



Chemical Bond

Volume 53
Number 9
December, 2002

St. Louis Section, American Chemical Society



Atilla Pavlath visits St Louis
Here with succession of Section Chairs
— present, past, and elect

A Fond Farewell....

As part of passing over the reins of authority, I was asked to provide a final message with “inspiring words of wisdom from a much relieved individual.” I definitely agree with the “much relieved” part, I’m not so sure about the “inspiring words.”

I would like to take this opportunity to publicly and sincerely thank everyone who has made our success this year possible—all the officers, committee chairs, organizers, coordinators and volunteers who gave up many hours of their precious free time to bring the wonderful world of chemistry to children, students, colleagues, and many others. By my calculation, we reached thousands of ACS members, non-member chemists, and members of the general public, and helped them to advance their understanding of the chemical

world around us, as well as enhancing their professional careers. Whether behind the scenes providing administrative support, in front of a crowd delivering lectures and demos, or any place in between, it is only the outstanding dedication of our members that allows us to provide all the wonderful services that we do.

I would also like to thank my family, who cancelled many of their own plans and suffered with their own cooking many nights while I was out at “another chemistry thing.”

I’m sure Leah O’Brien, the 2003 Chair, will continue the tradition of outstanding leadership that has long been a hallmark of the St Louis section, and one of which I am proud to have been a small part.

—Lisa Balbes



Lisa nursing her beloved Mac through a nasty case of measles (yes, thanks, much better now)

Chemical Bond

Volume 53

No. 9

December, 2002

The *Chemical Bond* is published in January through May and September through December by the St. Louis Section–American Chemical Society. It is mailed free of charge to members of the section at their address on file at ACS National Headquarters. Changes of address for members will be made automatically upon notification to National ACS Headquarters; send old and new address with zip codes to ACS Subscription Service Department, 1155 16th St. N.W., Washington, DC 20036 or visit chemistry.org, log in, and go to Update my Profile. Allow eight weeks for change to take effect.

The domestic subscription rate for non-members/affiliates is \$8.00 per year. Subscription orders and changes of address for non-members/affiliates should be mailed to Editorial Production Office, 125 West Argonne Drive, St. Louis, Missouri 63122 or e-mailed to the Editor.

Editor	Eric Ressner	314-962-6415 (H) 314-286-6600 x2199 (O) ressner@worldnet.att.net
Advertising Manager	Sue Saum	636-949-4735 SSaum@lindenwood.edu
Business Manager	Donna Friedman	314-595-4388 dfriedman@stlcc.cc.mo.us
Staff Writer	John Bornmann	636-946-5161 jbornmann@msn.com
World Wide Web		http://www.umsl.edu/~acs
Webmaven	Lisa Balbes	lisa@balbes.com

*Correspondence, letters to the Editor, etc., should be sent to
St. Louis Section–American Chemical Society
125 West Argonne Drive, St. Louis, MO 63122*

Copyright © 2002 American Chemical Society and the St. Louis Section–ACS

In this issue

- | | |
|-----|--|
| 2 | From Lisa Balbes, departing chair message |
| 4 | Meetings and Seminars |
| 5 | Nobelist Sir John Sulston visits Science Center |
| 6 | Letters, Words & More: The Color of Music |
| 8-9 | National Chemistry Week reports |
| 10 | Bond Briefs |
| 11 | St Louis Award Request for Nominees |
| 12 | Attila Pavlath, ACS past prez presents in St Louis |
| 13 | Continuity Dinner — place your reservation now! |
| 14 | Time to Chemvolunteer at Career Awareness Fair |

Meeting & Seminars

Board of Directors

St. Louis Section-ACS Board of Directors meets the second Thursday of each month, usually at the Alumni Center, UM-St Louis. Meetings are open to all members, and all are encouraged to attend. Elected officers and chairs of major committees have the right to vote; others in attendance have voice but no vote.

Date: December 12
Continuity Dinner at Spiro's East
Social hour: 5:30 pm
Dinner: 6:30 pm
Board meeting: 7:20
See p. 8 for details.

Future meetings: Jan 9, Feb 13

Saint Louis University

Seminars start at 3:30 pm in Room 204 Macelwane Hall, except as noted. Refreshments follow. For more information, contact Paul Jelliss, jellissp@slu.edu.

