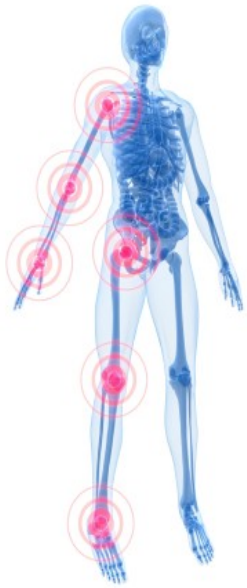
ABIA SYNERGY SEMINAR

AUSTEN BioInnovation INSTITUTE IN AKRON

In Vitro and Computational Simulation of Joint Function related to Musculoskeletal Disorders



REVISED DATE

March 24, 2010
5:00—6:00 p.m.

Location:
Akron Children's Hospital
Considine Auditorium
One Perkins Square
Akron OH 44310

Who should attend:
This seminar is perfect for graduates, medical students, residents, fellows nursing students, medical professionals

CME Opportunity:
The Summa Health System designates this educational activity for a maximum of 1.0 *AMA PRA Category 1 Credit(s) TM*.

Physicians should only claim credit commensurate with the extent of their participation in the activity.

Summa Health System is accredited by the Ohio State Medical Association to sponsor continuing medical

Synergy Seminar
RSVP to the number below or fax your registration form to:
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Speaker: John Elias, Ph.D.
Biomechanics Laboratory, AGMC

Computational modeling and in vitro experimental testing are powerful tools for investigating musculoskeletal disorders and evaluating the efficacy of treatment methods. These tools are commonly used to characterize kinematics of musculoskeletal joints, the loads carried by ligaments and the pressure applied to cartilage. The presentation will focus on the biomechanical tools available for computational modeling and in vitro testing, with applications of current and past research focused on the knee presented.

- Collaboration between orthopedic surgeons and biomechanical engineers
- Simulating joint function and measuring clinically relevant output in cadaver models
- Developing computational models to mathematically simulate joint function
- Using computational models to reconstruct and characterize in vivo motion
- Limitations and challenges of simulation of joint function