Conclusions: If MDMA-assisted psychotherapy significantly attenuates PTSD symptomatology and associated functional impairment, these results will form the basis for marketing authorization applications worldwide, including among participants with dissociative subtype of PTSD, depression, history of alcohol and substance use disorders, and adverse childhood experiences.

Disclosure: No significant relationships.
Keywords: neuroplasticity; MDMA; psychotherapy; ptsd

Precision psychiatry

O210

Depression patient-derived cortical neurons reveal potential biomarkers for antidepressant response

Y. Avior[1]*, S. Ron[1], D. Kroitorou[1], E. Nitzan[1], B. Corneo[2], D. Laifenfeld[1] and T. Cohen Solal[1]

[1]R&d, Genetika+, Jerusalem, Israel and [2]Stem Cell Core Facility, Columbia University, New York City, United States of America

*Corresponding author.
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Introduction: Major depressive disorder is highly prevalent worldwide and has been affecting an increasing number of people each year. Current first line antidepressants show merely 37% remission, and physicians are forced to use a trial-and-error approach when choosing a single antidepressant out of dozens of available medications.
Objectives: We sought to identify a method of testing that would provide patient-specific information on whether a patient will respond to a medication using in vitro modeling.
Methods: Patient-derived lymphoblastoid cell lines from the STAR*D study were used to rapidly generate cortical neurons and screen them for bupropion effects, for which the donor patients showed remission or non-remission.
Results: We provide evidence for biomarkers specific for bupropion response, including synaptic connectivity and morphology changes as well as specific gene expression alterations.
Conclusions: These biomarkers support the concept of personalized antidepressant treatment based on in vitro platforms and could be utilized as predictors to patient response in the clinic.

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Keywords: Depression; personalized medicine; biomarkers; disease models

O211

Individual-specific and subgroup level associations between stress and psychopathology in daily life: A temporal network investigation

R. Groen[1]*, C. Arizmendi[2], K. Gates[2], M. Schreuder[1], M. Wichers[1], C. Hartman[1] and J. Wigman[1]

[1]Department Of Psychiatry, Interdisciplinary Center Psychopathology And Emotion Regulation (icpe), University of Groningen, University Medical Center Groningen, Groningen, Netherlands and [2]Department Of Psychology And Neuroscience, University ofNorth Carolina at Chapel Hill, Chapel Hill, United States of America

*Corresponding author.
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Introduction: Stress is a risk factor for developing psychopathology. Emerging evidence suggests that daily experiences of stress may also predict symptoms during the day. It is unclear to what extent the influence of stress on psychopathology during the day is the same across individuals (including across diagnostic boundaries), and which effects are individual-specific
Objectives: This study aims to reveal how stress and symptoms are interrelated in a cross-diagnostic context by modeling individual level temporal networks, and examining subgroups with similar dynamics.
Methods: Hundred twenty two young adults (43.4% women) with a wide range of psychopathology in terms of severity and type of problems completed a six-month daily diary study. We used a temporal network approach (i.e., group iterative multiple model estimation) to model how stress and ten specific symptoms (e.g., feeling down, paranoia, restlessness) were related across time at the individual-specific, subgroup, and group level.
Results: After controlling for the lagged influence of stress on itself, stress level predicted the level of restlessness, worrying, nervousness, and feeling down during the same day for >70% of individuals. We observed three larger subgroups with each over 20 individuals, whose temporal networks showed different dynamic patterns involving specific symptoms. Effects of stress on other specific symptoms differed across individuals, and these were not subgroup-specific.
Conclusions: This study showed important overlap between individuals in terms of impact of stress on psychopathology in daily life. Subtle differences between individuals were also observed. Possibly, such differences are relevant for examining individual-specific vulnerability for future psychopathology. This requires further investigation.

Disclosure: No significant relationships.
Keywords: cross-diagnostic; Stress reactivity; person-specific analysis; temporal network analysis

O212

Pharmacogenetic drug use in young danish individuals with severe mental disorders

C. Lunenburg[1,2], K. Ishtiak-Ahmed[1,2], T. Werge[3] and C. Gasse[1,2,4,5]*

[1]Dep. Affective Disorders, Aarhus University Hospital Psychiatry, Aarhus N, Denmark; [2]Department Of Clinical Medicine, Aarhus University, Aarhus, Denmark; [3]Institute Of Biological Psychiatry, Mental Health Center Sct. Hans, Copenhagen, Denmark; [4]Psychosis Research Unit, Aarhus University Hospital Psychiatry, Aarhus N, Denmark and [5]Centre For Integrated Register-based Research, Aarhus University, Aarhus, Denmark

*Corresponding author.
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Introduction: Pharmacogenetics (PGx) studies genetic variance and related differences in drug outcomes. PGx guidelines for

psychotropic drugs are available (PGx drugs), but PGx testing is used only limitedly in psychiatric clinical practice.
Objectives: The aim of this study is to pinpoint different aspects of PGx drug use in the population, to support clinical uptake of PGx.
Methods: This drug utilization study investigated prescription PGx drug use in 56,065 young individuals with different severe mental disorders (SMD) in the Danish iPSYCH sample (born 1981-2005). We investigated the number of PGx drug users (incidence, prevalence), age (at first PGx drug use), sex, multiple PGx drugs per user (in light of panel-based PGx testing) and concomitant use of PGx drugs (in light of combinatorial PGx testing).
Results: We identified substantial PGx drug use in terms of incidence rates (e.g. 333 per 10,000 person years for the anticonvulsant lamotrigine) and prevalence (e.g. 15,260 users for the antidepressant citalopram) in patients with SMD. The age of first time PGx drug use ranged from 11.6-20 years, depending on SMD and sex. On average, more than one PGx drug was used by a single person (range 1.6-5.6 drugs, depending on SMD) or even used concomitantly (41-69%) affecting mostly two different PGx genes (84-92% of concomitant PGx drug users).
Conclusions: PGx drugs were frequently used in young individuals with SMD, often subsequently and concomitantly, arguing for panel-based/combinatorial PGx testing over single-gene testing. PGx testing could be applied already at a very young age.

