

1. Record Nr.	UNINA9910970279603321
Titolo	Mechanobiology of the endothelium // editor, Helim Aranda-Espinoza, Fischell Department of Bioengineering, University of Maryland College Park, MD USA
Pubbl/distr/stampa	Boca Raton : , : CRC Press, , [2015] ©2015
ISBN	0-429-17139-0 1-4822-0724-9
Edizione	[1st ed.]
Descrizione fisica	1 online resource (278 p.)
Disciplina	611.0187 611/.0187
Soggetti	Endothelium - Physiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	A Science Publishers Book.
Nota di contenuto	Cover; Preface; Contents; Chapter 1: The Endothelium as a Mechanosensor; Chapter 2: Mechanobiology of the Endothelial Nucleus; Chapter 3: Cancer Metastasis and Biomechanics of the Endothelium; Chapter 4: Valvular Endothelial Mechanobiology; Chapter 5: Environmental Factors that Influence the Response of the Endothelium to Flow; Chapter 6: Differential Response of the Endothelium to Simultaneous Chemical and Mechanical Stimulation in Inflammation Response; Chapter 7: The Role of Cholesterol and Lipoproteins in Control of Endothelial Biomechanics Chapter 8: Implications of Fluid Shear Stress in Capillary Sprouting during Adult Microvascular Network Remodeling Chapter 9: Endothelial Cell Adhesion Molecules and Drug Delivery Applications; Chapter 10: Leukocyte Transendothelial Migration: A Biophysical Event; Color Plate Section
Sommario/riassunto	<P>The endothelium is an excellent example of where biology meets physics and engineering. It must convert mechanical forces into chemical signals to maintain homeostasis. It also controls the immune response, drug delivery through the vasculature, and cancer metastasis. Basic understanding of these processes is starting to

emerge and the knowledge gained from research is now being used in applications from drug delivery to imaging modalities. This book reviews current knowledge in mechanobiology of the endothelium and its implications for the development of theranostic devices. </P>

---