

Screening and Identification of Natural Product based small Molecule Inhibiting Gsk3 beta, an Anticancer Drug Target

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Abstract—Glycogens synthase kinase 3(Gsk3) is a constitutively active serine threonine kinase. Gsk3 gene family consists of Gsk3 α and Gsk3 β . Gsk3 α encodes a protein of 51kDa (Gsk3 α), whereas Gsk3 β encodes a protein of 47kDa (Gsk3 β). Gsk3 β plays a critical role in number of physiological processes ranging from glycogen metabolism to gene transcription. Aberrant activity of Gsk3 β has also been implicated in many pathologies and disorder like Cancer, stem cell, Alzheimer, bipolar disorder and diabetes. In this project, we will be screening small molecules based natural products from our Institutional library (IIIM repository). We have already established cell-free and cell-based assay and screened some inhibitors. Here, we will be presenting data generated from screening these inhibitors.