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| <b>Research Theme:</b> Cancer Biology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Research Project Title:</b> Protein post independent cell death pathways in cancer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Principal Investigator/Supervisor:</b> Assoc Professor Valerie Lin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Co-supervisor/ Collaborator(s) (if any):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p style="text-align: center;"><b>Project Description</b></p> <p><b>a) Background:</b></p> <p>Progesterone has long been implicated in the development of breast cancer, but studies have indicated that progestin can exert protumoral or antitumoral effect depending on cellular context. The molecular basis for the cell context-dependent effect is not known. We have established a breast cancer cell model that responds to progestin with radical cell cycle arrest and cell death. Knowledge of the cellular and molecular basis for progestin to exert the strong antitumoral effect will provide insight into novel therapeutic strategies for breast cancer.</p> <p><b>b) Proposed work:</b></p> <p>This MSc project will focus on the identification of proteins and protein post translational modifications that are critical for the strong antitumoral property of progestin in our breast cancer cell model. Proteomics, biochemical, and cell biology techniques will be exploited in the target identification. Gene silencing and site-directed mutagenesis coupled with functional analysis will further validate the significance of the selected proteins and post translational modifications. This will lead to the discovery of novel molecules and pathways that play an integral part in the anti-tumoral function of progesterone. The long-term goal is to identify proteins and pathways that functionally interact with progesterone receptor to strengthen its antitumoral activity.</p> |
| <p style="text-align: center;"><b>Supervisor contact:</b></p> <p><b>If you have questions regarding this project, please email the Principal Investigator:</b><br/>cclin@ntu.edu.sg</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p style="text-align: center;"><b>SBS contact and how to apply:</b></p> <p>Associate Chair-Biological Sciences (Graduate Studies) : <a href="mailto:AC-SBS-GS@ntu.edu.sg">AC-SBS-GS@ntu.edu.sg</a><br/>Please apply at the following: <b>Application portal:</b><br/><a href="https://venus.wis.ntu.edu.sg/GOAL/OnlineApplicationModule/frmOnlineApplication.ASPX">https://venus.wis.ntu.edu.sg/GOAL/OnlineApplicationModule/frmOnlineApplication.ASPX</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |