1116-57-1143 **David Auckly***, dav@math.ksu.edu, and **Hee Jung Kim**, **Paul Melvin** and **Daniel Ruberman**. *From Tangles to Equivariant Hyperbolic Corks.* Preliminary report.

It is possible to pass from certain tangles to interesting cobordisms of 3-manifolds. Under the right conditions on the tangle, this will allow one to construct equivariant corks with hyperbolic boundary. The original definition of a cork is a smooth, contractible 4-manifold together with an involution on the boundary that extends as a homeomorphism, but does not extend as a diffeomorphism. Any two simply-connected, homeomorphic, smooth 4-manifolds are related by a cork twist – remove the cork and re-glue via the involution. There are a number of explicit examples of this known. We generalize these examples to allow other groups to act on the boundary changing the diffeomorphism type. (Received September 17, 2015)