



# Richland Section American Chemical Society

SPRING 2009

## Chemistry & Biochemistry of Chocolate: A Guilt-Free Food? APRIL 8 AT 6PM

Huber Auditorium in Badgley Hall Map at <http://www.eou.edu/visitor/map/>  
Eastern Oregon University

Food and beverages derived from cocoa beans have been consumed by humans for 1500 years, and the beverage was originally used as currency and in religious rites by the Mayans and Aztecs. A short history of chocolate will give some perspective to the science of chocolate. Cocoa pods from the cacao tree *Theobroma cacao* are harvested and the beans removed from the pods and fermented. Dried and roasted beans contain about 300 chemicals including unique fats, alkaloids, and simple and complex polyphenols. The manufacturing process results in the production of the various types of chocolate including white chocolate, milk chocolate, dark chocolate, and cocoa powder. Chocolate is purported to have aphrodisiac properties and one ingredient acts on the cannabinoid (marijuana) receptor. Chocolate's antioxidant properties will be outlined and compared with other foods. How chocolate's fat and antioxidants are related to heart disease will be discussed in terms of epidemiological, animal, human supplementation, and mechanistic studies. Recent animal and human studies will be described to determine whether chocolate should be considered a guilt-free food.

**ABOUT THE SPEAKER:** Dr. Joe Vinson attended college at the University of California at Berkley, where he received his B.S. in chemistry in 1963. He received a M.S. degree in physical organic chemistry from Iowa State University in 1966. He received a research assistantship at the Ames Lab of the Atomic Energy Commission at Iowa State and received a Ph.D. in organic and analytical chemistry in 1967. After several teaching positions in Pennsylvania and a two-year stint in industry at J. T. Baker Chemical Company, he returned to academe and is now a professor of chemistry at the University of Scranton in Northeastern Pennsylvania.

**Joe A. Vinson**  
*The University of Scranton*

## Polysaccharides in Nature & Industry Polysaccharides in Our Lives

March 10 at 5:30PM

Columbia Basin College Library Auditorium

Map at <http://www.columbiabasin.edu/home/index.asp?page=95>

About 90 percent of all biomass is carbohydrate, and more than 90 percent of all carbohydrates are in the form of polymers called polysaccharides. The commercial water-soluble or -dispersible polysaccharides, commonly called gums, are used in a variety of industries from petroleum production to foods. Preparation from plants, seaweeds, and bacteria; structures and properties that make them useful in diverse applications (e.g., oil well drilling muds, adhesives, textile sizing agents, food gelling agents, etc.); and uses of a representative sample will be presented in a way that is understandable by, and interesting to, both scientists and nonscientists.

**James N. BeMiller**  
*Purdue University*

**ABOUT THE SPEAKER:** James N. BeMiller is a Professor in the Department of Food Science and former director of the Whistler Center for Carbohydrate Research at Purdue University. The Whistler Center is an academic research center with international recognition devoted to fundamental research on the chemical and physical properties of carbohydrates that are related to their practical applications. He has been on the U.S.

Advisory Committee for International Carbohydrate Symposia, Inc., since 1975 and its president since 1978. He has been the national representative of the United States to the International Carbohydrate Organization (ICO) since 1978, and twice its president. He has been chairman of the Carbohydrate Divisions of the ACS, AACC, and IFT. He is a Fellow of AAAS, IFT, and the American Institute of Chemists. He has been a Belfort Lecturer at Purdue University, a William F. Geddes Memorial Lecturer for the Northwest Section of AACC, an Andrew Jackson Moyer Lecturer for the USDA laboratory at Peoria, and a Leonard A. Ford lecturer at Minnesota State University, Mankato.

