This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Gene catalog for differentiating human pluripotent stem cells (hPSCs) into mature, insulin-producing pancreatic β cells	<i>In vitro</i> and computational studies identified genes that could help develop strategies for β cell production from hPSCs. Antibody staining for insulin followed by cell sorting was used to isolate pure populations of insulin-producing cells derived from hPSCs. Subsequent gene expression and hierarchical clustering analyses demonstrated similarities between insulin-producing cells derived from different hPSCs. The analyses also found similarities between hPSC-derived cells and fetal insulin-producing cells and differences between hPSC-derived cells and adult insulin-producing cells. Further comparison between fetal and adult cells identified a catalog of genes responsible for β cell maturation and metabolic functionalization. Next steps include identifying the gene regulatory network associated with the catalog and potential drug targets.	Patent application filed covering method for analyzing RNA following intracellular sorting (MARIS); available for licensing	Hrvatin, S. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online Feb. 10, 2014; doi:10.1073/pnas.1400709111 Contact: Douglas A. Melton, Harvard University, Cambridge, Mass. e-mail: dmelton@harvard.edu
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