

Illinois Wesleyan U, Bloomington; Dustin Mergott; Ram Mohan and Rebecca Roesner
Iowa State U, Ames; Joe Taylor; Thomas Greenbowe and Dave Aeschliman
James Madison U, Harrisonburg, Va.; Jennifer Lee; Thomas DeVore and James Leary
Lawrence Technological U, Southfield, Mich.; Sean Foradori; Jerry Crist
Lincoln Land Community C, Springfield, Ill.; Becky Ball; Jennifer Little and Michael Ramm
Lock Haven U, Lock Haven, Pa.; Matthew Easley and Sarah Zigmont; Laura Lee and Alfred Hoberman
Loras C, Dubuque, Iowa; Matthew Whitney; David Oostendorp and David Speckhard
Marietta C, Marietta, Ohio; Jennifer Nalepka; William Hohman
Milwaukee Area Technical C; Timothy Larson; Kenneth Miller
Moorhead State U, Moorhead, Minn.; Dan Loban; Shawn Dunkirk
Morehead State U, Morehead, Ky.; Jason Underwood; Michael Adams
Morgan State U, Baltimore; Nahada Allison; Louise Hellwig
Mount St. Mary's C, Los Angeles; no president; Eleanor Siebert and Eric Stemp
Nebraska Wesleyan U, Lincoln; Jenny Oates; Norman Griswold
Northwestern U, Evanston, Ill.; Mary Beth Huff; SonBinh Nguyen
Old Dominion U, Norfolk, Va.; Carrie Skrzynski; Allen Clark
Providence C, Providence, R.I.; Blythe Pikosky; Kathleen Cornely
Rice U, Houston; Sean Elam and Jennifer Stine; Scott Singleton
Roanoke C, Salem, Va.; Carl Hollandsworth; Vernon Miller
St. John's U, Jamaica, N.Y.; Toni Krasnic; Neil Jespersen and Enju Wang
St. Vincent C, Latrobe, Pa.; Heather Eisman; Caryl Fish
San Jose State U, San Jose, Calif.; Reem Melhem; Brenda Kesler; Paul Wagenknecht, and Peter Djurovich
Tarleton State U, Stephenville, Texas; Charles Blaylock; Stuart Taylor
Technical Training Project Inc. at Essex County C, Newark, N.J.; Lawrence Green; Rudolph Jones
Tennessee Technological U, Cookeville; Charlotte Morgan and Andy Boswell; Edward Lisic
Texas Tech U, Lubbock; David Laney; Greg Gellene
Texas Wesleyan U, Fort Worth; Nadia Rodriguez; Ricardo Rodriguez
Thiel C, Greenville, Pa.; Tara Marshall,

Briana Richardson, and Della Smith; Richard Bennett
U of Arkansas, Fayetteville; Jamie Wilson; David Paul and Ingrid Fritsch
U of Arkansas, Little Rock; Courtney Hanon, Jerry Darsey and Marian Douglas
U of California, Davis; Fatema Lakhani; Phillip Jessop
U of Central Arkansas, Conway; Missy Snodgrass; Karen Weaver
U of Central Florida, Orlando; Jessica LoDuca; Cherie Geiger
U of Missouri, Rolla; Lorna Heavin and Alisa Duncan; Terry Bone
U of Nebraska, Kearney; Creston Myers; Yvonne Gindt and Chris Exstrom
U of Nebraska, Omaha; Chris Schwartz; George Pfeffer and Lana Thomas
U of New Haven, West Haven, Conn.; Beth Volkmar; Peter Desio
U of North Carolina, Greensboro; Allen Kimel; Alice Haddy
U of Northern Colorado, Greeley; Brock Johnson; Lynn James
U of Notre Dame, Notre Dame, Ind.; Alexei Horaczewski; Brad Smith and James Keller
U of Oregon, Eugene; Jana Mooster; James Hutchison
U of Wisconsin, Eau Claire; Kathryn Splan; Robert Eierman
U of Wisconsin, Milwaukee; Michael Grogan; Thomas Holme
Western Carolina U, Cullowhee, N.C.; Avery Fox and Luci Teague; Paul Brandt
Western Washington U, Bellingham; Robert Schmid; Gary Lampman
West Virginia U Institute of Technology, Montgomery, W.Va.; Randolph Wyatt Jr.; Thomas Hodgkins
Wilkes U, Wilkes-Barre, Pa.; Jennifer Bartels; Therese Wignot ◀

ACS acquires European software company

The American Chemical Society has acquired Hampden Data Services Ltd. (HDS), a leading European chemical information software company. The society had been a minority shareholder in HDS, which is located in Hertfordshire, England, since 1989.

