This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Imaging			
Magnetic resonance relaxometry (MRR) for malaria diagnosis	<p><i>In vitro</i> and mouse studies suggest MRR could help diagnose malaria from blood samples with better sensitivity and specificity than standard methods. MRR can detect alterations in paramagnetic susceptibility from the metabolism of hemoglobin to hemozoin crystallites by the malaria parasite in infected cells. In blood samples from healthy humans, MRR was able to detect parasite loads as low as 0.00025% in the samples after they were infected with <i>Plasmodium falciparum</i>. In mice infected with <i>P. berghei</i>, MRR on tail vein blood samples diagnosed malaria infection with 97.9% specificity and 90% sensitivity during the first 6 days of infection compared with 74.9% specificity and 82% sensitivity for the standard blood smear microscopy diagnosis method. Next steps include assessing the effect on baseline variations caused by different diets, different genetics and biological fluctuations.</p> <p>SciBX 7(36); doi:10.1038/scibx.2014.1084 Published online Sept. 18, 2014</p>	Patented; available for licensing	<p>Peng, W.K. <i>et al. Nat. Med.</i>; published online Aug. 31, 2014; doi:10.1038/nm.3622 Contact: Jongyoon Han, Singapore-MIT Alliance for Research and Technology Centre, Singapore e-mail: jyhan@mit.edu Contact: Weng K. Peng, same affiliation as above e-mail: wengkung@smart.mit.edu Contact: Peter R. Preiser, Nanyang Technological University, Singapore e-mail: ppreiser@ntu.edu.sg</p>