

**Department of Tropical Medicine, Medical
Microbiology and Pharmacology**

**SEMINAR
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**Development and pre-clinical efficacy of an adjuvanted
recombinant subunit COVID-19 vaccine**

Vaccination is a crucial component of an effective public health strategy against the ongoing COVID-19 pandemic. FDA-approved and Emergency Use Authorized (EUA) vaccines using new mRNA and viral-vector technology are highly effective in preventing moderate to severe disease, however information on their long-term efficacy and protective breadth against SARS-CoV-2 Variants of Concern (VOC) is currently scarce. This seminar will cover the development and pre-clinical evaluation of an adjuvanted, recombinant subunit vaccine in mice and cynomolgus macaques. We show that this vaccine is highly immunogenic and induces robust spike-specific and cross-variant neutralizing antibodies against circulating VOC for at least 3 months after the final boost. Protective efficacy and post-exposure immunity are evaluated using a late, heterologous P.1 (Gamma) challenge model. Our results indicate that our vaccine candidate effectively reduces viral load in the upper & lower respiratory tract and seems protective aprvtesf1pr v