Delaware Bioscience CAT

ARC – Cover Page (mandatory)

Proposal Title: Slide-based multi-target immunohistochemical and in situ hybridization solid tumor testing utilizing multiple colors with image analysis for superior prognostic/diagnostic profiling			
Lead Contact Kevin E. Shuman	**Title** Assistant Director of STEM Initiatives		
Department Biology, Chemistry, Physics, and the Environment			
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Institutional Federal Tax ID# 51-0064335			

Industrial Partner Information			
Primary Contact Fady Gerges	**Title** Medical Director/Owner		
Phone (302) 465-4354	**e-mail** doctorgerges@gmail.com		
Company Green Clinics Laboratory, LLC			
Address 740 South New Street, Ste: B	**City** Dover	**State** DE	**Zip** 19904
Small Business (less than 400 employees) Yes			

Budget Request	$75,000.00
Industrial Partner Commitment **(Dollar value of partner commitment must agree with budget and partner commitment letter)**	$75,000.00

Project Description

Green Clinics Laboratory (GCL) and Wesley College will partner to introduce undergraduates to research in a clinic pathology laboratory. Students will be initially trained at Wesley before completing an internship at GCL. At GCL, research will focus on diagnostic and prognostic indicators of cancer. Diagnostic and prognostic indicators are extremely important in the process of diagnosing and categorizing tumors. In solid tumor subsets, this is largely performed by running several tests on separate representative sections of the tumor. These tests are largely immunohistochemical and in situ hybridization based. The current modalities use predominantly one chromogen per slide. This is visually compared along a panel of tests and referenced to the original diagnostic slide using light microscopy. In few instances, 2 or more chromogens are used against a corresponding number of antigens or DNA targets on the same slide. In the later, the ability to examine the slides via light microscopy will be rather limited, especially if quantitative diagnostic indicators are targeted. Our project will aim at targeting 3 or more antigens simultaneously on the same slide with 3 or more chromogens. An image analysis software developed specifically for this project will analyze selected samples and produce diagnostically and prognostically relevant data. This will significantly improve the accuracy, dependability, and reproducibility of the tests while considerably cutting the cost.

Key Words

solid tumors, immunohistochemistry, in situ hybridization, antigens, chromogen, image analysis, Wesley College, Green Clinics Laboratory

Approved By: Malcolm J. D'Souza, PhD _____ _____

Name Signature

College/Div Sponsored Program Coordinator