

**Morehouse School of Medicine/ Tuskegee University/ University of Alabama at Birmingham
Cancer Partnership**

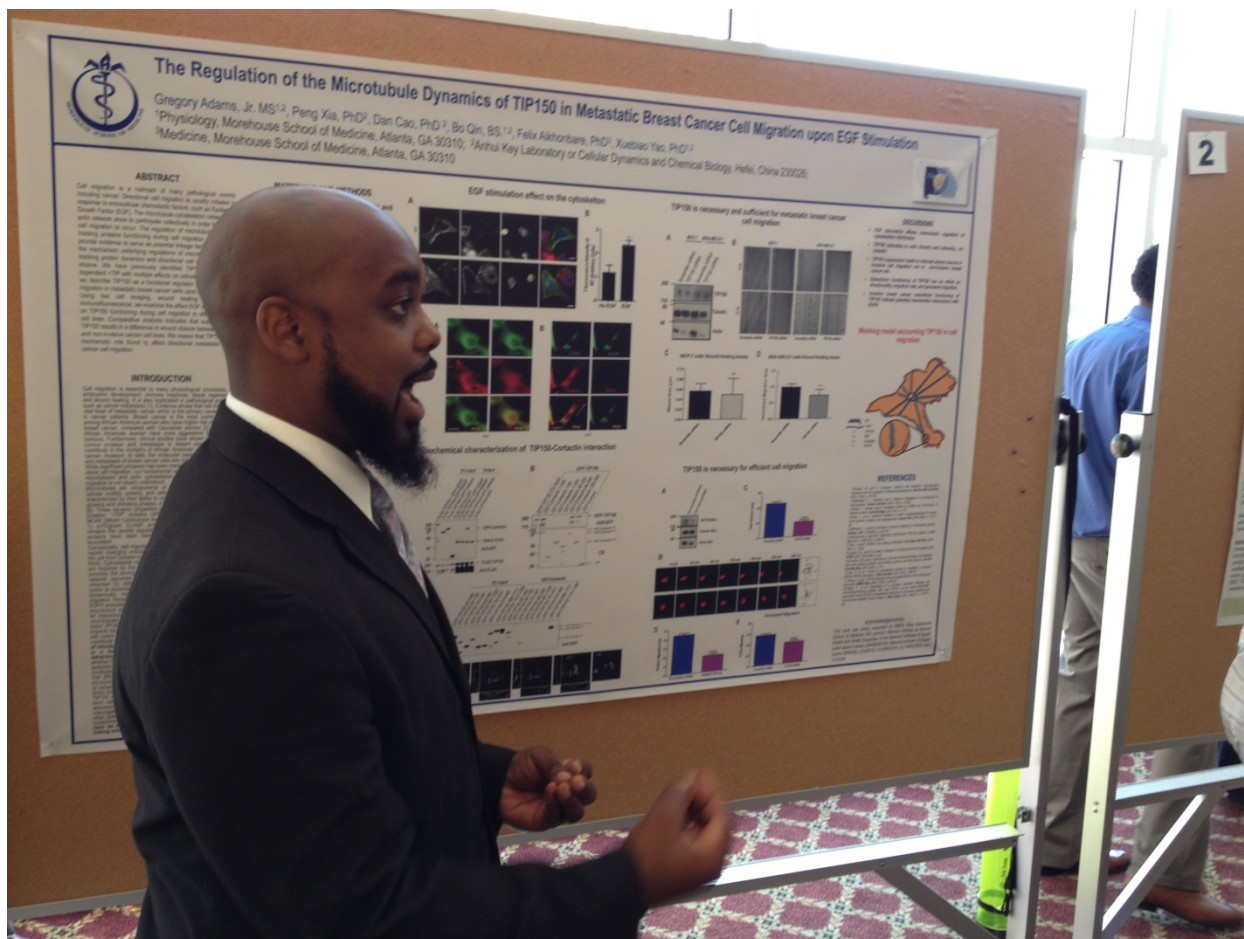