The acquisition will be aligned with Chemical Abstracts Service, the ACS division in Columbus, Ohio. Both organizations will be strengthened by the move, says CAS Director Robert Massie, noting that CAS's global operations include sales across Europe.

Founded in 1983, HDS specializes in

chemical and reaction substructure searching, particularly for CD-ROM and Internet products. HDS has authored or been a major contributor to many successful software packages used in the chemical information field, including CAS's STN Express software, a widely used tool to facilitate access to STN International.

CAS produces the world's largest and most comprehensive databases of chemical information, including 14 million abstracts of chemistry-related literature and patents and more than 18 million substance records. It publishes *Chemical Abstracts* and related publications and CD-ROM services, operates the CAS Chemical Registry, produces a family of online databases, and offers the SciFinder desktop research tool.

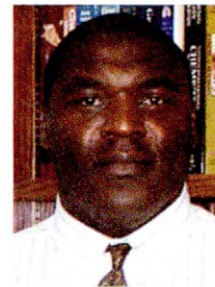
CAS also operates STN International, a network of scientific and technical databases, in association with FIZ Karlsruhe in Germany and Japan Science & Technology Corp. ◀

awards

Southern Chemist Award goes to Robinson

Gregory H. Robinson, a professor of chemistry and an organometallic researcher at the University of Georgia, Athens, will receive the 1998 Southern Chemist Award from the ACS Memphis Section. The award, which consists of a gold medal and an honorarium, recognizes distinguished service to the chemical profession in the southern part of the U.S. He will receive the award at a Memphis Section ceremony in December.

Robinson joined the chemistry department faculty at the University of Georgia in 1995 after beginning his academic career at Clemson University, in South Carolina, in 1985. His research at Georgia focuses



Robinson

on the synthesis, structure, and bonding of organometallic compounds of the main-group elements. Most notably, Robinson's work has attracted attention in the realm of multiply bonded compounds involving gallium. In 1995, his research group prepared the first examples of a class of compounds called cyclogallenes—dianionic gallium three-mem-

bered-ring compounds that display traditional aromatic behavior. In addition, his research group has prepared organogallium compounds in which the bonding is described as the first examples of a gallium-gallium triple bond—a gallyne—and a gallium-iron triple bond, a ferrogallyne.

In addition to his research, Robinson has edited a book on the coordination chemistry of aluminum. He received a bachelor's degree in chemistry from Jacksonville State University, in Alabama, in 1980, and a Ph.D. degree in chemistry from the University of Alabama, Tuscaloosa, in 1984. ◀

Five ACS regions present high school chemistry teaching awards

Five ACS Regional Awards in High School Chemistry Teaching have been awarded this fall to Barbara Pressey Stitzman, Steven Long, Andrew D. Shaw, Theresa R. Corley, and Richard A. Brown. Four of the awards were presented at the Western, Southwest, Midwest, and Southeast Regional Meetings. The ACS Northeastern Section presented its award to Brown at the ACS national meeting in Boston.

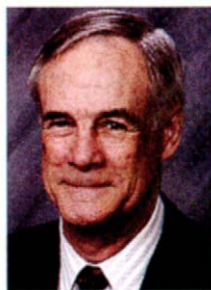
The regional high school chemistry teaching awards are intended to recognize and encourage outstanding high school chemistry teachers. The award consists of certificates for the teacher and for the teacher's school, \$1,000, and travel expenses to a regional meeting. In addition, all recipients of regional teaching awards are eligible to win the ACS James Bryant Conant Award in High School Chemistry Teaching.

Stitzman, a chemistry teacher and chemical safety coordinator at Chatsworth High School in Chatsworth, Calif., was presented with her award by ACS President Paul H. I. Walter at the Western Regional Meeting in San Francisco on Oct. 28. She has been a chemistry teacher at Chatsworth since 1986 and the school's chemical safety coordinator since 1987. Described as a "Renaissance woman" of chemistry, she incorporates real-world chemistry into her hands-on approach to teaching.

Stitzman received a bachelor's degree in zoology/chemistry from Chapman College, Orange, Calif., in 1965, and a master's degree in education and school counseling from Whittier College, in California, in 1978. Among her awards and honors, she was named an outstanding



Corley



Brown



Shaw



Stitzman

teacher by the California State Department of Education in 1983.

