

Dr. Romeo: all you need do to become a member is to send \$8 to Dick Mansell (sup 9) together with an outline of your phytochem. interests, I'll be happy to enrol you! Cal.

PHYTOCHEMICAL SOCIETY OF NORTH AMERICA

NEWSLETTER JANUARY 1976 HAPPY NEW YEAR ONE AND ALL ! ! !

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The newsletter proposed for December circulation was replaced by a brief note from the Treasurer because of the Canadian mail strike. Now that the postal operations are more or less back to normal, we can expand on the information which made an interim sheet mandatory.

- Canada (accommodations on campus of UBC)*
- * 1. The 1976 meeting will be held in Vancouver August 8-11. The local committee, chaired by Dr. V. Runeckles, was able to change the date from the previously announced June 21-25 after all, quote, "to meet the various objections raised about a June meeting". The symposium topic for this meeting has also been modified. To cite again: "The local committee laboured long and hard to come up with a symposium which was different from others held on wood recently. Hence the change in title to - The Structure, Biosynthesis and Degradation of Wood rather than the all-embracing Chemistry and Biochemistry of Wood. Specifically, we felt that the symposium could follow the logical sequence of structure and biosynthesis and then breakdown and degradation." Hence the following potential speakers have been approached:

Ultrastructure: W.A. Coté. College of Environmental Science and Forestry, Syracuse, N.Y.

Biosynthesis: a) Cell wall carbohydrates: D.J. Northcote, Department of Biochemistry, Cambridge, England.

b) Other macromolecules: D.T.A. Lamport, Department of Biology, Oberlin College, Ohio.

c) Monomolecular constituents: G.G.Gross, Institut für Pflanzenphysiologie, Ruhr Universität, Germany.

Transformations during ageing: W.E. Hillis, Forest Products Laboratory, CSIRO, Australia.

Chemical changes during pathogenesis: E.B. Cowling, Department of Plant Pathology, North Carolina State University, Raleigh, N.C.

Changes during insect attack: B.D. Mullick, Pacific Forest Research Centre, Canadian Forestry Service, Victoria, B.C.

Microbiological degradation: K.E. Eriksson, Forest Products Laboratory, Stockholm, Sweden.

Chemical resistance to injury and pathogenesis: P.E. Kolattkudy, Department of Agricultural Chemistry, Washington State University, Pullman, Wash.

Utilization of wood chemicals: H.L. Hergert, ITT Rayonier Ltd., N.Y.

The cost of sponsoring a roster of speakers from the four corners of the world will be borne only in part by registration fees (\$25 per full member, \$5 for students). The remainder will come from the combined input of UBC, the PSNA treasury, and hopefully, a conference grant for which Dr. Runeckles has made application to NRC, Canada.

2. The 1977 meeting in Ghent: There has considerable progress in planning for the joint meeting in Ghent. The past-president, Heinz Floss, attended an organizational meeting in Ghent (at no cost to the Society, he hastens to add) early in November with Drs. C. Sumere (Belgium), and J. Friend, T. Swain and J. Harborne (UK). The time for the meeting has been set for the first week in September with accomodation in the university dorms already reserved (cost: \$14 per day including meals). Dr. van Sumere will be the organizer with the Phytochemical Society (UK), the PSNA, and possibly, Groupe Polyphenol (France) participating. The title will be rather broad: Biochemistry of Plant Phenolics with topics ranging over techniques, enzymology, metabolism, chemistry, ecology, and speakers drawn about equally from Europe and America. From the social and cultural point of view, also, the meeting promises to be a good one. Early September is the time of the Festival of Flanders and a mid-meeting excursion to the Ardennes is proposed. If you are interested in applying to NSF for travel support to this meeting, please get in touch with Dr. G. Waller as soon as possible (see the last page).

3. The 1978 meeting: This meeting will also be a joint meeting, this time with the American Society of Pharmacognosy. It will be held, as previously announced, at Oklahoma State University at Stillwater; the date is tentatively set for August 14-18.

4. PSNA symposium volumes: Perhaps the membership, especially the newer members, are not fully aware of the symposium volumes published by the Society. The symposia of each annual meeting since 1966 have been published under the title "Recent Advances in Phytochemistry". Society members can purchase these volumes at a discount and, an important consideration in view of the shrinking reserves of the treasury, royalties from all sales go into society funds. Volumes L-IV were published by Appleton-Century-Crofts but all unsold copies are now in the possession of the current symposium publisher Plenum Press and are available either directly from them (contact Ms. Phyllis Straw) or can be ordered through the PSNA treasurer, Dick Mansell. As a reminder of the continuing usefulness of these volumes to phytochemists, the contents are listed hereunder, together with other pertinent details such as year of publication, number of copies remaining, retail price (price to members in brackets), and number of copies remaining. (Order form on page 9.)

Volume I- edited by T. Mabry, V.C. Runeckles, and R.E. Alston, 1968, 437 pages, 400 copies, \$39.50 (\$ 24.38), based on the 1966 symposium "Recent Advances in Phytochemistry".

Contents:- 1- Chemistry- the frontier of biological science, W.G. Whaley. 13- Chemistry principles in chemosystematics, H.G.H. Erdtman. 59- Sulfur compounds in plants, M.G. Ettlinger and A. Kjaer. 146- The betalains, T.J. Mabry and A.S. Dreiding. 161- Alkaloid chemistry and the systematics of Papaver and Argemone, F.R. Stermitz. 187- The taxonomic significance of acetylenic compounds, N.A. Sørensen. 229- Pseudoguaianolides in Compositae, W. Herz. 271- Systematic aspects of the distribution of di- and triterpenes, G. Ponsinet, G. Ourisson, and A.C. Oehlschlager. 305- C-glycosyl flavonoids, R.E. Alston. 329- New structural variants among the isoflavinoid and neoflavinoid classes, W.D. Ollis. 379- Recent investigations on the biosynthesis of flavonoids, H. Grisebach. 407- Index.

