

A Brief Report on Invited Impact Pharmacy Lecture Series 2022 – Lecture 3

(New connections and learning)

Date: 05.01.2023

Name of the presenter:

Dr Nirmal Robinson
Group Leader, Cellular Stress & Immune Response
Laboratory Centre for Cancer Biology
University of South Australia



Title of the presentation:

Bedside to Bench: Circumventing cancer drug resistance

Program Organized by:

Dept. of Pharmacy Practice &
Pharmacy Education Unit
JSS College of Pharmacy, Ooty

New Connections and learning: Pharmacy Practice- “Learning in the flow of work”

Making learning is a part of everyday work – and everyone’s experience at work differs of course and it multiplies at different places. Internship training for Pharm D students is an opportunity to learn new and provide service to the needy patient population. To enhance their learning experience, the institute has created new connections and learning opportunity at various practice settings. Our students are very excited to be at new practice site(s) to learn and demonstrate/shape their competencies.

Dr Nirmal, a proud alumnus of JSS college of pharmacy, Ooty, currently works as the group leader at cellular stress and immune response at the laboratory centre for cancer biology in university of south Australia. he was also the former group leader for Cellular Metabolism, and Immunity, CECAD, Research Center, University of Cologne, Germany. He served as a post-doctoral fellow Institute for Medical Microbiology, Immunology and Hygiene University of Cologne, Germany. Dr Nirmal has published over 30 scientific publications and also has received various international scientific grants for his research works. Dr Nirmal also serves as an ad hoc reviewer in the top scientific journals and has also delivered many scientific lectures at various conferences and scientific meetings across the globe.

Dr Nirmal started his presentation on “*Bedside to Bench: Circumventing cancer drug resistance*” from the basics of cancer physiology and how himself and his research team has managed to assess, understand and apply the knowledge gained from bedside and that has been transferred to bench; to rule out the practical difficulties in the management of cancer in terms of drug resistance and molecular mechanism elucidation to eliminate the same. Dr Nirmal also mentioned about the phases where a drug resistance can possibly occur in the pathological

condition. He then emphasized about the molecular level pathology and also about the greatest contribution of mitochondria in the development of cancer. Dr Nirmal also mentioned about the crucial role of mitochondria complex-1 in the progression and rapid development of cancer cells and also about the mTOR and TFEB complex in the progression of the same. Dr Nirmal also added a spotlight in the role of Autophagy in the degradation of the cell organelles and what will be the consequences if the autophagy fails to degrade the same and what would happen during cancer if the misfolded proteins accumulate.

The session was then concluded by Dr Nirmal by taking questions from staff and students. More than 70 students and staff were fruitfully benefited with this invited guest lecture.