Dec 4
Dr. Douglas Mans
University of Michigan
To be announced

University of Missouri– St. Louis

Refreshments at 3:45; seminars at 4 pm in 451 Benton Hall. For further information, contact Prof. Chris Spilling, 314-516-5314, cspill@umsl.edu

Monday, Dec 2
Prof. Richard Hsung
U Minnesota–Minneapolis
*Stereoselective Methodologies Using
Chiral Allenamides and Ynamides*

Monday, Dec 7

Dr. Steve Kolodziej
Pharmacia, St Louis
*The Use of Parallel Medicinal
Chemistry to Optimize Potency and
Selectivity of Hydroxamic Acid-Based
MMP Inhibitors*

Washington University

Seminars are in McMillen 311 at 4 pm unless otherwise noted. Coffee is available 20 minutes prior to the talk, and refreshments follow. For information, contact Thomas P Vaid, vaid@wuchem.wustl.edu

Dec 2
Prof. Jack Tanner
University of Missouri–Columbia
To be announced

Dec 3
Dr. Jerry Yang
Harvard University
*Chemistry at the Interface between
Biology and Materials Science*

Dec 10
Dr. Olafs Daugulis
U North Carolina–Chapel Hill
Synthetic Methodology

Dec 11
Dr. Linda McDowell
Washington University
To be announced

Dec 12
Prof. Paul F. Barbara
University of Texas–Austin
To be announced

Dec 17
Dr. Melanie Sanford
Princeton University
Organometallic Chemistry

Nobelist/Knight Visits River City

The St. Louis Science Center hosted Nobel Prize-winner Sir John Sulston and BBC broadcaster Georgina Ferry for a special guest lecture on November 12.

Sulston and Ferry spoke on genetics research and applications (and misapplications) to human well-being in their lecture, "The Common Thread."

Sir John Sulston won the 2002 Nobel Prize in Medicine, shared with Sydney Brenner and H. Robert Horvitz, for his work on organogenesis and programmed cell death. Sir John is a Fellow of the Royal Society and directed the Sanger Center in Cambridge, England, the focus of the UK efforts on the Human Genome Project.

Georgina Ferry is a well known science writer in the UK, and broadcaster on the BBC.

Sulston and Ferry's major premise had two sides: the Human Genome Project was a crowning and worthy achievement of modern science and technology, and the findings should be open and available for development of practical applications ... but ... some potential applications are grossly unethical, especially if scientists "get greedy."

Editor's note: the *Bond* did not have a reporter assigned to the lecture. This report is based on secondary sources.

OUTSTANDING PEOPLE

Lab Support® is the leader in the scientific professional staffing industry. We specialize in placing qualified degreed scientists on short- and long-term assignments in laboratories in over 50 major markets throughout the United States and Canada.

All of our Account Managers make "Quality Assignments" because they have a background similar to that of our clients and our employees.

If your company is looking for outstanding lab personnel or if you're an outstanding scientist seeking a new career offering variety, opportunity and a great benefit package, call Lab Support® today.



St. Louis (314) 434-4414

Nationwide (800) 998-3332

www.labsupport.com

On Assignment



LAB SUPPORT®

Science Professionals On Assignment

The Color of Music

by Jack Bornmann

Not too long ago I encountered the same new word twice within a week. The word was synesthesia. It refers to a fascinating condition in which senses seem to “leak” from one sensory part of the brain to an-

Letters & More Words & More

other. For example synesthetes (that is what you call a person with synesthesia) may see a color when they hear music, or experience colors and shapes when stuck with a pin.

I first encountered synesthesia in Sharon Begley’s weekly column, “Science Journal,” in the *Wall Street Journal* of June 28, 2002. A few days later I encountered synesthesia in a book, *The Lives of the Great Composers*, by Harold Schonberg. The Russian pianist and composer Aleksandr Scriabin was a synesthete who saw colors when he heard music. He wanted to have a majestic symphony performance in which all of the arts would take part. He would have music, dance, sculpture and paintings. Realizing that this was too much to accomplish, he decided to at least make a color organ so that

he could let the audience experience the colors that he saw with the music. One octave of his color organ, beginning with C (256 cps) is shown below.

Please, don’t ask me what curly blue looks like; I only report these things. One synesthete described the color of a perfectly cooked chicken as being “pointed.” I guess colors can have shapes.