Volume II- edited by M.K. Seikel and V.C. Runeckles, 1969, 175 pages, 120 copies, \$20 (\$15), based on the 1967 symposium "Phytochemical Techniques".

Contents:- 1- Nuclear magnetic resonance studies of plant biosynthesis, J.J. Katz and H.L. Crespi. 35- Methods of attacking the problems of lignin structure, J.M. Harkin. 75- Plant tissue culture as a technique for the phytochemist, E.J. Staba. 107- Utilization of mass spectrometry in natural product chemistry, A.M. Duffield. 127- Scope and limitations of gas chromatography of terpenes in chemosystematic studies, E. von Rudloff. 163- Index.

Volume III- edited by C. Steelink and V.C. Runeckles, 1970, 268 pages, 250 copies, \$25 (\$18.75), based on the 1968 symposium "Phytochemistry and the Plant Environment"

Contents:- 1- Effects of some environmental stress factors on certain phenolic compounds in tobacco, S.H. Wender. 31- Physiological and biochemical effect of air pollution oxidants on plants, W.M. Dugger and I.P. Ting. 59- Plant components and soil organic matter, E.A. Paul. 105- Phytotoxins as plant habitat variables, C.H. Muller. 123- Host-specific toxins as determinants of pathogenicity, R.P. Scheffer and K.R. Samaddar. 143- Antifungal compounds produced by higher plants, A. Stoessl. 181- Induced host resistance- a hypothesis derived from studies of phytoalexin production, M.A. Schwochau and L.A. Hadwiger. 191- Phytochemistry and host plant specificity in Drosophila, H.W. Kirscher and W.B. Heed. 211- Insect molting hormone in plants, E. Heftmann. 229- Sterol formation and transformation in Digitalis, G.M. Jacobsohn. 249- The distribution of sesquiterpene lactones in several Ambrosia species, J. Romo, A. Romo de Vivar, E. Diaz, A. Velez, E. León and E. Urvina. 255- Index.

Volume IV- edited by V.C. Runeckles and J.E. Watkin, 1971, 317 pages, 150 copies, \$32.50 (\$24.38), based on the 1969 symposium "Enzymology and Biochemistry of Phenolics".

Contents:- 1- Degradative metabolism of phenylalanine, tyrosine and dopa, G.H.N. Towers and P.V. Subba Rao. 45- The mechanism and properties of phenylalanine ammonia-lyase from higher plants, K.R. Hanson and E.A. Havir. 87- The enzymic reduction of cinnamic acids, M.H. Zenk and G.G. Gross. 107- Evolution and function of flavonoids in plants, J.B. Harborne. 143- Biosynthesis of furanocoumarins, H.G. Floss. 165- Biochemical studies in relation to the possible germination regulatory role of naturally occurring coumarin and

phenolics, C.F. van Sumere, J. Cottenie, J. de Greef and J. Kint. 223- The evolution of lignin: experiments and observations, S.M. Siegel, P. Carrol, I. Umeno, and C. Corn. 239- Biological oxidation of lignan phenols, C. Steelink. 273- Major frontiers in phytochemistry, T.J. Mabry. 307- Index.

Volume V- edited by V.C. Runeckles and T.C. Tso, 1972, 350 pages, \$19.50 (\$14.63), based on the 1970 symposium "Structural and Functional Aspects of Phytochemistry". This Volume and Volumes VI, VII, and VIII were published by Academic Press and are still available through them, or through the Treasurer, PSNA. Contents:-1- Primary energy conversion reactions in photosynthesis, J.H. Wang and S.I. Tu. 35- The nature of purified phytochrome, W.R. Briggs, H.V. Rice, G. Gardner, and C.S. Pike. 51- A study of the mechanism of phytochrome action, A.W. Galston and R.L. Satter. 81- Acetylcholine as a native metabolic regulator of phytochrome-mediated processes in bean roots, M.J. Jaffe. 106- The betalains: structure, function, and biogenesis, and the plant order Centrospermae. 135- Recent progress in the chemistry of flavylum salts, L. Jurd. 165- Histochemistry of plants in health and disease, D.S. van Fleet. 197- Secondary plant substances and insects, L.M. Schoonhoven. 225- Herbicide metabolism in plants, D.S. Frear, H.R. Swanson, and F.S. Tanaka. 247- The chemistry of tea and tea manufacturing, G.W. Sanderson. 317- A speculative view of tobacco alkaloid biosynthesis, R.F. Dawson and T.S. Osdene. 339- Index.

Volume VI- edited by V.C. Runeckles and T.J. Mabry, 1973, 241 pages, \$16 (\$12), based on the 1971 symposium "Terpenoids: Structure, Biogenesis, and Distribution". (Academic Press). Contents:-1- Application of physical methods to some structural and stereochemical problems in terpenes and steroids, P. Crabbé. 21- Novel sesquiterpenes isolated in Compositae, J. Romo, A. Romo de Vivar, and A. Ortega. 31- Chemistry and biogenesis of the quassinoids (Simaroubolides), J. Polonsky. 65- The biogenesis of sesquiterpene lactones of the Compositae, T.A. Geissman. 97- Recent developments in the biosynthesis of plant triterpenes, T.W. Goodwin. 117- Mechanism of indole alkaloid biosynthesis. Recognition of intermediary and sequence by short-term incubation, A.I. Scott, P.B. Reichardt, M.B. Slaytor, and J.G. Sweeney. 147- Biochemistry and physiology of lower terpenoids, W.D. Loomis and R. Croteau. 187- Genetic and biosynthetic relationships of monoterpenes, R.S. Irving and R.P. Adams. 215- Confirmation of a clinal pattern of chemical differentiation in Juniperus virginiana from terpenoid data obtained in successive years, R.H. Flake, E. von Rudloff, and B.L. Turner. 235- Index.

