Investigating adaptive immune responses in human whole blood

Research area:
Cancer

Brief description
Efficacy, toxicity and cytokine release are parameters important to study with novel immunotherapies. This project will modify/improve existing methods in order to advance the field of cytokine release/immune toxicity technologies. Techniques that will be used are flow cytometry, Q-PCR and ELISA based technologies.

Aim
Validate/improve cytokine release and immune toxicity assays

Background
Human whole blood is a powerful resource to use if you wish to study how novel immunotherapies affect our immune system. Commonly the cascade systems are impaired by the addition of anti-coagulant in order for experiments to be performed as coagulation would negatively influence the experiment. There is however ways to study immune responses in un-manipulated blood and this project will utilize such approach to study adaptive immune responses in fresh circulating whole blood.

Project plan
Efficacy, toxicity and cytokine release are parameters important to study with novel immunotherapies. Commonly one makes use of manipulated systems or purified cells to study this. We wish to study this in natural fresh whole blood. This project will both modify/improve existing methods in order to improve these studies, and subsequently also study the effects of these therapies on human white blood cells, mainly DCs and T cells. Techniques that will be used are flow cytometry, Q-PCR and ELISA based technologies.

Contact details
If you have a unique interest into immunology and cancer immunotherapy and are highly motivated to pursue research, do not hesitate to contact me.

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