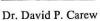


ASP NEWSLETTER

Volume 27, Number 3

Summer, 1991







Dr. Lynn R. Brady



Dr. Arnold Brossi

THREE ASP MEMBERS TO RECEIVE HONORARY MEMBERSHIP

Three ASP members have been chosen to receive honorary membership in the ASP. The first of these is David P. Carew. David has been active in the American Society of Pharmacognosy since its inception, was a member of the first Executive Committee, and served as President in 1965-66. He has remained active in the Society to this day and has rendered invaluable services to the Society and to Pharmacognosy in the intervening years. In fact, David and Lynn Brady are the only members of the ASP that have attended every annual meeting since the founding of the Society.

Dr. Carew's teaching experience includes both undergraduate and graduate teaching, mainly in the area of pharmacognosy, at the University of Iowa for 34 years. In 1980, he was designated as one of the University of Iowa's Outstanding Professors.

David has also served the University of Iowa School of Pharmacy in the capacity of Assistant Dean for Undergraduate Affairs since 1975 and served as Acting Dean for a portion of 1984.

David's research interests have centered around tissue culture studies with emphasis on studies with Catharanthus roseus.

As well as his activity in the American Society of Pharmacognosy, David has also been active in other professional organizations and has served those organizations by holding elected offices. These include Chairman of the Teachers' of

ANNUAL MEETING TO TAKE PLACE IN CHICAGO JULY 20-26

The 33rd Annual Meeting of the American Society of Pharmacognosy will feature a major International Symposium on the Contemporary Status of Natural Products Research in the areas of drug discovery, synthesis, biosynthesis and biological evaluation. The meeting will be held from July 21 to 26, 1991, and is hosted by the Program for Collaborative Research in the Pharmaceutical Sciences and the College of Pharmacy at the University of Illinois at Chicago. The meeting will be held at the newly renovated Congress Hotel on Michigan Avenue in the heart of downtown Chicago. The hotel overlooks the magnificent lakefront and Grant Park, and is close to the Loop and Michigan Avenue shopping, restaurant and business districts. Cultural attractions such as the Art Institute of Chicago, Orchestra Hall, the Adler Planetarium and others are also nearby. The Scientific Program Committee is pleased to propose a very diverse symposium program covering the breadth and depth of contemporary pharmacognosy.

At the time the ASP Newsletter went to press, more than 200 contributed papers had been accepted for presentation at the meeting. This includes 58 oral presentations and 143 poster presentations. These papers display an international flavor, with some originating in India, Africa, and Brazil, as well as other countries.

The social program committee is planning a broad social program both for the scientific participants and for their guests. Information about local cultural exhibits and events will be available at the hospitality desk throughout the conference. For all participants, there will be a welcoming reception on Sunday, July 21. Wine and cheese will be available at the poster session on Monday and beer and pretzels will be served on Tuesday evening. Visits to the evening concert at Ravinia may also be arranged. The Annual Banquet will be held on Thursday evening.

We look forward to an stimulating and enjoyable annual meeting in Chicago.

See Page 3 for Symposium Details

Honorary Members, Continued from Page 1, Column 1

Biological Sciences of the American Association of Colleges of Pharmacy and Chairman of the Pharmacognosy and Natural Products Section of the Academy of Pharmaceutical Sciences. He has also served on three occasions as Chairman of the Kilmer Prize Selection Committee.

The second member selected to receive Honorary Membership is Lynn R. Brady. Lynn has served the ASP in a large number of capacities over the years. After serving a 3-year term on the Executive Committee, Dr. Brady served as one of the early Presidents from 1970-1971. He also served as the Chairman of the Program Committee in 1960-61, and has acted as Chairman in numerous committees over the years. Lynn has also been a member of the Editorial Advisory Board for the Journal of Natural Products (Lloydia) for the past 20 years.

After a rewarding teaching career, Dr. Brady assumed his present position as Assistant Dean for Academic and Student Programs at the School of Pharmacy at the University of Washington in 1982.

Lynn's research interests center around the area of secondary metabolites of higher fungi, particularly those with toxicological or therapeutic interest. This research has resulted in a total of 81 scientific and educational publications to date. He has also served as the co-author of the standard American textbook in Pharmacognosy for the last three editions.

In addition to Dr. Brady's service to the American Society of Pharmacognosy, he has also been active in other professional organizations. He has been active in the American Association of Colleges of Pharmacy and has served as a member of the NABPLEX Review Committee of the National Association of Boards of Pharmacy since 1980.