Long was presented with his award at the Southwest Regional Meeting in Baton Rouge, La., on Nov. 4. He is a chemistry teacher and chairman of the science department at Rogers High School in Rogers, Ark. He is described as "a master at utilizing hands-on, group, and discovery teaching techniques."

Long received a B.S.E. degree in secondary education-chemistry/biology from the University of Arkansas, Fayetteville, in 1975, and a master's degree in secondary education-chemistry from the University of Houston, Clear Lake, in 1988. He is the winner of the 1996 Presidential Award in Secondary Science for Arkansas and the 1997 High School Service Award of the Arkansas Science Teachers Association.

Shaw was scheduled to receive his award on Nov. 5 at the Midwest Regional Meeting in Wichita, Kan. He is chairman of the science department at Westminster Christian Academy in St. Louis and has taught chemistry and physics there since 1977. Shaw has said: "My goal is excellence. I believe in order for me to be an excellent teacher, and thus provide an excellent education for my students, I must master the content which I am teaching and its delivery by pursuing professional development at every opportunity."

Shaw received a bachelor's degree in natural science from Covenant College, Lookout Mountain, Tenn., in 1974, and a master's degree in science education from the University of Tennessee, Chattanooga,

in 1977. Among numerous awards and honors, he was the recipient of the Educator of Achievement Award sponsored by the Missouri Council on American Private Education in 1997.

Corley was scheduled to receive her award at the Southeast Regional Meeting in Research Triangle Park, N.C., on Nov. 7. She is a chemistry teacher and science department chairman at Mountain Brook High School, Birmingham, Ala., where she has taught for 14 years. She has been described by colleagues as a "consummate professional" who uses real-world examples in her teaching of chemistry.

In June, Corley received a Presidential Award for Excellence in Mathematics & Science Teaching, which is administered for the White House by the National Science Foundation. She received a bachelor's degree in chemistry from Birmingham-Southern College in 1983; a master's degree in secondary education/chemistry from the University of Montevallo, in Alabama, in 1986; and an Ed.S. degree in secondary education/chemistry from the University of Alabama, Birmingham, in 1988. She currently is pursuing a doctoral degree in education at that university.

Brown has been a science teacher and science department chairman at Minnechaug High School, Wilbraham, Mass., since 1959. He is noted for his open-ended laboratory experiments that challenge students to design the experimental protocol for the research experiences he provides.

Brown received a bachelor's degree in chemistry and mathematics from Bowdoin College, Brunswick, Maine, in 1959; an M.S.T. degree in physical sciences from Colby College, Waterville, Maine, in 1966; and a Ph.D. degree in inorganic chemistry from North Texas State University in 1971. In 1996, he received the Outstanding High School Chemistry Award of the ACS Connecticut Valley Section and he was named Massachusetts Secondary Chemistry Teacher of the Year by the New England Institute of Chemists. ◀

Merck receives award from ACS division

The ACS Division of Biochemical Technology has presented the Industrial Biotechnology Award to Merck Research Laboratories, West Point, Pa., for "innovative bioprocess technology development of Vaqta, a hepatitis A vaccine." This award was established last year and

Merck is the first recipient. The award is presented to companies, teams, or organizations, and honors commercial bioprocess technology brought to practice in the past five to 10 years.

A group of scientists and engineers at Merck developed a fully integrated manufacturing process for Vaqta, consisting of cell culture, purification, inactivation, and formulation in conjunction with process monitoring, product characterization, and release assays. This vaccine was introduced in 1996 and has shown to be 100% effective in the prevention of disease after a single dose. The manufacturing process used for Vaqta is said to be the first application of modern bioprocess technology to the production of a whole-virus vaccine. ◀

Carbohydrate Chemistry Division presents awards

The ACS Division of Carbohydrate Chemistry presented two awards at the ACS national meeting in Boston in August. Michael K. Dowd, a lead scientist at the Southern Regional Research Center of the Department of Agriculture's Agricultural Research Service, New Orleans, received the Horace S. Isbell Award; and John F. Robyt, professor of biochemistry and director of the Laboratory of Carbohydrate Chemistry & Enzymology at Iowa State University, Ames, received the Melville L. Wolfrom Award. Both awards consist of an honorarium and a plaque.

The Isbell Award is presented annually to a scientist under 41 years of age for excellence in carbohydrate chemistry. Dowd received a B.S. degree in chemical engineering from Clarkson College, Omaha, in 1981, and M.S. and Ph.D. degrees in chemical engineering from Iowa State University in 1984 and 1986. He did a two-year postdoc in applied thermodynamics at the University of Canterbury, New Zealand.

