



NEWSLETTER

A PUBLICATION OF THE AMERICAN SOCIETY OF PHARMACOGNOSY - EDITED BY MELVIN R. GIBSON

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Annual Meeting. The Tenth Annual Meeting of the American Society of Pharmacognosy will be held August 18-22, 1969 at Oregon State University, Corvallis, Oregon. Two days of the meeting will be devoted to a symposium "Marine Biomedicals." Detailed information has been mailed to all Society members. Additional information may be obtained from George H. Constantine, Jr., School of Pharmacy, Oregon State University, Corvallis, Oregon 97331.

Connecticut Symposium. William Kelleher reports that the Second Natural Product Symposium on the Biosynthesis of Natural Products will be held at the University of Connecticut August 4 and 5, 1969. Speakers will include H. G. Floss, Purdue University; Ronald Bentley, University of Pittsburgh; Edward Leete, University of Minnesota; A. I. Scott, Yale University (formerly of Sussex); J. T. Kutney, University of British Columbia; and James M. Bobbitt, University of Connecticut. Additional information may be obtained by writing William Kelleher, School of Pharmacy, University of Connecticut, Storrs, Connecticut 06268.

Alkaloid Symposium. Varro E. Tyler, Purdue University, reports that The Fourth International Symposium on the Biochemistry and Physiology of Alkaloids will be held in Halle/Saale, Germany (DDR) June 25-28, 1969. Persons interested in attending should contact Dr. H. R. Schütte at the Institute für Biochemie der Pflanzen, Weinberg, 401 Halle/Saale, Germany (DDR).

FIP Meeting. Keith Swann, University of Manchester, calls attention to the meeting of The Federation Internationale Pharmaceutique to be held in London, September 7-12, 1969. The two-day symposium session will be on enzyme induction by drugs, enzyme activity, and effect of drug combinations on drug action. There will be meetings of the various sections. The Medicinal Plants Section's activities will include an all-day excursion on Wednesday, September 10. Inquiries regarding this meeting should be addressed to Mr. E. L. Robins, Secretary, The FIP (London) Committee, The Pharmaceutical Society of Great Britain, 17, Bloomsbury Square, London, W.C. 1, England.

British Pharmaceutical Conference. Keith Swann also reports that The British Pharmaceutical Conference will be held in Belfast on September 1-6, 1969.

Japan Meeting. Isao Inagaki, Nagoya City University reports on the 89th Annual Meeting of the Pharmaceutical Society of Japan, April 4-6, 1969 in Nagoya. In the section on pharmacognosy, and pharmacognostic and chemical studies papers were presented on *Sophora subprastrata*, *Toddalia asiatica*, *Euphorbia pekinensis*, *Quercus stenophylla*, *Polygonum cuspidatum*, *Trachelospermum asiaticum*, *Rehmannia glutinosa* var. *purpurea*, *Garcinia spicata*, *Viscum album* var. *coloratum*, *Trichosanthes cucumeroides*, *Hydrangea serrata* var. *thunbergii*, *Aralia cordata*, *Trapa japonica*, *Ophiopogon japonicus* var. *genuinus*, *Asclepias speciosa*, *Zyzyphus vulgaris* var. *spinosa*, *Corydalis incisa*, *Smilax*, *Bupleurum*, *Fagopyrum*, *Astragalus*, *Cimicifuga*, *Garneria*, *marihuana* and others. Other papers on plants were presented in the Section of Chemistry of Natural Products.

Honorary Membership Nominations. Egil Ramstad, Chairman of the Committee on Honorary Membership, asks that nominations for honorary membership in the Society should be sent to him at the School of Pharmacy and Pharmacal Sciences, Purdue University, Lafayette, Indiana 47907.

Compounds Solicited. D. Gröger, Institut für biochemie der Pflanzen, DDR-401, Halle (Saale) Germany, Weinberg is studying the biochemistry of quinazoline alkaloids of *Dichroa febrifuga*. He is interested in obtaining small samples of febrifugine and isofebrifugine. Anyone knowing of such samples should contact Gröger.