The third ASP member to be selected as Honorary Member of the ASP is Arnold Brossi. Dr. Brossi has been chosen to receive this honor due to his research achievements in the area of synthesis, preparation of analogues, metabolism and biological activities of isoquinoline alkaloids and related compounds.

Following a rewarding career with Hoffmann-La Roche and Company (both

in Basel and in Nutley, New Jersey) including serving as its Vice President from 1967-1973, Arnold assumed his current position as Chief of Medicinal Chemistry, National Institute of Arthritis, Diabetes and Digestive and Kidney Diseases, National Institutes of Health, in Bethesda, Maryland.

Dr. Brossi has published more than 350 scientific reports and has served as editor-in-chief of "The Alkaloids" from volume 21 through the latest volume, 39.

Dr. Carew and Dr. Brady will receive their Honorary Memberships at the 1991 meeting in Chicago, while Dr. Brossi will receive his at the 1992 meeting in Williamsburg, Virginia. Congratulations!!

Paul J. Scheuer Award Established

On June 1, 1991, the PAUL J. SCHEUER AWARD IN MARINE NATURAL PRODUCTS CHEMISTRY was publicly announced during a dinner in honor of Professor Paul J. Scheuer in Honolulu, HI. Dr. Scheuer is Professor Emeritus of the Department of Chemistry, University of Hawaii, and has had a distinguished career of 40 years at that institution. His is widely regarded by his peers as the individual most responsible for the development of the field of marine natural products, which today constitutes a major and active subset of natural products chemistry. A section of the award declaration reads:

The Paul J. Scheuer Award In Marine Natural Products Chemistry

Declaration: In recognition of more than three decades of contributions and inspiration to marine natural products research, a perpetual award is hereby established in the name of Paul J. Scheuer, who shall be the first recipient. The implementation and administration of this award is described herein.

Scope: To be awarded to an investigator in the field of marine natural products chemistry who has, in the style of Professor Paul J. Scheuer;

-conducted research with <u>major</u> impact on the field of marine natural products or the associated fields including, but not limited to, marine chemical ecology, marine toxicology, marine biosynthesis, synthesis of pharmacology of marine metabolites -contributed to the overall advancement and promotion of the field

-contributed to the education and inspiration of young investigators in the allied fields represented by marine natural products research.

As noted, the first award will be presented to Professor Scheuer during the Marine Natural Products Gordon Research Conference (MNP-GRC), which will be held February 16-21, 1992 in Ventura, CA. It is noteworthy that this particular GRC was initiated by Dr. Scheuer 20 years ago. A special program will be held to commemorate the event.

Subsequent awardees will be selected by a committee, and will reflect individuals, such as Professor Scheuer, who have made major contributions to the field of marine natural products chemistry. The awards will be presented biennially at the MNP-GRC.

It should be emphasized that the concept and initial financing of the Paul J. Scheuer award was made by his former students, postdoctoral fellows, and visiting colleagues. The funds collected have been deposited into an account managed by the Gordon Research Conferences, and the interest generated will be used to support this award. Recently, contributions from industry and colleagues in the field have been received, and the fund-raising for this award is on-going. Any individuals who may be interested in financially supporting this award should contact Bill Baker (Florida Institute of Technology at (407)768-8000, ext. 7376) or Roy Okuda (San Jose State University at (408)924-2525) for additional information.

FROM THE EDITOR'S DESK

I would like to express my thanks to those who have contributed to the ASP Newsletter. It is your contributions which make the Newsletter a success. I welcome any information which may be of interest to our members, including letters to the editor, publications of interest, grant information, position openings, promotions, meeting information, and so on. For inclusion in the Fall issue of the ASP Newsletter please forward this information to me by September 1, 1991 at the following address: Joy B. Reighard, Ph.D., Editor, ASP Newsletter, Temple University School of Pharmacy, 3307 N. Broad St., Philadelphia, PA 19140 Phone: (215)221-4946 U.S.A. (215)221-3678

1991 ASP MEETING TO BE HELD IN CHICAGO

KEYNOTE ADDRESS

B.S. Blumberg, Philadelphia An Exercise in Systematic Plant-derived Medication Discovery Nobel Laureate, 1976

PLENARY LECTURES

D.D. Soejarto, Chicago N.R. Farnsworth, Chicago O. Sticher, Zurich

H. Wagner, Munich

T.J.R. Harris, London

I. Kitagawa, Osaka O.S. Weislow, Frederick

D.E. Cane, Providence J.C. Vederas, Edmonton A.I. Scott, College Station

M.H. Zenk, Munich J.P.N. Rosazza, Iowa City

I. Ninomiya, Kobe

S.F. Martin, Austin

Plant Drug Discovery from the Tropical Rain Forest: Are Our Efforts Adequate?

