

recurrent trait of psychopathology. A translationally validated rodent model of AAC is the elevated plus maze (EPM) test, recently shown to be pharmacologically controlled in human and rodents via homologous neural substrates. Thanks to this test, we identified the involvement of the epigenetic enzyme LSD1 as a molecular restrainer of anxiety. We identified LSD1 aberrant regulation within the hippocampus of suicidal victims, suggesting its broad functional involvement in maladaptive behaviors. Interestingly, thanks to the parallel employment of rodent models, we evaluated a stress-related LSD1 homeostatic regulation that transiently limits memory formation-instrumental gene expression in the hippocampus upon trauma. Our work shed new light on epigenetic processes devoted to trauma resiliency through a negative regulation of anxiety plasticity.

Disclosure: No significant relationships.

Keywords: Trauma; epigenetics; Lysine Specific Demethylase 1; Hippocampus

S0048

“Neural Network Responses to Traumatic Stress Predicting its Longterm Consequences”

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Adaptive responding to severe stress or trauma requires an optimized reconfiguration in the activity of large-scale neural networks. In vulnerable individuals, this response can go awry, inducing long-term consequences on mental health, such as posttraumatic stress disorder (PTSD). Improved understanding of the neurobiological mechanisms underlying this maladaptive neural response to trauma might benefit early intervention (i.e., secondary prevention) options in stress-related psychopathology. Yet, because of obvious ethical limitations these acute responses to trauma are inaccessible in humans. Therefore, we here used a mouse model for PTSD to investigate adaptive vs. maladaptive neural responding to trauma, the latter leading to long-term behavioral consequences mimicking symptoms observed in PTSD patients. By using transgenic mice, we were able to fluorescently label all activated neurons during trauma exposure, and relate these activation patterns to later PTSD-like symptomatology. We observed increased neuronal activity in sensory-processing and memory-related areas of mice vulnerable to the long-term consequences of trauma exposure, compared to resilient mice. Moreover, vulnerable mice displayed increased functional connectivity between the default mode network and lateral cortical network (a proxy for the central executive network in humans) during trauma processing relative to resilient mice. As such, these findings provide first insight in how a maladaptive neural response to trauma can result in later symptoms of psychopathology.

Disclosure: No significant relationships.

Keywords: neural networks; animal model; resilience; PTSD

Long and Short Term Post COVID-19 Neuropsychiatric Disorders: From Clinics to Neuroimaging

S0049

“Delirium and COVID-19”: From Symptomatology to Laboratorial and Neuroimaging Findings”

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Introduction: The infection caused by the SARS-CoV-2 virus called COVID-19 may affect not only the respiratory system but also the central nervous system (CNS). Delirium is a frequent and serious condition in COVID-19 patients and may be caused by the direct invasion of the CNS or the induction of CNS inflammatory mediators or by indirect effects due to the systemic inflammatory status, other organ failure, prolonged mechanical ventilation time, immobilization but also social isolation. We aim to critically review literature reporting this syndrome in patients infected by the SARS-CoV-2 virus with a particular emphasis on reported clinical, laboratorial and neuroimaging findings. **Methods:** A state-of-the-art literature review was performed using PubMed, Embase and Web of Knowledge using the following keywords: delirium, COVID-19, SARS-Cov-2, neuroimaging, laboratorial findings. **Results:** More than 50% of patients with COVID-19 may present with delirium and in about 20% of the cases this is the primary presentation of the disorder. Previous data suggests that these patients may show a higher frequency of certain symptoms such as agitation, myoclonus, abulia, and alogia. Some distinct neuroinflammatory syndromes have been identified in patients presenting with delirium associated with the virus, namely, autoimmune encephalitis, Acute Disseminated Encephalomyelitis (ADEM) and stroke showing its potential for CNS involvement. Many of these patients present normal brain imaging, EEG and CSF findings but others have more specific laboratorial changes such as elevated creatinine kinase, elevated D-dimer levels, abnormal coagulation parameters and positive SARS-Cov-2 PCR in CSF or meningeal enhancement, ischemic stroke and perfusion changes in MRI imaging.

Disclosure: No significant relationships.

