Algorithms and Software Tools for the Prediction of Allergenicity

Werner Braun, Ph.D.,
Professor, Dept. of Biochemistry and Molecular Biology

4:00 pm  Friday
Mar. 14th, 2008
5.521 Levin Hall

Abstract: We created the Structural Database of Allergenic Proteins (SDAP, http://fermi.utmb.edu/SDAP/) to archive data on known allergens and implemented novel bioinformatics rules for the prediction of allergenicity. Using the sequence information of known allergens in SDAP, we used a large-scale statistical analysis to test current bioinformatics guidelines. We found that these bioinformatics guidelines are far from optimal. We also include examples of how 3D structures of allergens can be used as a basis for quantitative rules to predict allergenicity. (http://scsb.utmb.edu/faculty/braun.htm)