This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Enhanced antigen-specific T cell activation using nanoscale artificial antigen-presenting cells (aAPCs) in a magnetic field	<i>In vitro</i> and mouse studies suggest magnetic-field culturing methods could increase activation of antigen-specific T cells by nanoscale aAPCs. In T cells cultured with nanoscale aAPCs, exposure to a magnetic field induced aAPC aggregation to increase T cell receptor cluster size, which led to increased T cell expansion and activation compared with no exposure to a magnetic field. In mice with subcutaneous melanoma tumors, adoptive transfer of tumor-specific T cells activated by aAPCs in a magnetic field caused decreased tumor growth compared with adoptive transfer of cells cultured without the magnetic field. Next steps include developing GMP-grade materials for use in humans.	Patent applications filed; exclusively licensed to NexImmune Inc. for immune regulation; available for licensing in indications other than immunology	Perica, K. <i>et al.</i> <i>ACS Nano</i> ; published online Feb. 24, 2014; doi:10.1021/nn405520d Contact: Jonathan P. Schneck, The Johns Hopkins University School of Medicine, Baltimore, Md. e-mail: jschnecl@jhmi.edu
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