Lab 1: Tissue biomechanics and mechanobiology

**PI:** Alan Grodzinsky
**Lab Instructors:** Eliot Frank, Diana Chai

**Summary**

- Mechanical testing of cartilage under static and dynamic compression and shear. We will demonstrate the use of plugs of bovine tissue run through a series of tests in the apparatus.

- Demonstrations of incubator-housed bioreactors for application of dynamic compression and shear to cartilage specimens, and the various cell- and molecular-biological outcome measures that are used to assess mechanotransduction mechanisms in cells in their native dense extracellular matrix environment.

**Recommended Reading**


[http://www.openwetware.org/wiki/GEM4labs](http://www.openwetware.org/wiki/GEM4labs)