



Temple University

ANNOUNCES A
COLLOQUIUM

Dr. Frank Bretz

*Statistical Methodology, Novartis
and
Department of Biometry,
Medical University of Hanover, Germany*

will speak on

A Graphical Approach to Sequentially Rejective Multiple Test Procedures

Time: 3:00 – 4:00 PM

Date: Friday, November 7, 2008

Place: Tuttleman Learning Center 203AB

Abstract

A variety of sequentially rejective, weighted Bonferroni type tests have been proposed for clinical trials with multiple treatment arms or endpoints, such as gatekeeping procedures, fixed sequence tests and fallback procedures. They allow to map the difference in importance as well as the relationship between the various research questions onto an adequate multiple test procedure. Since these procedures rely on the closed test principle, they usually require the explicit specification of a large number of intersection hypotheses tests. The underlying test strategy may therefore be difficult to communicate. We propose a simple iterative graphical approach to construct and perform such Bonferroni type tests. The resulting multiple test procedures are represented by directed, weighted graphs, where each node corresponds to an elementary hypothesis, together with a simple algorithm to generate such graphs while sequentially testing the individual hypotheses. The approach is illustrated with the visualization of several common gatekeeping strategies. A case study is used to illustrate how the methods can be used to tailor a multiple test procedure to given study objectives.

(Joint work with Willi Maurer, Werner Brannath, Martin Posch)