

**JOHN P. MCGOVERN LECTURESHIP
IN BIOMEDICAL COMPUTING AND IMAGING**

How Does Kinesin Generate A Power Stroke?



Wonmuk Hwang, Ph.D.
Department of Biomedical Engineering
Texas A&M University
College Station

Kinesin is a nano-scale biological motor protein that uses ATP hydrolysis to walk along the microtubule track. Whether this biological motor uses a Brownian ratchet or a power stroke mechanism has been an open question. Dr. Hwang used molecular dynamics simulations to identify a potential force generating structural element of kinesin, where a power stroke is generated by a novel way of dynamically folding and unfolding of its structure.

Dr. Hwang received his bachelor's degree at Seoul National University and a PhD in theoretical physics at Boston University. He also worked at the MIT Center for Biomedical Engineering before joining the faculty at TAMU. His current research interests are biomolecular self-assembly and molecular biomechanics.

**Drinks
and snacks
complimentary**

DATE: Tuesday, October 10, 2006

TIME: 4:00PM

**PLACE: Room 1414, 14th floor,
University Center Tower (UCT) Building,
7000 Fannin St., Houston, TX 77030**

Parking in the UCT building will be validated.

For information contact Ms. Namiko Burleson at 713.500.3938



THE UNIVERSITY of TEXAS

SCHOOL OF HEALTH INFORMATION
SCIENCES AT HOUSTON

A part of The University of Texas Health Science Center at Houston

