## This week in techniques

| Approach | Summary | Licensing status | Publication and contact information |
|---|---|---|---|
| **Drug platforms** | | | |
| Self-assembling, osteogenic, polymer-based coating to prevent joint implant failure | Rodent studies suggest a self-assembling, osteogenic, polymer-based coating could help prevent joint implant failure. The multilayer polymer coating is less than 2 μm thick and consists of a permanent osteoconductive hydroxyapatite base layer underneath hydrolytically degradable osteoinductive poly(β-amino ester) layers that slowly release bone morphogenetic protein 2 (BMP2). In a rat model for implant integration, implants that used the multilayer polymer coating showed better integration with host bone and greater tensile strength at the bone-implant interface than implants stabilized with conventional bone cement. In the model, implants with the polymer coating showed long-term stable fixation to host bone and no fracturing at the bone-implant interface as measured out to 18 months. Next steps include evaluating implants that use the coating in large animal models.<br><br>*SciBX* 6(29); doi:10.1038/scibx.2013.775<br>Published online Aug. 1, 2013 | Patent application filed; available for licensing | Shah, N.J. *et al. Sci. Transl. Med.*; published online June 26, 2013; doi:10.1126/scitranslmed.3005576<br>**Contact:** Paula T. Hammond, Massachusetts Institute of Technology, Cambridge, Mass.<br>e-mail: hammond@mit.edu |