fundamental neural processes and are increasingly implicated in the aetiology of mental illness. For example, cytokines, innate immune system proteins responsible for coordinating bodily responses to infection, are also critical to fundamental learning processes such as long term potentiation (LTP) in the brain. Microglial cells, the brains equivalent of macrophages, appear central to dendritic pruning and neural plasticity while MHC proteins central to self/non-self distinctions play a critical role in early neural development. Perhaps unsurprisingly given these roles aberrant immune responses are also increasingly implicated across the range of mental illnesses. In this talk I shall review mechanisms of immune modulation of neural function, summarise evidence implicating aberrant immune responses in common mental illnesses then finally present compelling new data demonstrating anti-depressant properties of a commonly used immuno-modulatory therapy. Together illustrating that psychoneuroimmunology has rapidly become an exciting new frontier for psychiatry.

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Once considered an immune privileged site, it is now clear that immune actions in the brain play a critical role in many