

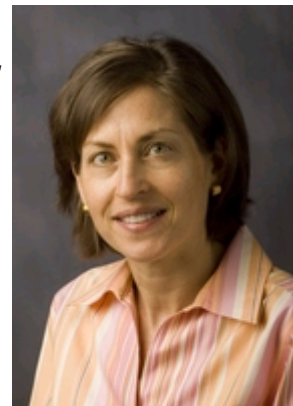


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LORI A SETTON, MARY MILIUS YOH AND HAROLD L. YOH, JR. BASS PROFESSOR OF BIOMEDICAL ENGINEERING AND ASSOCIATE PROFESSOR OF ORTHOPAEDIC SURGERY

Research in Setton's laboratory is focused on the role of mechanical factors in the degeneration and repair of soft tissues of the musculoskeletal system, including the intervertebral disc, articular cartilage and meniscus. Work in the Laboratory is focused on engineering and evaluating materials for tissue regeneration and drug delivery. Studies combining engineering and biology are also used to determine the role of mechanical factors to promote and control healing of cartilaginous tissues. Research in the Laboratory is funded by The National Institutes of Health, The Coulter Foundation and The North Carolina Biotechnology Center.



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Teaching (Spring 2010):

BME 230.01, *TISSUE BIOMECHANICS* Synopsis

Education:

PhD, Columbia University, 1993
BS, Princeton University, 1984

Specialties:

Tissue Repair, Tissue Engineering
Biological Materials

Research Interests:

Research in Setton's laboratory is focused on the role of mechanical factors in the degeneration and repair of soft tissues of the musculoskeletal system, including the intervertebral disc, articular cartilage and meniscus.

Curriculum Vitae

Awards, Honors, and Distinctions

Dean's Award for Excellence in Mentoring, Duke University, Graduate School, 2004
Fellow, American Institute of Biological and Medical Engineers, 2005
Van C. Mow Medal, American Society of Mechanical Engineers, 2007

Representative Publications (More Publications)

Gilchrist, Christopher L. and Witvoet-Braam, Sietske W. and Guilak, Farshid and Setton, Lori A., *Measurement of intracellular strain on deformable substrates with texture correlation*, Journal of Biomechanics, vol. 40 no. 4 (2007), pp. 786 - 794 [013] [abs].

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Boyd, L.M. and Richardson, W.J. and Chen, J. and Kraus, V.B. and Tewari, A. and Setton, L.A., *Osmolarity regulates gene expression in intervertebral disc cells determined by gene array and real-time quantitative RT-PCR*, Ann. Biomed. Eng. (USA), vol. 33 no. 8 (2005), pp. 1071 - 7 [s10439-005-5775-y] [abs].

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Upton, Maureen L. and Chen, Jun and Guilak, Farshid and Setton, Lori A., *Differential effects of static and dynamic compression on meniscal cell gene expression*, Journal of Orthopaedic Research, vol. 21 no. 6 (2003), pp. 963 - 969 [S0736-0266(03)00063-9] [abs].

Baer, A.E. and Laursen, T.A. and Guilak, F. and Setton, L.A., *The micromechanical environment of intervertebral disc cells determined by a finite deformation, anisotropic, and biphasic finite element model*, Trans. ASME, J. Biomech. Eng. (USA), vol. 125 no. 1 (2003), pp. 1 - 11 [1.1532790] [abs].

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