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Mechanobiology: The role of mechanics in health and disease

Mechanobiology is an emerging field of science at the interface of biology and engineering that focuses on how physical forces and changes in the mechanical properties of cells and tissues contribute to development, physiology, and disease. The development of this field has been led by experimental methods at the sub-cell, cell and tissue scales that model the *in vivo* physiologic and pathologic responses to mechanical stimuli. The observations from these measurements are quite often counterintuitive and concurrent theoretical and computational advances have helped interpret the experimental findings. The aim of this special issue is to present the state-of-the-art in this emerging field of mechanobiology at length scales ranging from single proteins to large tissues. The issue contains a number of papers on both the development of novel experimental techniques as well as new theoretical and computational frameworks.

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