An interactive automatic procedure for detection of malaria from microscope blood images is presented. The user is required to select image from data set and the algorithm detects whether the blood is infected with malaria or not automatically. This method will help in reducing the time taken for diagnosis and the chance for human errors. A general framework to perform detection of malaria parasite, which includes an image pre-processing, extracting infected blood cells, morphological operation and highlighting the infected cells, is described. We have evaluated our algorithm using a dataset of 76 microscopic blood images from different patients (both infected and uninfected). Experimental results show that the proposed algorithm achieves 94.87% sensitivity and 97.3% specificity for the malaria parasite detection. This methodology may serve as a rapid diagnostic tool for malaria, even in microscopically negative cases. We also present open research problems.
An Image Processing Approach for Accurate Determination of Parasitemia in Peripheral Blood Smear Images

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Index Terms

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