PHILADELPHIA ORGANIC CHEMISTS' CLUB

DATE: Thursday, April 20th, 2006; 6:00 pm dinner, 8:00 pm seminar

PLACE: Carolyn Hoff Lynch Room, located on the 1st floor (around the corner from the business office), New Chemistry Building, University of Pennsylvania, 34th and Spruce Streets, Philadelphia, PA

SPEAKER: **Dr. Kay M. Brummond, Professor of Chemistry**
The University of Pittsburgh

BIOGRAPHY: Kay Brummond attended the Pennsylvania State University where she received her B.S. and Ph.D. degree, the latter under the direction of Raymond Funk. Following a postdoctoral appointment with Robert Boeckman at the University of Rochester, she accepted an Assistant Professorship at West Virginia University in 1993. She was promoted to Associate Professor in 1999. In 2001 she moved her research program to the University of Pittsburgh where she is an Associate Professor. Her research interests include development of new synthetic methods with an emphasis on organometallic processes, their application to the synthesis of biologically important compounds, as well as designing new strategies for the preparation of small organic molecules on a solid support

TITLE: **Transition Metal Catalyzed Reactions of Allenes**

DINNER: The meeting will be preceded by cocktails (cash bar) at 5:30 pm followed by a dinner at 6:00 pm at La Terrasse 3432 Sansom St. Phila, 19104. Reservations should be made by email: emichelotti@locuspharma.com or phone: (215)-358-2026 to Enrique Michelotti **before 5:00 pm, Monday April 24th. Please pay the $45.00 for dinner when you attend.** **Thank you.**

Transition Metal Catalyzed Reactions of Allenes

Kay M. Brummond

A remarkable array of interesting compounds has been discovered from nature. There are many reasons that these compounds must be synthesized in the lab ranging from determination of the chemical structure to simply needing more than nature can provide. These natural products can pose challenges to the synthetic community in a variety of ways, including new arrangements of functionalities and novel skeletons. Chemists are practiced in solving these challenges but the price can be considerable at times, for example, in the number of synthetic manipulations required to obtain a desired substructure or functionality. Thus, there is a continuing need for the development of new reaction processes to address these new functional and structural challenges. Expanding our synthetic tool-box to include under-utilized functional groups can be a surprisingly useful resource. Our group is extensively involved in exploring transition metal catalyzed reactions of allenes, a functional group that was largely ignored for the first half of the 20^{th} century and still considered a curiosity by many in the latter half. We have shown that allenes undergo carbocyclization and cycloaddition reactions to provide novel arrangements of functionality and substructures that are difficult to obtain using existing methods. I will present a few of these discoveries and their application to biologically interesting compounds.