

American Chemical Society – Kalamazoo Local Section (Bi)monthly Newsletter

February 11, 2011

Vol. 1 - Issue 2

Comments from the Chair

Doug Williams

*After all is said and done, more will be said than done.
And so, to keep our sanity, let's try to have some fun.*

With so much to say, we are sending our second "bimonthly" newsletter to you almost one month ahead of schedule. We are also working hard to keep our Web site updated and useful. For all of the details, see <http://www.wmich.edu/acs/>. Here's why -

- New job listings from local employers.
- Upcoming chemistry talks and events in our area.
- Summaries of recent KACS activities.
- Some boring details about Executive Committee work.
- Some exciting opportunities for volunteers (like chair-elect – hint, hint). Please check these out.

Thank you to all who came to our mixer on Jan 20, especially our four consultant panelists: Bill Schinzer, Loretta Dubray, Shirley Smith and Scott Aldrich. If you missed it, a summary with photo and panelist presentations are on our web site under Past Events and News. Scott and his work were recently featured in the January issue of Encore Magazine: see [Encore - January 2011](#).

Please don't let my poetic deficiencies stop you from mentioning the ACS illustrated poetry challenge for Earth Day 2011 and the International Year of Chemistry. A flyer with contest rules for grades K-12 is on our home page. Please feel free to distribute this to educators.

If you want to post chemistry-related events, job openings or announcements, please send a note with proposed content to (ACSkzoo@gmail.com).

KACS website:

<http://www.wmich.edu/acs/>

Do you have questions, comments, or would like to contribute to this newsletter? Send an email to:

ACSkzoo@gmail.com



2011 KACS Executive Officers

Chairperson

Dr. Doug Williams, Kalsec, Inc.
DWilliams@kalsec.com

Past-Chairperson

Dr. Susan Stapleton, WMU – Chemistry
susan.stapleton@wmich.edu

Chairperson-Elect

Vacant

Secretary

Carl Stachew
cstachew@yahoo.com

Treasurer

Dr. John Miller, WMU – Chemistry
john.b.miller@wmich.edu

Councilor

Dr. Lydia E. M. Hines, WMU – Chemistry
lemhwgh@gmail.com

Alternate Councilor

Mr. Michael Kiella
mike.kiella@charter.net

Upcoming events at glance (Feb - Apr 2011)

- **Feb 12** – Girl Scout chemistry badge event (CANCELLED)

- **Feb 22** – Science Café - “Kalamazoo River oil spill: Overview and prospects for recovery,” Professor Steve Hamilton (Kellogg Biological Station/MSU), 7 pm, Martini's

- **Mar 1** – High School Spring Science Symposium. (Contact donald.schreiber@wmich.edu for details)

- **Mar 22** – ACS Tour Speaker: Ned Heindel (ACS President, 1994), 6:30 pm, Kalamazoo Area Math & Science Center

- **April** – Earth Day and IYC Events (Energy theme), details to be announced

Do you have an event that you would like to have listed in this newsletter? Send an email to:

ACSkzoo@gmail.com

Science Café

Tuesday Feb 22, 7 pm – Martini's Restaurant

Please join us to hear Prof. Steve Hamilton of the MSU-Kellogg Biological Station present “Kalamazoo River oil spill: Overview and prospects for recovery.” Dr. Hamilton is an aquatic ecosystems expert and serves as a consultant to the EPA environmental advisory group that is monitoring impact and remediation of the Enbridge oil spill into the Kalamazoo River watershed last July. His talk will begin at 7 pm in the upper room at Martini's restaurant, 832 S. Westnedge, Kalamazoo. This event is part of our local section celebration of the International Year of Chemistry 1st quarter theme: Water and our Environment. Complimentary hors d'oeuvres and cash bar.

Spring Tour Speaker

Tuesday Mar 22, 6:30 pm – KAMSC

We are delighted to host former ACS President and professor of Lehigh University Ned Heindel to speak to our section on the topic of “Tinctures, Tonics, and Patent Medicines: A History of Commercialized Quackery.” Ned's presentation will begin at 6:30 pm on March 22 at the Kalamazoo Area Math & Science Center (4th floor of the old Central High School, 600 W. Vine Street, Kalamazoo). See our [Web page](#) for a more detailed summary of Ned's topic and a printable flyer to post or share with your friends. Thank you to everyone who voted online in the speaker topic survey. It was a close vote.

Announcements

High School Chemistry Awards – Call for Nominations

Lydia Hines

The Kalamazoo Local Section has budgeted annual awards to be given to deserving High School Chemistry Students, and to a **High School** teacher (and his/her school) nominated by his/her principal as an **outstanding chemistry teacher**. In the past few years we have received a very small number of nominations from principals, so we are appealing to you as members/parents or grandparents - if you have noticed that your child/grandchild has had an exceptional experience the study of chemistry in High School, the Education Committee (contact: donald.schreiber@wmich.edu) would very much appreciate your participation in nominating that teacher for consideration for the award. We look forward to hearing from you.

