

spring 2005

Folk Medicine in the 19th Century



Please join the Richland Section on March 8, at 7 PM in the Columbia Basin Library building, when Dr. Ned Heindel, professor of chemistry at Lehigh University will talk on "Folk Medicine in the 19th Century."

About the talk: In the absence of enforced licensing laws and in the presence of a malevolent and painful medical orthodoxy that focused its therapy on bloodletting and leeching, the 18th and 19th centuries saw the growth of a vigorous alternative medical system. In the Eastern United States, this unorthodox medicine was especially well entrenched, and pow-wow "doctors", hydropaths, Thomsonians, electropaths, and homeopaths maintained sizable practices. Substantial reliance on herbal preparations of folk culture origin, on charms and semi-occult chants, and on defined acts and manipulations characterized many of these medical systems. Vestiges of these unorthodox practices still survive, but even more important several of the therapies and natural product preparations that they devised have found their way into the medicine of today.

About the Speaker: Dr. Heindel, who was president of the American Chemical Society in 1994, is currently a professor of chemistry at Lehigh University and professor of nuclear medicine at Hahnemann University. A past director of the ACS and the Council for Chemical Research, Dr. Heindel is currently a board member of the Chemical Sciences Roundtable – National Academy of Sciences. He also is presently a trustee of the Northampton County Historical Society and the Chemical Heritage Foundation. Dr. Heindel was the director of the Lehigh University Center for Health Sciences from 1980 to 1987 and currently consults for numerous pharmaceutical companies.

Info and RSVP for dinner: If you would like to have dinner with Dr. Heindel before the talk, please contact Bill Samuels at 375-3857, or email at bill.samuels@pnl.gov.

WHO: Dr. Ned D. Heindel

WHAT: Folk Medicine in the 19th Century

WHEN: March 8, 7:00pm

WHERE: Columbia Basin College,
Library Building, Room L-103

A map of the Pasco campus can be found at <http://cbc2.org/pasco.html>

Message from Section Chair



I would like to begin by thanking the 2004 Section officers. Sam Bryan did an outstanding job as Chair. It was a very productive year for the Section – Sam will be a hard act to follow! As Past-Chair, Sam continues to be my mentor. Jeff Woodford did a terrific job as Section Treasurer, in my opinion the most thankless of jobs. Maintaining a checking account with two check books floating around, a savings account, plus CDs and a never-ending stream of incoming bills requires far more accounting skills than I have. I am very pleased to have Jeff continuing this year as Treasurer. Although Bruce McNamara's activities as Section Secretary many times fall below the radar screen, he kept the Section's activities well documented. Bruce is continuing on this year as Sec-

tion Secretary. Steve Krogsrud continues to take the lead in preparing our quarterly newsletter. Dick Hermens and Tim Hubler continue their positions as Councilor and Alternate Councilor, respectively. Dick and Tim bring a more long-term view of Section operations to the Executive Board. Bill Samuels joins the Executive Board as Chair-elect. I look forward to working with this group as the 2005 Section Chair.

The proposed Richland Section budget for 2005 is shown on the next page. The Section membership will be requested to approve the proposed budget during the March 8 speaker meeting. The Section's total income for 2005 is anticipated to be approximately \$10,000. The largest component comes from the National ACS annual allotment (~\$6,000) and voluntary Section dues (\$1,800). Other funds come from partial subsidy of Councilor travel by National ACS and support for Section Education Outreach activities from organizations such as Battelle. A number of Section expenses are reasonably consistent year-to-year. These include costs associated with National tour speakers, Councilor travel, production of this newsletter, and travel costs for the new Chair-elect to attend a National ACS training workshop.

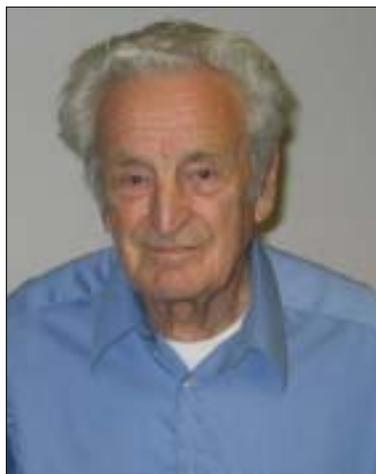
The Section is providing financial support to two ACS Student Affiliate groups. Three members of the Columbia Basin College chapter are presenting original research at the next Northwest Regional Meeting in Fairbanks, Alaska and a number of students in the Eastern Oregon University (EOU) chapter will be presenting research results

at the Spring National ACS meeting in San Diego. EOU has a particularly dynamic ACS Student Affiliate Chapter that conducts extensive fund-raising to support their activities. This chapter has won the "Outstanding Chapter Award" in three of the past four years, an award reserved for the top five percent of the student affiliate chapters in the nation. The students in both chapters are active participants in the Section's Education Outreach activities and in the tour speaker support activities.