Volume VII- edited by V.C. Runeckles, E. Sondheimer, and D.C. E. Walton, 1974, 178 pages, \$18.50 (\$13.88), based on the 1972 symposium "The Chemistry and Biochemistry of Plant Hormones". (A/P). Contents:- 1- Recent aspects of the chemistry and biosynthesis of the gibberellins, J. MacMillan. 21- Chemistry of the cytokinins, N.J. Leonard. 57- Chemistry and biochemistry of abscisic acid, B.V. Milborrow. 93- The biochemistry of the action of indoleacetic acid on plant growth, P.M. Ray. 123- Gibberellin control of a secretory tissue, J.E. Varner. 131- The biochemistry of ethylene: biogenesis and metabolism, S.F. Yang. 165- Author index. 173- Subject Index.

Volume VIII- edited by V.C. Runeckles and E.E. Conn, 1974, 249 pages, \$22.50 (\$16.88), based on the 1973 symposium "Metabolism and Regulation of Secondary Plant Products". (Academic Press).

Contents:- 1- Phenylalanine ammonia-lyase and phenolic metabolism, L.L. Creasy and M. Zucker. 22- Enzymology and regulation of flavonoid and lignin biosynthesis in plants and plant cell cultures, H. Grisebach and K. Hahlbrock. 53- Possible multienzyme complexes regulating the formation of C₆-C₃ phenolic compounds and lignins in higher plants, H.A. Stafford. 81- Photoregulation of phenylpropanoid and styrylpyrone biosynthesis in Polyporus hispidus, G.H.N. Towers, C.P. Vance, and A.M.D. Nambudiri. 95- Nonprotein amino acids from plants: distribution, biosynthesis, and analog functions, L. Fowden. 123- Proteinase inhibitors in natural plant protection, C.A. Ryan and T.R. Green. 141- Regulatory control mechanisms in alkaloid biosynthesis, H.G. Floss, J.E. Robbers, and P.F. Heinstein. 179- The biochemistry of myo-inositol in plants, F. Loewus. 209- Unusual fatty acids in plants, T. Galliard. 243- Subject Index.

Volume IX- is published by Plenum Press and is now on the market at \$27.50 (\$16.50) . Owing presumably to the mail strike, I have neither a copy nor publisher's blurbs and so cannot provide details of pagination etc. It is based on the 1974 symposium, "Phytochemistry in Relation of Disease and Medicine", with V.C. Runeckles serving his final term as Editor-in Chief. The papers given at this symposium were the following: Teratogenic constituents of potatoes, J. Kuc. Advances in the chemistry of tumor-inhibitory natural products, S.M. Kupchan. Allergies to plants and plant products, G.H.N. Towers and J.C. Mitchell. Recent studies on antimicrobial agents from higher plants, L. Mitscher. Plant neurotoxins, C. Ressler. Botany and chemistry of hallucinogens: recent advances and unsolved problems, R.E. Schultes. Indole alkaloids, A.I. Scott. Chemistry and metabolism of marijuana, M.E. Wall. Growth regulation, K. Nakanishi. Crop plant chemistry and folk medicine, J.A. Duke.

5. Proposed by-law change. The executive has been confronted in the past with several requests for membership mailing lists. The latest is a request from Freeman, Cooper and Co. Book Publishers for purposes of advertising a book on the chemistry of natural products authored by one of our few life members, Dr. T. Geissman. The Society by-laws state under Article IX (General Provisions), Section 1: "The membership mailing list of the Society shall not be released to private or commercial interests for purposes of advertising or for solicitation of any type or form". But what would be so bad about receiving notices of a book that might otherwise escape one's notice and yet which promises to be of such interest to phytochemists? Selling the list would make a welcome addition to the treasury, seriously depleted by expenses incurred at recent meetings. In view of the possible lucrative aspect, the by-law change proposed is simply to add "except with the approval of the Society President and upon payment of a predetermined fee" after ".....form". The executive proposes to distribute a membership list to the members in the near future in conjunction with a Society brochure. If this is done, the aforementioned section will be very difficult to enforce, whether or not a fee is charged. If you have opinions or ideas about how this problem should be handled, please relay them to the Secret-

ary. Then, in the light of your views, the proposal can either be dropped altogether or modified for presentation at the annual business meeting. Some one of you must recall why this section was included in the first place, and have some ideas on how to control commercial access to membership lists published for membership use.

6. Membership dues. The Treasurer asks me to point out that his job of book-keeping and maintaining up-to-date mailing lists would be greatly facilitated if members were to respond to the first billing with prompt payment of dues (or at least, heaven forbid, with the information that you no longer wish to be a member). The need to send out second, third and even fourth billings to recalcitrant members adds an unwelcome and unnecessary expense, especially so with today's high, and tomorrow's higher, postage rates. The dues at \$8 per year for full members are little enough when one considers that they reduce the purchase price of Society symposium volumes (the publication of which is supported at least in part by membership dues) by 25% for Volumes I-VIII and by 40% for Volumes IX and X.

7. Personalalia and other miscellany.

Dr. T.J. Mabry has received an Alexander von Humboldt U.S. Senior Scientist Fellowship. He will spend this spring and part of this summer at the University of Heidelberg in the Cell Biology Institute.

James Saunders and Eloy Rodriguez have graduated from the rank of student member to that of full member. Jim successfully defended his Ph.D. thesis last August and is now at Davis with Dr. E.E. Conn. Eloy acquired his doctorate in September and has joined Dr. G.H.N. Towers at UBC. Or rather, Eloy is at UBC where Dr. Towers is employed, but during this, a sabbatical year, is not likely to be found.

Dr. Stewart Brown has submitted the historical review of the Society he kindly consented to write. The Treasurer will incorporate it into a brochure for distribution to all members in the near future.