Summer Institute 2015

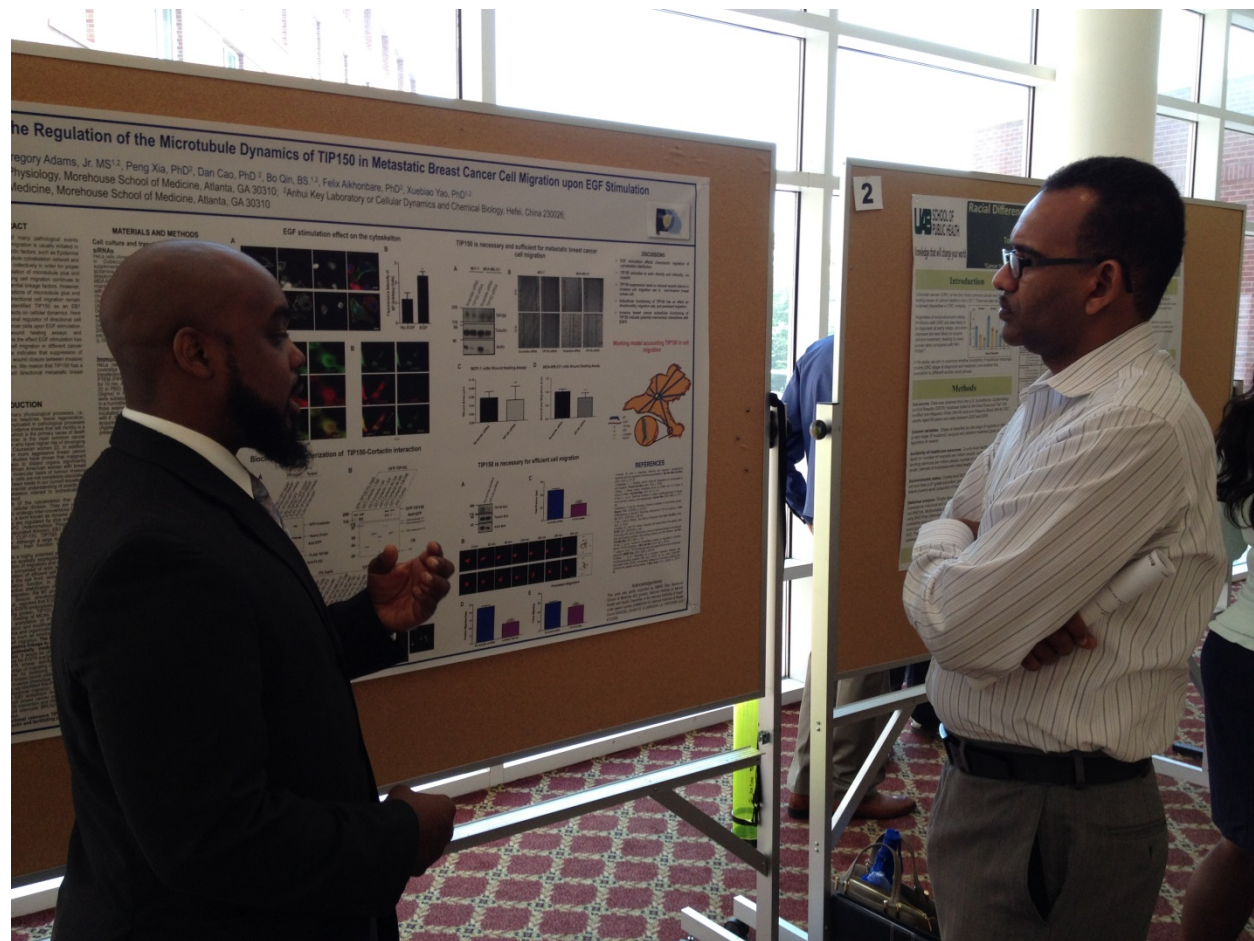
Kellogg Conference Center at Tuskegee University on July 22, 2015