Kilmer Prize Winner. Bruce H. Mock, Purdue University, is the winner of the 1969 Kilmer Prize for his paper "The Biosynthesis of Rubrofusarin by *Fusarium graminearum*." This will be presented at the Montreal meeting of the A.Ph.A. Mock is a student of James E. Robbers.

Purdue Meetings. James E. Robbers, Purdue University, reports that during the weekend of April 26 Purdue hosted the Second Annual Ohio State-Purdue Colloquium in Pharmacognosy and Natural Products. Thirteen original research presentations were made to the forty persons attending the meeting. William Remers, Lederle Laboratories, presented a seminar "Synthetic Antibacterials Related to Mitomycins" February 19 at Purdue.

Illinois Research. Frank A. Crane, University of Illinois, reports the following research projects underway under his direction: Mark J. Solomon cooperating on the study of the genetic control of alkaloid production in species and strains of the genus *Datura* (supported as an AFPE fellow); Albert S. Pomykala cooperating on the study of *Solanum dulcamara* and *Solanum nigrum* that affect public health (supported by a fellowship from the U. of Ill. Graduate College); and Michael I. Schaffer cooperating on a joint project involving pharmacognosy and pharmacology of several species of *Arnica*.

Article Recommended. Norman R. Farnsworth, University of Pittsburgh, recommends the article "Forensic Aspects of Cystolith Hairs of *Cannabis* and Other Plants" by G. H. Nakamura in *J. Assoc. Official Anal. Chemists*, 52, 5-16 (1969). In this study 600 species of dicotyledons were studied microscopically from groups of plants known to bear cystolith hairs. Photomicrographs are presented that show several species of plants which contain cystolith hairs similar to those of *Cannabis sativa*. The author points out that of these similar species, eight-two were subjected to chemical analysis (Duquenois-Negm Test), in which a positive test is indicated by the production of a color which is soluble in chloroform. Sixty-three of the species examined bear cystolith hairs similar to those of *Cannabis sativa*.

Lynn Index Monographs. Norman R. Farnsworth has announced that Monograph VI, concerning the Tubiflorae, of the *Lynn Index* has been completed and will soon go to the printer. This monograph is larger than all previous monographs. As soon as it is available an announcement will be made in the *Newsletter*. Monograph VII is now ready for final typing. It will be about the same size as Monograph VI and will concern all of the Monocotyledonae not previously included in other monographs.

Promotion of *Lloydia* Committee. Norman R. Farnsworth reports that The Committee for the Promotion of *Lloydia* has designed a brochure to be sent out to laboratories and investigators throughout the world who either are not members of the ASP or who do not subscribe to *Lloydia*. This brochure will be sent within the next few weeks to more than a thousand addresses.

Committee for '70 Report. The ASP Committee for '70 has completed all arrangements for the ASP trip to Vienna in 1970 reports Norman R. Farnsworth. A complete brochure on the trip will be sent soon to all ASP members. Anyone wishing to take the charter flight to Vienna must have been an ASP member for at least six months prior to departure of the flight or be a member of the immediate family of the members. Persons wishing to take the charter flight who are not members of the ASP should consider becoming members this year. There will be 150 seats on the aircraft which has been chartered (S.A.S.). The round-trip fare per person is \$270, and a deposit of \$50 per person will have to be made prior to January 1, 1970, with the balance due on or before April 1, 1970. The guided tour which has been set up from Copenhagen to Munich will cost about \$340 per person and will include hotel accommodations (double occupancy), three meals a day, and travel. The expense for the four days in Munich has been estimated at \$65 per person, and the expenses for the Vienna meeting are estimated at \$120 per person. Full details will be sent out soon which will indicate the final costs and full description of the plans.

