

the Alembic



Chair's Corner

Welcome back! Summer is almost over, the days are getting shorter and it is time for me to write another Chair's Corner. Our schedule for the fall is coming into place; we will have two tour speakers and then a tour of a local industry. The upcoming meetings should be interesting and informative. Our banquet in May was well attended and it was nice to meet the award winners.

I was reading an interesting article on the ACS web site about tomatoes and how to grow them to be more nutritious. Since I am an amateur gardener, this article caught my eye. Researchers at the Institute of Vegetable Science in Germany have recently published results from a study of how increasing the salt content of irrigation medium increased the nutritional value of the tomatoes.¹ There were some drawbacks; the tomatoes were smaller and the yield overall per plant was less as well. I don't know if I will try this on

my own tomatoes, but it does give me a little food for thought.

In the news this week was the announcement that astronomers have agreed on a definition for a planet. Now there are only eight planets in the solar system, with Pluto being demoted to a dwarf planet. It makes me think about advances in knowledge or thought that can change the whole basis of a field. Even knowledge that everyone takes for granted as being "true" can change with a little more data. It sure makes life exciting. I cannot wait to see what happens next!

We still need a National Chemistry Week Coordinator. Please let me know if you are interested.

Laura

1. Journal of Agriculture and Food Chemistry (2006, 54 441-448)

ACS - CWS Mini-Directory

Chair

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"Can Dogs see Ghosts? (The Chemistry of Vision)"

by

Dr. Robert S.H. Liu
Department of Chemistry
University of Hawaii



Wednesday, September 20, 2006

7:30 PM Science Building, *Trytten Lecture Hall*. Room A121
UW – Stevens Point

5:30 Mixer & Dinner, Michele's Restaurant

During his boyhood in Shanghai, China, R. Liu often heard the statement: "Dogs can see ghosts!" Now after more than three decades of research in Vitamin A and visual pigments, he asked himself whether there is scientific basis that "dogs can see ghosts". Preparing to answer this question in this presentation, he will first review the important development in the chemistry of vision in recent decades with particular emphasis on the work carried out at the University of Hawaii. Topics covered will be: stereospecificity of the binding site of rhodopsin, the probing of specific protein-substrate interactions (in rhodopsin) through F-NMR spectroscopy, the specific mode of photoreaction that triggers the visual process and the unusually high photosensitivity of rhodopsin. With these as background information, he shall then return to address the question: Can Dogs See Ghosts? This talk was initially presented to a group of businessmen in a luncheon gathering in downtown Honolulu in August 2004. Needless to say it was presented in a manner not assuming any prior knowledge in chemistry. However, it will not be difficult to re-direct the lecture to a more chemically oriented audience at a level tailored to the interest and background of that group of listeners.

About the Speaker

Education: B.A., 1961, Howard Payne College Ph.D., 1965, California Institute of Technology

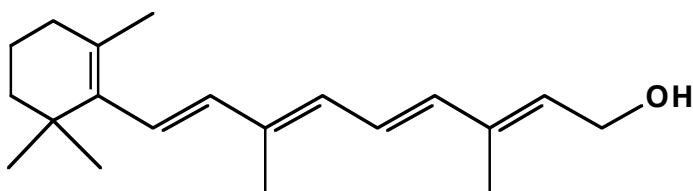
Associate Professor of Chemistry, 1968–72, Professor of Chemistry, 1972–2005, Professor emeritus, 2005–, University of Hawaii.

Photochemistry and photophysics of conjugated polyenes, new isomers of vitamin A and carotene, visual pigment analogs, bacteriorhodopsin, sensory rhodopsin and ¹⁹F-NMR of membrane proteins.

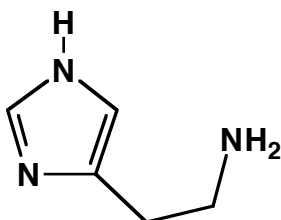
Prior to the meeting, a 5:30 PM mixer and dinner will be held at Michele's Restaurant, 513 Division St. (Business 51 North, adjacent to UWSP campus). *After dinner, drive three blocks east on Fourth Avenue to reach Parking Lot X on campus. The Science Building is adjacent to the lot and the Trytten Lecture Hall is just inside the main entrance. Reservations are made by contacting Robin Tanke at 715-346-4325 (or email rtanke@uwsp.edu) by 5 PM on Tuesday September 19.*

ACS - Central Wisconsin Section 2006 Meeting Schedule				
DATE	LOCATION	SPEAKER	TOPIC	HOST
September 20	Stevens Point	Robert S. H. Liu	The Chemistry of Vision	Robin Tanke
October 18	Marshfield	Ramon Barnes	Analytical Plasma Source MS Analysis for Nutrition and Toxicology	Carmen Wiley
November 9	Stevens Point	Tom Guilliams	Plant Tour of Ortho-Molecular Products	Tom Guilliams

Molecules of the Month



The body makes **trans-retinol** (vitamin A) from β -carotene, the orange color compound in carrots. trans-Retinol is converted to 11-cis-retinal, which binds to the opsin protein to form rhodopsin. When light hits rhodopsin molecules in the retina of the eye, 11-cis-retinal breaks away from opsin and transforms to all-trans-retinal, causing the eye to send an "I see light" signal to the brain.



Histamine is the chemical messenger that antihistamine medicines try to block. Histamine is released by mast cells during an allergy attack and can produce multiple biological effects including bronchoconstriction (asthma), vasodilation (watery eyes, runny nose), and gastric acid secretion.

ACS-CWS Web Page

www.uwsp.edu/chemistry/acscws/

Up-to-date information about section activities including the Alembic and meeting notices.

Also visit www.chemistry.org for latest chem news.

New Faculty & Staff at UWSP

Chemistry Lecturers

Michael Pallmer
B.S., University of Alaska
M.S., Ph.D., Purdue University

David Thiel
B.S., St. Norbert College
Ph.D., University of New York-Stony Brook

Ted Weiland
B.S., UW-Eau Claire
M.S., Iowa State University

Faculty

Jason D'Acchioli (inorganic)
B.S., Providence College
Sc.M. Brown University
Ph.D., The Ohio State University

Nate Bowling (organic)
B.S., Valparaiso University
Ph.D., University of Wisconsin - Madison

Jim Lawrence (biochemistry)
B.S., Bemidji State University
Ph.D., Purdue University

Mike Zach (analytical)
B.S., University of Wisconsin – Stevens Point
M.S., Ph.D., University of California, Irvine