But probably not before he takes off on a combined holiday and working visit to Austria and Germany later this month, the working part courtesy of NATO.

The Secretary is on sabbatical leave this year and also is not always to be found at her home address. If response to your letters is delayed, it's not necessarily the fault of the mail strike!

Kenton L Chambers, Oregon State University, has asked on behalf of The American Society of Plant Taxonomists that notice of their new journal: Systematic Botany, be included in this newsletter. He hopes that phytochemists will submit papers in biochemical systematics of plants. The journal will begin publication this year, with a minimum of 400 pages per yearly volume, in 4 issues. Dr. W.L. Culberson, Department of Botany, Duke University Durham, N.C. 27706 will be editor and will provide instructions for preparation of manuscripts. The intention is to publish both original research reports and interpretative and review articles on all aspects of the systematics of cryptogamic and phanerogamic plants. Members of the ASPT (if you are interested in joining write the treasurer Dr. L.C. Anderson, Department of Biological Sciences, Florida State University, Tallahassee, FL 32306 and include the \$16 yearly

dues) will receive a subscription to the new journal and have the privilege of submitting papers for publication.

8. Some up-coming meetings of possible interest to phytochemists.

Feb. 16-20 Denver, Colorado, American Society for Photobiology.

May 30-June 4 New Orleans, Louisiana, AIBS, ASPP, ABS

June 9-11 Guelph, Ontario, Can. Soc. of Plant Physiology.

22-25 Halifax, Nova Scotia, Can Fed. of Biol.Soc.

July 11-16 Mt. Telemark Lodge, Cable Wisconsin, Amer. Soc. of Pharmacognosy. Symposium: Naturally occurring anti-tumor agents of clinical interest. Local program: Dr. Gordon Svoboda, Eli Lilly Co., Indianapolis.

25-31 Hamburg, FRG. 10th Int. Congress of Biochemistry.

Aug. 8-11 Vancouver, British Columbia PSNA

23-28 Dunedin, New Zealand, IUPAC Symposium.

30-Sept. 2 Rome, Italy. 2nd Int. Cong. on Photobiology

30-Sept. 4 Lausanne, Switzerland. 9th Int. Conference on Plant Growth Substances.

Sept. 6-10 Munich FRG. Joint meeting of Br. Phytochem. Soc., Int. Assoc. of Plant Tissue Culture, and the Gesellschaft fur Arzneipflanzenforschung.

ANNOUNCING - - - A SYMPOSIUM

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To be held as part of the American Chemical Society National Meeting

March 20-25, 1977, in New Orleans, Louisiana, U.S.A.

The symposium will run from Wednesday morning through Friday noon of that week and include both invited and contributed reviews and research papers of 20, 40, and 60 minutes length (including question period). Authors will be free to publish their papers in the outlet of their choice.

Titles, requested time, and a short abstract should be received by the Chairman as much before October 1, 1976, as possible. American Chemical Society abstract forms will be sent to the authors of those papers selected for the symposium. Completed abstracts are due by November 20, 1976.

Chairman: Dr. John W. Rowe

Cochairman: Dr. Duane F. Zinkel

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NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

9 December 1975

Dr. George R. Waller
Department of Biochemistry
Oklahoma State University
Stillwater, OK 74074

Dear Dr. Waller:

With reference to your letter of 26 November, it would be possible for NSF to consider a request for a block of funds to support travel to the phytochemical meeting planned for Gent, Belgium, September 1977. I advise you in that vein on the assumption that there will be 30 or more applicants for support from the US, that funds from all US sources will be pooled so that there will be a single national competition for support administered by your group (that does not imply, of course, that different guidelines specified by different donors cannot be employed, only that interested applicants have a single place to go), and that a reasonable level of funding can be provided by the Foundation.

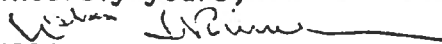
Design of the proposal is left entirely to you, but attempt to answer in it all the questions a hard-nosed, tight-fisted reviewer might be inclined to ask.

Recognize that any NSF funds that may be awarded will be for airfares only, for use on US carriers only, for residents of the US only (but excluding students and Federal employees, and it would be wise to avoid conflict-of-interest situations). The funds must be available to all qualified persons whether a member of the Society or not. The proposal should be sponsored and endorsed by one of the universities with which your Society officers is affiliated. Usually they do this as a courtesy.

I note from the minutes you provided that there was concern that a differential registration fee might be objectional to NSF. It is not. We would not be providing support for registration fees in any case, so you should set them as you choose.

If I can be of aid in answering other questions, do not hesitate to call me at (202) 632-4333.

Sincerely yours,


William J. Riemer
International Travel Program
Physiology, Cellular, and
Molecular Biology

PHYTOCHEMICAL SOCIETY OF NORTH AMERICA

NEWSLETTER

JULY 1976

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1. The 1976 meeting at U.B.C. in beautiful British Columbia: All members should by now have received the packet from Vancouver containing forms for abstracts, registration and residence accommodations. In case you didn't get yours, or have already lost it in the pile of papers that so rapidly accumulates on the desk of a hard-working scientist, the forms are repeated on pages 7-10.