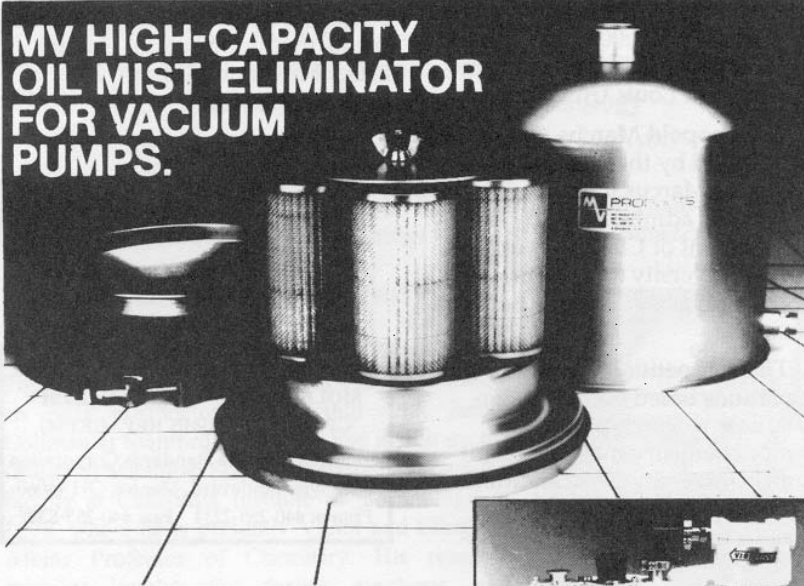
It has been estimated that 1 in every 200 people have synesthesia. The St Louis Section of the American Chemical Society has about 1800 members; that means there are about 9 chemists and chemical engineers in our section with synesthesia. The most common form is to see colors when looking at letters or numbers. Until recently doctors and specialists thought synesthetes were daft or lying. Thus, the synesthetes out there may have hidden their special abilities.

Modern research has shown that synesthesia truly exists. For example, brain scans have shown that the area of the brain that becomes active when we see colors is activated when a synesthete hears words or music that produces color for them. One hypothesis proposes that a stray nerve fiber extends from one sensory area of the brain into an adjacent sensory area.

Fascinating!

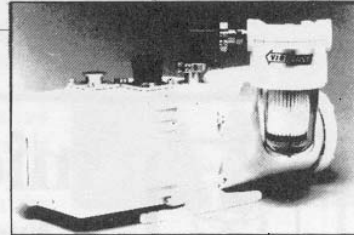


DO AWAY WITH VACUUM PUMP OIL MIST-with MV Oil Mist Eliminators.



MV HIGH-CAPACITY OIL MIST ELIMINATOR FOR VACUUM PUMPS.

MV VISIMIST OIL MIST ELIMINATOR FOR SMALLER PUMPS. →



- REMOVES OIL MIST FROM VACUUM PUMP EXHAUST.
- PROTECTS CLEAN ROOMS FROM PUMP VAPORS.
- KEEPS OIL RESIDUE FROM STICKING TO FURNITURE, WALLS AND FLOORS.
- COALESCING FILTERS DRAIN OIL INTO A RESERVOIR FOR EASY RECOVERY.

Vacuum pump oil mist contaminates the surrounding air, settles on surfaces and you breathe it. Eliminate this problem by installing MV oil mist eliminators on your vacuum pumps. It will save you time and money.

The high-capacity oil mist eliminator is made of stainless steel and is designed for large vacuum pumps. It measures only 10" dia. x 13.5" high. The coalescing filter elements remove oil mist at 0.1 micron with an efficiency of 99.999%.

The MV Visimist eliminates oil mist and is designed for smaller vacuum pumps. Contact MV Products for the oil mist eliminators best suited for your requirements. They install in minutes and require little maintenance.



PRODUCTS

A DIVISION OF MASS-VAC, INC.

247 RANGWAY ROAD, P.O. BOX 359 NO. BILLERICA, MA 01862-0359
TEL (978) 667-2393 FAX (978) 671-0014 E-mail sales@massvac.com

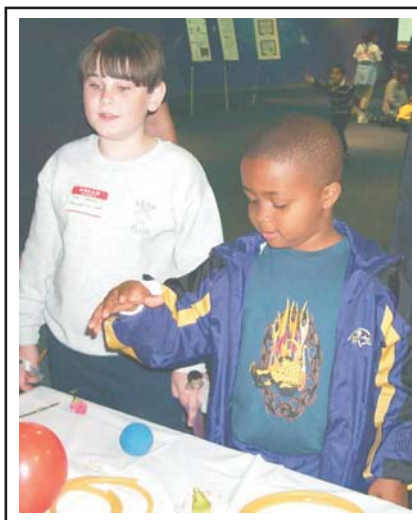
Report from National Chemistry Week

The headline event of National Chemistry Week, Day at the Science Center, was held on Saturday, October 19th. The academic/industrial exhibition drew almost 2,900 visitors.

