conferenceseries.com

25th World Congress on

CANCER SCIENCE AND THERAPY

10th World Congress on

BIOMARKERS & CLINICAL RESEARCH October 18-20, 2017

7 Baltimore, USA

Neuropharmacology of severe disorders of consciousness due to TBI: From molecular neuroimaging to clinical trials (or the other way around)

Esteban A Fridman Weill Cornell Medicine, USA

Chronic disorders of consciousness (DOC) produced by very severe structural brain injuries remain a complex and challenging Garea of study due to the lack of animal models of the disease. Such conditions includes the vegetative state, marked by a wakeful appearance without any signs of behavioral responsiveness, and minimally conscious state, where patients demonstrate limited behavioral evidence of consciousness. Although some patients may retain residual capacities that can be revealed by pharmacological therapies, typically dopaminergic agents, only amantadine has demonstrated some efficacy accelerating the rate of recovery. Since amantadine is a weak dopaminergic drug, my line of research is devoted to better understanding the physiopathology underlying this complex disease by using molecular neuroimaging (i.e., FDG-PET; [11C]raclopride-PET; and MRI). Using this approach, we were able to define a new set of biomarkers suggesting the existence of a presynaptic dopaminergic deficit in severe DOC that could be reversed by introducing the dopamine precursor L-DOPA. In this context, I will propose a new pharmacological model and approach for patients in vegetative state and minimally conscious state in order to facilitate their emergence from unconsciousness, and suggest directions for future research in the extended field of TBI.

esf2005@med.cornell.edu