

Indonesia mRNA working group: *P. vivax* vaccine

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EHI: Vaccine Research Group - Andre Lubis, Adi Sadewa

BRIN/EHI roles in mRNA-based *P. vivax* vaccine development

Current activities

1. Generating genomic data and bioinformatics analysis on *P. vivax* malaria vaccine candidates
2. Designing seed vaccine mRNA vaccine against erythrocytic stage of *P. vivax* i.e. DBP and RBP - *early phase*
3. Preparing for malaria expression systems - learning from COVID-19 recombinant protein in-house production in mammalian cells

Plan on mRNA Malaria Vaccine Consortium

1. Preparing for CHMI:
 - a) seed vaccine (? from Mahidol: CSP and Pvs25)
 - b) Preparation for clinical trials - insectary and short-term parasite culture (?)
2. Establishing assays to measure vaccine efficacy including immunology assays on antibody response against malaria vaccine - with Burnet Institute

Supporting expertise and facilities at BRIN/EHI

- **Expertise:** malaria epidemiology, bioinformatics, malaria molecular diagnostics, Malaria Clinical Trials, laboratory assays: *in vitro* parasite culture, invasion inhibition assays, serology
- **Facilities:** BSL2, biosafety cabinet, PCR machines, ELISA, Luminex, Sanger Sequencing, NGS equipments

Lacking: FUNDING