The Value of Ethnomedical Information for Drug Discovery

Some Recent Aspects of the Isolation and Structure Elucidation of Natural Products Potent Plant-derived Immunostimulators

W.K. Milhous, Washington Development of Drugs for Multiple Drug Resistant Malaria

Molecular Biological Approaches in Screening for Natural Product Leads Recent Chemical Investigations on Licorice Roots

Bioassay Support for Natural Product Antiviral Drug Discovery: Role in Extract Fractionation and Drug Purification

Enzymatic Formation of Cyclic Terpenoids

Stable Isotope Labelling in Biosynthetic and Structural Studies

How Nature Synthesizes Vitamin B₁₂. A Survey of the Last Four Billion Years

Isoquinoline Alkaloids: Pathways - Enzymes and Metabolism

Metabolism of the Vinca Alkaloids: From Streptomyces griseus to Monoamine Oxidase

Recent Progress in the Synthesis of Indole Alkaloids Strategies for the Synthesis of Indole Alkaloids

ASP RESEARCH ACHIEVEMENT AWARD LECTURE

S.W. Pelletier, Athens

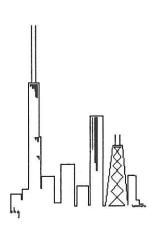
Studies in the Chemistry of Natural Products

SEE YOU IN CHICAGO!!



MEETING NEWS

The ASP Ad Hoc CE Committee is currently developing a CE program to be offered in conjunction with this summer's meeting in Chicago. 15 CEU's will be offered at the annual meet-A separate nominal charge will be assessed for participation in the CE program to cover expenses of record keeping. CEU's will be awarded for participation in the keynote address, the ASP Research Achievement Award lecture, and any of the plenary lectures at the rate of one (1) CEU per lec-No credit may be earned for attending poster sessions or short podium lecture sessions. A table will be set up in the general registration area for those interested in registering for the CE program. The program will be sponsored by the College of Pharmacy, Ferris State University, Big Rapids, MI, an approved provider of pharmacy continuing education by the ACPE. The program number is 679-028-91-001. Questions concerning the program can be sent to Robert Krueger, College of Pharmacy, Ferris State University, Big Rapids, MI 49307. or by phone (616)592-2236.



NEW MEMBERS

The ASP is pleased to welcome the following new members:

New Full Members:

Mamdouh M. Abou-Zaid University of Ottawa

Aliou M. Balde University of Antwerp

Philip S. Beauchamp Pomona, California

Christie Boros Virginia Polytechnic Inst. and State Univ.

V. Bringi Phyton Catalytic, Inc.

Shmuel Carmeli Tel-Aviv University

Brad K. Carte' Smith Kline Beecham Pharmaceuticals King of Prussia, PA

Anna Maria Casazza Bristol-Myers Squibb Pharmaceutical Research Institute Wallingford, CT

William E. Dasher University of Puget Sound

D. John Faulkner Scripps Institution of Oceanography

Nobuhiro Fusetani University of Tokyo

Cristina Garcia-Viguera Murcia, Spain

Hideo Hayashi University of Osaka Perfecture, Japan

Evelyn Heuberger-Wieland Wuppertal, Germany

Tatsuo Higa University of the Ryukyus, Japan

A. S. Hirsch Tel-Aviv, Israel

Tomas Hudlicky Virginia Polytechnic Inst. and State Univ.

Ogo Igboko Detroit, Michigan

Russell G. Kerr Stanford University

Werner Knoß University of Bonn

Shia S. Kuan Natural Toxins Research Center New Orleans, LA

Niels Lindquist Institute of Marine Sciences Morehead City, NC

Lumonadio Luyengi University of Illinois at Chicago James A. Marshall University of South Carolina

