

# The Blue Ridge Chemist

The Blue Ridge Chemist, since 1947 the  
Official Local Section Publication of the  
Virginia Blue Ridge Section, American Chemical Society



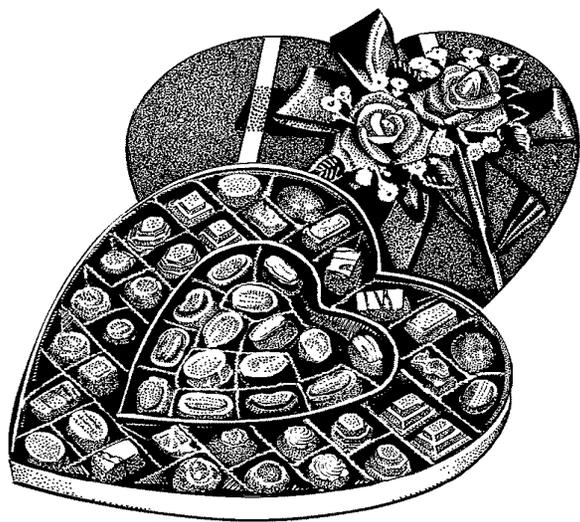
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VOLUME LVIII

February 2005

No. 2

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**Carbohydrates?**

**Roanoke College Hosts February Meeting**

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<http://membership.acs.org/v/vbr>

## VIRGINIA BLUE RIDGE SECTION AMERICAN CHEMICAL SOCIETY

**590th SECTION MEETING**

**Hosted by Roanoke College**

**Thursday, February 24, 2005**

### **PROGRAM:**

- 6:00-7:00 Social Time, Ballroom, Sutton Student Center  
7:00-8:00 Dinner, Ballroom, Sutton Student Center  
8:00-9:00 Talk, Ballroom, Sutton Student Center

The social time, dinner, and talk will take place in the Ballroom of the Sutton Student Center at Roanoke College. Dr. James N. BeMiller will be speaking on "What Are All Those Carbohydrates Doing in My Food?".

Dinner will be tossed salad with dressing, pasta salad, roast beef au jus, seafood Newberg, rice pilaf, seasoned green beans, hot rolls, pound cake and cheesecake with assorted toppings, and iced tea and coffee. Cost for the dinner is \$12.00, with students and retired ACS members half price.

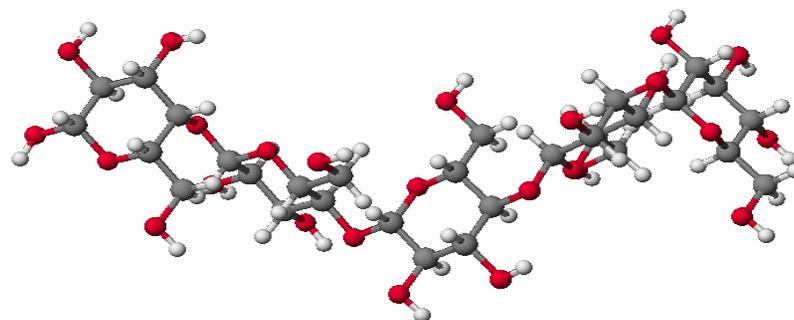
Reservations for the dinner must be made by THURSDAY, FEBRUARY 17, SEVEN DAYS before the meeting, by calling Ben Huddle at 540-375-2440 or e-mailing to [huddle@roanoke.edu](mailto:huddle@roanoke.edu) or writing to Department of Chemistry, Roanoke College, Salem, VA 24153, or by sending an e-mail to Margaret Anderson at [anderson@roanoke.edu](mailto:anderson@roanoke.edu).

## James N. BeMiller

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. Dr. BeMiller has more than 240 papers and book chapters to his credit and has edited or authored 25 books. He has been editor of the important series *Methods in Carbohydrate Chemistry*. He edited the best-selling *Industrial Gums* (now in its third edition) and *Starch: Chemistry and Technology* (two editions). He has contributed significantly to organizations that promote advancement of the chemistry and applications of carbohydrates. 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. Dr. BeMiller has received a university AMOCO Outstanding Teacher Award, the Monsanto Sigma Xi Kaplan Research Award, the Melville L. Wolfrom Award of the ACS Division of Carbohydrate Chemistry, the Harold Macy Food Science and Technology Award, the Medal of the Japanese Society of Applied Glycoscience, the Kenneth A. Spencer Award of the Kansas City Local Section of the ACS, and the Alsberg-Schoch Award of the American Association of Cereal Chemists. He is a Fellow of AAAS, IFT, and the American Institute

