ENHANCE EXCITATORY NEUROTRANSMISSION IN HIPPOCAMPAL SLICES BY ANTI-P AUTOANTIBODIES FROM A PATIENT WITH SYSTEMIC LUPUS ERYTHEMATOSUS (SLE)

J. Parodi1, C. Carcamo2, M. Bravo3, L. Massardo3, S. Jacobelli3, N. Inestrosa4, A. Gonzalez3

1Biología Celular, 2Neurology, 3Reumatologia, 4Biología Celular, Pontificia Universidad Católica de Chile, Santiago, Chile

Introduction: Patients with SLE frequently display neuropsychiatric symptoms that cannot be attributed to vascular disease. A neuropathogenic role of specific autoantibodies, such as anti-P ribosomal protein autoantibodies, is an interesting possibility. Actually, anti-P autoantibodies have been so far associated with psychotic symptoms.

Aims: To analyze synaptic effects of autoantibodies from a SLE patient with focal epilepsy.

Results: Immunoblot and ELISA assays revealed anti-P autoantibodies both in serum and cerebrospinal fluid (CSF) of the patient. Using a setting of mice hippocampal slices, we found that both serum (1/1000 dilution) and CSF (1/100 dilution) provoked a 2-fold increase in the amplitude of field excitatory post-synaptic potentials, without altering the pre-synaptic response or the paretic pulse facilitation. Anti-P autoantibodies purified by affinity chromatography reproduced the effects.

Conclusion: Anti-P antibodies have post-synaptic effects upon glutaminergic transmission and, therefore, can potentially mediate alterations leading to epileptic symptoms (Financed by Basal Project 12/2007)