia spectrum disorders on age, gender and municipality. Children in the control group could not have parents with schizophrenia spectrum disorders or bipolar disorder but were not excluded for any other reasons. At baseline, when the children were seven years old, they went through a comprehensive assessment including e.g. cognitive skills, motor functioning, psychopathology and self-concept. Psychopathology was examined with a variety of assessment tools including Child Behavior Checklist (CBCL). Self-concept was assessed with the ‘I Think I Am’ questionnaire, which measures five domains of self-concept. At the first wave of follow-up, at age nine the children’s psychopathology and self-concept were once again assessed with the CBCL and the ‘I Think I Am’.

**Results:** The differences in psychopathological profiles and self-concept as well as differences in trajectories from age seven to age nine between the groups will be presented at the meeting.

**Discussion:** The differences in trajectories of psychopathology and self-concept will be discussed in the context of possibilities for developing early intervention strategies towards children with familial risk of schizophrenia or bipolar disorder.