

inflammation-related comorbidities, including metabolic diseases. In fact, there exists a bidirectional relationship between inflammation and metabolic dysfunction that could be linked to multiple factors, including life style, stress and genetic predisposition. MDD patients exhibit several metabolic disturbances such as overweight, insuline resistance and dyslipidemia, among others, which are not always fully explained by life style factors. These findings have led to the formulation of an immunometabolic hypothesis, which could be present in a subgroup of MDD patients, associated to specific symptoms and clinical features.

In this presentation, data reflecting the complex relationships and interactions between immune and metabolic disturbances in MDD will be shown. In particular, it will be shown how machine learning approaches can be useful to disentangle the clinical and biological heterogeneity of MDD, using immunometabolic biomarkers.

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## S0010

### Exploring the role of lifetime brain maturation trajectories and their determinants in the onset of psychiatric disorders

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**Abstract:** Recently, the diffusion of sophisticated neuroimaging techniques has tremendously advanced our understanding of brain structure and function. Nevertheless, **the current knowledge of the neurobiology of complex mental illnesses** - like major psychoses and depression - **is limited, hindering the development and validation of biomarkers for diagnosis, prognosis, and prediction of treatment response.**

Increasing evidence is suggesting a crucial role of environmental, personal, and behavioral processes, interacting among themselves and with genetics, in shaping mental functioning and psychopathological risk. In this context, the study of brain maturation trajectories and of their association with genetic and environmental factors can provide key insights on the risk for the emergence of mental illnesses over lifetime.

The present lecture will provide an **overview of our recent research on the brain underpinnings of psychotic and affective disorders onset during either adolescence/young adulthood or late adulthood.** Evidence obtained from young samples of twins will be presented to provide useful information on the **genetic and environmental determinants of physiological and pathological neurodevelopmental trajectories.** The complex **relationships among life events, brain morphology and connectivity, and psychopathology** will be discussed by showing our recent findings on multicentric transdiagnostic samples of young adults and elders. Special focus will be given to the brain mechanisms affected by social stressors, including discrimination and bullying, as well as chronic stress, and their possible role in facilitating the onset or in enhancing the severity of psychotic and affective disorders.

**Disclosure of Interest:** None Declared

## S0011

### Physical comorbidities in people with severe mental disorders: promises and future challenges

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**Abstract:** The comorbidity of mental and physical disorders is gradually becoming recognized as a major problem for health care. Its public health importance is vast and growing for a variety of reasons including the extension of life expectancy, the imperfection of currently available treatments of mental and many physical disorders and the tendency of fragmentation of medicine into ever more limited specialties. The problems related to comorbidity are also rapidly increasing in low- and middle-income countries where in addition to the issues mentioned above there is also a scarcity of means to deal with them.

The presentation will remind the audience of the complexity of the problems and draw attention to action that could be taken by public health authorities and the medical profession in the areas of teaching, organization of service and research.

**Disclosure of Interest:** None Declared

## S0012

### Exploring the Restoration of Brain Connectivity during Weight Normalization in Severe Anorexia Nervosa

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**Abstract:** Anorexia nervosa is a persistent and often difficult to treat eating disorder with significant physical and mental health consequences. While it is known that the disorder is associated with alterations in brain functional connectivity during the phase of acute underweight, the effect of weight normalization on brain connectivity remains unclear.

This talk focuses on the recovery of intrinsic brain connectivity during weight normalization in severe anorexia nervosa, presenting data from a longitudinal study. Using resting-state functional magnetic resonance imaging, we assessed brain connectivity at three different stages of inpatient treatment. Our findings indicate that patients with severe anorexia nervosa have weaker intrinsic connectivity and altered network topology, which do not improve during treatment. These persistent disruptions in brain networks suggest that severe anorexia nervosa may have long-term effects on the way the brain processes information, even after weight is restored.

**Disclosure of Interest:** None Declared