Illustration by Albin Schmalfuß, 1897  
Source: Wikimedia Commons

# RICHLAND SECTION | 09 budget proposal

Proposed 2009 Budget for the Richland Section and Actual Expenses 2007 & 2008

	2007 Actual	2008 Actual	2009 Budget
<b>REVENUES</b>			
(1) Annual ACS Allotment	6862	7,825.00	7000
(2) New member commissions	0	15.00	0
(3) Donations, contributions	0	0.00	0
(3a) Bequests and/or trusts	0	0.00	0
(4) Rebate from ACS for Councilor travel expenses	1872	1,932.00	1932
Rebate from ACS for leadership conference			300
(5) Program revenue (includes newsletters, short courses, lectures Regional Meeting (NORM) CC Event NORM	4295.6	8,919.02	0
(6) Local section dues, affiliate dues	1801.36	1,595.00	1500
(7) Interest, dividends	2648.15	136.73	0
Checking interest (Banner)	43.02	5.07	0
Savings interest (Banner)	225.77	131.66	100
ACS Investment Pool	2379.36	0.00	0
(8) Special events and activities	0	2,134.53	0
(9) Meals (include total meals in revenue)	0	0.00	0
(10) Other revenue (describe and itemize)	500	0.00	0
Reserved funds			615
Reserved Funds	800		1830.9
<b>(11) TOTAL REVENUES</b>	<b>18779.11</b>	<b>22,557.28</b>	<b>13177.9</b>
<b>EXPENSES</b>			
(12) Subsidies to subsections, topical groups, or affiliate groups	2000	3,100.00	3330.9
EOU Student Affiliates	2000	2,300.00	1500
Other	0	800.00	1830.9
(13) Awards, scholarships, grants, etc.	799.93	0.00	0
Awards	499.93	0.00	0
TCTC Teacher Grants	300	0.00	0
(14) Administrative expenses ( including postage, printing, and ship	10.32	425.86	200
(15) Printing, publications, newsletters, meeting announcements, p Newsletter	1219.71	1,138.71	1138.71
Public relations	1219.71	802.71	788.71
Public relations	0	336.00	350
(16) Local Meetings (include speakers' expenses)	3576.71	7,413.54	2740
Speakers	1500	1,519.49	1575
ACS Picnic	175.29	63.50	200
ACS Annual social	552.8	0.00	350
Post-NORM celebration	705.18	0.00	0
Science Cafes	285.51	615.00	615
50-Year Celebration/National Award	357.93	5,830.55	0
(17) Meals	609.8	0.00	300
Arrangements	609.8	0.00	300
(18) Travel subsidies to Councilors	4521.05	4,283.55	4300
(19) Travel subsidy and fee for Local Section Leadership Conferenc	295.8	275.00	450
(20) Other expenses (describe and itemize)	5998.41	2,497.90	2750
Regional Meeting (NORM) CC Event	3267.96	0.00	0
TCTC Dues	45	0.00	0
NCW, K-12 outreach	1260.45	906.97	1000
Olympiad	75	0.00	150
Science Fair and award	250	399.93	400
HS Teacher Endowment Fund	500	0.00	0
Mini-Symposium	0	0.00	0
Women and Minority Affairs Cmte	500	500.00	500
Boy Scouts Nuclear Science Merit Badge		50.00	100
Earth Day		441.00	400
Project SEED	100	200.00	200
<b>(21) TOTAL EXPENSES</b>	<b>19031.73</b>	<b>19,134.56</b>	<b>15209.61</b>
<b>(22) EXCESS (DEFICIT)</b>	<b>-252.62</b>	<b>3,422.72</b>	<b>-2031.71</b>

## 09 OFFICERS

Listed below are the newly elected section officers. As their job is to make the section's activities of more value to you please contact them with your ideas!



**CHAIR**  
**JOHNATHAN L. MALE**  
(509) 372-6358  
Jonathan.Male@pnl.gov



**CHAIR-ELECT**  
**ASANGA B. PADMAPERUMA**  
(509) 372-4895  
asanga.padmaperuma@pnl.gov



**SECRETARY**  
**DAVID MERRILL**  
(509) 375-8408  
David.Merrill@areva.com



**TREASURER**  
**PHILLIP K. KOECH**  
(509) 372-6891  
Phillip.Koech@pnl.gov



**COUNCILOR**  
**TIM HUBLER**  
(509) 371-6274  
tim.hubler@pnl.gov



**ALTERNATE COUNCILOR**  
**ANNA CAVINATO**  
(541) 962-3561  
acavinat@eou.edu

**09 BUDGET  
VOTE APRIL 8  
AT SPEAKER MEETING**

Dear Members,

I wanted to pass on some information that you may find useful, especially if you're experiencing a job transition during these challenging economic times. The ACS now offers its members an excellent set of Harvard Business Skills Courses which are available online. These 42 courses are offered at a very reasonable rate for members (\$25) and can help you improve those skills that are a great complement to the technical skills that you already bring to your job. (See last page of this newsletter for details.) Additionally, the ACS is rolling out its Leadership Development System at the next ACS National Meeting in Salt Lake City. These are a combination of both face-to-face classes and online classes (17 courses in all). To help take that next step in your career path, please consider taking some of these courses.

Items for consideration at the Council Meeting at Salt Lake City are the following:

**Nominations for ACS President-Elect:** The Council will vote on these candidates and narrow the current slate of nominees to two. The nominees are: Berkeley (Buzz) W. Cue, Jr. (BWC Pharma Consulting, LLC, Leydard, Ct.); Nancy B. Jackson (Sandia National Laboratory, Albuquerque, NM); Cheryl A. Martin (Rohm and Haas Company, Philadelphia, PA); Dorothy J. Philips (Waters Corporation, Milford, MA).

**Dues:** Council will vote on an increase in dues. The ACS dues for 2009 was set earlier at \$140. In accordance with Bylaw XII, Section 3(a), the 2010 dues rate will escalate to \$145.

**Professional Employment Guidelines (PEG):** The Committee on Economic and Professional Affairs (CEPA) has completed its update of the PEG (8<sup>th</sup> Edition) for approval by the Council. The current edition can be found at [www.acs.org](http://www.acs.org), click on the careers tab, and the link is at the bottom of the page (Ethics and Professional Guidelines).

