Department of Microbiology & Immunology Programme Seminar Series… *January 2019*

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CeLS Auditorium
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Level 1, Centre for Life Sciences
Singapore 117456

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Modulating Macrophage Activities for Disease Intervention

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Abstract

Macrophages are a dynamic and heterogeneous cell type of the innate immune system. They maintain tissue homeostasis and provide the first line of defense against microbial infection. When dysregulated, they also contribute to inflammation and fibrosis.

In our study, we have identified transcription factors that regulate tissue macrophage development and homeostasis. We have screened macrophage responses to FDA-approved drugs, bioactive compounds and natural products and identified compounds that modulate macrophage polarization. We have also investigated how macrophages eliminate antibody-bound tumor cells in cancer immunotherapy. These studies help to elucidate molecular basis underlying macrophage heterogeneity and provide a basis for modulating macrophage activities for disease intervention.

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