Pharmacognosy at Mississippi. The Department of Pharmacognosy, University of Mississippi has erected a 20' x 60' plastic greenhouse which is being used along with a six-acre campus drug plant garden to grow plants for classroom and research use. The department has just moved into the new School of Pharmacy building. New facilities for the department include a large undergraduate laboratory, a preparations room, three six-man drug plant research laboratories, an herbarium an indoor greenhouse, a fermentation laboratory, a cell culture laboratory, an antibiotics laboratory, a biosynthesis laboratory, a chromatography laboratory, a plant processing room, and a research instruments laboratory. Three environmental laboratories will be added during the next fiscal year.

For Your Library. When the Editor in the last issue listed *Plant Toxicity and Dermatitis, A Manual for Physicians* by Kenneth F. Lampe and Rune Fagerstrom (Williams & Wilkins, 1968, \$9.25) it was not known that ASP member Varro E. Tyler, Purdue University, cooperated in the preparation of this reference work. ASP member Finn Sandberg, Stockholm is also recognized in the acknowledgments section for his cooperation. The book is well written and handsomely illustrated by a generous number of line drawings. It is recommended for the personal library of anyone interested in poisonous plants.

Plants Wanted. ASP member C. S. O'Connor, Dublin, is anxious to include American species of *Galium* in a phytochemical study. Anyone able to provide samples should contact C. S. O'Connor, College of Pharmacy, 18 Shrewsbury Road, Ballsbridge, Dublin 4, Ireland.

A Note on Cyanogenetic Glycoside Study. Karlis Kazerovskis, Ferris State College, recommends an extension of laboratory study of cyanogenetic glycosides: "The Study of cyanogenetic glycosides in Wild Cherry and Bitter Almond is described by E. P. Claus (*Laboratory Manual for Pharmacognosy*, 2nd Ed., p. 31) and V. E. Tyler, Jr. and A. E. Schwarting (*Experimental Pharmacognosy*, 2nd Ed., p. 33). This laboratory experiment could be extended by using not only powdered Wild Cherry and Bitter Almond flour but also powdered kernels of pits of ripe plums, cherries, and peaches, and apple seeds (apple seed contains approximately 40 per cent of seed coat and 60 per cent of kernel).

"Place 2 gms. of each powdered material (3 gms. apple seeds) in separate 200 ml. Erlenmeyer flasks, and moisten the powder with 2 ml. of water. Use one-inch wide filter paper strips, moisten two-thirds of the strip with 1 per cent picric acid solution, and change it into sodium picrate by moistening with 10 per cent sodium carbonate solution. Suspend the filter paper strip with a cork in the Erlenmeyer flask above the moistened plant material. Intensity of the color change (Guinard's Test) of the filter paper is proportionate to the amount of cyanogenetic glycoside present in each sample tested. After one hour the students should compare the color of the filter paper strips and list the tested materials according to the intensity of the color developed. The students may include the strips of paper or parts of them in their laboratory reports. Several students can perform the test as a group, each setting up one sample.

"To illustrate the hidden toxicity of kernels or seeds of the edible ripe fruits of the genus *Prunus*, the following test is suggested: Use three 600 ml. beakers, and place in one beaker 1 gm. and in another 2 gms. of powdered kernels of peaches or plums. Moisten the powder with water using 1 ml. per gm. Place fine metal screen in the beaker over the moistened plant material and cover the beakers with a Petri dish. After five minutes put a mouse in each of the beakers, using one beaker as a control. Note the behavior of the animals in the test beakers and their change in skin color. After a few convulsions (3-5 minutes) the animal in the beaker containing the 2 gms. of material usually dies."

Editor's Note. I have resigned as editor of the *Newsletter* effective with the publication of this issue. I want to thank all those who have contributed to the success of this publication. Without this cooperation it would cease to be a publication. It has been a pleasure to be of service to the Society since the inception of the *Newsletter* six years ago. I'm sure the publication will, with the Society's cooperation, continue to be an important project of communication under the editorship of my successor Ralph N. Blomster, School of Pharmacy, University of Maryland, 636 West Lombard Street, Baltimore, Maryland 21201. All future news items should be sent to him.

