USF NEXUS INITIATIVE 2018 AWARD RECIPIENT

Gary Daughdrill

Structure and Dynamics of the Adenovirus E1A Protein Binding to the Human Retinoblastoma Protein, Rb

The early E1A viral protein from adenovirus binds and inhibits the retinoblastoma (pRb) tumor suppressor, resulting in cellular transformation and oncogenesis. E1A is a disordered protein, and we have already used nuclear magnetic resonance (NMR) spectroscopy to characterize its transient secondary structure and dynamics. We have also made a preliminary characterization of the structural changes that occur when E1A binds to pRb, and we have elucidated the function of the two main binding motifs in E1A and the flexible linker that separates them. To extend our preliminary analysis we are determining the structure of E1A bound to Rb.

Partnerships:

Lucia B. Chemes, Ph.D, Group Leader and Professor
Institute for Biotechnological Investigations - CONICET, National University of San Martín (Buenos Aires, Argentina)

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