The Section is involved in a number of Education Outreach activities. These include participation in such activities as the Mid-Columbia Science and Engineering Fair, National Chemistry Week, and Family-A-Fair. These outreach activities provide a wonderful opportunity for all member of the Section to become involved.

I would like to encourage all members to actively participate in Section activities. Our National ACS tour speakers have had long and distinguished careers in academia or industry with a wide array of experiences. The dinner conversations with these people are absolutely fascinating. I encourage all to consider joining us for dinner with the seminar speaker. There will be continuing requests for volunteers to support various Section activities such as being a science fair judge or manning a booth at the Family-a-Fair. Finally, there is always the annual search for individuals to run for various Section offices. If you have an interest in becoming a member of the Executive Board please let those wishes be known!

Member Profile Leland Burger



Dr. Leland (Lee) Burger has been a member of the ACS for sixty years. He has been an active member of the Richland Section for almost as long, having joined when the Section was formed in the late forties. He has served as Treasurer ('53); Chair ('58); Regional Meeting Program Chair ('67 & '79); and on the Tri-City Technical Council. In 1955 Lee, three other chemists from the local section, a metallurgist, a biologist, and

Columbia (Richland) High School, organized the first Mid Columbia Science Fair. He was Chemist of the Year in 1983. He remains an active member, for example, still volunteering to judge science fair projects on behalf of the Section. The Section newsletter editor interviewed him recently. The interviewer's questions are in bold.

Dr. Burger, where do you hail from, originally? I grew up on a ranch in northern Wyoming. My father was a building contractor, but ranched part time. I grew up hiking, exploring the outdoors, building radios, and doing chemistry experiments. At the time, the late twenties and early thirties, new radio tubes and circuits were being developed, and I enjoyed working with them. Also, I had a chemistry lab in the house from the time I was about ten.

Any explosions at the Burger home? No, but I did a number of experiments that I probably shouldn't have done, looking back on it.

Where did you go to college? I got a scholarship to the University of Wyoming in 1935. This was important, for it was in the middle of the Depression.

Did you know at the time you started that you would major in chemistry? I knew it would be science of some type, and I was most familiar with chemistry. My high school did not have a physics class!

And after college? I started graduate school at the University of Washington, but World War II soon intervened. I hadn't started my research yet when my faculty advisor, George Cady, was called to Columbia University to work on fluorine chemistry. I guess you know what that was for! Professor Cady asked me to come along. He was working for Harold Urey, who had a contract with the Office of Scientific Research and Development (OSRD) to research

2005 Richland 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

Tom Jones, (509) 373-3969
email: Thomas_e_jones@rl.gov

Chair-Elect

William Samuels, (509) 375-3857
email: bill.samuels@pnl.gov

Secretary

Bruce McNamara, (509) 376-1408
email: Burce.McNamara@pnl.gov

Treasurer

Jeff Woodford, (541) 962-3321
email: jwoodfor@eou.edu

Councilor

Richard Hermens, (541) 962-3327
email: rhermens@granderonde.com

Alt Councilor

Tim Hubler, (509) 373-0249
email: tim.hubler@pnl.gov

Proposed Budget and Expenses of the American Chemical Society, Richland Section, 2005			
	2005 Budget Proposed	2004 Budget	2004 Actual Total
INCOME			
Annual ACS Allotment	\$6,150	\$5,836.00	\$6,149.00
New Member/Affiliates Commissions	\$0	\$0.00	\$0.00
Interest: Checking & Savings (Banner)	\$40	\$30.00	\$30.52
CDs (Yakima FS&L)	\$320	\$1,200.00	\$326.78
Checking account bal xfer	\$0	\$0.00	\$0.00
Newsletter (advertising)	\$0	\$0.00	\$0.00
Misc. (refunds, events, e.g., NCW)	\$1,700	\$1,500.00	\$2,951.00
Northwest Regional Meeting	\$0	\$0.00	\$0.00
Fund Raising / Donations	\$0	\$0.00	\$0.00
Voluntary Section Dues	\$1,750	\$3,200.00	\$1,759.00
TOTAL INCOME	\$9,960	\$11,766.00	\$11,216.30
EXPENSES			
Administrative	\$50	\$450.00	\$153.36
Local Meetings			
Speakers	\$900	\$900.00	\$1,500.00
Arrangements	\$500	\$750.00	\$704.99
Regional Meeting (NORM)	\$0	\$300.00	\$340.06
Awards	\$230	\$100.00	\$329.66
TCTC Dues	\$45	\$45.00	\$45.00
TCTC Teacher Grants	\$0	\$300.00	\$300.00
Newsletter	\$1,200	\$1,200.00	\$1,160.67
Education			
NCW, Family-a-Fair, K-12 outreach	\$1,000	\$1,200.00	\$1,652.88
Olympiad	\$50	\$135.00	\$50.00
Science Fair	\$200	\$300.00	\$200.00
Student Affiliates	0	\$1,500.00	\$1,500.00
Travel			
Councilors	\$3,500	\$3,500.00	\$3,457.07
Section Officers	\$650	\$600.00	\$894.08
Student Affiliates Travel (CBC & EOU?)	\$2,500		
Other			
ACS Picnic	\$200	\$200.00	\$162.31
ACS Annual meeting pizza social	\$0	\$200.00	\$377.94
50-Year Celebration/National Award	\$300	\$600.00	\$285.06
Mini-Symposium	\$0	\$1,000.00	\$803.79
Public Relations	\$50	\$100.00	\$0.00
Women and Minority Affairs Cmte	\$500	\$600.00	\$757.02
Project SEED	\$0	\$500.00	\$0.00
TOTAL EXPENSES	\$11,875	\$14,480.00	\$14,673.89
NET GAIN (LOSS)	(\$1,915)	(\$2,714.00)	(\$3,457.59)
ASSETS/LIABILITIES			
		2004 Final(?)	2003 Final
CD1 (Yakima FS&L) 03-90026042		\$22,716.20	\$22,402.90
CD2 (Yakima FS&L) 03-96009670		\$0.00	\$5,851.37
Savings (Banner Bank) 326094011		\$1,489.11	\$112.65
Checking (Banner Bank) 300122713		\$536.90	\$207.88
Liabilities			
TOTAL ASSETS		\$24,742.21	\$28,574.80

