



AMERICAN CHEMICAL SOCIETY KENTUCKY LAKE SECTION

January 2012 Kentucky Lake Section Meeting

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Los Portales Mexican Restaurant

Union City, TN

Thursday, January 26, 2012

Social @ 5:30, Dinner @ 6:00, Presentation @ 7:00

Los Portales is located at

1700 W Reelfoot Ave Ste 274, Union City, TN 38261
in the same shopping center as Goody's and J.C. Penney

The price is \$10 (Students \$5)

Presentation:

Calcium-Dependent Assembly of Cadherins

By

Dr. Susan Pedigo

Univ. of Mississippi

Associate Professor of Biochemistry

See Reverse Side for Abstract & Biographical Sketch

Comments from the Chair

Greetings KLS! I hope everyone had a good holiday season and is meeting the New Year with enthusiasm. We have several exciting events occurring this year and I hope that we will have a lot of involvement from our members. In March we are hosting a leadership retreat for undergraduate and graduate students in conjunction with the Ole Miss Chapter. We have a great line-up of speakers during the academic year (thanks to Dr. Phil Shelton, the Chair Elect) and

we are hoping to arrange some social activities over the summer that are little to no cost and family friendly. We are continuing to offer awards for outstanding students and chemical professionals as was started by our Past Chair, Dr. Robbie Montgomery. So keep up the hard work and keep your eyes peeled for announcements on all these upcoming events. We need your continued support and involvement to keep our Local Section going strong. If you would like to volunteer for any of these activities or have questions or concerns about the section, please feel free to email any of the officers.

Kate Stumpo

KLS-ACS 2012 Officers

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KLS-ACS Web Page

<http://kentuckylake.sites.acs.org/>

If you would like to receive the newsletter by e-mail,
send a request to Rebecca.brown@kctcs.edu

Abstract

Calcium-Dependent Assembly of Cadherins

Cadherins are transmembrane proteins that are responsible for communication between identical cells through calcium-dependent interactions. In spite of concerted effort by many research teams, there is still ambiguity about the structural nature of the lateral and adhesive interfaces of these constructs. Recently, however, cell-cell interaction studies and high resolution structural studies have converged on a model that proposes some interesting features. Detailed calcium-binding studies from our lab elaborate this model to propose that binding of Ca³⁺ generates the conformational change. This field has now matured to the point where biophysical techniques can be used to test the role of specific amino acids in the equilibria that culminate with formation of the adhesive dimer. The overall goal of our research is to understand the molecular mechanism that leads to adhesion in classical cadherins through studies of the linked equilibria.

Brief Biographical Sketch

Susan Pedigo began her career as a chemist by receiving her Bachelors in Chemistry from the University of Colorado in 1982. From here she moved to the University of Minnesota and in 1987 graduated with a Masters followed by a Ph. D. from the University of Iowa in 1995. During her stay at the University of Iowa she obtained the Center for Biocatalysis and Bioprocessing Predoctoral Fellowship in 1993. Susan then took on a postdoctoral position at Vanderbilt, until becoming part of the faculty at the University of Mississippi where she remains today.