Families enjoyed activities including liquid nitrogen demonstrations (Monsanto), UV glowing beads and molecular models (SIUE), slime (Kids N Chemistry), and making toothpaste (SLU). Other groups mounting demonstrations or exhibits included Sigma-Aldrich, Missouri Botanical Garden, Steris, Buckeye International, and Principia College. Lisa Balbes had her ever-popular chemistry and science fair web sites available. Marie Sherman and Dorothea Bean (Ursuline Academy) presented special activities. The winning entries



Cabbage juice indicates acid and base properties of some household chemicals



A racketball frozen in dry ice does not bounce!

in our "Chemistry Keeps Us Clean" poster contest were on display as well.

Thank you to all SIUE students and ACS members for their help!



ELEMENTAL ANALYSIS

C, H, N, O, S, P • Halogens • Ash • Metals
TOC • TOX • BTU • Molecular Weights
ICP • ICP/MS • IC
Custom Analysis • Problem Solving

HUFFMAN

LABORATORIES, INC.

Quality Analytical Services Since 1936

4630 Indiana Street • Golden, CO 80403
Phone: (303) 278-4455 • Fax: (303) 278-7012
Chemistry@huffmanlabs.com
www.huffmanlabs.com



National Chemistry Week — Sports Section

The 10th annual Battle of the Burets was held October 30th at St Louis Community College–Florissant Valley in conjunction with National Chemistry Week. Twenty-seven teams from 15 area

and Kristen Mengwasser), and Francis Howell Central High School (Bill Kirchner and Dan May).

In the final round drop-off, Jessica Patane and Holly Smith grabbed the Grand Championship. All students who participated in this event received certificates of participation. The evening provided a chance for science students from all area high schools to meet, compete, and share refreshments.

The Battle of the Burets is co-sponsored by the St Louis ACS Section and the Chemistry



Titration lab is beehive of activity during prelim rounds

high schools participated in this exciting titration competition. Three preliminary rounds were held to select the teams for the final round. Teachers and fellow students looked on as teams of two students performed titrations for speed and accuracy.

The first round trophies went to Visitation Academy Team 1 (Jessica Patane and Holly Smith), Visitation Academy Team 2 (Shivani Dave

Department of SLCC–FV. The Battle of the Burets Committee appreciates the time and efforts of Solutions Plus for preparing, certifying, and donating the titrants. We would also like to thank Florissant Valley's staff and the ChemTech students for the tremendous work to support this event. Refreshments were donated by St Louis Community College–Florissant Valley.



Heat-winning pairs (from left) Francis Howell, Visitation #1 and Visitation #2 display their trophies. Eventual Grand Champions are at center.

Bond Briefs

Closing-of-the-books ceremony scheduled

The year's financial business will be coming to a close soon. Treasurer Bruce Ritts needs all requests for reimbursement of 2002 expenses by December 18. Please submit them through the appropriate Committee Chair in plenty of time.

The final tallies are in....

In races that were deemed "too close to call" during the regular returns on November 6, amazingly, *all* candidates in the St Louis ACS section elections won by narrow

margins. Thus, for 2003, the following will serve in elected positions:

Lisa Balbes moves from Chair to Immediate Past Chair

Leah O'Brien moves from Chair-Elect to Chair

Bijan Khazai is Chair-Elect

Incumbent **Keith Stine** remains Secretary

Incumbent **Bruce Ritts** remains Treasurer

Newly elected Directors are **Hal Harris, Sue Dudek, and Eric Ressner**

Donna Friedman was re-elected Councilor

**POLYMER STANDARDS FOR GPC/SEC
MOLECULAR WEIGHT ANALYSIS
GPC/SEC COLUMN REPACKING**

American Polymer Standards Corporation
8680 Tyler Boulevard, Mentor, OH 44060
Phone: 440-255-2211 Fax: 440-255-8397



micron inc.