Grants. The Department of Pharmacognosy, University of Mississippi, has been awarded a new one-year grant of \$14,000 by Mallinckrodt Chemical Works for drug plant research. The principal investigator is Norman J. Doorenbos. John M. Cassady and H. G. Floss, Purdue University, have been awarded a grant of \$63,600 for a three-year study of the "Synthesis of Ergot Alkaloid Precursors" by the USPHS.

Personal. Jan Trojanek, Research Institute for Pharmacy and Biochemistry, Prague, Czechoslovakia, will join the staff of the Department of Pharmacognosy, University of Pittsburgh, for one year starting October 1, 1969. He will be a Visiting Research Professor of Pharmacognosy. Heinz-Peter Munzing, currently studying for his Dr. Nat. Ret. degree at the Institut für Pharmazeutische Arzneimittellehre der Universität München, will complete his degree requirements in December, 1969, and will join the staff of the Department of Pharmacognosy, University of Pittsburgh, on January 1, 1970 as a Research Associate in Pharmacognosy. He will be concerned chiefly with the isolation and characterization of antitumor principles from plants. Norman R. Farnsworth has recently lectured to the students at the Brooklyn College of Pharmacy and Temple University as part of the AACP lecture series. He also presented the Rho Chi lectures at Howard University and Temple University as well as a lecture entitled "Herbs and Weeds as Potential New Drugs" before the New York Unit of The Herb Society of America at a symposium on herbs held in New York City in April. ASP member George L. Webster retires at the age of 68 as Dean of the College of Pharmacy, University of Illinois on August 31, 1969. He will be succeeded as Dean by August P. Lemberger, University of Wisconsin. Ralph F. Voigt, Head of the Department of Pharmacognosy and Pharmacology, University of Illinois, will retire effective December 31, 1969. A Search Committee has been appointed to find his successor. Heinz Floss, Purdue University, has been invited to participate in the visiting lecturer program of the USDA Northern Regional Laboratory in Peoria. On May 1 and 2 he gave three lectures on "Stereospecific Biosyntheses." On May 9 he was at the University of Nebraska giving two lectures on "Antibiotic Biosynthesis" and "The Biosynthesis of Ergot Alkaloids." In June, Floss will participate in the IV International Symposium on the Biochemistry and Physiology of Alkaloids in Halle, Germany. He will give some plenary lectures on "Biosynthesis of Ergot Alkaloids." Before and after the meeting in Halle, Floss will give some seminars in Germany. Floss has resigned effective June 30, 1969 as Head of the Department of Medicinal Chemistry and Pharmacognosy at Purdue in order to accept a Research Career Development Award from NIH. He will be succeeded in the departmental post by G. E. Cwalina. Georgia J. Persinos was in Brazil and Argentina doing field work during the month of March in her capacity as Executive Director of Research Pathology Associates. John K. Brown, University of the Pacific, has been awarded a Mead Johnson Undergraduate Research Grant for 1969-70. The title of the project is "Phytochemical Investigations of the Root of *Brunfelsia Hopeana* Benth. (Manaca Root)". Ivor Corman has been appointed Vice President, Marine Biology Division, Environmental Development, Inc., Woods Hole, Massachusetts with an address of 1000 Vermont Avenue, N.W., Room 209, Washington, C. C. Ajay K. Bose, Stevens Institute of Technology was on sabbatical during the fall term of 1968-69. At the 5th International Symposium of Natural Products held in London in July, 1968, he presented a paper describing the total synthesis of 5,6-trans penicillin and another paper describing the biosynthesis of gliotoxin using C^{13} and N^{15} labeled compounds. He was a Visiting Professor at the Central Drug Research Institute of the government of India, Lucknow and a guest of the National Research