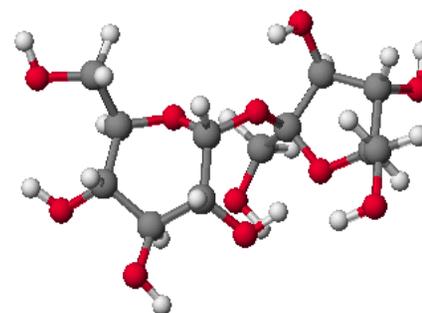


of Chemists. He has been a Belfort Lecturer at Purdue University, a William F. Geddes Memorial Lecturer for the Northwest Section of AACC, an Andrew Jackson Moyer Lecturer for the USDA laboratory at Peoria, and a Leonard A. Ford lecturer at Minnesota State University, Mankato. He is or has been on the editorial boards of 9 journals.



### "What Are All Those Carbohydrates Doing in My Food?"

The several different kinds of carbohydrate used as ingredients in our food are almost never added for their caloric value, or even as sweeteners. Rather, they are used primarily to provide texture. Or they may be employed as processing aids, to replace fat, or to provide other functionalities, among which are emulsion, foam, and freeze-thaw stability; generation of flavors, aromas, and color; and adhesion. They also may be employed as dietary fiber, prebiotics, or acidulants. And the list goes on. Major classes of food carbohydrates are starches, hydrocolloids (food gums), sugars, and polyols. These and others will be covered.



### Undergraduate/High School Poster Session

The Virginia Blue Ridge Section of the American Chemical Society is sponsoring the thirteenth Annual Undergraduate/High School Poster Session as a part of the April 20, 2005 meeting at Radford University. The posters will consist of an 8'(high) by 4'(wide) board.

If you have a student or students, who will be participating, submit the following information to Chris Hermann by April 1, 2005 via e-mail [chermann@radford.edu], by fax [540-831-6615], or by mail [Box 6949, Department of Chemistry and Physics, Radford University, Radford, VA 24142]. If you have any questions, call Chris Hermann at 540-831-5413 (office), 540-639-6705 (home), or 540-818-2431 (cell). All students and faculty will get e-mail confirmation.

Name of Project: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

Name(s) of Student(s): \_\_\_\_\_

\_\_\_\_\_

Affiliation (name of high school, college, or university)

\_\_\_\_\_

Class of Student(s) (freshman, sophomore, junior, senior) (circle)

Student(s) e-mail address: \_\_\_\_\_

Advisor's Name, Address, Telephone Number, and e-mail address:

\_\_\_\_\_  
 \_\_\_\_\_  
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### VBRS Financial Information Request for Your Input

The Executive Committee of the Virginia Blue Ridge Section of the American Chemical Society would like to provide you with information about our section and request your thoughts on several items. Over the years the VBRS has been doing reasonably well, both in terms of attendance and finances. Our section covers 15 counties in mid southwestern part of Virginia and one county in West Virginia. Currently we have about 460 members. Our newsletter mailing list, which includes ACS members, area high school chemistry teachers and a few others, has about 600 names.

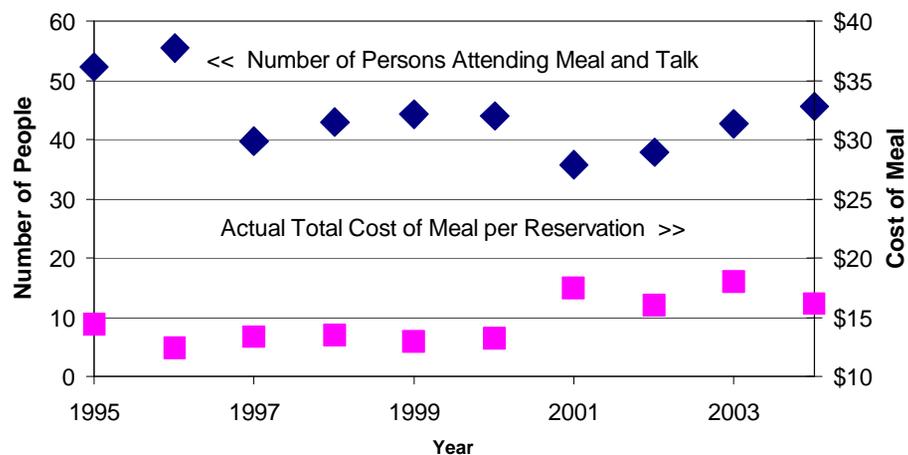
About 25 years ago the section hosted a SERMACS meeting, and ended up with money to put in our treasury. When we hosted another meeting several years ago, we broke even. Our current balance sheet shows assets of about \$22,000. The table below shows the section's net revenue for the past ten years. For six of these years we had more income than expenses, and for four of them we had more expenses than income. The reasons for the variations are many.

