

## Focused Seminar Series on Microdevices in Biological Studies

25 Jul 2016 – 10 Oct 2016

# Development of Tumour Cell Filtration System for Blood Salvaging Applications

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Date: 1<sup>st</sup> August 2016, Monday

Time: 12pm to 1pm

Venue: Perseverance Room, Enterprise Level 5



### ***Abstract***

Blood loss in surgeries is common and there is a need to carry out blood transfusion during surgeries with massive blood loss. Blood cell salvaging devices (Cell Savers) presents itself as an alternative to predonated blood transfusions and are commercially available for use. However, Cell Saver use is a contraindication for tumor resection surgery due to its inability to remove all cancer cells which may be disseminated into the shed blood during the tumor resection process. There is a concern that reinfusion of blood with the presence of such cells can potentially contribute to new tumor formation due to the metastatic process.

In this project we aim to develop a tumour cell filtration system for the removal of cancer cells from shed blood during surgery leading to the eventual generation of safe and reliable blood replacement during tumor resection surgeries for patients with allogeneic transfusion issues. With this, an additional blood source for transfusion can be potentially made available to patients undergoing tumour resection surgeries.

### ***Short Biography***

Mr. Zhangxing Lai is currently a research engineer in National University of Singapore, Biomedical Engineering Department. He had completed his basic degree in Mechanical Engineering Department, National University of Singapore. Zhangxing is also currently pursuing his Masters in the Department of Mechanical Engineering, National University of Singapore.