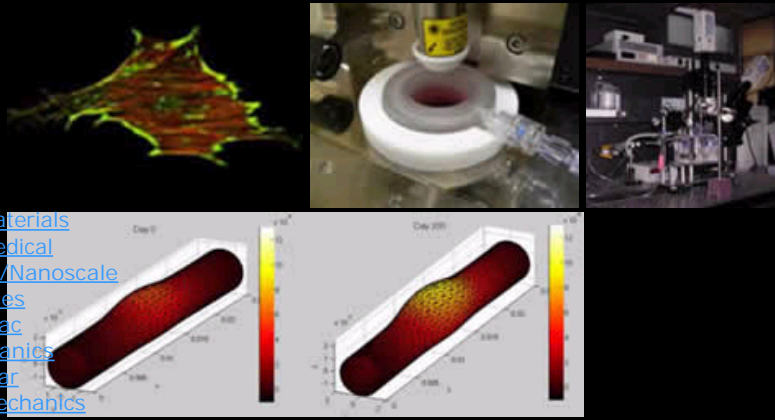


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Webpage: <http://biomed.tamu.edu/faculty/humphrey/>



The primary goal of our laboratory is to synthesize rapidly increasing molecular, cellular, and biomechanical data on mechanobiological responses in the vasculature within a general theory of growth and remodeling that permits development of computational fluid-solid-growth models. Such models promise to enable us, for the first time, to predict disease progression and responses to clinical interventions, and thereby to change the paradigm of medical device design. Devices should be designed based on how the tissues will adapt in response to the altered chemo-mechanical loading."

**Biography**

Jay D. Humphrey received the B.S. degree from Virginia Tech and the M.S. and Ph.D. degrees from The Georgia Institute of Technology, all in Engineering Science and Mechanics, and he completed a post-doctoral fellowship in Cardiovascular Research at The Johns Hopkins University. Professor Humphrey has authored a graduate textbook (Cardiovascular Solid Mechanics: Cells, Tissues, and Organs), co-authored an undergraduate textbook with a former student (An Introduction to Biomechanics: Solids and Fluids, Analysis and Design), co-authored a general textbook (Style and Ethics of Communication in Science and Engineering), co-edited a research book (Cardiovascular Soft Tissue Biomechanics), contributed chapters to 16 other books, and published over 140 journal articles. He was elected to the US National Committee on Biomechanics and the World Council of Biomechanics, and he serves as co-Editor of the international journal Biomechanics and Modeling in Mechanobiology. He is also a Fellow of the American Institute for Medical and Biological Engineering and a Fellow of the American Society of Mechanical Engineering.

**Keywords**

- Biomechanics
- Aneurysms
- Cerebral vasospasm
- Hypertension
- Soft tissue growth and remodeling
- Tissue engineering

[Continuum Biomechanics Laboratory](#)



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