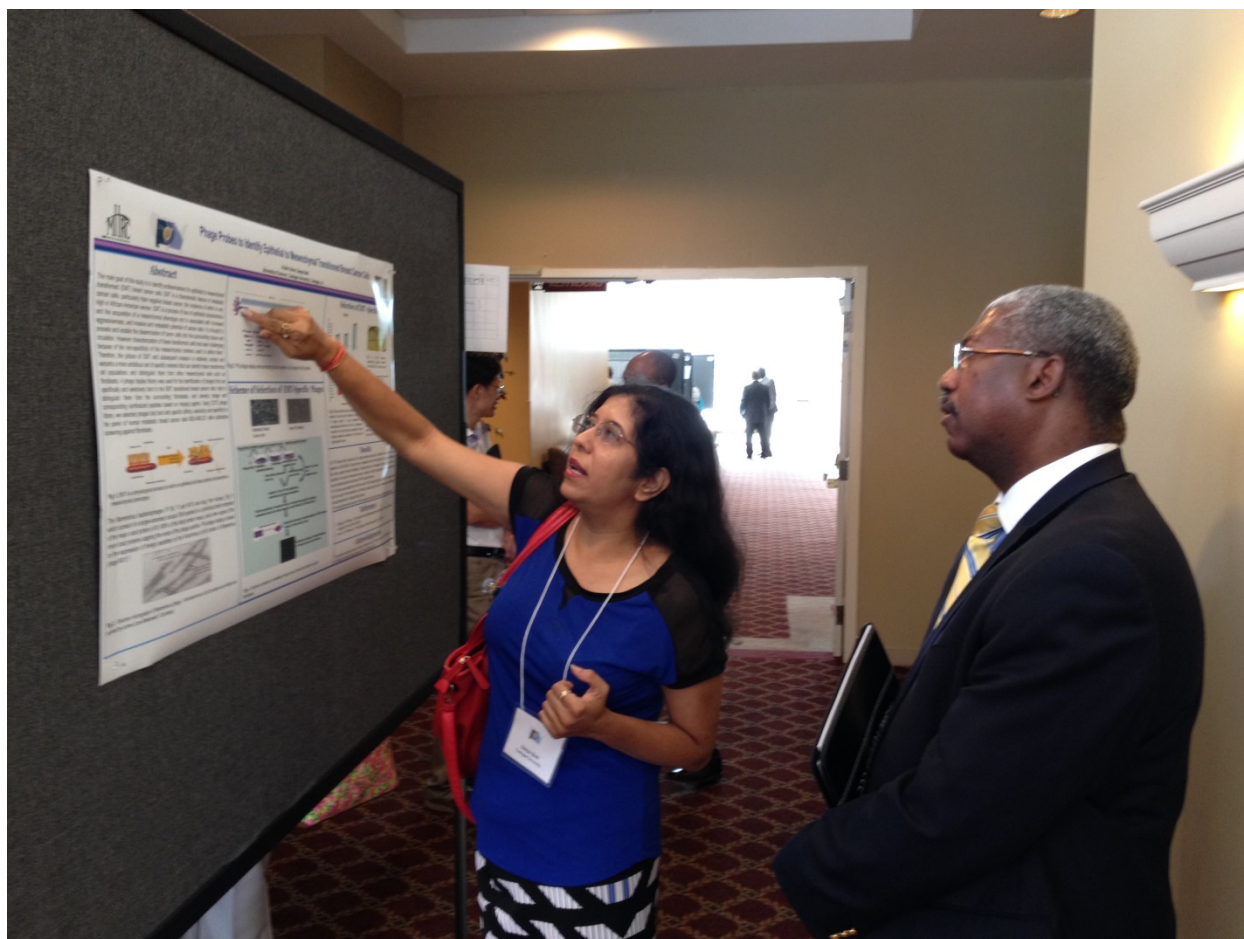
Trainees, investigators and staff participated in the annual conference that highlights trainees' research with their mentors through oral presentations and a poster competition.

Below Dr. Tim Turner welcomes participants to the Summer Institute at Tuskegee University.









