

Title: Negative regulation of golli protein on store-depletion-induced calcium influx in T cells.

Authors: Ji-Ming Feng\*, Yan-Hong Kathrin Hu and Anthony T. Campagnoni

Affiliation: Neuropsychiatric Institute, UCLA School of Medicine, 760 Westwood Plaza, Los Angeles CA 90024.

\*Corresponding Author: Ji-Ming Feng ([jfeng@mednet.ucla.edu](mailto:jfeng@mednet.ucla.edu) <<mailto:jfeng@mednet.ucla.edu>> ).

Abstract: Calcium influx is crucial for T cell activation and differentiation. The detailed regulation of this process is still unclear. In this study, we found that that golli protein, the alternatively spliced product of myelin basic protein gene, plays a critical role in regulating calcium influx in T cells. Golli-deficient T cells are hyperproliferative and show the enhanced calcium uptake upon TCR stimulation. We further found that the action of golli is on the inhibition of the store-depletion-induced calcium entry in T cells. Despite the hyperproliferation in vitro, golli-deficient mice are resistant to EAE induction. The results indicate that golli functions in a unique way to regulate T cell clonal expansion and its subsequent effector cell differentiation through a mechanism involving the modulation of the store-depletion-induced calcium entry.

Ji-Ming Feng, Ph.D.

Assistant Research Neurobiologist,  
Neuropsychiatric Institute,  
UCLA School of Medicine,  
NPI/47-376,  
760 Westwood Plaza,  
Los Angeles, CA 90024

Tel:(310)-825-0459