

Biomedical and Health Informatics Series

Tuesday, January 16th, Room RR 134, 12:00-12:50

Eugene Kolker, PhD

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“Swimming in GOBS of Data”

Biology is now transforming into an integrative and information-based science that has two key characteristics: global or high throughput (HTP) analysis and data integration. This presentation will focus on data analysis for HTP studies. Global genome scale studies are still at the very early stages of their development and are therefore subject to considerable noise. Obtained HTP data have to be critically re-analyzed with regard to their accuracy and utility for the quantitative analysis. One of the key difficulties inherent in such HTP data is the absence of “known” genome scale datasets - experimental standards - that can be used for testing and validation. In addition to these experimental standards, flexible, transparent, and statistically sound computational methods should be developed as well. Altogether, the experimental standards and computational methods will introduce experiment- (study-) specific approaches for HTP studies, which in turn will result in deeper biological knowledge.

Dr. Kolker has over 20 years of expertise in biological data analysis and integration. His research has been supported by DOE, NIH, and NSF. Eugene participated in organizing numerous scientific meetings, including ICMCM, RECOMB, and ASM. In 1996 he organized and ran the *COMBI* Seminar Series for 5 years, which became a required course of interdisciplinary PhD program in Computational Molecular Biology at UW. In 1998-2001 Dr. Kolker served as a member of the Board of Directors of the International Society for Computational Biology (ISCB) and is currently serving as a member of the Standards Committee of the Human Proteome Organization (HUPO).

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/>