A. Marston University of Lausanne, Switzerland

Adam W. Mazur The Proctor and Gamble Company

Charles L. Rittenberry Amarillo, Texas

Robert T. Rosen Rutgers University

Leonidas Samochowiec Institute of Pharmacology and Toxicology Poland

Soelaksono Sastrodihardjo Indonesia

Pamela J. Seaton University of North Carolina

Jong-Keun Son Yeungnam University Korea

Kun Ho Son Andong National University Korea

I. W. Southon Cheshire, U.K.

Ivan Vukusic Zagreb, Yugoslavia

Edward B. Walker Weber State University Ogden, Utah

Haoharu Watanabe Shizuoka University

Amy E. Wright Harbor Branch Oceanographic Institute Ft. Pierce, FL

New Associate Members:

John M. Cronan, Jr. University of Maryland

Opinya Ekabo University of Illinois at Chicago

Fekadu Fullas University of Illinois at Chicago

J. B. Hanuman Natural Products Research Laboratory Switzerland

Hoon Huh University of Minnesota

Marie Ener Jean-Jacques University of Mississippi

Olipa D. Ngassapa University of Illinois at Chicago

Aeri Park University of Oklahoma

Lisa A. Shamon North Carolina State University

ASP AWARDS AND GRANTS WINNERS ANNOUNCED

1) Research Starter Grants:

ASP small research grants from \$2000 to \$5000 are available for active members in the first five years of their career. These are one-time awards and are not subject to indirect costs.

This year's winner is:

Dr. Wayne D. Inman, Chemistry Department, South Dakota State University. His topic is "Anthelmintic Active constituents from the Mushroom *Polyporus badius*."

2) Travel Grants for Active Members:

Travel grants are available to enable active members who are in the <u>first five years of their career</u> to travel to an American Society of Pharmacognosy meeting and present the results of their research. These awards of \$300 to \$500 are made on a competitive basis.

This year's winners are:

Dr. L. Samochowiec, Institute of Pharmacology and Toxicology, Pomeranian Medical Academy, Szczecin, Poland, and

Dr. L. Pieters, Departement Farmaceutische Wetenschappen, Universitaire Instelling Atwerpen, Belgium

3) Travel Grants for Graduate Students:

Graduate students under supervision of a Society member are also eligible for a travel grant of \$300 to \$500 to enable them to attend a Society meeting and present a paper.

This year's winners are:

Mr. Zhi Dong Jiang, College of Pharmacy, Oregon State University, and

Mr. Mohamed Mroue, College of Pharmacy, University of Houston.

4) Undergraduate Research Awards:

The ASP Undergraduate Research Awards consist of a stipend of \$2000 to the student and \$500 to the advisor to help defray the costs of the research. There are no limitations on the type of research to be conducted other than that it should be in the area of natural products.

This year's winner is:

Ms. Annette Squillario, Chemistry Department, Penn State Altoona Campus, "Alkaloids of Orthomene schomburgkii", Dr. Mary Menachery, Advisor.

5) Lloyd Library Museum Fellowships

This grant program was established in cooperation with the Lloyd Library and Museum. In keeping with the Lloyd Library's interest in promoting student activities, two \$500 travel awards to attend the national ASP meeting will be awarded. These awards will be made based on excellence in both scholastic and research activities in the field of natural products.

This year's winners are:

Mr. Edward J. Kennelly, Department of Biology, Washington University, and

Mr. Mark Foster, Department of Medicinal Chemistry, The University of Utah.

These awards will be presented at the annual meeting in Chicago in July. Congratulations to all award and grant winners!!

FUTURE MEETINGS

Future ASP Meetings

1991 - July 21-26 - University of Illinois at Chicago (see page 3)1992 - July 26-31 - Williamsburg, Virginia

1993 - San Diego, California

1994 - Late July - Halifax, Nova Scotia

American Association of Pharmaceutical Scientists Future Meetings

Plan now to attend the 6th National Meeting of the American Association of Pharmaceutical Scientists, scheduled for November 17-21, 1991, in Washington, D.C. A highlight of the meeting will be the Medicinal and Natural Products Chemistry (MNPC) section's symposia on "The Medicinal Chemistry of Substances of Abuse: and "Computer Assisted Drug Design", Your participation in MNPC's scientific program is invited through the submission of abstracts in either podium or poster format. A limited number of podium slots are available, and priority will be given to papers on topics related to substances of abuse. Any number of poster abstracts may be submitted for review. For further information or to obtain abstract submission forms, contact:

Victoria F. Roche, Ph.D.
MNPC Paper Screener
Department of Pharmaceutical Sciences
Creighton University
2400 California Street
Omaha, NE 68178-0232
Phone: (402)280-2893

American Association of Colleges of Pharmacy Future Meetings

1991 - July 7-10 - Boston, Massachusetts

Gesellschaft fur Arzneipflanzenforschung Future Meetings

The 39th Annual Congress of the Gesells-chaft fur Arzneipflanzenforschung, University of Saarbrucken, Germany, September 3-7, 1991. For further details contact: Dr. Hans Becker, FR 12.3 Pharmakognosie und Analytische Phytochemie, Universitat des Saarlandes, 66 Saarbrucken, F.R.G. Telephone: 0681-302-2420 (FAX 0681-302-4386).