Leland Burger cont'd

gaseous diffusion. So for the next four years I worked on UF₆ chemistry and diffusion barriers to be used at Oak Ridge.

It must have been quite a change, from Wyoming to New York City!

Well, the big change had been moving to Seattle. But, New York City was a great place; great ethnic diversity; there was little crime and you could ride anywhere for 5¢. During the time I was there my fiancée came out from Seattle and we were married in New York City.

Was the work there pretty intense? Yes, but fun. We had visitors from everywhere. The physics section was in the next building, but Fermi and his group left for Chicago in the spring of 1942.

And then? After four years I returned to the Univ. of Washington and finished my degree in physical chemistry. I was interviewed by General Electric and started here at Hanford in Feb 1948.

Did you have any projects at Hanford that you remember as being particularly satisfying? Lots of them; the work I did on liquid-liquid

extraction was every bit as interesting as the Manhattan Project. I really enjoyed figuring out the factors that determine how a solute partitions between two liquids and then trying to get it to work in a plant. The work directly supported the REDOX and especially the PUREX process for plutonium separation. Also work with special fission products such as iodine and tritium was interesting, especially the latter that got us into Fusion Reactor studies as well as Cold War issues. Of course, there were other things like the great ferrocyanide flap, but that's another story.

Yes, probably beyond the scope of this interview. Do you have any advice for chemists just starting out?

Try to keep up with what is happening in science in general. Specialization is a fact of life, but spend some time in the library, pull a journal off the shelf from an area different from your own and look through it. Read an article or two. Think a bit about the history and where things are headed. You may be surprised at how fast things change. And, be aware that there are some who would like to over-control research, make purely political decisions, or try to inject religion into research.

Thank you Dr. Burger

Hail & Farewell

We would like to welcome the following new members to the Richland Section: **Alan Cooper, Suodong Liu, TP Straatsma, Yingxiang Tao, Matthew Douglas, Vanda Glezakou, Elmer Huber, Yolanda Peters, James Peters, David Scott,** and **Ashley Stowe.** We wish departing member **So Hirata** the best of luck in his new job out of state.

Part Time Teaching Opportunity

Heritage University in Toppenish is looking for adjunct faculty to help with expanded beginning chemistry courses next fall. Class time is expected to be two evenings a week for three hours each time. If interested, please contact Eric Leber at leber_e@heritage.edu

Coming Events

- February 17/18** Desert Hills Middle School, Point-of-contact – Kent Parker at kent.parker@pnl.gov
- February 18** Carmichael Middle School Science Fair, Point-of-contact – Judy Morrison at jmorrison@tricity.wsu.edu
- March 1** Chief Joseph Middle School Science Fair, Point-of-contact – Judy Morrison at jmorrison@tricity.was.edu
- March 8** Tour Speaker: Ned D. Heindel, Topic: Folk Medicine in the 19th Century
- March 10** Regional Science Fair at Columbia Center on March 10, 2005, Point-of-contact – Tom Jones at thomas_e_tom_jones@rl.gov
- April 21** Tour Speaker: Donald A. McQuarrie, Topic: Modern Theories of Electrolyte Solutions
- June** Annual Picnic –Jointly with the American Institute of Chemical Engineers
- September 21** Tour Speaker: Mary Orna, Topic: Doing Chemistry at the Art/Archaeology Interface

**Richland Section
Home Page**

www.pnl.gov/acs/



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Point To Ponder

It is not enough to reach for the brass ring. You must also enjoy the merry-go-round. – Julie Andrews