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Investigating Rhoptry Gene Conservation between Plasmodium yoelii and Plasmodium falciparum using the Polymerase Chain Reaction for DNA Amplification

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Abstract

In order to obtain a tangible basis for vaccine targets, it is crucial to understand the role of proteins at the site of invasion. In previous study, 27 novel rhoptry proteins were identified by MudPIT analysis and immunoelectron microscopy. In this investigation, the conservation of rhoptry genes between *Plasmodium yoelii* and *Plasmodium falciparum* was assessed. From the previously identified rhoptry genes, 14 were investigated with the orthologues/paralogues of the *Plasmodium falciparum, Plasmodium yoelii, Plasmodium chabaudi*, and *Plasmodium berghei*. Also, primers designed for the 14 *Plasmodium yoelli* rhoptry genes were used to test DNA amplification with the PCR. Amplification of *Plasmodium falciparum, Plasmodium yoelii,* and *Plasmodium chabaudi* gDNA was accomplished with the designed primer set for the *Plasmodium yoelii* rhoptry gene PY07825.

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