Advisory Committee for Pharmaceutical Science
Pharmacology Toxicology Subcommittee Meeting
June 10, 2003

Questions for Subcommittee:

(1) While most data from genome-scale gene expression experiments are incompletely understood, at the same time much of these data are considered valuable. Reluctance has been expressed for incorporating these endpoints into routine pharmacological and toxicological investigations. Should the FDA CDER be proactive at this time in enabling the incorporation of such study data into nonclinical phases of drug development, and in clarifying how the results should be submitted to the agency? What should the present and future goals be for use of the data by CDER, and what major obstacles are expected for incorporating these data into nonclinical regulatory studies?

(2) Concerns have been raised about gene expression data reproducibility across laboratories, across platforms and technologies, and over the volume of data generated from each experiment. Is it: (a) feasible, (b) reasonable, and (c) necessary for CDER to set a goal of developing an internal database to capture gene expression and associated phenotypic outcome data from nonclinical studies in order to enhance institutional knowledge and realize the data's full value?

(3) Concerns have been expressed over the reanalysis and reinterpretations of large gene expression data sets. Is it advisable for CDER to recommend that sponsors follow one common and transparent data processing protocol and statistical analysis method for each platform of gene expression data that will be submitted, but not preclude sponsors from applying and sharing results from additional, individually favored, methods? What specific advice do you have to CDER for clarifying recommendations on data processing and analysis, as well as data submission content and format?