



FENS Forum 2008

For posters, morning sessions: 9:30-13:30; afternoon sessions 13:30-17:30.
Authors are expected to be in attendance at their posters at the time indicated.
For other sessions, time indicates the beginning and end of the sessions.

First author Albasanz, José Luis (poster)

Poster board C11 - Sun 13/07/2008, 16:45 - Hall 1

Session 049 - Parkinson's 1

Abstract n° 049.1

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Title Metabotropic glutamate receptors are impaired in Parkinson Disease cortex brain.

Text Metabotropic glutamate (mGlu) receptors are G-protein coupled receptors which have been recently implicated in the neuropathogenesis of Parkinson Disease (PD). Different components of mGlu receptors transduction pathway were studied in frontal cortex from PD cases as compared with age-matched healthy controls. Total mGlu receptors determined by radioligand binding assay were significantly decreased in frontal cortex from PD cases. However, type I of mGlu receptors determined using [3H]Quisqualic acid were significantly increased in PD. The increase in mGlu1 receptor determined by Western-blotting and the absence of variation in mGlu5 receptor level suggest mGlu1 as the responsible for the increment in [3H]Quisqualic binding. On the other hand, alpha subunit of Gq protein level was slightly decreased in PD. Phospholipase C beta1, the main isoform coupled to mGlu1 receptors was not significantly affected. Finally, delta isoform of protein kinase C was significantly increased in PD cases. These results show that glutamate transduction pathway mediated by metabotropic glutamate receptors is affected in frontal cortex from Parkinson disease and suggest these receptors as an important target to pharmacological treatment of this neuropathology.

Theme C - Disorders of the nervous system
Neurodegenerative disorders and movement disorders - Parkinson's disease: human studies and therapies