



NeuRA

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BIPOLAR DISORDERS Factsheet

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What are S100 proteins?

S100 proteins are a subgroup of proteins which regulate intracellular processes such as cell growth and motility, cell cycle regulation, transcription and differentiation. They are characterised by two calcium binding sites of the helix-loop-helix conformation, and at least 21 members have been identified so far. S100B is one member of this subgroup that is primarily found in the cytoplasm of astrocytes. It regulates cell shape, energy metabolism, and intracellular signal transduction. Serum S100B has been used as a marker for CNS damage, particularly in astrocytes, as well as a marker of blood-brain-barrier disruption.

What is the evidence for S100 proteins in people with bipolar disorder?

Moderate quality evidence suggests a large effect of increased serum S100B in people with bipolar disorder compared to controls. This was found regardless of age, gender, current mood state (depression, hypo/mania, mixed, or euthymic), illness duration, or measure (serum or plasma).

There were similar sized increases in serum S100B in people with bipolar disorder or major depression, but the effect was larger in people with schizophrenia compared to controls.

For more information see the technical table



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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.

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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