Project Title: Expression and Biophysical Analysis of Recombinant Integrin Sub-unit Functional Domains

Project Proponent: Neil Andrew David Bascos, PhD

Designation of Proponent: Assistant Professor

Department and College of Proponent: National Institute of Molecular Biology and Biotechnology; College of Science

Project Abstract:

Integrins provide the principal means for cellular attachment to the extracellular matrix (ECM). Integrins are made up of sub-units that associate as heterodimers on the cell surface. The binding of integrin heterodimers to ECM ligands provide attachment to the ECM as well signals for intracellular processes, thereby “integrating” the intracellular and extracellular environments. The formation of different integrin heterodimer combinations results in different affinities for several ligands as well as variations in intercellular processes signaled. Studies have correlated the formation of different integrin heterodimers with the multiple stages of cancer progression. Changes in the populations of integrin heterodimers formed have been associated with the onset of metastasis. Integrin sub-unit glycosylation has been associated with these modifications in heterodimers populations. In previous studies, changes in population of integrin heterodimers formed were monitored by observing cell lines derived from tumours at different stages of cancer.

Funding Support in Philippine Pesos: _______

Duration and Status: _______

Contact Information of Project Proponent: (office) 029277516; nadbascos@gmail.com; ndbascos@up.edu.ph