

During the talk she will provide guidance on what should and should not be done for the end users, as well as strengths and limitations of the chatbot intervention.

**Disclosure of Interest:** None Declared

## S0113

### Treatment Options for Problematic Internet Use

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**Abstract:** Research investigating interventions for problematic usage of the Internet (PUI) remains at an early stage but is steadily developing. In terms of therapies assessed through randomized clinical trials, literature suggests that cognitive behavioral therapy may be the most effective intervention but definitive statements as to its benefits need more testing. In relation to pharmacological treatments for PUI, studies have largely examined the efficacy of agents such as antidepressants and stimulants with a potential therapeutic effect of escitalopram, bupropion, methylphenidate, and atomoxetine. Another emerging form of potentially useful treatment involves non-invasive neurostimulation techniques such as transcranial magnetic stimulation and transcranial direct current stimulation. These interventions are thought to mediate their effect in PUI via stimulation of cortical brain cells and modification of their related functions. In summary, although the limited available treatment evidence includes some promising findings, there is a need for higher-quality research to develop best practice guidelines and determine cost-effective options in PUI treatment. The presentation will provide a state-of-the-art overview in the field of therapeutics for PUI.

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## S0114

### Circulating immune cell composition and activation status associate with brain white matter microstructure in bipolar depression

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**Abstract:** Bipolar disorder (BD) has been consistently associated with alterations in the immune system. Evidence suggests a condition of systemic low-grade inflammation due to decreased adaptive, increased innate immunity, with higher levels of circulating cytokines, higher macrophage/monocyte inflammatory activation patterns, and higher neutrophils to lymphocyte counts; and with a dynamic pattern of premature immunosenescence and partial T

cell defect starting early in adolescence, involving a reduction of naïve T cells and an expansion of memory and senescent T cells. Quantitative analysis of circulating inflammatory markers suggested persistent low-grade inflammation.

A growing literature suggests that the immune system plays a core role in maintaining brain homeostasis, with both adaptive and innate immune support, ensured by cell trafficking across the blood brain barrier, being essential for brain maintenance and repair in healthy conditions, and disrupted in brain disorders including BD. Measured in peripheral blood, these markers of altered immuno-inflammatory setpoints parallel activation of microglia and disruption of white matter (WM) integrity in the brain.

Studies in the field are in its infancy, but findings by our group showed that: circulating Th17 cells correlated with higher FA, while regulatory FOXP3<sup>+</sup> cells correlated with higher RD and MD, and with lower fMRI neural responses in the right dorsolateral prefrontal cortex; higher circulating cytokine-producing NK cells were fostered by ongoing lithium treatment and directly correlated with better FA, and inversely with RD and MD, also partially mediating the known benefits from lithium on WM; and activation status and expression of killer proteins by cytotoxic CD8<sup>+</sup> T cells negatively associated with WM microstructure, thus suggesting that CD8<sup>+</sup> T cells can leave the blood stream to migrate into the brain and induce an immune-related WM damage in BD.

Implications of these findings for neuroprogression, clinical outcomes, and new treatment strategies of the disorder will be discussed.

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## S0115

### Proactive psychiatry of addiction: toward the normalization of early prevention

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**Abstract:** Most substance use disorders (SUDs) emerge in adolescence and young adulthood. Early interventions in young people may reduce the risk and severity of SUD and other mental disorders. However, we are not able to reach our young people early enough for prevention and treatment, and when we do, they often already show a high concentration of comorbid mental disorders and signs of a chronic intermittent course of SUD. Hence, we must reach our addicted young patients at an earlier stage, when symptoms are still mild or transient, or perhaps even before that – when they only show precursors of possible dysfunction.

One of the most prominent precursors of dysfunction is our ability – or lack thereof – to control or “self-regulate” our behaviors, cognitions, and emotions. Many scientists argue that poor self-regulation is perhaps the core determinant of the development of mental health disorders, including addiction. Several prospective general population studies have shown that poor childhood self-control early in life is a strong predictor of many negative outcomes later in life, up to 20 to 30 years later in adulthood. Although correlational in nature, these findings suggest that early childhood interventions that are deliberately aimed at improving self-