2. The 1977 meeting and NSF travel grant application: No new information is available for the meeting in Ghent (see April newsletter or Phytochemistry, January, 1976) but there are new developments in the travel grant application. Dr. Waller reports that 32 persons have indicated their intention to apply. These are enough to launch the application since a minimum of 30 participants is required, but by no means taxes the total capacity! Applicants must contribute an oral or poster presentation on any plant subject to qualify. Membership in the PSNA is not required, but only U.S. residents are eligible, (students and federal employees excepted). A deadline of October 15, 1976 has been set for submission of titles, abstracts, authors, and institutions-- 5 copies in a standard format. Send to Dr. G. Waller Dept. of Biochemistry, Oklahoma State University, Stillwater, OK 74074, telephone 405-372-6211, ext 7592. The abstracts will be submitted to an advisory committee for review of strengths and weaknesses and returned to the applicant if revision is necessary. Deadline for submission of the revised abstract is November 15, 1976. A short biographical sketch must also be submitted including educational qualifications, work experience, honors received, membership in scientific societies, professional activities, research interests, and a list of principal publications, especially those related to the research to be reported at the meeting. Deadline for this, in a form suitable for xeroxing is also November 15. The grant will cover costs of air transportation only. Indicate the city of departure nearest you, and provide an estimated cost of return air fare from your place of residence as well as any other information which will aid Dr. Waller in composing the proposal. If you have any strategies for defence of the proposal against the questions of a hard-nosed granting committee send them in too! The proposal will be sponsored by Oklahoma State University (site of the 1978 PSNA meeting).

3. Items on the agenda of the 1976 annual business meeting: As required by the constitution, this meeting will be held during the annual meeting in Vancouver, August 8-11, 1976. Among the matters to be discussed are the following:

Sites of future meetings: President Loewus has received an invitation for the 1979 meeting from Northern Illinois University, DeKalb, and for the 1980 meeting from Washington State University, Pullman. Both invitations will be presented for discussion.

Proposed change in the PSNA constitution: The proposal to amend Article IX, Section 1 of the By-Laws to " The membership mailing list of the Society will be released to private or commercial interests only when in the judgement of the executive committee such a distribution will be to the benefit of the Society " will be submitted. A copy of the constitution as amended in August, 1975 is published on pages 3-6 of this newsletter.

re BAPA membership: The invitation from Dr. Gerald Weissman, president of Biology Alliance for Public Affairs (BAPA) to the PSNA to join in will be discussed. This organization is now formally established and consists of 12 biological societies representing approximately 50,000 scientists, largely medically oriented. The aim of BAPA is encouragement of biological sciences in the United States and coordination of long-range planning for specific goals. Dr. T.C. Tso of the USDA at Beltsville has been PSNA representative during organizational meetings and his report was published in the April newsletter.

Election of officers: At the moment, only the office of Vice-President (President-Elect) is open. All nominations, whether presented by the nominating committee, made from the floor at the meeting, or submitted to the secretary prior to the meeting, will be presented for a vote.

If you will not be able to attend the business meeting and have views to express on any of the above items, or wish to have other items included, get in touch with the Secretary by mail or telephone (613-733-0755)- or with any other member of the executive.

Miscellaneous announcements:

The following announcement should have appeared in the April newsletter but is hereby printed hopefully better late than never:
"Postdoctoral fellowship in plant enzymology- research on catabolism of aromatic compounds in plant cell cultures. Some undergraduate teaching. Stipend: \$8500/annum. Send resumé to Dr. B.E. Ellis, Dept. of Chemistry, University of Guelph, Guelph, Ontario, Canada N1G 2W1".

National Academy of Sciences Publishing and Printing Office, 2101 Constitution Ave., Washington D.C. 20418 announces a new title: Herbal Pharmacology in the People's Republic of China: A Trip Report of the American Herbal Pharmacology Delegation, 269 pages, paper bound, \$8. Dr. Morris Kupchan was a member of this delegation and presented an impromptu illustrated summary of the trip at the PSNA meeting in Cullowhee, 1974. The delegation visited and exchanged ideas with scientists at medical schools, research institutes, hospitals, pharmacies, pharmaceutical factories, and plantations and presents a survey of the uses of herbal medicines and the status of pharmaceutical research, education, and drug control in China today. The book should be a useful addition to the library of anyone interested in pharmacology in all its implications.

A second book, Plant Studies in the People's Republic of China: A Trip Report of the American Plant Studies Delegation, 205 pages, paper bound, \$7.25 should interest those with more purely botanical bents. NAS would be happy to receive orders for either book- the numbers are ISBN 0-309-02348-2 and ISBN 0-309-02348-3; 1975, respectively

While we're on the subject of books, don't forget that the Treasurer is happy to order copies of the Society publications, Recent Advances in Phytochemistry, Volumes I-X for you (see January and April newsletters).

PHYTOCHEMICAL SOCIETY OF NORTH AMERICA

CONSTITUTION AND BYLAWS

CONSTITUTION

ARTICLE I

NAME

Section 1. The name of this organization shall be the Phytochemical Society of North America, hereinafter called the Society. For convenience, the expression PSNA shall be deemed to be an appropriate abbreviation.

Section 2. The Society is the successor to the Plant Phenolics Group of North America and, as such, assumed all of the assets and liabilities of the aforementioned Group on January 1, 1967.

ARTICLE II

OBJECTIVES

The objectives of the Society shall be to encourage and stimulate research into the chemistry and biochemistry of plant constituents, their effects upon plant and animal physiology and pathology, and their industrial importance and utilization; and to encourage and stimulate communication of these interests among members by providing a forum for the presentation, discussion and publication of scientific research for the advancement of science and promotion of the common welfare.

ARTICLE III

MEMBERSHIP

Section 1. Membership in the Society shall be open to any person interested in phytochemistry and the role of plant substances in physiology, pathology, chemistry and related scientific disciplines.

ARTICLE IV

ELECTED OFFICERS

Section 1. The elected officers of the Society shall be a President, a Vice-President, a Secretary and a Treasurer.

Section 2. The office of Vice-President shall be considered to be that of President-elect.

Section 3. The offices of Secretary and Treasurer may be combined.

EXECUTIVE COMMITTEE

ARTICLE V

Section 1. Management of the Society shall be vested in an Executive Committee consisting of the President, the Vice-President, the Secretary, the Treasurer, the Immediate Past President and the Editor-in-Chief. In the event of vacancies the President shall make interim appointments until the next election is held; provided, however, vacancies of elected officers shall be filled as hereafter provided.

