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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