Net Revenue per Year, in Dollars

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Net gain	-3400	1600	400	3700	-700	1800	2300	-1300	600	-2200

The graph below contains information about two areas that are of interest to the Executive Committee: meeting attendance and meal costs. This graph shows the average number of persons attending the meetings per year and the average actual cost of the meal per reservation. The average number of persons attending each meeting is about 45, which is about 10% of the VBRS ACS membership, and

**VBRS Annual Comparison Chart**



about 8% of the mailing list. Our first question is: what can we do to increase attendance? Would different locations, or more technical talks, or less technical talks, or different times, or . . . increase interest? Let us know what you think.

Another area of concern is the cost of the meal. In 1995 the cost of the meal to members was variable, and ranged from \$11 to \$20 (Chateau Morrisette) depending on the actual meal expenses. This practice of variable pricing continued for three years until 1999. At that time, the section set a fixed meal cost: \$12 per meal for members; students and retirees pay half price of \$6. Then, the \$12 charge closely matched the actual meal cost per person. However, as the graph shows, over the past four years, the average actual total price of a meal per person has been about \$17. (This number was obtained by dividing the total price of the meal, refreshments, room charges, gratuity, tax, etc. by the number of persons who actually attended the meal.) The amount the section receives from persons attending the meal is typically 50-75% of the actual total cost of the meal. This discrepancy is making it increasingly difficult to offer reasonably priced meals to members, to cover meal-related expenses, and to maintain our commitment to

encourage attendance of students and retirees by using section funds to subsidize their meal costs. How should the section address rising meal costs? Should we go back to a variable price to the attendees, a price that comes close to the actual cost of the meal? Or, should we keep one price and keep it at \$12, or raise it to \$14 or \$16? What is reasonable? Are there any other, better options?

A area of less concern is the number of reservations that go unfilled. While this number is typically small, on the order of 2-4, it has been as large as 15. Part of this deficit usually is make up by persons who show up without a reservation. On rare occasions the number of people attending is more than the number of reservations made. The current policy of the section is to not impose any penalty on these individuals, and to express our sincere appreciation to those who do pay for unused reservations. We want to be a friendly organization, so we plan to continue to encourage individuals to make reservations by the deadline listed in the Blue Ridge Chemist and to pay for their reservations if they cannot attend and cannot cancel before the reservation deadline. Do you think we should change our position on reservations? If so, how?

We would greatly appreciate your input on the three concerns discussed above, namely:

1. What can be done to increase participation of members?
2. What do you think we should do about the amount charged per meal?
3. What, if anything, should we do about unused reservations?

Please send your comments to Elizabeth Cox at [coxe@wlu.edu](mailto:coxe@wlu.edu) (or phone at 540-458-8163) or to any of the other members of the Executive Committee: Adele Addington, Dana Jacobs, Ben Huddle, Warren Pendergast, Jason Powell, Gwen Sibert, Gary Hollis, or Vernon Miller.

## Project Bookshare

In 1984, the American Chemical Society launched an initiative to assist institutions that have a need for scientific publications. Project Bookshare, as the program has come to be known, is charged with collecting chemistry textbooks and back numbers of journals from donors and making these materials available to libraries in selected small U.S. colleges and to university libraries in mostly developing countries. Donated books and journals from Project Bookshare have reached across the United States (Alabama, Kentucky, Louisiana, Michigan, Montana, South Dakota, and Tennessee, among others) and around the world to help improve the educations of chemists and chemical engineers in Africa (Chad, Eritrea, Ethiopia, Ghana, Kenya, Niger, Nigeria, Sierra Leon, Sudan), Asia (China, Kazakhstan, Korea, Mongolia, Pakistan, Philippines, Sri Lanka, and Thailand), Europe (Albania, Armenia, Cyprus, Czech Republic, Estonia, Greece, Latvia, Lithuania, Macedonia, Poland, Romania, Russia, and Turkey), and Latin America (Argentina, Bolivia, Brazil, Chile, Costa Rica, Guatemala, Mexico, Panama, Paraguay, and Venezuela).

If you are interested in making a donation to Project Bookshare, you are asked to submit a list of publications to be donated to the ACS Office of International Activities, listing each book by title, author, and date, and journals and magazines by title and issue date. Books should be no more than ten years old, except for "classic" titles. Donors are asked to cover the costs of shipping to U.S. addresses. Whenever possible, Project Bookshare staff try to match donors and recipient institutions to save time, money, repacking, and excessive handling.

