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Cultivation of the liver forms of Plasmodium vivax in human hepatocytes.

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The blood schizogonic cycle of human malaria parasites has thus far been the most exhaustively studied phase of parasite development. However, before entering red blood cells (RBCs), the parasite undergoes its first multiplication not in blood, but in hepatic cells. These hepatic stages were the last to be discovered and only a few studies have been performed in humans and other primates. Despite recent advances, in vivo studies have limitations and other approaches such as cultures of these liver forms may be necessary to investigate their chemosensitivity and their biochemical or immunological properties. Recently, sporozoites of species of rodent malaria have been made to infect cultured cell lines or primary hepatocyte cultures. We report here that the complete cycle of the human malaria parasite Plasmodium vivax can be obtained in primary cultures of human hepatocytes up to release of merozoites able to penetrate RBCs.

PMID: 6363939 [PubMed - indexed for MEDLINE]