Center of the government of UAR, Cairo during his sabbatical leave. . . Charles L. Winek, Chief Toxicologist of Allegheny County and Associate Professor of Pharmacology and Toxicology, Duquesne University, has been appointed to the Editorial Board of **International Journal of Clinical Toxicology**. He was elevated to the status of Fellow of the American Academy of Forensic Sciences at their recent meeting in Chicago. . . Madhukar G. Chaubal, University of Pacific, has been promoted to associate professor. . . John Rosazza will join the faculty of the University of Iowa as an assistant professor of pharmacognosy in August, 1969. He received his Ph.D. from the University of Connecticut in 1968 and is currently doing postdoctoral work at the University of Wisconsin. . . Edward Joseph Shellard has been appointed Professor of Pharmacognosy at Chelsea College, University of London. . . J. C. Van Meter has been appointed biochemist at New Castle State Hospital, New Castle, Indiana and made director of laboratories. The hospital, under contract with the National Institute of Nervous Diseases and Blindness, is currently involved in the study of the clinical and biochemical effects of anticonvulsant drugs. . . Philip Catalfomo, Oregon State University, has been awarded the AFPE Gustavus A. Pfeiffer Memorial Research Fellowship for 1969-70. He will be on sabbatical leave during the 1969-70 academic year studying at the University of Zurich, Organic Chemistry Institute, Zurich, Switzerland in the laboratory of Conrad H. Eugster. . . R. E. Schultes, Harvard, recently returned from a trip to Europe where he worked with B. Holmstedt and J. E. Lindgren (Karolinska Institutet) and A. Hofman (Basle). In January, Schultes attended the II Amazon Biota Symposium in Letician, Columbia and was awarded the Order of Victoria Regia for botanical research in the Amazon by the Colombian Ministry of Government. In field work in the Letician area Schultes found *Virola* was used as an orally administered hallucinogen among the Witoto Indians. He also collected material for the study of the anomalous toxic plant *Sphenoclea zeylanica*.

Books and Periodicals. Keith Swann, University of Manchester, recommends the following: **Perspectives in Phytochemistry**, Edited by J. B. Hasborne and T. Swain (Academic Press, 1969, 63s), **Plant Cell Organelles**, Edited by J. B. Pridham (Academic Press, 1968, 60s), **Modern Methods in Plant Taxonomy**, Edited by V. H. Heywood (Academic Press 1968, 84s), **Chemotaxonomy and Serotaxonomy**, Edited by J. G. Hawkes (Academic Press, 1968, 84s), and **Powdered Vegetable Drugs** by Betty P. Jackson and Derek W. Snowdon (J. A. Churchill, Ltd., 1968, 65s). . . Rustem S. Medora, University of Montana, recommends **Fatty Acids and Their Industrial Application**, Edited by P. E. Scott (Dekker, 1968, \$8), **Index of Plants of Texas with Reputed Medicinal and Poisonous Properties** by H. M. Burlage (Burlage, Austin, 1968), **Perfume and Flavor Chemicals, Vol. I and II** by S. Arctander (S. Arctander, P.O. Box 114, Elizabeth, New Jersey 07207, \$52 prior to publication). . . C. J. Alexopoulos, University of Texas recommends **Fundamentals of Mycology** by J. H. Burnett (St. Martin's Press, 1968) and **The Biology of the Myxomycetes** by W. D. Gray and C. J. Alexopoulos (Ronald Press, 1968). . . Arthur E. Schwarting, University of Connecticut, recommend. **Anatomisch-mikrochemische Drogenanalyse** by D. Frohne (Georg Thieme Verlag, P. O. Box 732, Herdweg 63, 7 Stuttgart 1, Germany). . . George M. Hocking, Auburn University recommends the following: **Exotica** (Roehrs Co., Rutherford, N. J., 1963) includes photographs of many medicinal plants both in black and white and color and **Staerke-Atlas** by J. Seidemann (Paul Parey, Berlin, 1966).