In 1990, Dowd returned to Iowa State, where he studied kinetic and transport processes in living systems and began a series of carbohydrate modeling studies. He joined the Southern Regional Research Center in 1993, and his current research aims to increase corn utilization. He also contributes to a program to develop improved vegetable oil extraction technology. His research interests include mod-

eling transport processes in biological systems, computational modeling of biologically important compounds, and separation processes.

The Wolfrom Award is given annually to recognize excellent contributions to carbohydrate chemistry. Robyt's work on polysaccharide-hydrolyzing enzymes and polysaccharide-synthesizing enzymes led him to study the chemical methods for modifying carbohydrates, especially sucrose, starch, and dextrans.

Robyt's major research accomplishments have included the development of the subsite-binding hypothesis to explain the specificity of polysaccharide-hydrolyzing enzymes; the first discovery of an enzyme that was specific for forming a single oligosaccharide product from starch; and the demonstration of the insertion mechanism for dextran synthesis by dextransucrase.

Robyt received a B.S. degree in chemistry from St. Louis University in 1958 and a Ph.D. degree in biochemistry from Iowa State University, Ames, in 1962. ◀

Chi-Huey Wong to receive Howe Award from Rochester Section

Chi-Huey Wong, Ernest W. Hahn Professor of Chemistry at Scripps Research Institute, La Jolla, Calif., will receive the 1998 Harrison Howe Award from the ACS Rochester Section. The Howe Award, which consists of an honorarium and a plaque, was established in 1944 in honor of Harrison Howe, co-founder of the Rochester Section and founding editor of *Industrial & Engineering Chemistry News Edition*, the predecessor to *Chemical & Engineering News*. The award recognizes a scientist who has had outstanding achievements in chemistry and who shows the potential for future achievement.

Wong is being honored for his development of new enzymatic and chemical-enzymatic methods for large-scale organic synthesis, especially for the synthesis of complex carbohydrates, their mimetics, and glycoproteins.

Wong's developments have made it possible to synthesize classes of compounds important in biology and medicine and have pointed the way toward new green methods for use in large-scale chemistry. His work has influenced the development of catalytic



Wong

asymmetric synthesis, enzyme chemistry, and molecular glycobiology. Wong's current research interests are in bioorganic and synthetic organic chemistry, especially as they relate to carbohydrate recognition, enzymatic

synthesis, and enzyme inhibition.

Wong received a B.S. degree in chemistry (1970) and an M.S. degree in biochemical science (1977), both from National Taiwan University, and a Ph.D. degree in chemistry from Massachusetts Institute of Technology (1982). Among many awards and honors, he received an ACS Arthur C. Cope Scholar Award (1993), the Roy L. Whistler International Award in Carbohydrates from the International Carbohydrate Organization (1994), and the ACS Claude S. Hudson Award in Carbohydrate Chemistry (1999). Wong has authored more than 350 research publications and more than 60 patents. ◀

Dallas-Fort Worth Section names winners

The ACS Dallas-Fort Worth Section has named C. David Gutsche the recipient of the 1998 Wilfred T. Doherty Award and Jane Smith the recipient of the 1998 Werner Schulz Award. Gutsche is Robert A. Welch Professor of Chemistry at Texas Christian University, Fort Worth, and Smith teaches chemistry at R. L. Turner High School in Carrollton, Texas.



Gutsche



Smith

Gutsche was honored with the Doherty Award, which consists of \$1,000 and a plaque, for his work on synthesis and characterization of calixarenes. He and his

Continued on page 118

Subscription & Member Record Service: Send all new and renewal subscriptions with payments to: ACS, Dept. L-0011, Columbus, Ohio 43268-0011. Changes of address, claims for missing issues, subscription orders, status of records and accounts should be directed to: Manager, Member & Subscriber Services, ACS, P.O. Box 3337, Columbus, Ohio 43210; (800) 333-9511 or (614) 447-3776.

Subscription Rates 1998: Printed editions (1 year, members): \$33.25—included in the ACS membership dues of \$102.00 for U.S. members; foreign member subscribers add \$35.00 for surface delivery (including Canada and Mexico), or add \$65.00 for Europe air service, or add \$82.00 for all other countries air service; (1 year, nonmembers): U.S., institutions, \$147; individual, \$110. Outside U.S.: Canada and Mexico, institutions, \$193; individual, \$156. Europe, institutions, \$215; individual, \$178; all others, institutions, \$232; individual \$195. Rates do not apply to nonmember subscribers in Japan; enter subscription orders with Maruzen Co. Ltd., 3-10 Nihonbashi 2-chome, Chuo-ku, Tokyo 103, Japan. Tel: (03) 272-7211.

