Department of Biochemistry and Molecular Biology

2017 Seminar Series

Wednesday 20th of September
12-1pm
Bio21 Institute Auditorium
30 Flemington Road, Parkville

Dr Dezerae Cox
Department of Biochemistry and Molecular Biology

Understanding how proteome foldedness changes under proteostasis stress

Understanding the kinetic process of protein folding in cells remains a grand challenge, as much of the proteome folds through discrete steps at different quality control checkpoints. We have recently developed a fluorogenic thiol-binding dye (TPE-MI) that can capture a snapshot of the balance of unfolded protein relative to folded states in intact live cells. This approach does not require any expression of specific protein reporters, and has the potential to offer single-protein kinetic folding information for endogenous proteins at a proteome-wide scale. I will describe the potential applications of this probe to determine proteome foldedness in cells following the application of stress. This knowledge will contribute to our understanding of disorders characterised by proteostasis imbalance, and will assist in targeting those proteins most prone to misfolding under stress conditions.

ALL WELCOME. Please join us for a light lunch after the seminar!
Further information: Matthew Dixon (matthew.dixon@unimelb.edu.au)