The Editor lists the following publications which may be of interest to readers: **Microbial Transformations of Steroids and Alkaloids** by Hiroshi Iizuka and Atsushi Naito (University of Tokyo Press and University Park Press, State College, Pa., 1967, \$16.50); **Fatty Acids: Their Chemistry, Properties, Production and Uses. Part 4, Second Edition Revised**, Edited by Klare S. Markley (Wiley, 1967, \$35); **An Introduction to the Chemistry and Biochemistry of Fatty Acids and Their Glycerides** by F. D. Gunstone (Barnes and Noble, 1968, \$10); **Venomous Animals and Their Venoms, Vol. 1 Venomous Vertebrates** by Wolfgang Bucherl, Eleanor E. Buckley and Venancio Deulofeu (Academic Press, 1968, \$24); **Society and Drugs Vol. 1 and Students and Drugs Vol. 2** by Richard H. Blum and Associates (Jossey-Bass, Inc., 1969, \$25 the set - sold as set only); **Papers on Plant Systematics** by Robert Ornduff (Little-Brown, 1967, \$6); **The Pyrrolizidine Alkaloids, Their Chemistry, Pathogenicity and Biological Properties** by L. B. Bull C. C. J. Culvenor and A. T. Dick (Wiley, 1969, \$25.50); **Isoenzymes in Biology and Medicine** by A. L. Latner and A. W. Skillen (Academic Press 1968, \$11.50); **Natural Proteinase Inhibitors** by R. Vogel, I. Trautshold and E. Werle (Academic Press, 1969, \$10); **Advances in Enzyme Regulation**, Edited by George Weber (Pergamon, Vol. 6, 1968, \$19); **Methods in Cell Physiology, Vol. 3**, Edited by David M. Prescott (Academic Press, 1968, \$18); **Dynamics of Development: Experiments and Inferences** by Paul A. Weiss (Academic Press, 1968, \$9); **Behavior of Enzyme Systems, 2nd. Edition** by John M. Reiner (Van Nostrand Reinhold, 1969, \$14.50); **The Histochemical Journal** (Chapman & Hall, 11 New Fetter Lane, London EC 4, England, \$31 for six issues per year); **Herbs and Hormones—The Evolution of Drugs and Chemicals that Revolutionized Medicine** by Charles L. Huisking (The Pequot Press, Essex, Connecticut, 1968, \$5); **The Membranes** by Albert J. Dalton and Francoise Hagenau (Academic Press, 1968, \$12.50); **Radiation Biology** by Alison P. Casarett (Prentice-Hall, 1968, \$9.25); **Comparative Biochemistry of the Flavonoids** by J. B. Harborne (Academic Press, 1967, \$16); **International Review of Cytology, Vol. 24** by G. H. Bourne, J. F. Danielli, and K. W. Jeon (Academic Press, 1968, \$19.50); **Plant Immunity** by L. V. Metlitskii and O. L. Ozeretskovskaya (Translated from the Russian) (Plenum, 1968, \$12.50); **Evolution and Environment. A Symposium** presented on the occasion of the one hundredth anniversary of the foundation of Peabody Museum of Natural History of Yale University, Edited by Ellen T. Drake (Yale University Press, 1968, \$15); **Molecular Basis of Virology** by H. Fraenkel-Conrat (ACS Monograph No. 164) (Reinhold, 1968, \$18); **Tropical Crops: Dicotyledons** by J. W. Purseglove (Wiley, 1968, \$8.50); **Biological Membranes. Physical Fact and Function**, Edited by Dennis Chapman (Academic Press, 1968, \$15); **Drugs on the College Campus** by Helen H. Nowlis (Anchor, 1969, \$.95); **Gonadotropins 1968. Proceedings of the Workshop Conference, Vista Hermosa, Mor., Mexico, 1968**, Edited by Eugenia Rosenberg (Geron-X, Los Altos, California, 1968, \$12); **Plant Diseases and their Chemical Control** by E. Evans (Blackwell Scientific Publications, Oxford, England, 1968, \$12.25); **Protein Biosynthesis and Membrane Biochemistry** by Richard W. W. Hendler (Wiley, 1968, \$11.95); **Yams. An Account of the Nature, Origins, Cultivation, and Utilization of the Useful Members of the Dioscoreaceae** by D. G. Coursey (Humanities Press, New York, 1968, \$9.50); **Plant Diversity** by Robert M. Harris (Brown, Dubuque, Iowa, 1969, \$1.95).