Keywords: COVID-19; Delirium; Laboratory findings; neuroimaging findings

S0050

Social Isolation and its Brain Correlations: From Symptomatology to Neuroimaging Findings

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According to the social brain hypothesis, the human brain includes a network designed for the processing of social information. This network includes several brain regions that elaborate social cues, interactions and contexts, i.e. prefrontal paracingulate and parietal cortices, amygdala, temporal lobes and the posterior superior temporal sulcus. We will explore neuroimaging studies that investigated social isolation in healthy subjects.

Disclosure: No significant relationships.

Keywords: social isolation; brain networks; Brain; Neuroimaging

S0051

“Pre-Existing and New-Onset Cognitive Impairment in Patients with COVID-19”

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Recently, many reports have been available related to neuropsychiatric complications in the course of COVID-19 infection, and its long-term consequences. Many of them are related to psychological factors, such as: isolation, change of existing habits, fear of getting sick and dying, fear of losing a job and fears related to the financial situation, which resulted in an increase in the occurrence of diseases and mental disorders such as adaptation and anxiety disorders, depression. It has been also reported that treatment in conditions of intensive care unit lead to high prevalence of psychiatric disorders like PTSD in discharged patients. In our own studies we observed that patients with new appearing psychiatric symptoms were mostly those, who were professionally active, but did not work remotely. The time the patients spent at home had a negative impact on their well-being, they generally felt worse, their family life suffered more frequently. The most common cognitive symptoms, which are reported embrace: problems with short- and long-term memory, lack of mental clarity, feeling eclipsed, lightheaded, poor concentration, mental fatigue. We also present here a series of post-acute COVID cases from the examined population and provide a concise comparison of observed symptomatology with previous reports.

Disclosure: No significant relationships.

Keywords: Neuropsychiatric symptoms; cognitive functions; Covid-19

E-Mental Health for Anxiety Disorders

S0052

Interreg and WHO-CC : a Fruitful Collaboration in the Service of E-Mental Health

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Within the IT4Anxiety project, the World Health Organisation Collaborating Centre (WHOCC) for research and training in

mental health of Lille, is the leader of the work package “identification of needs among the different actors in the mental health field”. The complexity of our object of study - the use of new technologies for people’s mental health - requires undertaking a multi-disciplinary approach, considering both the clinical and the socio-anthropological aspects. A mixed-methods research conducted with people experiencing anxiety, carers and professionals, aims to describe the use, acceptability and needs of the different categories of actors concerned by the use of new technologies. The quantitative part is a cross-sectional, descriptive, observational study. A anonymous self-administered questionnaire is distributed online and in hard copy in the 5 partner countries (Belgium, France, Germany, the Netherlands and the UK) to the three study populations. It consists of access to digital tools or technological solutions, experience related to these and the contribution and perceived effect of users to e-mental health related projects. The qualitative approach includes a detailed understanding of the potential therapeutic and socio-anthropological changes that these tools can bring. It explores : description of used technologies, the representations and emerging needs in relation to the management of anxiety and the improvement of mental health ; the clinical impact perceived by all stakeholders and the implementation of new ways of living with the tools. This international research will enable a comparative study to be carried out on the dynamics of appropriation of these e-(mental) health devices in different countries of the North-Western European region.

Disclosure: No significant relationships.

Keywords: mental health;; innovative technology;; digital psychiatry;; Anxiety,

S0053

The IT4 anxiety project : Improving Anxiety Prevention and Management with Innovative Digital Solutions

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Technological innovations give new perspectives in many fields, including health. It was in this context that the IT4Anxiety project was born in 2019 bringing together mental health professionals and start-ups, but also universities, research centres, higher education establishments and public authorities from the North-West Region of Europe. The project is challenging our ability, as partners, to gather stakeholders from different background, medical and non-medical field, in order to support the implementation and co-conception of innovative solutions with the objective of reducing the anxiety of mental health service users. During the four years of project implementation (2019-2023), the stakeholders will have opportunities to work with the end-users, expecting to address the needs of around 3,000 mental health service users suffering from anxiety. The fifteen start-up involved in the project activities will be recruited through hackathons and calls based on identified needs. They will join the project in order to test and improve their solutions. This will create opportunities to connect the start-ups with the medical world, research codes and procedures and to give them a new perspective in the understanding of their targeted market segment. Furthermore, almost a thousand mental health professionals will be trained in e-mental health, benefiting from our