Single copies: Current \$20. Rates for back issues and volumes are available from Publications Support Services, ACS, 1155—16th St., N.W., Washington, D.C. 20036. Back and current issues available on microfilm and microfiche. Rates on request from Microform Program, ACS.

Chemical & Engineering News (ISSN 0009-2347) is published weekly except for the last week in December by the American Chemical Society at 1155—16th St., N.W., Washington, D.C. 20036. Periodicals postage paid at Washington, D.C., and additional mailing offices. POSTMASTER: Send address changes to C&EN, Member & Subscriber Services, P.O. Box 3337, Columbus, Ohio 43210.

ACS assumes no responsibility for the statements and opinions advanced by the contributors to its publications.

C&EN is published in print format, and may be published in other formats, methods and technologies of distribution, now known or later developed. For all illustrations submitted to and used in C&EN, it is understood and agreed that they may appear in other formats, methods and technologies of distribution, including but not limited to reprints of the articles to which they apply.

Copyright permission: Reprographic copying beyond that permitted by Section 107 or 108 of the U.S. Copyright Act is allowed for internal use only, provided that the fee of \$6.00 per article copy is paid to the Copyright Clearance Center (CCC), 222 Rosewood Dr., Danvers, Mass. 01923, USA. Direct reprint and other permission requests to ACS Copyright Office, Publications Division, 1155—16th St., N.W., Washington, D.C. 20036. For quotes and information on ordering bulk reprints, call CJS Reprint Services at (888) 257-2134 or (410) 819-9765. The CCC Code for C&EN is 0009-2347/98/\$6.00.

Advertising Management: CENTCOM LTD.
(For list of offices see opposite page)

Office of Ombudsman: (800) ACS-5558



Advertising Management for the
American Chemical Society Publications

CENTCOM, LTD.

President

James A. Byrne

Executive Vice President

Benjamin W. Jones

Director of Marketing Svs. & Information Systems

Laurence J. Doyle

CENTCOM, LTD.

676 East Swedesford Road

Suite 202

Wayne, PA 19087-1612

Telephone: (610) 964-8061

Fax No.: (610) 964-8071

DIRECTOR, ADVERTISING SALES

Benjamin W. Jones, Exec. VP

MANAGER,

CHEMICAL PUBLICATIONS SALES

Kenneth M. Carroll

GLOBAL MANAGER,

ADVERTISING SALES

Walter H. (Skip) Mongon

ADVERTISING PRODUCTION MANAGER

Linda S. Hall

CLASSIFIED ADVERTISING MANAGER

Matthew J. McCloskey

SALES REPRESENTATIVES

Philadelphia, PA ... Frank Patton, Thomas E. Leahy, CENTCOM, Ltd., 676 East Swedesford Road, Suite 202, Wayne, PA 19087-1612; Telephone: 610-964-8061; Fax No.: 610-964-8071

New York/New Jersey ... John M. Lucas, Dean A. Baldwin, CENTCOM, Ltd., Schoolhouse Plaza, 720 King Georges Post Road, Fords, NJ 08863-1925; Telephone: 732-738-8200; Fax No.: 732-738-6128

Cleveland, OH ... Thomas E. Leahy, CENTCOM, Ltd., 19035 Old Detroit Road, Suite 203, Rocky River, OH 44116; Telephone: 440-331-5151; Fax No.: 440-331-3432

Chicago, IL ... Michael J. Pak, Thomas M. Scanlan, CENTCOM, Ltd., 540 Frontage Road, Northfield, IL 60093-1203; Telephone: 847-441-6383; Fax No.: 847-441-6382

Houston, TX/Atlanta, GA ... Edward M. Black, CENTCOM, Ltd., P.O. Box 820966, Houston, TX 77082-0966; Telephone: 281-493-1560; Fax No.: 281-493-6673

West Coast/Denver, CO ... Bob LaPointe, CENTCOM, Ltd., One Annabel Lane, Suite 209, San Ramon, CA 94583; Telephone: 925-277-1259; Fax No.: 925-277-1359

United Kingdom ... Malcolm Thiele, Mary Trussler, Technomedia Ltd., 34a West Street, Marlow, Buckinghamshire, SL7 2NB, United Kingdom; Telephone: 1628-488-889; Fax No.: 1628-481-111

