

July 27th ,2012

UMSAEP 2012-Report on my activities at Ellis Fischel Cancer Center and the University of Missouri for the period of June 18th 2012 till July 13th 2012

Dear Prof Bharuthram

Firstly, I would like to thank you for availing the opportunity to participate in the UMSAEP program. I tried to represent the best interest of UWC as an outstanding research institute that makes us proud to belong to. This mission was achievable as I had a very stimulating enthusiastic host (Prof Jane Armer).

I arrived to Columbia (Missouri) on June 17th, 2012.

On Monday (June 18th) I started my academic and research interactions at Ellis Fischel Cancer Center (EFCC) by meeting with Professor Jane Armer. A plan for the activities for the period of stay was drafted.

On June 19th I attended the bioinformatic group meeting at EFCC to gain an insight about their efforts of establishing a database for lymphoedema research.

On June 20th I have started my **lecturing activities** which included the following:

- Presenting my research at UWC. This took place at the General Surgery Journal Club that was held on June 20th at Acuff Auditorium (College of Medicine-University of Missouri). A total of 41 doctors attended; among them were breast cancer surgeons (Drs Paul Dale, Debra Koivunen, and Arthur Rawlings) and interns. I had a very positive feedback and expression of will of inter-institutional collaboration. Lecture title was "Keeping abreast of breast cancer: An evaluation of molecular markers for breast cancer micrometastases"
- A joint seminar at EFCC where I presented my research in conjunction with my collaborator, Prof Luciane Cavalli from Lombardi Cancer Institute. Lecture title was "Keeping abreast of breast cancer: Insight into breast cancer drug resistance from a genomic perspective"
- A joint presentation at the Department of Pathology and Anatomical Sciences at UM (Prof Armer, Prof Cavalli and Dr Abdul-Rasool) to middle school students attending the UM summer research program during 'Meet the Scientist session'
- Presentation for breast cancer survivors at the American Cancer Society in Columbia (MO), again I received a positive feedback from the organizer.

- Attending the tumor board meeting at EFCC where breast cancer cases were discussed among experts handling the management.

Research activities

- Poster presentation at 6th Biennial Cancer Survivorship Research Conference: Translating Science to Care which was held June 14-16, 2012 in Arlington, VA. The poster title was "Breast Cancer Patients with triple negative Phenotype: Attempts to improve survival.
- Attending Dr Kristen Taylor Molecular Oncology Laboratory at the college of Medicine (University of Missouri): we discussed her research interests and agreed that I will be witnessing her gene silencing experiments with regard to the RAP2 gene (RPIP9) which is believed to act as a tumour suppressor gene in Leukemia and also Breast cancer. I did my relevant readings and attended the relevant lab work.

Collaborative Initiative.

My initial research plans/proposal was not achieved due to the fact that the pathologist in charge (Prof Charles Caldwell) has moved from UM so I could not get the specimens from the American side. We contacted him several times but he indicated that the only way to go forward is to wait for his replacement. However, I did process my South African samples and expect to publish that work by end of 2012.

As an alternative plan, and to be able to analyse specimen obtained from EFCC, a collaborative research initiative between the University of Western Cape, University of Missouri and Georgetown University is currently drafted. The aim of this future project is a population study to perform a wide genomic analysis in breast cancer patients of African, Caucasian and Hispanic origin especially those of triple negative phenotype (ER negative, PR negative and Her 2 negative). Those patients are known to have a more aggressive disease course and higher mortality rates. The specimen will be provided by Ellis Fischel Cancer Center which has the largest collection of clinical specimen with relevant clinical data in the States. We are planning to obtain more specimens through Groote Schuur Hospital for the African part of the study. To be able to do this, I have undertaken and passed the ***Collaborative Institutional Training Initiative*** evaluation courses so that I can be acknowledged as a collaborator by the *Institution*

Review Board (IRB) of UM and will wait for further progress with regard to this. I also submitted an application to the Cancer Association of South Africa to contribute for future expenses of this project.

Thank you for your support

Sincerely

Dr Sahar Abdul-Rasool

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