Please don't hesitate to contact me if you have questions about any of these items, [tim.hubler@pnl.gov](mailto:tim.hubler@pnl.gov)

## SCIENCE FAIR JUDGES NEEDED

### *No Experience Needed*

Judging for the Mid Columbia Science Fair will be March 12 at the Columbia Center Mall. There are two separate judging opportunities. The first is to be a judge for the Fair in general. To sign up for that, go to <http://www.mcsf.net/index2.html>, click on "Judging" at the left, and then go to the "Online Judging Sign-Up Form". The site also describes the judging process.

The second opportunity is to judge only the chemistry related entries to determine the winners of several prizes that the Richland Section gives to students. For information on this, please call Therese Clauss at 509-371-6345, or email at [thereserw.clauss@pnl.gov](mailto:thereserw.clauss@pnl.gov). This latter opportunity is a great way to meet other section members and support local students.

## NORM June 28 - July 1

### Northwest Regional Meeting (NORM) June 28 - July 1, 2009 Pacific Lutheran University - Tacoma, WA

The 2009 Northwest Regional Meeting of the American Chemical Society (NORM) will be hosted by Pacific Lutheran University on June 28 - July 1, 2009. The Awards Banquet will be located at the Tacoma Museum of Glass. Keynote Speakers include:

#### **Frontiers in Mass Spectrometry**

Professor Neil Kelleher, University of Illinois

#### **Energy and Sustainability**

Professor Daniel Nocera, MIT

#### **Chemistry Demonstration Show**

by Tim Hoyt and Herb Bryce

#### **Madame Curie – A One-Woman Dramatic Presentation**

by Carole Berg

Online information is available at:

<http://www.chem.plu.edu/norm2009/>

## EOU OUTREACH



### *First "Science Saturday" held in Ontario, OR*

The Eastern Oregon University Student Affiliates recently received a Community Involvement (CISA) grant from ACS national to conduct outreach activities more specifically directed to underrepresented minorities. The first of these events took place on November 15, 2008 at Treasure Valley Community College (TVCC) in Ontario, OR. Ontario was chosen because of its remote rural settings and a high incidence of Hispanics in the population. The event, entitled "Have a Ball with Science: How Chemistry Impacts Sports" was extremely successful with a total of 39 students in 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grades attending the program. Twelve EOU Student Affiliates conducted hands on activities revolving around the 2008 National Chemistry Week theme and closed the event with a magic show.

## MEMBER BENEFIT

The ACS Leadership Development System ([www.acs.org/leaderdevelopment](http://www.acs.org/leaderdevelopment)) is a new benefit designed especially for ACS members. It consists of online courses that members can access in their free time and courses led by expert facilitators. The system will debut at the ACS national meeting in Salt Lake City on March 23, with a presidential symposium on leadership, followed by a reception recognizing the contributions of the many ACS volunteers and leaders that made this a reality.

The system is built on a framework of 17 courses that focus on four core leadership competency areas: personal capability, interpersonal skills, focusing on results, and setting a clear direction. A fifth, character competency, is the foundation on which the framework rests. Seven of the courses are self-administered online, and nine are half-day facilitated courses. The capstone is a daylong, facilitated "Extraordinary Leader" course.

Forty-two Harvard Business Courses are available to members to take online at a cost of \$25 each. You can take the entire suite of

courses or you can pick can choose the ones that are beneficial to you. In the full suite, the courses are linked to each other (e.g. the Finance Essentials course might link to the Budgeting course). Go to <https://acs.learn.com/learncenter.asp?sessionId=3-2390ABDF-5394-4104-A525-57C6FDE8911A&id=178414&page=89>



**Competency Matrix the new ACS Leadership Development System offers a variety of courses for leaders at all levels.**

## COMING EVENTS

**MARCH 10 James N. BeMiller,** University of Scranton, Chemistry and Biochemistry of Chocolate: A Guilt-Free Food? (Talk to be held in LaGrande, OR)  
Purdue University, Polysaccharides in Nature and Industry (Polysaccharides in Our Lives)

**MARCH 12 Judging for Mid Columbia Science Fair**

**APRIL 8 Joe A. Vinson,** The

**APRIL 22 Earth Day** Contact Janet Bryant, 509-375-3765, or [janetlbryant@pnl.gov](mailto:janetlbryant@pnl.gov) for details or to volunteer

**MAY 11 Addison Ault,** *Chance and Design in Organic Chemistry*

**JUNE 19 Summer Picnic**

**JUNE 28 - JULY 1 Northwest Regional Meeting** Tacoma, WA

**OCTOBER 18-24 National Chemistry Week**

**OCTOBER 19 Mark Thomson,** Ferris State U., The Role of Chemistry in the Development of Regional Styles of Beer and Ale

Richland Section  
Home Page

[www.pnl.gov/acs/](http://www.pnl.gov/acs/)



Richland Section  
American Chemical Society  
c/o Editor: Steve Krogsrud  
4816 W. Irving  
Pasco, WA 99301

## Point to Ponder

It's hard to beat a person who never gives up. – Babe Ruth