



#### KEY WORDS

- ✓ Beta alanine
- ✓ Schizophrenia
- ✓ Pre-Pulse inhibition
- ✓ Sensory Gating
- ✓ Neurotransmitter

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## EVALUATION OF PRE-PULSE INHIBITION VALUES IN ACUTE AND CHRONIC BETA-ALANINE ADMINISTERED RATS

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#### THESIS ABSTRACT

Pre-pulse inhibition (PPI) is the reduction in the startle reflex by a lower-intensity and short-term prepulse given before an audible, visual or tactile stimulus strong enough to induce a startle reflex. PPI shows some deterioration in many psychiatric diseases, especially in schizophrenia, and in the patient's family and healthy relatives, and as such, it has been called an endophenotype and has recently become a frequently used test in drug development studies. Beta alanine has known gabaergic effects and the potential to improve NMDA hypofunction via glycine and consequently the irregularities in the dopaminergic system, and to mediate structural repair in the brain with vitamin B5 (pantothenic acid), which it transforms by strengthening cognitive functions with itself and its metabolites. With this potential effect, we evaluate that it can be used as a treatment and potentiating agent in schizophrenia. Based on this hypothesis, the aim of this study is to investigate the effects of acute and chronic use of beta-alanine on PPI values, which is one of the endophenotypic markers of schizophrenia.

#### APPLICATION AREAS OF THE THESIS RESULTS

Write the application areas of the results of the thesis in maximum 800 characters and in two paragraphs. The entire form should not exceed one page.

#### ACADEMIC ACTIVITIES

It is promising in terms of using  $\beta$ -alanine, an endogenous molecule, with a low side-effect profile in schizophrenia, which is difficult to treat.