Section 2. The Executive Committee shall meet each year immediately preceding the Annual Meeting.

Section 3. The Executive Committee shall establish policies of the Society and shall be responsible for the administration of all Society funds.

Section 4. The Executive Committee shall appoint committees for special purposes.

Section 5. The Executive Committee shall determine the annual assessment of dues on regular members and on student members.

Section 6. The Executive Committee shall consider and recommend to the membership from time to time appropriate changes in the Constitution, and shall promulgate Bylaws appropriate to the implementation of the Constitution.

Section 7. Through appropriate Bylaws, the Executive Committee shall provide for publication of the annual Symposium Proceedings.

ARTICLE VI

ELECTION OF OFFICERS

Section 1. Election of officers shall be at the Business Session of the Annual Meeting of the Society by a majority vote of the members present. Nominations for Vice-President, Secretary and Treasurer shall be presented to the membership by a Nominating Committee consisting of the Immediate Past President as Chairman and two members appointed by the President. Nominations from the floor shall be in order. In addition, prior to the Annual Meeting, a member of the Society may submit to the Secretary nominations which the Secretary will present at the meeting.

Section 2. Upon election the term of office for such officers shall extend through the Business Session of the next Annual Meeting. The Vice-President shall automatically ascend to the presidency at the end of his scheduled term of office or at any prior time that the office of President may be vacated. However, he shall not succeed himself as President after serving his scheduled term of office. There shall be no restrictions on the number of terms of office of the Secretary or of the Treasurer.

Section 3. All vacancies in Society offices, other than President, occurring between Annual Meetings of the Society shall be filled by members of the Society approved by the Executive Committee. Members so selected shall serve until the next Annual Meeting of the Society.

Section 4. All officers of the Society shall serve without remuneration, but, at the discretion of the Executive Committee, may be reimbursed for certain expenses incurred in conducting the business of the Society.

ARTICLE VII

EDITOR-IN-CHIEF

Section 1. The Editor-in-Chief shall be appointed by the Executive Committee and shall serve as a member of the Executive Committee.

Section 2. There shall be no restrictions on the tenure of office of the Editor-in-Chief.

Section 3. The Editor-in-Chief shall serve without remuneration, but, at the discretion of the Executive Committee, may be reimbursed for certain expenses incurred in conducting the business of the Society.

ARTICLE VIII

AFFILIATED SOCIETIES

Section 1. The Executive Committee shall have the power to establish or discontinue affiliation with the Society of scientific societies or associations organized for the study and advancement of any branch of science.

ARTICLE IX

MEETINGS AND BUSINESS

Section 1. The Annual Meeting of the Society shall be arranged in accordance with procedures established by the Executive Committee in appropriate Society Bylaws.

Section 2. All business requiring action by the membership shall be transacted at a Business Session which shall be scheduled by the Executive Committee during the Annual Meeting.

Section 3. A meeting of the Executive Committee shall be called by the President prior to the convening of the Annual Meeting. The President may call additional meetings of the Executive Committee as may be required.

Section 4. The parliamentary procedure for all business meetings of the Society shall be governed by Robert's Rules of Order, current revised edition, and the Executive Committee shall provide for a Parliamentarian.

ARTICLE X
QUORUM

Section 1. Twenty members, including officers, shall constitute a quorum at the Business Session of the Annual Meeting of the Society.

Section 2. A majority of the total number of members of the Executive Committee shall constitute a quorum for all meetings of the Executive Committee.

ARTICLE XI

FISCAL YEAR

Section 1. The fiscal year of the Society shall be from January 1 to December 31.

ARTICLE XII

BYLAWS

Section 1. The Executive Committee shall establish appropriate Bylaws, not in conflict with the Constitution, as may be necessary and proper to implement or further clarify the Articles of the Constitution.

Section 2. The establishment or amendment of such Bylaws shall require a simple majority vote of the membership at the Business Session of the Annual Meeting.

Section 3. Proposed Bylaws and amendments shall be made in writing to the Secretary 20 days prior to the Annual Meeting, and shall be distributed to all members prior to the Annual Meeting.

ARTICLE XIII

AMENDMENTS TO THE CONSTITUTION

Section 1. Upon recommendation of the Executive Committee this Constitution may be changed or amended by a simple majority vote of the membership at the Business Session of the Annual Meeting.

Section 2. Proposed amendments shall be made in writing to the Secretary 20 days prior to the Annual Meeting and shall be distributed to all members prior to the Annual Meeting.

ARTICLE XIV

ARTICLES OF INCORPORATION

Section 1. In the event the Society becomes incorporated, the Articles of Incorporation (Charter) shall conform to the provisions of this Constitution and all amendments hereafter adopted.

Section 2. The Executive Committee shall review and coordinate all necessary appropriate revisions of the Constitution and Bylaws and be responsible for the submission of all required reports to State and other governmental agencies, annually or otherwise as required by law.

ARTICLE XV
DISSOLUTION OR LIQUIDATION

Section 1. In the event of dissolution or liquidation all liabilities and obligations of the Society shall be paid, satisfied and discharged.

Section 2. All assets remaining shall be transferred to one or more societies or organizations engaged in activities substantially similar to those of the Society; provided, however, that no assets shall accrue to the benefit of any officer or member of the Society.

BYLAWS

ARTICLE I
TYPES OF MEMBERSHIP

Section 1. There shall be three types of members: Regular, Student and Life.

Section 2. Regular membership is open to any person interested in phytochemistry upon payment of annual dues, the amount of which shall be established by the Executive committee. Regular members in Good standing may become emeritus regular members and exempt from payment of annual dues upon notification to the Treasurer, in writing that they have reached retirement age. . . . Student membership shall be restricted to matriculated students.