Role of Focal Adhesion Kinase in Renal Cell Carcinoma

Saanyol S. Suswam¹, Arindam Ghosh¹, PhD and Sunil Sudarshan¹, MD

¹Department of Urology ²Partnership Research Summer Training Program
University of Alabama at Birmingham

UAB MEDICINE
Knowledge that can change your world

of cytoplasmic protein that arrival and proliferation. In test migration, invasion and the function of FAK in carcinoma (RCC), we tion of tumor phenotypes was knocked down in n of cells with FAK used assay. A Boyden active potential of control kdown.

most common malignancies . The American Cancer id 14,080 deaths resulting ionable therapeutic targets h demonstrated activation of to increased cellular invasive and metastatic (is to understand how would positively impact

cells in vitro leads to a al, and also affects the rate

id RCC4 cells using viral o confirm the knockdown in

A Boyden Chamber invasion assay was utilized to measure the invasive potential of FAK knockdown in RCC cells relative to controls. The rate of proliferation of control cells was compared to cells with FAK knockdown using the Cell Titer Glo assay.

RESULTS

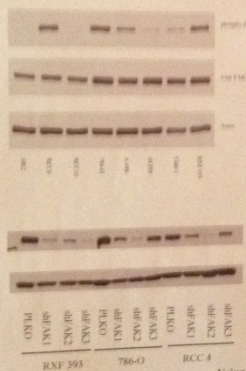


Figure 1. Relative levels of phosphorylated and total FAK in various RCC lines was compared relative to an immortalized renal epithelial cell line HK2, relative to Actin loading controls.

Figure 2. RNF393, 786-O and RCC4 cells were used to knockdown FAK expression and assess the effects of FAK knockdown in vitro.

Using a lentiviral vector, RCC4, 786-O and RNF393 cells were stably transfected with 3 different short hairpin(shRNA) RNAs and FAK protein levels in these cells was assessed by Western blot.

RESULTS

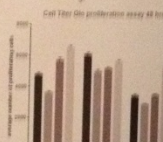
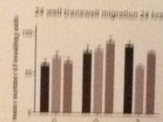


Figure 3. RNF393, 786-O and RCC4 cells were used to knockdown FAK expression and assess the effects of FAK knockdown in vitro.

CONCLUS

The results of these tests did not show the knockdown on migration, invasion or growth. The results of the in vitro experiments would potentially show a much more significant effect. The results of this study warrant further investigation.

ACKNOWLEDG

UAB CA 118948-09 Marchmont University/University of Alabama Partnership







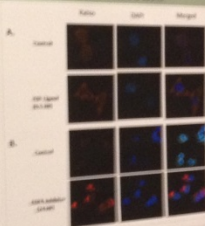
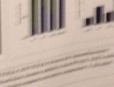
MOTHERSHERD, SHWETA TRIPATHI, BALASUBRAMANYAM KARANAM, CLAYTON YATES
TUSKEGEE UNIVERSITY, DEPARTMENT OF BIOLOGY, TUSKEGEE, AL

UNIVERSITY, DEPARTMENT OF BIOLOGY, TUSKEGEE, AL

MATERIALS AND METHODS

MATERIALS AND METHODS

RESULTS

[illegible]

CONCLUSIONS

It is understood the critical issue is that of a sufficient size. What has the data shown in terms of the size, such as the length? What have been the consequences of GAT? It is not an appropriate use of the GAT, getting it to the GAT is not sufficient. It is not the size of the data which is relevant to the matter, then the problem becomes one of a sufficient size of the data, GAT and not the data.

2. Repeat analysis, but instead with 10×10^6 gene pairs. $10 \times 10^6 \times 10^6 = 10^{12}$ gene pairs tested (100M, 100M \times 100M) are 100M decimated \times 100M \times 100M \times 100M \times 100M. Additionally, no general search pattern is given to it. It explores its search space with 100M queries.

[illegible]

FUTURE DIRECTIONS



REFERENCES

Figure 1. A schematic diagram of the proposed system. The system is composed of a user, a server, and a database. The user sends a request to the server, which then queries the database. The server returns the results to the user.

001102 MPAT

ATTENTION

[illegible]

TION

100,000 cases of breast cancer, and breast will be the major contributor to the rise in deaths in the breast for the next 15 years in the United States, it is inevitable that the study of breast cancer will continue to be a high priority for cancer researchers. In the United States, breast cancer is the leading cause of cancer death among women, and the leading cause of cancer death among African American women. In the United States, breast cancer is the leading cause of cancer death among African American women. In the United States, breast cancer is the leading cause of cancer death among African American women.