Analytical Services

Complete Materials Characterization

Morphology Chemistry Structure

**SEM - TEM - EPA - ESCA - AUGER
XRF - XRD - FTIR - DSC - TGA**

3815 LANCASTER PIKE, WILMINGTON DE. 19805
PHONE 302 - 998 - 1184, FAX 302 - 998 - 1836
E-MAIL MICRONANALYTICAL@COMPUSERVE.COM
WEB PAGE WWW.MICRONANALYTICAL.COM

Nominate a Colleague: The St Louis Award

The St Louis Award, sponsored by the Monsanto Company, is presented to an individual who has made outstanding contributions to the profession of chemistry and demonstrated potential to further the advancement of the chemical profession. The award, consisting of a \$1,500 honorarium and a plaque, is presented at the St Louis Award Banquet, the final event of Chemical Progress Week in April.

Please help the Awards Committee identify outstanding chemists in the St Louis Section by submitting your nominations to the St Louis award chair. The nomination should include a nominating letter, two or more seconding letters from individuals who have had a close profession affiliation with the nom-


inee, a brief biography, a description of the nominee's accomplishments, and a list of publications and patents.

At the time of the nomination, the nominee must not have previously received the Midwest Award or any national ACS-sponsored award. The nominee must be a member or affiliate of the St Louis Section of the ACS. The deadline for nomination packets to be received is December 13, 2002. Please send nominations and inquiries to:

Dr Joseph Ackerman
St Louis Award Chairman
Department of Chemistry
Campus Box 1134
Washington University
One Brookings Drive
St Louis, MO 63130-4899
phone: 314-935-6593
fax: 314-935-4481
chemistry@wuchem.wustl.edu

Chemical Analysis Services

- ▲ Materials Identification and Deformation
- ▲ Product Defects / Failure Analysis
- ▲ Thermal and Physical Testing (ASTM)
- ▲ Polymer Analysis and Testing



Chemir / Polytech
Laboratories, Inc. (800) 659-7659
chemir.com

Since 1959
2672 Metro Blvd. Maryland Heights, MO 63043



COBERT ASSOCIATES

QUALITY PRODUCTS FOR CHROMATOGRAPHY

XPERTEK® • CAPILLARY COLUMNS • HPLC COLUMNS • SPE • VIALS AND ACCESSORIES • FILTRATION PRODUCTS

Stocking Distributor For More Than 75 Manufacturers, Including:

• ABI-Brownlee	• Keystone	• Rheodyne	• Upchurch
• Agilent/J&W	• Pierce	• Shodex	• Vydac
• Hamilton	• Optimize	• Synchron	• Whatman

P.J. COBERT ASSOCIATES, INC. • P.O. BOX 460046 • ST. LOUIS, MO 63146
1-800-972-4766 • (314) 993-2390 • FAX (314) 993-2491
EMAIL cobert@cobertassoc.com • WEB SITE <http://www.cobertassoc.com>



Pavlath Delivers Inspirational Message

Attila Pavlath, immediate past president of national ACS, visited St Louis on November 14 and addressed a General Meeting of the section, saying "It is Time for a Change!"

Pavlath began with a brief history of the ACS and his 30 years "shaking up" the ACS governance.

musical inspiration, delivering such tunes as "The Impossible Dream," "I Believe," and "Impossible/It's Possible." The latter could probably be said to sound the true theme of Pavlath's message: try to get people to switch from saying "birds can't fly," to asking rather, "how do birds fly?"



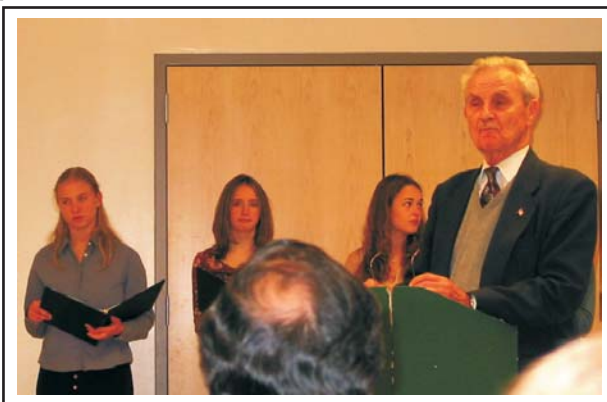
Members had an opportunity to meet and chat before dinner and the main event.

A self-proclaimed rabble-rouser and revolutionary, he recounted how his first proposal as a national Director was voted down 14-1. Progress comes to the persistent, however; his last proposal as outgoing President was approved 11-4.

