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# OSU RESEARCH STATEMENT

Hello everyone, following is a brief account of my research progress at The Ohio State University:, March 2015

1: WESTERN BLOTTING: I successfully learnt the western blotting technique for separating and identifying proteins. I gained expertise in analyzing the results of western blotting via two distinct methods-

a. LICOR: a digital and advanced method for detecting protein using fluorescently labelled antibodies
b. AUTORADIOGRAPHY FILMS: a method in which autoradiography films are processed by film developer in the dark room.

2: FLUORESCENT MICROSCOPY: I have used the fluorescent microscope to visualize and capture images of the cultured cells in different states - control and treated.

3: PLASMID EXTRACTION: I was able to transform bacteria to extract and purify plasmid PC DNA 3.1 through the plasmid extraction kit available in the lab.

4: BACTERIAL CULTURE: I maintained bacterial colonies and learned to prepare media and handling the bacterial colonies in aseptic conditions.

5: CELL CULTURE: I have managed to maintain 2 cancer cell lines: Colorectal cell line -HCT116 and Glioblastoma-Gli36. I have been able to see the effect of my compounds on the induction of DNA damage marker proteins on both these cell lines so far. The results are in agreement with the research hypothesis I am working for my Ph.D.

6: QUANTITATION (DNA & PROTEINS): I have learnt to quantitate DNA by Hoesht method, established in this lab and proteins by Lowry's method.

7: AGAROSE ELECTROPHORESIS: I used the plasmid nicking assay to witness the DNA breakage induction by my compounds in the absence and presence of copper. The results of agarose electrophoresis were analyzed by gel dock instrument.

8: CELL VIABILITY ASSAYS: I have also used various assays for assessing the viability of cancer cells in control and treated conditions:

a. MTT assay
b. Methylene Blue assay