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1. Puri, B, Mehta B, Ingole N, Prasad P, Mathure T. Laboratory tests for malaria: A diagnostic conundrum? *S Afr Med J* 2013;103(9):625-627. [<http://dx.doi.org/10.7196/SAMJ.6470>]
2. Karimov SS, Kadamov DS, Murodova NK. [The current malaria situation in Tadjikistan]. *Med Parazitol (Mosk)* 2008; Jan-Mar(1):33-36.

S Afr Med J 2013;103(10):701. DOI:10.7196/SAMJ.7433

Laboratory tests for malaria: A diagnostic conundrum?

To the Editor: We compliment the team of investigators from Mumbai, India, for their critical evaluation of the utility of a peripheral blood smear examination, an immunochromatographic antigen test and polymerase chain reaction (PCR) towards diagnosis of malaria,^[1] though the utility of any point-of-care (POC) test to diagnose malaria would be unpredictable at very high and very low ambient temperatures.

Every POC test to diagnose malaria is an immunological test based on an antigen-antibody reaction at optimal conditions, whereas microscopy involves staining of slides and visual examination. The efficacy of a microscopic evaluation would not be affected by lower temperatures at ambient conditions of about 10°C and 3 000 m altitude. However, the performance of the POC test for malaria would be far from ideal as, at temperature extremes, patients would have warm clothing while laboratory/testing areas would be at ambient temperature. Higher ambient temperatures might also selectively impair the performance of any POC malaria test. This would apply in malaria-endemic deserts such as the Khatlon Region in southern Tadjikistan.

In conclusion: A dearth of malaria POC test results should not be considered to be a handicap by any laboratory, since a thorough evaluation of peripheral blood smears detecting different *Plasmodium* species would be ideal for diagnosing malaria even at higher and lower ambient temperatures.