Section 3. The designation Life Member is an award or recognition bestowed by the Society on members who have made significant contributions to the activities and advancement of the Society. Life Members are entitled to all the privileges of regular members for Life, and shall be exempt from payment of dues. Each Life Member must be approved by the Executive Committee. It will be the usual procedure for the President to announce new Life Members at an Annual Meeting of the Society. All Life Members shall be presented with a suitably inscribed scroll in recognition of the distinction.

Section 4.

ARTICLE II

DUTIES OF ELECTED OFFICERS

Section 1. PRESIDENT. The President shall be the chief executive officer of the Society. It shall be his duty to preside at the business and general meetings of the Society. He shall have the power to call meetings of the Executive Committee, and shall appoint the members of the standing committees and of new committees authorized by the Executive Committee.

Section 2. VICE-PRESIDENT. The Vice-President shall assist the President as mutually agreed between them, and shall serve as President in the latter's absence.

Section 3. SECRETARY. The Secretary shall be responsible for keeping complete minutes of the Business Session of the Annual Meeting and of all meetings of the Executive Committee. In the absence of the President and Vice-President the Secretary shall preside at meetings of the Executive Committee. The Secretary shall conduct the correspondence of the Society except as otherwise provided, and shall be responsible for distribution of special notices to the membership. The Secretary shall be responsible for publication and distribution to the membership of newsletters. Under exceptional circumstances the Secretary may request the assistance of his designate with the issuance of a newsletter.

Section 4. TREASURER. The Treasurer shall collect and receive all moneys due to the Society and shall have custody of the funds of the Society. All moneys received shall be deposited by him in the name of the Society. The Treasurer shall make disbursements for debts against the Society, and shall keep a full accounting of the Society's financial transactions. He shall issue dues notices at the beginning of the fiscal year and dues reminders at the beginning of the second and fourth quarters of the fiscal year to members not current in dues by those dates. The Treasurer shall keep the membership list of the Society up-to-date. At the beginning of the fiscal year, and at other times upon request, he shall supply the members of the Executive Committee a list of all members in good standing. The Treasurer shall administer the financial policies of the Society. At the close of the fiscal year he shall prepare an annual financial statement of accounting to be submitted with the accounting books and vouchers to a certified public accountant of his choice or to an Auditing Committee consisting of two Society members appointed by the President. Copies of the audited financial statement shall be distributed by the Treasurer to the membership. The Treasurer shall submit to the Society at each Annual Meeting an Annual Report of the financial operations and membership information for the current fiscal year to which shall be attached the audited financial statement as at the close of the previous fiscal year. In addition the Treasurer shall include in his Annual Report an interim financial statement for the current fiscal year as of date within 30 days prior to the Annual Meeting. Auditing of the interim financial statement shall not be required.

ARTICLE III

DUTIES OF THE EDITOR-IN-CHIEF

Section 1. The Editor-in-Chief shall be responsible for the publication of the annual Symposium Proceedings.
Section 2. The Editor-in-Chief shall negotiate all publication contracts with commercial publishers subject to approval by the Executive Committee.
Section 3. The Editor-in-Chief shall conduct all correspondence pertinent to publication of the Symposium Proceedings and shall edit all manuscripts for inclusion in the publication.
Section 4. The Editor-in-Chief may be assisted by a co-editor, in the person of the Symposium Chairman.

ARTICLE IV
PUBLICATIONS

Section 1. The Society shall publish at irregular intervals a newsletter. Publication and distribution of the newsletter shall be the responsibility of the Secretary.

Section 2. The Society shall publish the annual Symposium Proceedings. Publication of the Proceedings shall be the responsibility of the Editor-in-Chief. Distribution of the published Proceedings shall be at the discretion of the Executive Committee.

ARTICLE V
ANNUAL DUES

Section 1. The annual assessment of dues on regular members and student members shall be determined by the Executive Committee.

Section 2. Annual dues shall be payable in advance on January 1 of the fiscal year.

Section 3. A member whose dues are one year in arrears shall cease to be a member of the Society. Membership dues not paid by December 31 of the fiscal year are considered in arrears for one year.

ARTICLE VI
MEETINGS AND BUSINESS

Section 1. A meeting of the Society for transacting business, electing officers, presenting communications and related activities shall be held each year at such place as shall be determined by the Executive Committee. Under exceptional circumstances the Executive Committee may cancel the meeting.

Section 2. Special meetings may be called at the discretion of the Executive Committee.

Section 3. The Executive Committee, during the Business Session of an Annual Meeting, shall appoint in advance the Symposium Chairman for the next Annual Meeting who shall, subject to approval of the Executive Committee, establish the date of the next Annual Meeting and who shall organize the Meeting and the program.

Section 4. The program shall consist in part of a Symposium and in part of contributed papers. Speakers of distinguished achievement in their respective fields may participate in the Symposium by invitation of the Symposium Chairman. The granting of honoraria to Symposium speakers shall be at the discretion of the Executive Committee. Payment of such honoraria shall be made at the time of the Annual Meeting.

Section 5. Contributed papers shall be considered for presentation if at least one author is a member in good standing. However, contributed papers may be accepted from any nonmember who is introduced by a member.

Section 6. The Symposium Chairman shall appoint local committee members, including a Symposium Treasurer, to assist in the planning and organization of the Annual Meeting.

Section 7. The extent to which expenses of an Annual Meeting may be underwritten by Society funds shall be determined in advance of the Annual Meeting by the Executive Committee. However, all deficit expenditures not covered by registration fees and other fees assessed against the registrant shall be paid and discharged with use of Society funds.

Section 8. Following the Annual Meeting, and after all debts of the Meeting have been satisfied and discharged, the local Symposium Treasurer shall submit to the Treasurer of the Society an itemized accounting of all receipts and expenditures of the Meeting and all Meeting vouchers. Residual funds remaining in the local Symposium account shall be transferred to the General Account of the Society.

