



American Chemical Society Wichita Section

September, 2018 Newsletter

Stephen Donnelly, Editor

Section Meeting & Awards Banquet

Monday, 24 September

Wichita State University

Wichita, KS

Meal: 6:00 p.m.

Speakers Presentation: 7:00 p.m.

We will meet for dinner in the Pike Room (RS 266) of the Rhatigan Student Center on the Wichita State University Campus. The Meal will include chicken parmesan and/or vegetarian lasagna, Caesar salad, fresh baked garlic bread, and homemade cookies and brownies. The cost of the meal is \$16, \$8 for students. We ask those interested in joining us for dinner to **RSVP to Paul Rillema via email (paul.rillema@wichita.edu) by Friday, 21 September.** The presentation will be given in the same room starting at approximately 7:00 PM.

A map of the WSU campus can be found at <https://www.wichita.edu/>. Parking is available in the Rhatigan Student Center parking garage for \$1.50 per hour, or for free in designated visitor parking lots.

Speaker: *Dr. Bill Mattson, PhD*
Department of Chemistry
Randolph College,
Lynchburg, Virginia

Title: *Creative Problem Solving in Chemical Research*

Abstract:

Enjoy an interactive presentation while strengthening an important skill--problem solv

ing. In the day-to-day work environments of chemists and others, it is essential to be able to solve problems creatively. Such problems might involve obtaining new research ideas, improving processes and production in industry, or dealing with problems that arise during research. Oftentimes people apply a random process rather than something more directed, and the results are often poor. This presentation will provide insights that will allow you to improve your creative problem-solving abilities. The speaker has been teaching creative problem solving for many years, and has proven that it can be learned! Past audience responses suggest that regardless of whether you are a chemist, this interactive presentation will be worthy of your time for both its value and its thought-provoking and entertaining elements.

Speaker Bio:

Bill has been a chemistry professor at Randolph College in Lynchburg, Virginia. He earned a B.S. and a Ph.D. in Chemistry from the University of Virginia and an M.S. in Technology of Management from American University. In addition to teaching general, analytical, and instrumental chemistry and to working both on and off campus with students on research projects, Bill offers a popular course in creative and critical problem solving.

Bill has spent 29 of the past 32 summers teaching or conducting research at the University of Virginia, James Madison University, the University of North Carolina, and the University of Tennessee. He has also served as a senior reviewer charged with helping to audit all Advanced Placement chemistry courses in the nation, a consultant for the South Carolina Course Alignment Project, a question writer for the American Dental Exam, an Educational Testing Service chemistry Advanced Placement reader, a National Science Foundation panel member for grant evaluation, a director of the Central Virginia Regional Science Fair, and a master of ceremonies for a high school Academic Competition for Excellence program.

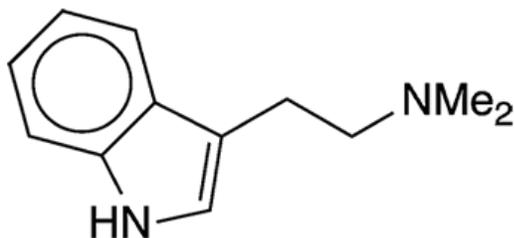
ACS Midwest Regional Meeting, 2019

The Wichita Local Section will be hosting the 2019 Midwest Regional Meeting on October 16th to the 19th. We are in the planning phase and will certainly welcome anyone who may wish to volunteer to help make this event a success. We will also be looking for vendors or anyone else who would like to rent an exposition booth during the event. Please contact either Dr. Paul Rillema or Dr. Arvin Cruz, who will be co-chairing this event. Their contact information is listed below.

High School Science Teacher Outreach

The Wichita Section is making an effort to improve our connection with high school science teachers at schools within the section. If you know a science teacher who might be interested we encourage you to invite them to our next meeting, and, as noted above the section will cover the cost of the meal. For additional information about this outreach effort contact Norman Schmidt at normans@tabor.edu.

Molecule of the Week



N,N-Dimethyltryptamine (DMT) is a plant-based hallucinogen that is outlawed in most countries. DMT was isolated from many species in the 1950s, notably by Pfizer chemists F. A. Hochstein and Anita M. Paradies, who discovered it in the leaves of *Prestonia amazonica* (aka *Haemadictyon amazonicum*), which is called “yagé” by inhabitants of the Peruvian Amazon basin.

Hungarian chemist/psychologist Stephen Szará synthesized DMT in 1956 and studied its psychotropic effects in volunteers during that decade. DMT is sometimes called the “spirit molecule”; it produces psychedelic results when it is swallowed, inhaled, injected, or “vaped”. The DMT structure with a hydroxyl group on the benzene ring is the “feel-good” molecule [serotonin](#).

DMT is currently an outlaw, but chemist David Olson and his research team at the University of

California, Davis, may have found a legitimate pharmaceutical use for it and other hallucinogens. In an effort to find alternatives to the side effect-prone anesthetic ketamine* for treating depression, the investigators showed that DMT, LSD, and other psychotropics increase the number of synapses in the brain areas of lab animals that regulate emotion and mood.

As with ketamine, the effects are long-lasting and involve a similar signaling pathway. These results are promising, but any commercial drug to arise from them is a long way off.

*Recently reported research indicates that ketamine may require signaling through opioid receptors.

Wichita Section Web Site:

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

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