Chemists Celebrate Earth Day – Kalamazoo Nature Center

Lydia Hines

The **Kalamazoo Local Section** will participate for the fourth year with the **Kalamazoo Nature Center** to celebrate **Chemists Celebrate Earth Day (CCED)** on **Saturday, April 16, 2011**. On that day from 10 a.m. to 4 p.m. the Nature Center opens its campus free of charge to the public, and we are given a table where we can display learning materials relating to chemistry (and its relation to energy, this year's theme for CCED - chosen to coincide with the **International Year of Chemistry's** 2nd quarter theme of energy). Members Lydia and Wallis Hines have represented the Section for the past 4 years; but any Section member who would like to have the joy of talking to patrons young and old, of giving materials to parents, teachers, and scout leaders for educational purposes, and of doing a simple hands-on experiment for the public that passes by the table, for all or any portion of that time, is invited to come and share the day. Please contact Lydia Hines (lemhwgh@gmail.com) if you are willing to be an ambassador for chemistry on April 16.

Valentine's Day Special

New explanation for heart-healthy benefits of chocolate

ACS Office of Public Affairs

WASHINGTON, Feb. 7, 2011 — In time for the chocolate-giving and chocolate-noshing fest on Valentine's Day, scientists are reporting discovery of how this treat boosts the body's production of high-density lipoprotein cholesterol (HDL) — the "good" form of cholesterol that protects against heart disease. Just as those boxes of chocolates get hearts throbbing and mouths watering, polyphenols in chocolate rev up the activity of certain proteins, including proteins that attach to the genetic material DNA in ways that boost HDL levels. Their report appears in the *Journal of Agricultural and Food Chemistry*, one of 39 peer-reviewed scientific journals published by the American Chemical Society.

Midori Natsume, Ph.D., and colleagues note that studies have shown that cocoa, the main ingredient in chocolate, appears to reduce the risk of heart disease by boosting levels of HDL, or "good" cholesterol, and decreasing levels of low-density lipoprotein (LDL), or "bad" cholesterol. Credit for those heart-healthy effects goes to a cadre of antioxidant compounds in cocoa called polyphenols, which are particularly abundant in dark chocolate. Until now, however, nobody knew exactly how the polyphenols in cocoa orchestrated those beneficial effects.

The scientists analyzed the effects of cocoa polyphenols on cholesterol using cultures of human liver and intestinal cells. They focused on the production of apolipoprotein A1 (ApoA1), a protein that is the major component of "good" cholesterol, and apolipoprotein B (ApoB), the main component of "bad" cholesterol. It turns out that cocoa polyphenols increased ApoA1 levels and decreased ApoB levels in both the liver and intestine. Further, the scientists discovered that the polyphenols seem to work by enhancing the activity of so-called sterol regulatory element binding proteins (SREBPs). SREBPs attach to the genetic material DNA and activate genes that boost ApoA1 levels, increasing "good" cholesterol. The scientists also found that polyphenols appear to increase the activity of LDL receptors, proteins that help lower "bad" cholesterol levels.

[DOWNLOAD FULL TEXT ARTICLE](#)

Journal of Agricultural and Food Chemistry

"Cacao Polyphenols Influence the Regulation of Apolipoprotein in HepG2 and Caco2 Cells"

Here is a Valentine's Day sampler of other recent research on the health benefits of chocolate published in ACS journals:

- [New evidence that dark chocolate helps ease emotional stress](#)
- [Study finds that people are programmed to love chocolate](#)
- [Natural ACE inhibitors in chocolate, wine and tea may help lower blood pressure](#)

Announcements

Apply Now for the ACS Scholars Program

The ACS Scholars Program is now accepting applications for the 2011-2012 academic year; the deadline is March 1, 2011. Qualified students can get complete information and apply online at www.acs.org/scholars. Contact the ACS Scholars program with any questions by email at scholars@acs.org, or by telephone at 202-872-6250 (direct line) or 1-800-227-5558, ext. 6250 (toll-free).

A World Without Chemistry?...

Check out the video "[A Day Without Chemistry](#)", developed in conjunction with the ACS Younger Chemists Committee.



Sudoku Challenge – January Winners

Congratulations to **Hershel Jude**, **Bryce Assink**, and **Tim Evans** for submitting their winning entries to the January Sudoku challenge. They each received a \$5 gift certificate to Water Street Coffee Joint. Thanks to all who participated in this challenge. Below is the solved puzzle.

Up to the task for another Sudoku challenge? Go to page 6 of this newsletter for your chance to win a prize...

Difficulty: Medium

6	1	7	8	5	4	3	9	2
9	8	2	1	6	3	5	7	4
3	4	5	9	2	7	1	8	6
1	7	9	2	4	6	8	3	5
2	5	3	7	8	9	4	6	1
8	6	4	5	3	1	7	2	9
4	2	6	3	7	5	9	1	8
5	3	1	6	9	8	2	4	7
7	9	8	4	1	2	6	5	3

Sudoku challenge

Solve the puzzle, win a prize!

Here's how to win a prize:

- 1) Solve this Sudoku puzzle.
- 2) Email the solved puzzle, as a pdf or jpg, to ACSkzoo@gmail.com
- 3) Submission deadline is February 28, 2011.
- 4) Prizes will be awarded to the first 3 correct entries.
- 5) Winners and solution will be announced in the next newsletter.

Have fun!

Difficulty: HARD

8		7		1	4		3	
	1	2	6					
		9						
9		4	8					3
				7				
2					3	7		4
						4		
					8	3	2	
	8		7	4		6		1

New to Sudoku? Click on the [link](#) to learn the few basic rules of the game.