This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Engineering anatomically shaped human bone grafts with human mesenchymal stem cells (hMSCs)	A bioreactor system for culturing hMSCs on bone-shaped scaffolds could help generate bone grafts with complex geometries. The system consists of anatomically shaped scaffolds that allow perfusion of nutrients and waste materials between culture medium and cells seeded onto the scaffold. As proof of principle, researchers produced a scaffold for a temporomandibular joint (TMJ). Addition of hMSCs to that scaffold and subsequent incubation in the bioreactor led to formation of TMJ-shaped bone grafts within five weeks. Next steps include developing strategies to vascularize the bone grafts.	Patent application filed covering the biomimetic system leading to the TMJ and other anatomically shaped bone grafts; available for licensing	Grayson, W.L. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online Oct. 5, 2009; doi:10.1073/pnas.0905439106 Contact: Gordana Vunjak-Novakovic, Columbia University, New York, N.Y. e-mail: gv2131@columbia.edu
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