1027-92-129   **Alain Goriely*** (`goriely@math.arizona.edu`), Math Dept, Building 89, University o Arizona, Tucson, AZ 85721, and **Rebecca Vandiver**. *The Elastic Dynamics of Biological Growth.*

The growth of tissues such as arteries, heart, bones, or tumor is partly conditioned by their mechanical environment. As a tissue grows, it is not only subject to stresses but it also develops stresses by itself. These forces play an important role in the evolution and regulation of growth, both in physiological and pathological conditions. In this talk we explore the interplay between growth and stress and the time evolution it generates. In particular, we show that in the case of spatially homogeneous growth, a general form of time evolution can be obtained leading to a dynamical systems coupling growth and stresses variables. Simple examples will be considered to develop new insights into growth processes. (Received February 23, 2007)