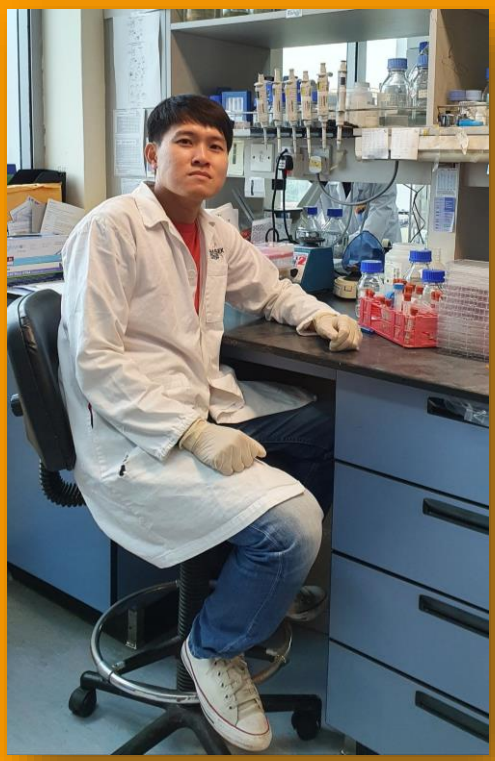
PhD DEFENSE

TEMASEK LIFESCIENCES LABORATORY



Mr Sum RongJi

Dr Ian Cheong Group

21 Apr 2022, Thu
11am

Join Zoom Meeting
https://us02web.zoom.us/j/87808411927
Meeting ID: 878 0841 1927
Passcode: 633164

All Are Welcome!

Clostridium septicum: From germination to colonization

Clostridium septicum infections are highly associated with co-occurring malignancies. To study how such infections could be initiated, an unbiased germinant screen was performed. Unexpectedly, bile-salts were revealed as potent germinants, and two gene products belonging to the Csp family of proteases were found to mediate bile-salt sensing. C. septicum is the only bacterium besides Clostridiodes difficile to respond to bile-acid germinants, and the only bacterium known to possess multiple functional bile-salt germination receptors. The pathway for bile-salt germinant sensing seems to be similar to C. difficile. Further, molecular dynamics simulations suggest that these bile-salt sensors in C. septicum bear strong structural congruence to their counterpart in C. difficile. Given that certain bile salts are risk factors for colorectal cancer, we speculate that bile-salt responsive germination in C. septicum may be related to its association with malignancies.