



# Richland Section American Chemical Society

winter 2005



*More Good  
From  
the Grape*

## PRODUCED BY:

Dr. Eric Leber

## VARIETAL:

More Good From the Grape

## VINTAGE:

November 16, 7:00 pm

## VINEYARD:

Columbia Basin College  
Library Auditorium  
Pasco, Washington

The Richland Section is pleased to present Dr. Eric Leber, Professor of Chemistry at Heritage University in Toppenish, as our final speaker for 2005. Dr. Leber will speak on recovering value from winemaking waste on November 16 at 7 PM in the Library Auditorium (library building, room 102) of Columbia Basin College's Pasco campus.

### ABOUT THE TALK

The premium wine industry in Washington State began more than 40 years ago with the planting of several varietal grape-vine cuttings obtained from the Aquitaine region of France. This first vineyard was situated on Harrison Hill (see following photograph) in Sunnyside, Washington (quite close to the Toppenish campus of Heritage University) and became the basis for the region's first 100% French varietal wine, produced by Associated Vintners.

The intervening four decades have seen exponential growth in the magnitude of the winemaking enterprise in this State with the number of wineries up more than 100-fold over the period. Moreover, during that time, the amount of waste discharged from the wineries increased more than 1,000-fold, since the wineries are now much larger as well as more numerous.

The costs, risks, and liabilities of disposing of this waste (in particular, pomace, the residual seeds, skins, and stems) are increasingly significant, and, in 2003, they were compounded in immediacy and seriousness by substantial legal and financial liabilities arising from the Washington Supreme Court decision (in Case No. 71855-5, *Hickle v. Whitney Farms, Inc.*) that these organic materials are covered by the State's Hazardous Waste Management Act, Chapter 70.105 RCW. Thus, the producers of these agricultural wastes are now among those parties legally liable for their proper management and disposition. More than ever before, they must exercise responsible stewardship of those wastes and the attendant environmental risks (e.g., frequent organic and inorganic contamination of the land and water; anaerobic fermentation that generates noxious odors and internal temperatures over 500° F., germination that interferes with other commercial crops, boron toxicity that shuts down fruit production, etc.) and financial costs in the millions of dollars per year.



Associated Vintners shareholders planting their Harrison Hill vineyard.  
—Photo courtesy of Associated Vintners.

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In his talk, Dr. Leber will discuss how he and his students have systematically pursued the value-added conversion of the biowastes from winemaking, with the goal of:

1. Reducing the negative costs and risks of managing winery wastes.
2. Minimizing the associated legal liabilities.
3. Demonstrating the feasibility of recycling and sustainability in winemaking.
4. Retaining locally value-adding processes, thereby creating more year-round, higher-skilled jobs for the Yakima Valley.

### ABOUT THE SPEAKER

Dr. Leber was born and raised near the town of Issaquah, Washington and graduated from Issaquah High School after a year as an exchange student in France at the Lycee de Mathematiques et Sciences in Lyon.

He majored in Chemistry at Reed College (Portland, Oregon) while also serving as Senior Operator and Acting Supervisor of the TRIGA Mark I Nuclear Research Reactor Facility. His contributions to nuclear science were acknowledged with the 1971-72 Coryell Undergraduate Award in Nuclear Chemistry and Technology from the American Chemical Society. Eric interned at Pacific Northwest Laboratory, Richland, Washington, and Brookhaven National Laboratory, New York, prior to graduating Phi Beta Kappa from Reed in 1972.

At Yale University, Dr. Leber furthered his training as a Research Associate and Instructor of Advanced Physical Chemistry, receiving a Ph.D. degree in 1975. At Yale, he

was awarded the Richard Wolfgang Prize for the most distinguished doctoral thesis submitted during the academic year 1975-76. Dr. Leber then worked as a postdoctoral fellow (1975-1977) at the University of California, Berkeley, with the research group headed by Professor G. T. Seaborg.

In May 1977, Dr. Leber received a Congressional Science Fellowship from the American Association for the Advancement of Science. During the term of his fellowship, Eric served as Staff Scientist to Congressman Mike McCormack (D-Wash.), Chairman of the Subcommittee on Energy Research and Production of the House Science and Technology Committee.

From 1984 until 1992, Dr. Leber was on the staff of the American Chemical Society, serving initially as Director of Public Policy and Communication, and later as an ACS Smithsonian Fellow, coordinating the planning of the various permanent exhibitions at the Smithsonian Institution's National Museum of American History.

Before joining Heritage University (formerly Heritage College) in 2002, Dr. Leber was the Manager of College and University Relations at the Pacific Northwest National Laboratory (PNNL) in Richland. Since joining Heritage, Dr. Leber's primary interests have been in the areas of natural products chemistry and University-Community health partnerships.



## Mole Day



The Richland Section celebrated Mole Day (10/23) by organizing a fundraiser for the Richland Library. The Section set up a area at the library where patrons could take part in hands-on experiments.

Shown here are (left to right, first row) Sam Bryan with daughters Loren and Hanna, and Ian Lerchen (son of Megan Lerchen). In the back row are Barbara, Jeanette, and Kim, Richland Library Staff members.

# Section Election Candidates

Enclosed is the ballot for the election of Richland Section officers for 2006. We will be electing a Chair-Elect, Secretary, and Treasurer. Please return the ballot to Bill Samuels by November 29, 2005.