Project Bookshare is intended to bring U.S. chemists closer to colleagues in less advantaged situations worldwide. The generosity of ACS members, U.S. corporations, institutions of higher learning

and others has made Project Bookshare a true national and international success. Send your list of publications to:

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American Chemical Society  
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Washington, DC 20036 USA  
phone: (202) 872-4548 or (800) 227-5558, x 4548  
fax: (202) 872-6317  
email: j\_torio@acs.org

### **2005 Teaching Nonproliferation Summer Institute: Integrating Science & Politics in the Study of Weapons of Mass Destruction**

June 27 to July 1  
Washington and Lee University  
Lexington, Virginia

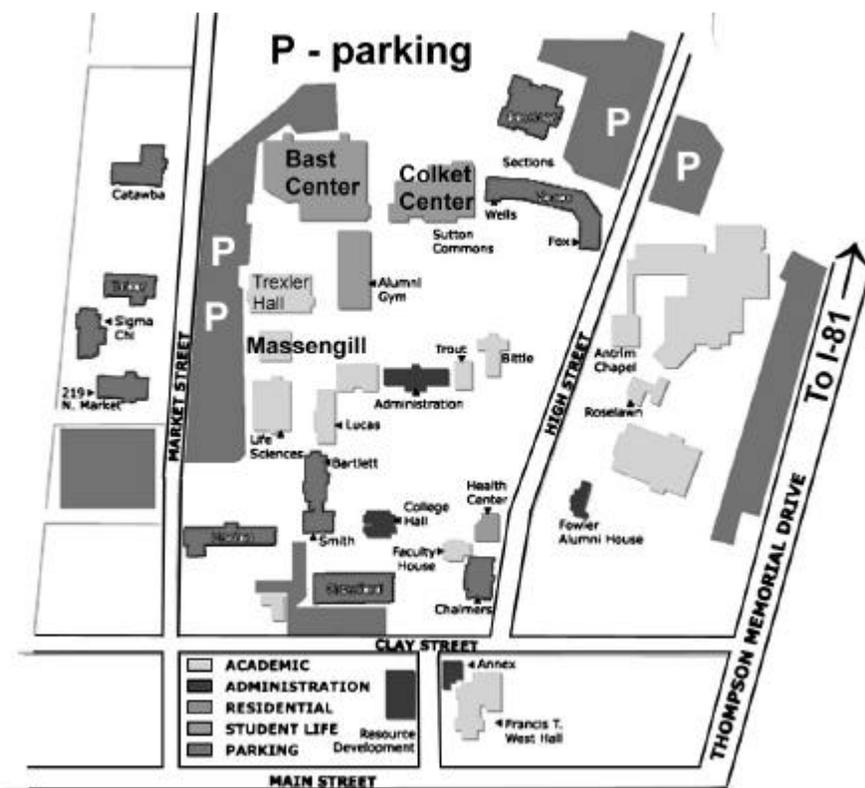
This faculty workshop, funded by the U. S. Institute of Peace, the Ploughshares Foundation, and the National Science Foundation, is designed to help college and university instructors prepare or update course material related to weapons of mass destruction and nonproliferation. Experts on chemical, biological, radiological and nuclear weapons will present current information on issues facing the United States and the world community because of the proliferation of weapons of mass destruction. The final day of the conference will be devoted to course development and the exchange of curricular materials related to these subjects. Particular attention will be given to the development of interdisciplinary ! courses that integrate science and social science perspectives. More information can be obtained at <http://wmd.wlu.edu> .

## Directions to Roanoke College

From I-81 take exit 140 (Route 311) and go south into Salem. This road is Thompson Memorial Drive. The first light is Main Street, and the street just before this is Clay Street. Turn right onto either Main or Clay Street and then right onto either Market or High Street to get to a parking lot. Construction is limiting the parking on High Street. There are many steps from the Market Street lot, but there are more spaces available here. It would be possible to avoid these steps by going through the Bast Center and taking the elevator.

The social time, dinner, and meeting are in Ballroom of the Colket Center. Parking is available from both High Street and Market Street.

### Map of Roanoke College



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Salem, VA 24153  
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THE BLUE RIDGE CHEMIST  
Vern Miller, Editor  
Roanoke College  
Salem, VA 24153

The March Virginia Blue Ridge Section meeting is scheduled for Wednesday, March 23 at Virginia Tech. The speaker will be Dr. Joel Gillespie speaking on protein folding and disease. The contact person is Paul Deck.