

**PHC7650 Minicourses
Winter 2010**

**Session 1 January 18-Feb 12
Fundamentals of Fluorescence
David Kessel and Kamiar Moin**

**Session 2, Feb 15-Mar 12
Use of Excel Spreadsheets in Research and Teaching
Russell Yamazaki**

This course will cover the use of Excel spreadsheets to analyze and visualize research data and to provide mathematical simulations of experimental situations to allow comparisons with experimental data. The use of spreadsheets to analyze group data such as student exam scores will also be covered. The sessions will be conducted

**Session 3, Mar 15-Apr 9
Drug targets for Therapeutic Intervention in Human Diseases that Result
from Alteration of Membrane Transport
Cristina Artalejo and Ellen Tisdale**

A variety of hereditary and autoimmune diseases are the result of a defect(s) in some aspect of membrane transport. A better understanding of the molecular basis that underlies these diseases enables one to identify possible targets for therapeutic intervention. The format will be similar to a discussion run by a group leader in a pharmaceutical company on a project to develop a drug from the initial chemical design, to the action on isolated organs, the solubility, the biodisposibility, the administration, the activity, side effects in animals, and finally to human clinical trials. For this mini-course, students are expected to present and critique journal articles relevant to the topic. There will be no exam and the grade will be based on oral presentation and discussion of journal articles. A minimum enrollment of 4 students is required in order to have a critical mass for discussion.