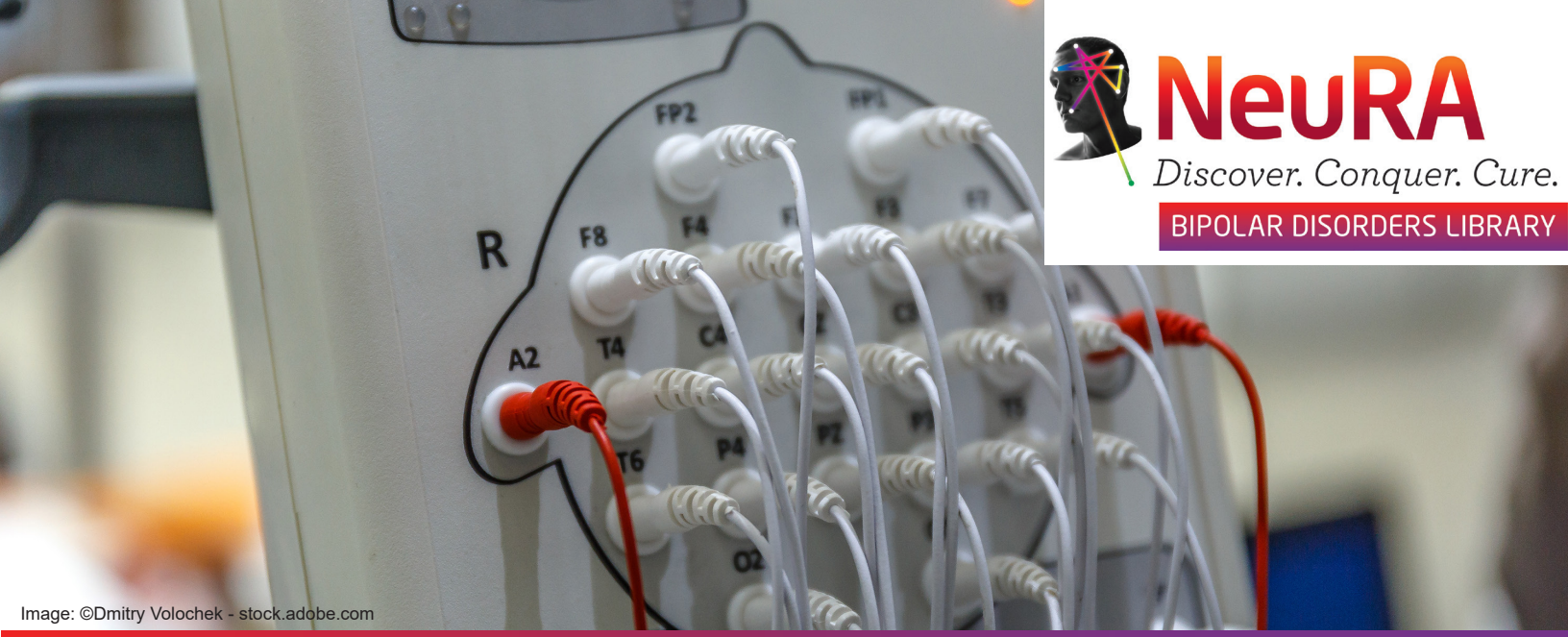

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BIPOLAR DISORDERS Factsheet

December 2021

What is the P50?

The P50 event-related potential is interpreted as a physiological substrate for an inability to "gate" or inhibit irrelevant sensory information. In this paradigm, paired auditory clicks are presented, separated by a 500ms interval. The first click initiates or conditions the inhibition, while the second (test) click indexes the strength of the inhibition. P50 ratio is quantified as the amplitude of the response to the second click divided by the first. An absence of a reduced response to the second stimulus is interpreted as a failure of inhibitory mechanisms, postulated to represent a defect in sensory gating, and a larger ratio is indicative of reduced cortical inhibition.

What is the evidence for P50 anomalies in people with bipolar disorder?

Moderate quality evidence shows large effects of increased P50 S2/S1 ratio and decreased P50 S1-S2 difference in people with bipolar disorder compared to controls. Medication may improve S2/S1 ratio. There were no effects of psychotic symptoms on P50 sensory gating.

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NeuRA (Neuroscience Research Australia) is one of the largest independent medical and clinical research institutes in Australia and an international leader in neurological research.

Diseases of the brain and nervous system pose the greatest health, economic and social burden of any disease group because they are chronic, debilitating and have no known cures.

Medical research is the cornerstone of efforts to advance the health and wellbeing of families and the community. Our dedicated scientists are focussed on transforming their research into significant and practical benefits for all patients.

While we hope you find this information useful, it is always important to discuss any questions about bipolar disorder or its treatment with your doctor or other health care provider.

For more information see the technical table

HOW YOUR SUPPORT HELPS

We are able to make significant advances due to the generosity of countless people. Your donation allows us to continue to work towards transforming lives. For information on how you can support our research, phone **1300 888 019** or make a secure donation at **neura.edu.au**.

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