

# HIV-1CA PROTEIN BEHAVIOR AND INTERACTIONS DURING HUMAN IMMUNODEFIENCY VIRUS-1 (HIV-1) MATURATION

## Abstract:

The immature immunodeficiency virus type (HIV-1) is structurally composed by an HIV-1 Gag precursor protein, which is a multi-domain polyprotein that is divided into four major domains: the N-terminal matrix (MA), the capsid (CA), the nucleocapsid (NC), and the C-terminal p6. When the maturation of the virus occurs, HIV-1 Gag protein is proteolytically cleaved into the main CA. The HIV-1 has a highly ordered core structure that consists of multimeric capsid (CA) proteins. The monomer CA contains two independently folded domains, the N-terminal domain CTD and C-terminal domain NTD.<sup>1</sup> HIV-1 CA has multifaceted roles during HIV-1 morphogenesis and is thus regarded as a promising target for future antiviral intervention.<sup>2</sup> The aim of this study is to determine the behavior and interactions of this protein during the viral maturation and its relation to it. We will apply nuclear magnetic resonance (NMR) spectroscopy to characterize the HIV-1 CA protein.