

## This week in techniques

| Approach   | Summary  | Licensing status                        | Publication and contact information   |
|--|--|---|---|
| <b>Drug platforms</b>  |  |   |   |
| Embryonic stem cell (ESC)-derived anterior pituitary tissues for treating endocrine diseases | <i>In vitro</i> and mouse studies identified a method to generate anterior pituitary tissues from ESCs that could help treat endocrine diseases. Cultured mouse ESCs were first stimulated to aggregate into non-neural ectoderm and hypothalamic ectoderm layers. Subsequent treatment of the ectoderm with a hedgehog pathway agonist led to the formation of 3D anterior pituitary structures that produced endocrine cells. In mice, grafting of the cell structure increased hormone levels compared with those in sham-grafted controls. Next steps could include applying the strategy to human ESCs. | Patent and licensing status unavailable | Suga, H. <i>et al. Nature</i> ; published online Nov. 9, 2011; doi:10.1038/nature10637<br><b>Contact:</b> Yoshiaki Sasai, RIKEN Center for Developmental Biology, Kobe, Japan<br>e-mail: <a href="mailto:yoshikisasai@cdb.riken.jp">yoshikisasai@cdb.riken.jp</a> |
|  | <b>SciBX 4(46); doi:10.1038/scibx.2011.1309</b><br>Published online Dec. 1, 2011   |   |   |