

# Biomedical and Health Informatics Series

Tuesday, November 28th, Room RR 134

## Valerie Daggett, PhD

Professor, Department of Medicinal Chemistry, Adjunct Professor, Department of Biochemistry, Adjunct Professor, Division of Biomedical and Health Informatics Adjunct Professor, Department of Bioengineering; Member, Biomolecular Structure and Design Program; Member, Molecular Biophysics Program; Member, Neurobiology and Behavior Program; Member, Computational Biology Program; Member, Center for Nanotechnology

### *"Molecular Dynameomics"*

Simulation methods are playing an increasingly important role in biology and biomedical research. This talk will focus on the importance of protein dynamics to protein function and pathology. This is an area that has experienced a data explosion. While our computing abilities are following Moore's Law, the resulting data are not. Consequently, what began as computational biophysical studies have moved into the realm of bioinformatics. The Daggett group efforts in the area of Dynameomics will be discussed.

Dr. Daggett has 21 years of experience performing simulations of proteins. She developed the approach of simulating protein unfolding to characterize the folding process. She also was the first to use simulation methods to map conformational changes associated with amyloidosis. At UW she was a founding member of the Biomolecular Structure and Design Program, and she will be taking over as director of that program in 2007. She is PI of NIH, ONR, Microsoft, DOE and other grants. She is a regular study member of the NIH Macromolecular Structure and Function A Study Section. She has also evaluated grants for many other sponsors, including DOE, NAS/NRC, BBSRC, MRC, The Wellcome Trust, the Hereditary Disease Foundation and various NIH projects. Dr. Daggett is the Senior Editor of *Protein Engineering Design and Selection (PEDS)* and she is on several editorial boards: *Biochemistry*, *Structure*, and *Biomedical Computation Review (BCR)*. She is a contributing member to 'FACULTY OF 1000 BIOLOGY', and co-editor of the upcoming *Current Opinion in Structural Biology* issue on Folding and Binding. She was elected to the Biophysical Society Council (2007-2010), and she has organized several international meetings. Dr. Daggett has published over 125 scientific papers and had two of the 'Top 5' downloaded papers in the *Journal of Molecular Biology* in 2005.

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The Biomedical and Health Informatics lecture series covers current topics and developments in Biomedical and Health Informatics. Presenters include faculty, students, researchers and developers from the University of Washington, other academic institutions, government, and industry (locally and nationally). The intended audience is the broader University of Washington and Seattle area community with an interest in BHI as well as BHI faculty and students.

**Series Website:** <http://courses.washington.edu/mebi590/>