



Centre for Biosystems Science and Engineering

Seminar

Novel drug targets to inhibit Epithelial to Mesenchymal transition

on

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4-5 PM, Meeting Room, BSSE.

by

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Over the course of last century, a number of anti-cancer therapies have been approved for clinical use, but their effectiveness is limited by drug resistance. While many of the patients respond to these therapies initially, the majority will relapse and come back to clinic with a more aggressive form of cancer. Importantly, these cancer cells have altered their survival and proliferation networks and hence are no longer sensitive to the initial therapy. Cancer cells exhibit resistance to therapy via multiple mechanisms, one of which is by undergoing an epithelial to mesenchymal transition (EMT). EMT is a key developmental process that is hijacked by tumor cells to escape therapy. Currently, there are no inhibitors known to prevent EMT induction. In this talk the speaker will describe identification of novel drug targets to inhibit EMT by studying re-wiring of signalling networks during EMT using unbiased and quantitative mass spectrometry based phospho-proteomic analysis.

About the speaker

Vibhuti Agrawal is a PhD student in the Department of Biological Engineering at Massachusetts Institute of Technology. She has been working in the lab of Prof. Forest White to use systems biology to better understand the mechanisms of therapeutic resistance in cancer. She was awarded the Ludwig Center for Molecular Oncology Graduate Fellowship and Faculty of Future by Schlumberger for her research work. Prior to this, she obtained a Bachelor's degree from the Department of Biochemical Engineering and Biotechnology at Indian Institute of Technology, Delhi.