



## American Chemical Society Wichita Section

August/September, 2015 Newsletter

Stephen Donnelly, Editor

**Section Meeting**  
Monday, 21 September, 6:00 PM  
Kansas Wesleyan University  
Salina, KS

**Meal:** 6:00 p.m.

**Presentation:** 7:00 p.m.

We will meet for dinner in the Steward Dining Room in Pfeiffer Hall on the campus of Kansas Wesleyan University in Salina. The cost of the meal is \$13.50 for members and guests, and \$7.00 for students. The meal will include a Caesar salad, garlic bread, choice of two pastas, Alfredo or meat sauce, parmesan cheese, assorted dessert bars and ice tea. A map of the KWU Campus can be found at <http://www.kwu.edu/campus-map>. Please RSVP to Dr. Dorothy Hanna at [dahanna@kwu.edu](mailto:dahanna@kwu.edu) by 15 September.

Following the meal we will traverse the short distance from Pfeiffer Hall to Room 229 of the Peter's Science Hall for the presentation to be given by our invited guest Dr. Robert Bates.

**Speaker:** *Dr. Robert Bates*, Professor Emeritus, The Food Science and Human Nutrition department of the Institute of Food and Agricultural Science at the University of Florida.

**Title:** *What You Always Wanted To Know about Chemicals in Foods but Were Afraid To Eat*

**Abstract:**

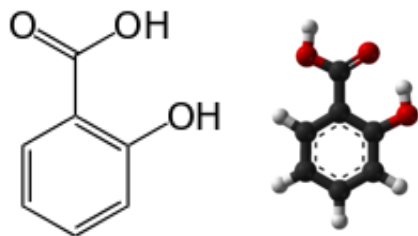
Foods are complex mixtures of chemicals, but with difference. There is a very important legal distinction between naturally occurring food constituents and other chemicals that end up in food by design or default. Conversely, the much more important matter, chemical compatibility, dictated by human physiology and nutritional biochemistry and

vital to well-being, health, performance, and survival - is often ignored or misinterpreted by vocal yet chemically illiterate groups. Despite considerable progress in understanding the science and technology of foods, culture and perception have a far greater influence upon food acceptance and regulation than the reality of nutrition and toxicology. Paradoxically, as science uncovers more about the complex interactions of foods with the human body, the less confident and more confused the public becomes regarding the safety, value, and nutritional efficacy of the U.S. (increasingly global) food supply. Food additives and now phytochemicals are examples of food consumption concerns that should also stress total diet, lifestyle, and common sense. This presentation will deal with both essential and trivial food constituents and emphasize some of the positive and negative aspects of each. Despite our imperfect and changing knowledge, a better appreciation of the chemistry and metabolism of foods has dramatic potential for improving health and well-being, while ignorance is sure to have the opposite effect.

**Speaker Bio:**

Bob Bates received his B.S. degree in food technology from MIT. After several years in the food industry, he obtained an M.S. degree in food science from the University of Hawaii and a Ph.D. in food science from MIT. After a year at the Institute of Nutrition of Central America and Panama in Guatemala, he joined the University of Florida. He is presently a professor emeritus of food technology in the Food Science and Human Nutrition Department. Bates' areas of interest are food processing and utilization, small-scale process and equipment development, fermentation technology and byproduct recovery, food product development, and international technical assistance. His major responsibilities involve teaching graduate and undergraduate food science processing and product development courses; and conducting research/extension activities in home, community, and small-scale industrial food processing operations. He has completed short and long-term international assignments in many countries in the Caribbean, Central and South America, and Asia. He fields frequent inquiries on food science and technology and related subjects from national, international, and industrial sources. Bates has developed and presented many short courses in the U.S. and overseas and has been an ACS tour speaker on various food science and technology topics for about 30 years.

\*\*\*\*\*

**Molecule of the Week****Salicylic Acid****2-hydroxybenzoic acid**

Salicylic acid is a white solid first isolated from the bark of willow trees (*Salix* spp.), from which it gets its name. It also occurs as the free acid or its esters in many plant species.

In an early (1966) biosynthetic process, researchers at Kerr-McGee Oil Industries (now part of Anadarko Petroleum) prepared salicylic acid via the microbial degradation of naphthalene. It is now commercially biosynthesized from phenylalanine.

Acetylsalicylic acid (aspirin), a prodrug to salicylic acid, is made by an entirely different process. Curiously, salicylic acid is also a metabolite of aspirin.

Salicylic acid and its esters are used as food preservatives, in skin-care products and other cosmetics, and in topical medicines. In 2015, J. L. Dangl, S. L. Lebeis, and co-workers at the University of North Carolina, Chapel Hill, discovered that native salicylic acid plays a role in determining which microbes are in the root microbiome of *Arabidopsis thaliana*, a weed that grows in Europe and Asia.

\*\*\*\*\*

**The 2015 Midwest Regional Meeting**

October 21-24, St. Joseph, Missouri



The 2015 Midwest Regional Meeting will be held on the campus of Missouri Western State University in St. Joseph, Missouri and is being hosted by the Kansas City Section of the ACS.

Go to <http://mwr2015.sites.acs.org/> for more information.

\*\*\*\*\*

\*\*\*\*\*

**3<sup>rd</sup> Annual ACS Entrepreneurial Summit**

September 17-18, 2015, Washington, DC

**ACS Entrepreneurial Resources Center**

The ACS Entrepreneurial Summit is an event highlighting the interplay between small businesses and startups, government, corporate venture groups, and private investors as they work towards chemistry innovation and market commercialization. This year's theme focuses on the relationship between corporations' research interests, chemical entrepreneurs, and innovation.

Check the Entrepreneurial Resource Center link at ACS.org for more information.

\*\*\*\*\*

**Wichita Section Web Site:**<http://wichita.sites.acs.org/>**2015 Section Officers****Dr. Norman Schmidt, Chair**

Tabor College

[normans@tabor.edu](mailto:normans@tabor.edu)**Dr. Dorothy Hanna, Chair-elect**

Kansas Wesleyan University

[dahanna@kwu.edu](mailto:dahanna@kwu.edu)**Dr. Diane Nutbrown, Secretary**

Emporia State University

[dnutbrow@emporia.edu](mailto:dnutbrow@emporia.edu)**Dr. Jenifer Settle, Treasurer**[jsettle14@gmail.com](mailto:jsettle14@gmail.com)**Paul Rillema, Councilor (2014 - 2016)**

Wichita State University

[paul.rillema@wichita.edu](mailto:paul.rillema@wichita.edu)**Eric Trump, Immediate Past-Chair**

Emporia State University

[etrump@emporia.edu](mailto:etrump@emporia.edu)