Benelux, Scandinavia ... Marstonbury Ltd., 12 Alban Park, Hatfield Road, St. Albans, Herts AL4 0JJ U.K.; Telephone: 1777-855-574; Fax No.: 1777-841-694

France, Italy, Spain ... Gerard Lecoer, Aidmedia, 416 Chemin de Halage, 01600 Saint Bernard, France; Telephone: 04 74 00 69 65; Fax: 04 74 00 68 54

Germany, Switzerland, Austria ... IMP, InterMediaPartners GmbH, Deutscher Ring 40, 42327 Wuppertal, Germany; Telephone: 49-0202-271690; Fax No.: 49-0202-2716920

Japan ... Shigeyuki Yasui, Intercommunications (Japan), Inc., 34-205, Seishin-cho 1-1, Edogawa-Ku, Tokyo 134-0037, Japan; Telephone: 011 813 5676-6120; Fax No.: 011 813 5676-6133

China ... Zhang Li, Intercommunications (China) Inc., Room 201, 141-9 Wershui Tong Road, Hongkou Qu, Shanghai, China; Telephone: 8621-6517-0924; Fax No.: 8621-6517-0924

Hong Kong ... Jeremy Miller, Major Media Limited, 1402 Capitol Centre, 5-19 Jardine's Bazaar, Causeway Bay, Hong Kong; Telephone: 2890 3110; Fax No.: 2576 3397

Australia ... Keith Sandell, Sandell Strike Skinner Whipp, 66 KS Victoria St., Box 109 North Sydney, NSW 2060, Australia; Telephone: 0 11 61 9922-2977; Fax No.: 0 11 61 9922-1100

Singapore ... Adeline Lam, Hoo Siew-Sai, Publicitas Major Media Pte. Ltd., 20 Upper Circular Road, #02-21A The Riverwalk, Singapore 058416; Telephone: 65 536-1121; Fax No.: 65 536-1191

Korea ... DOOBEE Inc., Center Building (Byulgwan), 1-11 Jeong-dong, Choong-ku C.P.O. Box 4557, Seoul, Korea; Telephone: 822-776-4100; Fax No.: 822-755-9860

India ... Ronny Mistry, Ronny Mistry Associates Pvt. Ltd., 2388 Vijaydeep, 50 Grandnagar Bandra (E) Bombay 400 051, India; Telephone: 22-6450204; Fax No.: 22-6456372

awards

Continued from page 103

coworkers proved the existence of calixarenes and devised procedures for their unambiguous synthesis in good yield. Gutsche received a B.A. degree in 1943 from Oberlin College, in Ohio, and a Ph.D. degree in organic chemistry in 1947 from the University of Wisconsin, where he worked under William S. Johnson. He was on the chemistry faculty of Washington University, St. Louis, for 42 years before moving to Texas Christian University in 1989.

Smith received the Schulz Award, which consists of \$500 and a plaque, for her innovative methods of chemistry teaching, and especially the techniques she has developed to help students visualize chemistry's abstract concepts. She received a B.A. degree in chemistry in 1982 and an M.A. degree in education in 1985, both from Austin College, Sherman, Texas. ◀

Fellowships in medicinal chemistry available

The ACS Division of Medicinal Chemistry has issued a call for nominations for the five \$20,000 predoctoral medicinal chemistry fellowships to be given for the 1999-2000 academic year. Nominations must be submitted by Jan. 15, 1999, and nominees must be in doctoral programs at a medicinal chemistry, pharmaceutical chemistry, biochemistry, or chemistry department listed in the ACS Directory of Graduate Research.

Nominations should include a complete curriculum vitae; a bibliography, including reprints and preprints of articles; a project rationale of up to five pages, prepared by the nominee; transcript, including Graduate Record Examination scores, if available; a nomination letter from the nominee's research adviser; a seconding letter; and a letter from a university official that commits to cover tuition and all fees.

Nominees must be U.S. citizens or hold a permanent resident visa and must have at least one full year of graduate study remaining as of Sept. 1, 1999. For more information, including a complete set of guidelines, contact Kenneth Kirk, NIH, NIDDK, Bioorganic Chemistry, 8 Center Dr., Bldg. 8A, Rm. B1A-20, MSC 0810, Bethesda, Md. 20892; phone (301) 496-2619, fax (301) 402-4182, e-mail: kennethk@bdg8.niddk.nih.gov. ◀