The main part of the presentation was an unusual blend of literary allusions, abstract messages of hope, and supporting music by the Clayton High School choir. After each verbal passage, Pavlath bowed to the choir, who then regaled the audience with

Following the formal talk, Pavlath took questions. The most on point: "What *specific* changes do you think are most needed?" Pavlath's reply was that much direct and indirect benefit could come from improving the public image of chemistry. A good answer, one the local section has been and continues to be deeply committed to.

Pavlath notched St Louis as the 161st local section he has visited out of a total of 189. He left little doubt that the remaining 28 would soon be meeting him up close and personal.



Attila Pavlath with a portion of his back-up group, the Clayton High School choir

Open Invitation: 2002 Continuity Dinner

Every December, the St Louis ACS section Board meeting is held at a special site and dedicated to ceremonially passing the reins of office and granting special recognition to certain members. Lisa Balbes will pass the Chair's gavel to incoming Chair Leah O'Brien.

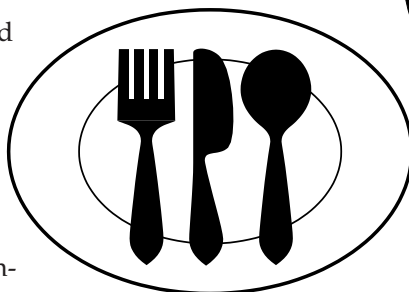
The Continuity Dinner usually draws a large number of members who do not otherwise participate in section activities. So don't be a stranger.

This year, the date is December 12, and the place is Spiro's South (3122 Watson Road, near Hampton). Social hour will begin at 5:30, with beer, wine, and soft drinks. Dinner will be served at 6:30, and the business meeting/ceremonies will begin at 7:15.

A Salute to Excellence will be presented to Marie Sherman.

A secretly invited speaker will give the Henry Godt Memorial Lecture.

The cost of the dinner is \$20 per person. Please place reservations by Monday, December 9th.



Continuity Dinner Reservation

Member name _____

Number attending _____ × \$20 = Amount remitted \$ _____

Your preference for entrée: Steak (#) _____ Salmon (#) _____

Reservation must be received by December 9, 2002.

Please mail with check payable to St Louis Section-ACS

to: Dr. Samir El-Altably
Camela Medical Equipment Co
PO Box 50168
St Louis, MO 63105

Chemvolunteer at Career Awareness Fair?

As one year ends, another one begins. It is time to start thinking how you will represent the Section as a Chemvolunteer.

One public outreach program to consider is the 20th Career Awareness Fair organized by the St Louis Public Schools, March 18-19, 2003, at the America's Center. This program allows 8th grade students to invest in their future by exploring and understanding a variety of career options, and meet people who perform these jobs on a daily basis.

That's where you come in. As a Chemvolunteer, you not only get to represent the section and the chemistry profession but to talk one-on-one with students who may be looking at chemistry as their career. Last year, over 1,200 business persons "presented" their

skills were applied, what they like about their jobs, and the education and training needed for that profession. It is your opportunity to share with these students the joy of a career in chemistry.

What event in your life made you pursue a career in chemistry? Would you like to share that with potential new chemists? Do you want to help develop a world-class workforce? Don't hesitate, don't be shy, volunteer today and make a difference. I hope to see you at this event and others throughout 2003.

For more information on this and other programs, please contact Greg Wall by telephone at 800-325-5832 ext. 3139 (W) or 314-772-0037 (H) or e-mail at gwall@sial.com (W) or gwall37@msn.com (H). Make this year one to remember.

Dr William H Elliott

Dr William H Elliott, internationally recognized pioneer in clinical applications of gas chromatography and mass spectrometry died on September 27. He was 84.

Born in St Louis, Dr Elliott received his BS/Chemistry in 1939 and MS/Chemistry in 1941 from Saint Louis University, and earned his PhD in organic chemistry from SLU School of Medicine in 1944. Professor Elliott served on the faculty of the SLU School of Medicine, Biochemistry Department, from 1944 until his retirement in 1991,

and taught in the Chemistry Department on the main campus as well.

Dr Elliott's research involved metabolism of cholesterol, bile acids, and other steroids. He developed clinical applications of GC for analysis of steroids and founded a mass spectrometry facility at SLU that is used extensively to screen children with suspected inborn errors of metabolism.

Dr Elliott received his 50-year pin from the St Louis ACS section in 1990, shortly before his retirement.

St. Louis Section
American Chemical Society
125 West Argonne Drive
Kirkwood, MO 63122

Rush—Dated Material Inside

Non-Profit
U.S. Postage
PAID
St. Louis, MO
Permit No. 850