You will note that we are not electing Councilors this year. Councilors are elected for 3 year terms. Richard Hermens' term as Councilor expires in 2007. Tim Hubler's term as alternate Councilor expires next year. Councilors are the local section's voice at the national ACS level. If you have any concerns that you want to bring to the attention of the national ACS leadership, besides directly contacting the office in Washington, D.C., you can also make Richard and Tim aware of your concerns. Information on how to contact our Councilors, as well as other local section officers, can be found on our website, [www.pnl.gov/acs](http://www.pnl.gov/acs).



#### FOR CHAIR ELECT:

Jeff Woodford is currently associate professor of chemistry at Eastern Oregon University in La Grande, Oregon. He received his Ph.D. from the University of Nebraska-Lincoln in 2000 and his B.S. in Chemistry from Carnegie Mellon University in 1994. His research interests include laser spectroscopy, nonlinear optics, and computational chemistry. He has been a member of ACS since 1991 and is currently serving as Section's treasurer.



#### FOR TREASURER:

Sam Bryan is currently a Staff Scientist at the Pacific Northwest National Laboratory. Sam received his Ph.D. degree in Inorganic Chemistry from Washington State University (1985) and did a post-doc at Oak Ridge National Lab. Sam has served on the board of the local section (Richland Section) of the ACS since 1993 and served as Chair of the Section in 1998 and again in 2004. During his years as an active member of the Richland Section, Sam has been involved with every aspect of sections affairs. Currently he is serving as the technical program chair for the upcoming NORM'07 which the Richland Section is hosting in June 2007.



#### FOR SECRETARY:

Bruce McNamara obtained his Ph.D. in Physical Chemistry at Purdue University. The research at Purdue involved development of laser-based infrared instrumentation, toward kinetic studies of transient organometallic intermediates. A 1.5 year post-doc at Berkeley followed, where Bruce did similar work with more expensive laser setups and even shorter lived transients. Another post-doctoral position at PNNL in the Radiochemical Processing Group was followed by a year at DOE Headquarters in Gaithersburg, Maryland. Sick of the bureaucratic life, Bruce returned to PNNL and started his career as a chemist, where he works in a goofy-colored lab coat and rubber gloves and is often seen sporting a pocket protector.

## Upcoming

### NW Regional Meetings

**June 25-28, 2006 Reno, NV**

Host: Sierra Nevada

Site: John Ascuaga's

Nugget Hotel Casino

**June 17-20, 2007 Boise, ID**

Host: Richland

Site: Boise Convention Centre

on the Grove

**June 15-17, 2008 Park City, UT**

Host: Central Utah/Rocky Mtn. Region

Site: Park City Marriott

**2009 Tacoma, WA**

Host: Puget Sound

(100th Anniversary of PS Section)

Site: Pacific Lutheran University

## ACS National Awards

The Richland Section was presented with two ACS national awards at the recent meeting in Washington, D.C. with a Chemluninary Award for Outstanding Performance by a Local Section, Medium Size, for last year's activities. We were honored for activities such as hosting the third Native American Umatilla Reservation Math/Science Fair, the Girls in Science Day, Project SEED, Boy/Girl Scouts Merit Badge activities, and Careers in Chemistry for middle-school minority students. The Section received its second Chemluninary Award for Outstanding Outreach to Girls or Young Women. This was presented primarily for an innovative "Girls in Science" day held at Eastern Oregon University in La Grande. It was a daylong science event for approximately 100 girls in grades 6-8 in Northeastern Oregon. Hispanic and Native American students were targeted. The activities ranged from determining the caloric content of food items to understanding how sunscreens work and investigating components of cigarette smoke. Overall the event emphasized the National Chemistry Week theme of Health and Wellness.



Pictured are (left to right) Tim Hubler, Janet Bryant, Anna Cavinato, and Richard Hermens.

## From the Editor

Occasionally, events will come up that we think you might be interested in, but have too short a "lead time" to put in the newsletter. If you would like us to contact you with these, just make sure you update your email address when you fill out your yearly membership form.

- Editor

## Member Benefit

### YOUNGER CHEMISTS COMMITTEE OFFERS LEADERSHIP AWARDS

Are you taking on or pursuing a position of leadership?  
Would you like to develop the skills needed to be successful?  
If so, you should apply for a YCC Leadership Award!

These awards cover the expenses of attending a leadership development workshop at the 2006 ACS Leaders Conference in Baltimore, Maryland.

Participants will explore the behaviors and characteristics exhibited by effective leaders at any level. Potential leadership opportunities, both within and outside the workplace, will be discussed and personal plans for improving leadership skills will be developed.

The application deadline is Thursday, December 1, 2005. Application forms and further information about the awards are available at <http://chemistry.org/ycc>

## Coming Events

- November 16** Tour Speaker: Eric Leber, Topic: More Good From the Grape
- November 10** AIChE Dinner Meeting Topic: Black Rock Reservoir. Contact Greg Gauck (373-1779) or Vanessa Anda (373-6571) for details
- 2006**
- March 20** James O'Brien, Topic: Chemistry in the Sherlock Holmes Stories
- May 2** Donald Burns, Topic: Counterfeiting: Catch'em with Near-IR
- September 27** William Zoller, Topic: The Eruption of Mt. St. Helens: Chemistry and Atmospheric Implications
- October 25** Carolyn Fisher, Topic: Spices and Herbs: Chemistry and Health

**Richland Section  
Home Page**

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



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## Point To Ponder

Great works are performed, not by strength, but by perseverance.— Samuel Johnson