Disclosure: We thank the iPSYCH consortium, in specific the iPSYCH PI's (Merete Nordentoft, Anders Børglum, Preben B. Mortensen, Ole Mors, Thomas Werge and David M. Hougaard). The iPSYCH project is funded by the Lundbeck Foundation Denmark and the universities and un
Keywords: Pharmacogenetics; Drug Utilization; severe mental disorders

O213

Pharmacogenetics and adhd treatment outcomes in the danish population-based IPSYCH sample

C. Lunenburg[1,2], K. Ishtiak-Ahmed[1,2], J. Thirstrup[3] and C. Gasse[1,2,4,5]*

[1]Department Of Clinical Medicine, Aarhus University, Aarhus, Denmark; [2]Dep. Affective Disorders, Aarhus University Hospital Psychiatry, Aarhus N, Denmark; [3]Department Of Biomedicine, Faculty of Health, Aarhus University, Aarhus, Denmark; [4]Psychosis Research Unit, Aarhus University Hospital Psychiatry, Aarhus N, Denmark and [5]Centre For Integrated Register-based Research, Aarhus University, Aarhus, Denmark

*Corresponding author.
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Introduction: Pharmacogenetics (PGx) studies genetic variance and related differences in drug outcomes. The aim of PGx testing is to increase therapy efficacy and safety, by applying e.g. dose adjustments in patients with a specific geno- or phenotype. PGx guidelines for psychotropic drugs are available (PGx drugs), including atomoxetine used in the treatment of attention deficit hyperactivity disorder (ADHD). In Denmark, broad implementation of PGx is currently still low, possibly due to the lack of population-based studies investigating the real-world impact of PGx variability.
Objectives: The aim of this study is to investigate the association of PGx variability (patients' genotype/phenotype) in users of atomoxetine and different treatment outcomes in a large population-based sample of individuals with ADHD.
Methods: This study will use data of the large Danish population-based iPSYCH case-cohort study sample including information on genetic variants, prescription drug use and outcome data, e.g. psychiatric and somatic hospitalizations and death. The study population comprises all individuals diagnosed with ADHD born 1981-2005 with at least one prescription for atomoxetine between 1995 and 2016. All individuals will be categorized according to their CYP2D6 phenotypes. We will perform Cox regression analysis to estimate the hazard ratios comparing the rates of the different outcomes in people with different phenotypes adjusted for a number of confounding factors.
Results: We have identified approximately 20,000 individuals with ADHD, of whom an estimated 10-20% have filled at least one prescription of atomoxetine.
Conclusions: We expect results in the beginning of 2021.

Disclosure: We thank the iPSYCH consortium, in specific the iPSYCH PI's (Merete Nordentoft, Anders Børglum, Preben B. Mortensen, Ole Mors, Thomas Werge and David M. Hougaard). The iPSYCH project is funded by the Lundbeck Foundation Denmark and the universities and un
Keywords: Pharmacogenetics; ADHD; atomoxetine

O214

Pharmacogenetic profiles of young danish individuals with and without severe mental disorders

C. Lunenburg[1,2], J. Thirstrup[3] and C. Gasse[1,2,4,5]*

[1]Department Of Clinical Medicine, Aarhus University, Aarhus, Denmark; [2]Dep. Affective Disorders, Aarhus University Hospital Psychiatry, Aarhus N, Denmark; [3]Department Of Biomedicine, Faculty of Health, Aarhus University, Aarhus, Denmark; [4]Psychosis Research Unit, Aarhus University Hospital Psychiatry, Aarhus N, Denmark and [5]Centre For Integrated Register-based Research, Aarhus University, Aarhus, Denmark

*Corresponding author.
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Introduction: Pharmacogenetics (PGx) studies genetic variance and related differences in drug outcomes. PGx guidelines for psychotropic drugs are available (PGx drugs). By executing PGx testing in a prospective or pre-emptive setting, dose adjustments or even change of treatment type can be applied prior to start of therapy to patients who carry a specific geno- or phenotype (i.e. actionable geno- or phenotypes). By doing so, increased efficacy of therapy or reduced risk of adverse events of treatment can be accomplished. In Denmark, broad implementation of PGx is currently still low.
Objectives: The aim of this study is to classify the PGx profiles of Danish individuals with and without severe mental disorders (SMD), to be used in follow-up studies investigating PGx and drug outcomes.
Methods: This study made use of imputed genotyping data of the Danish iPSYCH sample, which includes 77,639 young individuals born between 1981-2005, with or without a diagnosis of one or more of five selected SMD (i.e. depression, attention-deficit/hyperactivity disorder, autism, bipolar disorder and schizophrenia). We investigated a panel of 48 genetic variants with known PGx

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