

# Research

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My group is currently involved in the following projects:

(1) Protein engineering and production for use in vaccine development and generation of monoclonal antibodies.

- Development of new tags for production of high purity proteins using mammalian cell lines
- Identification and design of immunogenic protein fragments/new immunization regimen
- Evaluation of antibody responses based on binding and functional assays
- Generation and characterization of monoclonal antibodies

(2) Putting in-house monoclonal antibodies into multiplex platforms

- Development of monoclonal antibodies for multiplex immunohistochemistry. This is in collaboration with Joe Young to focus on clinical test platforms for cancer immunotherapy.
- Development of sandwich ELISA for proteins circulating in bodily fluid so that we can use them to screen for biomarkers in human diseases.

(3) Exploring the use of new platforms for virus detection

- Working with collaborators, we are interested to work on new technologies that can be used for virus detection.