Figure 1. A. Representative images of 2DPAF cells were treated with 100 ng/ml of 1,25-(OH)₂D₃ for 24 h and stained with the mixture of anti-αSMA (red) and anti-αSMA with DAPI (blue) antibodies. The cells were treated with anti-αSMA antibody with and without DAPI antibody. 100 ng/ml 1,25-(OH)₂D₃ is shown in the figure.

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27

Increasing Elementary Science in All Areas
 Aron & Kelly (2001, pp. 112)
 Language Learning: Science Education

Introduction
 The purpose of this study was to determine the extent to which elementary school teachers in the United States reported to use science in their classrooms. The study also sought to identify factors that influenced teachers' use of science in their classrooms.

Methods
 Data were collected from a national survey of elementary school teachers. The survey included questions about teachers' demographics, their use of science in their classrooms, and factors that influenced their use of science.

Results
 The results of the survey indicated that the majority of elementary school teachers reported to use science in their classrooms. However, the use of science was more likely to be reported by teachers in the upper elementary grades than by teachers in the lower elementary grades. Factors that influenced teachers' use of science included their own background in science, their access to science resources, and their beliefs about the importance of science education.

Conclusions
 The findings of this study suggest that there is a need for more science education in elementary schools. Teachers' use of science in their classrooms is influenced by a variety of factors, and efforts should be made to provide teachers with the resources and support they need to use science effectively in their classrooms.

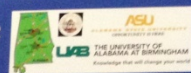
Number of Science Activities

Grade Level	Number of Science Activities
1st Grade	1
2nd Grade	2
3rd Grade	3
4th Grade	4
5th Grade	5

Epigenetic downregulation of *hTERT* by combined Epigallocatechin-3-gallate and sodium butyrate treatment in MDA-MB-231 and MCF-7 breast cancer cell lines.

Sabita N Saldanha¹, Amel Mohammed¹ and Trygve Tollefsbo²

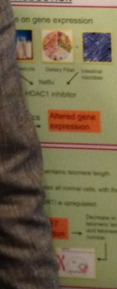
¹Alabama State University and ²University of Alabama at Birmingham



ABSTRACT

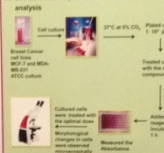
Type II breast cancer is an aggressive type of breast cancer that predominantly affects African-American populations. The treatment of this breast cancer is primarily based on the lack of estrogen receptors (ER) and progesterone receptors (PR). Therefore, an alternate form of treatment that is safe and cost effective is needed. The expression of the *Nr1H3* gene, a member of the nuclear receptor superfamily, has been shown to be upregulated in a majority of cancers and contributes to the immortal phenotype of tumor cells. The gene is experimentally regulated and therefore targeting *Nr1H3* and its downstream signaling pathway may be a novel therapeutic mechanism that regulates the expression of the gene. In a promising chemopreventive approach, we propose that sodium butyrate (NaBu) with distinct epigenetic profile (DNA methylase 1 (DNMT1) and histone deacetylase 1 (HDAC1)) may be used to downregulate the expression of *Nr1H3* and effectively downregulate the expression of *Nr1H3*. Our results showed that the EGGS and NaBu combination downregulate the expression of *Nr1H3* in both ER⁺ (T47D) and ER⁻ (MDA-MB-231) breast cancer cell lines. The downregulation of *Nr1H3* accompanied by a concomitant decrease in DNMT1 and HDAC1 levels. These initial findings suggest that EGGS and NaBu may be a novel combination for the treatment of ER⁺ and ER⁻ breast cancer cells. However further experiments are necessary to confirm the findings. Future aims will also include the *in vivo* study of the combination of *Nr1H3* and *Nr1H3* of cell of histones at the *Nr1H3* promoter for

INTRODUCTION

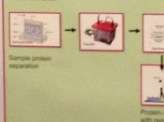


MATERIAL AND METHODS

A. Cell culture, cell proliferation and microscopy



B. Western Blot



RESULTS