Phytochemical Society of Europe Future Meetings

Biochemical Mechanisms Involved in Growth Regulation (a joint meeting with the Italian Society of Phytochemistry and the Italian Society of Plant Physiology) to be held in Milan, Italy, Sept. 11-14, 1991. Phloem and Xylem Transport (a joint meeting with the Society for Experimental Biology - Plant Transport Group) to be held in St. Albans, U.K., December 16-18, 1991.

Phytochemistry and Agriculture to be held in Wageningen, The Netherlands, April 22-24, 1992.

To receive further information about the above meetings please contact: Dr. B.V. Charlwood, Plant Cell & Molecular Biology Group, Division of Biosphere Sciences, King's College London, Campden Hill Road, London W8 7AH, U.K.

Biologically Active Compounds From Non-Flowering Plants and Marine Organisms, University of Saarbrucken, F.R.G. September 3-7, 1991. For details contact: Professor Hans Becker, FR 12.3 Pharmakognosie und Analytische Phytochemie, Universitat des Saarlandes, 66 Saarbrucken, F.R.G. Telephone: 0681-302-2420 (FAX 0681-302-4386).

Sixth Plant Cell Wall Meeting, Nijamegen, Netherlands, August 25-28, 1992. For more information contact: Professor M.M.A. Sassen, Department of Experimental Botany, Catholic University, Toernooiveld, 1, 6525 E D Nijmegen, The Netherlands (FAX 080-553-450).

Other Meetings of Interest

International Symposium on Essential Oils, St. Vincent, Italy, September 11-13, 1991. For further information please contact: Prof. Dr. Carlo Bicchi, Dipartimento die Scienza e Technologia del Farmaco, Turin University, Corso Raffaello 31, 10125, Torino, Italy.

FIP and 1991 Pharmacy World Congress - Washington, D.C., September 2-5, 1991. For further information contact Dr. Roland Hardman, President, Medicinal and Aromatic Plants Section, FIP, 'Holly Leigh', Hold Road, Bradford-On-Avon, Wiltshire, U.K. BA15 1TR.

Third Congress of the International Society for Plant Molecular Biology, "Molecular Aspects of Plant Growth and Development," Tuscon, Arizona, October 6-12, 1991. For further information contact: Woo Wester Conference Consultants, 2934-1/2 Beverly Glen Circle, Suite 383, Los Angeles, CA 90077 Fax: (213)474-5894.

International Symposium on New Drug Research and Development, Beijing, China, October 22-25, 1991. Address correspondence to: Prof. Cai Yu, Secretary General of ISONDRAD, Chinese Pharmaceutical Association, A-38, Bei Lishi Lu, Beijing, 100810, China. Telex: 222523 SPAC CN. FAX: (01)831-5648.

OBITUARY DR. JAMES A. KLOCKE 1952-1991

I regret to inform the membership of the death of ASP member James A. Klocke, Ph.D., in a boating accident in San Francisco Bay on Sunday, January 20, 1991. Dr. Klocke, 38, and a colleague, Kenneth Jones, 43 (of the U.S.D.A. in Albany, CA) drowned, apparently after being incapacitated by hypothermia, following the capsizing of their single-mast sailboat in rough weather the afternoon or evening of the 20th. Dr. Klocke was a native of the Cincinnati, OH area and received his B.S. in Biology at the University of Cincinnati in 1974, his M.S. in marine biology at the University of San Francisco in 1976, and his Ph.D. in Entomology-Natural Products at the University of California, Berkeley in 1982 under Professor Isao Kubo. Dr. Klocke conducted extensive research on plant-, insect-, and marine-derived natural products having insecticidal and insectrepellant properties. His research efforts (funded by the NSF, industrial, and other private sources) resulted in a large number of significant and well-received peer-reviewed publications, as well as major research projects on naturally occurring insecticides which are currently undergoing commercial research and product development. Despite his relative youth and the tragic brevity of his professional career, Dr. Klocke was highly regarded by his peers and was recognized, both nationally and internationally, as an expert in the field of naturally occurring pesticides. During his alltoo-brief professional career, Dr. Klocke was affiliated with the U.S.D.A. (Plant Protection Phytochemistry, Western Regional Research Lab., Albany, CA), NPI and the Plant Resources Institute at the University of Utah Research Park in Salt Lake City (1982-1990), the College of Pharmacy at the University of Utah (Adjunct Professor in the Department of Medicinal Chemistry), was a consultant for Natural Product Sciences, Inc. at the University of Utah Research Park (1990-1991), and ad recently accepted a position as Assistant General Manager of Entomological Research at the ISK (Ishihara) Mountain View Research Center in San Francisco and Sunnyvale, CA. He was engaged to be married in the Fall of 1991. Jim was an energetic, enthusiastic, and highly motivated scientist and a good friend. He is sorely missed, both personally and professionally.

