This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Small molecules that prevent teratoma formation in human pluripotent stem cell-derived therapies	<p>Small molecules that are selectively toxic to human pluripotent stem cells could help decrease the tumorigenicity risk of stem cell-derived therapies. Residual, undifferentiated stem cells in stem cell-derived cell therapies can lead to teratoma formation. In mixed cultures of differentiated human cells and undifferentiated human stem cells, small molecule inhibitors of survivin (BIRC5), such as sepantronium, and small molecule inhibitors of B cell CLL lymphoma 10 (BCL10) selectively induced apoptosis in undifferentiated cells. In a mixture of differentiated human cells and undifferentiated human stem cells injected into mice, none of the cell mixtures pretreated with sepantronium or another small molecule survivin inhibitor developed teratomas, whereas all the untreated cell mixtures did. Next steps include developing more specific inhibitors of survivin and BCL10.</p> <p>Astellas Pharma Inc.'s sepantronium, a survivin expression inhibitor, is in Phase II testing to treat non-Hodgkin's lymphoma (NHL).</p> <p>Erimos Pharmaceutical LLC's Terameprocol tetra-<i>O</i>-methyl nordihydroguaiaretic acid, a small molecule inhibitor of the production and activation of survivin, is in Phase I for multiple cancers.</p> <p>SciBX 6(34); doi:10.1038/scibx.2013.943 Published online Sept. 5, 2013</p>	Patent application filed; unavailable for licensing	<p>Lee, M.-O. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Aug. 5, 2013; doi:10.1073/pnas.1303669110</p> <p>Contact: Hyuk-Jin Cha, Sogang University, Seoul, South Korea e-mail: hjcha@sogang.ac.kr</p> <p>Contact: Kwang-Soo Kim, Harvard Medical School, Boston, Mass. e-mail: kskim@mclean.harvard.edu</p>