

## **DEVELOPMENT OF A METHOD FOR THE *IN VITRO* PRODUCTION OF *P. VIVAX* OOKINETES (POSTER)**

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We developed a method for the *In vitro* production of mature *P. vivax* ookinetes. Gametocytemic blood was collected from 98 *P. vivax*-infected patients reporting to malaria clinics in Mae Sod and Maekasa Districts, Tak Province, Thailand. Briefly, gametogenesis was induced using xanthurenic acid and parasites were separated by density gradient centrifugation and then cultured in RPMI-1640, pH 7.8 – 8.2. At the same time that blood was collected, 200 *Anopheles dirus* mosquitoes were allowed to feed on each patient. Mosquito midguts were removed 2-36 hr post-feeding, and gut contents were smeared onto glass slides, as were cultured samples from various time points. Slides were stained with Giemsa, and *In vitro* and mosquito development of ookinetes was compared. Mature ookinetes were produced in 48.0% (47/98) of *In vitro* cultures, with a total yield ranging from 10 to 248,500 (mean = 15,523, median = 600) ookinetes produced per 5 ml blood. The temporal development and the morphology of the *P. vivax* ookinetes produced *In vitro* were similar to that observed in the *A. dirus* mosquitoes. The method that we describe is simple, can be used at remote sites without sophisticated equipment, and yields high numbers of clean ookinetes. This method of producing mature *P. vivax* ookinetes will be a useful tool for studies on ookinetes in *P. vivax* endemic regions.

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