Manuel F. Balandrin, Ph.D.





Dr. James E. Robbers School of Pharmacy Purdue University West Lafayette, IN 47907

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David J. Slatkin, Ph.D., Treasurer The American Society of Pharmacognosy P.O. Box 9558 Downers Grove, IL 60515

MEMBERSHIP

Membership in the American Society of Pharmacognosy is recognized in several categories:

Full Membership

Full membership is open to any scientist interested in the study of natural products. Dues are \$45.00 per year. If overseas airmail is requested, the dues are \$85.00.

Associate Membership

Associate membership is open to students of pharmacognosy and allied fields. These members are not accorded voting privileges, and dues are \$35.00 per year.

Honorary Membership

Honorary members are selected by the Executive Committee of the American Society of Pharmacognosy on the basis of meritorious service to pharmacognosy.

Present Honorary Members are:

- Dr. Jack L. Beal, Columbus, Ohio
- Dr. Norman R. Farnsworth, University of Illinois
- Dr. R. Hegnauer, Leiden, Netherlands
- Dr. Albert Hofmann, Switzerland
- Dr. Richard E. Schultes, Harvard Botanical Museum
- Dr. Arthur E. Schwarting, Florida
- Dr. Gordon Svoboda, Indianapolis, Indiana
- Dr. Varro E. Tyler, Purdue University
- Dr. Monroe E. Wall, Research Triangle Institute, North Carolina
- Dr. Heber W. Youngken, Jr., University of Rhode Island

Patron, Sustaining, and Benefactor Memberships

These memberships are open to any person or organization wishing to support the aims and objectives of the Society. Dues are as follows:

Patron Member - \$200.00 per year Sustaining Member - \$500.00 per year Benefactor Member - \$1,000.00 per year.

Additional information about membership may be obtained by writing to the Treasurer of the Society:

David J. Slatkin, Ph.D., Treasurer The Am. Society of Pharmacognosy Chicago College of Pharmacy 555 31st Street

Downer's Grove, IL 60515

SOCIETY BUSINESS

Tellers Report

The Teller's Committee reports the results of the 1991 elections for the ASP:

Vice President (1991-1992)

Lester Mitscher

Executive Committee Member

(1991-1994) - Robert P. Borris

Secretary (1991-1994)

William J. Keller

The amendment to the Constitution and By-Laws to expand the membership categories to include emeritus members passed and establishes the annual dues for emeritus members at \$5.00.

BOOKS OF INTEREST

Journal of Herbs, Spices, & Medicinal Plants, a new quarterly publication. Published by Food Products Press, the journal will serve as a focus point through which investigators and others will be able to publish material of importance to the production, marketing, and utilization of plants and associated extracts. Subscriptions are available from The Hawthorne Press, Inc./FPP, 10 Alice Street, Binghamton, New York 13904-1580. Rates are \$24.00 for individuals, \$32.00 for institutions, and \$42.00 for libraries.

Focus on Phytochemical Pesticides, Volume I, The Neem Tree, Martin Jacobson, CRC Press, Inc., 2000 Corporate Blvd., N.W. Boca Raton, FL 33431. Phone: 1-800-272-7737 (Continental U.S. only) or (407)994-0563, 1989, 184 pp., \$79.95 U.S./ \$89.95 Outside the U.S.

Plant Biotechnology, S.D. Kung and C.J. Arntzen, eds., Biotechnology Series, No. 11, Butterworths, 80 Montvale Ave., Stoneham, MA 02180 Phone: (617)438-8464, 1989, 423 pp., \$59.95.