This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Assays & screens			
A point-of-care device for obtaining T cell counts from whole blood of HIV-infected individuals	<p>A battery-powered, handheld device for on-chip sample preparation and counting of CD4⁺ and CD8⁺ T cells from human whole blood samples could provide point-of-care diagnostics for patients with HIV. Doctors routinely measure CD4⁺ and CD8⁺ T cell levels in patients with HIV to monitor the disease. Microfabrication methods were used to generate a multilayered fluidic network capable of lysing and quenching red blood cells, collecting and fluorescently tagging lymphocytes and counting CD4⁺ or CD8⁺ T cells from healthy individuals or patients with HIV. The counting error was estimated using blood from healthy individuals and was 2.9% for CD4⁺ cells, 1.6% for CD8⁺ cells and 1.9% for the ratio. Next steps including testing more samples from patients with HIV that have low CD4⁺ cell counts to determine the sensitivity and robustness of the device.</p> <p>SciBX 7(2); doi:10.1038/scibx.2014.65 Published online Jan. 16, 2014</p>	Patent application filed; available for licensing	<p>Watkins, N.N. <i>et al. Sci. Transl. Med.</i>; published online Dec. 4, 2013; doi:10.1126/scitranslmed.3006870</p> <p>Contact: Rashid Bashir, University of Illinois at Urbana-Champaign, Urbana, Ill. e-mail: rbashir@illinois.edu</p>