ARTICLE VII
OFFICIAL REPRESENTATION

Section 1. Where official representation of the Society is desirable the President or his designates shall represent the Society. All representatives of the Society shall serve without remuneration, but, at the discretion of the Executive Committee, may be reimbursed for certain restricted expenditures incurred in their representation.

ARTICLE VIII
STANDING RULES

Section 1. The Executive Committee may establish standing rules to meet special or temporary situations and may suspend any existing standing rules for the same purpose.

ARTICLE II
GENERAL PROVISIONS

Section 1. The membership mailing list of the Society shall not be released to private or commercial interests for purposes of advertising or for solicitation of any type or form.

Section 2. The Society shall be organized exclusively for scientific and educational purposes.

Section 3. The Society shall be operated exclusively for scientific and educational purposes.

Section 4. No part of the activities of the Society shall consist of carrying on propaganda, or otherwise attempting to influence legislation.

Section 5. The Society shall not participate in, or intervene in (including the publishing or distributing of statements), any political campaign on behalf of a candidate for public office.

Section 6. No financial obligations shall be incurred on behalf of the Society by any officer or member unless authorized by the Executive Committee.

Section 7. The Society shall not be organized or operated for profit.

Section 8. No part of the funds of the Society shall or may under any circumstances inure to the benefit of any private individual.

Section 9. The Society shall not engage in any transactions which result in the diversion of any part of its funds to any officer or member of the Society.

REGISTRATION FORM

NAME:

AFFILIATION:

BUSINESS ADDRESS:

CITY:

POSTAL/ZIP CODE:

[If you are registering other participants, please provide names, addresses and other details on the back of this form or on separate sheets].

REGISTRATION:

	<u>CHECK</u>	<u>NUMBER</u>	<u>COST</u>	<u>TOTAL</u>
Registration - member	<input type="checkbox"/>	_____	\$25.00	_____
- non-member	<input type="checkbox"/>	_____	\$35.00	_____
- student	<input type="checkbox"/>	_____	\$ 5.00	_____

SPECIAL EVENTS:

Banquet at Mediaeval Inn (Monday, August 9) 5-course meal, wine, entertainment	<input type="checkbox"/>	_____	\$15.00	_____
Boat Cruise (Tuesday, August 10) Bar, snacks, music	<input type="checkbox"/>	_____	\$ 8.00	_____
TOTAL REMITTANCE (Payable to "PSNA Registration")				\$ _____

DAYTIME PROGRAMME:

I am interested in a possible daytime programme
for spouses and children

MAIL CHEQUES WITH THE REGISTRATION FORM, CALL FOR PAPERS (IF REQUIRED) AND
ACCOMMODATION RESERVATION FORM TO:

Dr. V.C. Runeckles,
Department of Plant Science,
University of British Columbia,
Vancouver, B.C., Canada V6T 1W5.

NOT LATER THAN JULY 15

REGISTRATION FORM

NAME:

AFFILIATION:

BUSINESS ADDRESS:

CITY:

POSTAL/ZIP CODE:

[If you are registering other participants, please provide names, addresses and other details on the back of this form or on separate sheets].

REGISTRATION:

CHECK	NUMBER	COST	TOTAL
Registration - member	<input type="text"/>	\$25.00	<input type="text"/>
- non-member	<input type="text"/>	\$35.00	<input type="text"/>
- student	<input type="text"/>	\$ 5.00	<input type="text"/>

SPECIAL EVENTS:

Barbecue at Redwood Inn (Monday, August 3) 5-course meal, wine, entertainment	<input type="text"/>	\$15.00	<input type="text"/>
Boat Cruise (Tuesday, August 10) Bar, snacks, music	<input type="text"/>	\$ 8.00	<input type="text"/>

TOTAL REGISTRATION (Provide to "PSNA Registration")

\$

DAYTIME PROGRAMS:

I am interested in a possible daytime program for spouses and children.

MAIL CHECKS WITH THE REGISTRATION FORM, CALL FOR PAPERS (IF REQUIRED) AND ACCOMMODATION RESERVATION FORM TO:

Dr. F. G. Runkler,
Department of Plant Science,
University of British Columbia,
Vancouver, B.C., Canada V6T 1Z6.

NOT LATER THAN JULY 15

CALL FOR PAPERS

- 1) A 15 minute maximum time allowance for papers.
- 2) Only 2" slides or OH projection can be provided.
- 3) Please indicate the following details; type the abstract within the framework of the box for reduction and duplicating purposes. The speaker's name should be underlined.

EXAMPLE:

(Leave blank)	<u>D. Hoffmann, K.D. Brunemann, E.L. Wynder and G.B. Gori,</u> <u>American Health Foundation, New York, N.Y., and National</u> <u>Cancer Institute, Bethesda, MD.</u>
ON THE CARCINOGENICITY OF MARIJUANA SMOKE 	

--	--

DEADLINE: JULY 15. Papers can only be accepted concurrently with Registration Form.

TOTEM PARK/PLACE VANIER

Name of Conference you will be attending:

..... Conference dates:

Reservation Male

is for: Female

Surname

First Name

Full

Address

Planned

Planned

Arrival Date Time Departure Date Time

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..... Adults in Twin Room(s)	\$12.90 per person daily
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There is no refund for missed meals.

This card does not constitute confirmation of reservation in itself. A confirmation will be sent by us to you. If you have not received your confirmation 7 days before the beginning of the conference please call and reconfirm your reservation. Rates are quoted in Canadian Dollars (excluding Hotel Tax) and are subject to change without notice.

Requests must be received 4 weeks prior to arrival.

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11

THE PHYTOCHEMICAL SOCIETY OF NORTH AMERICA

SYMPOSIUM AND ANNUAL MEETING:

THE STRUCTURE, BIOSYNTHESIS AND DEGRADATION OF WOOD

The Phytochemical Society of North America will be holding its Annual Meeting and Symposium in beautiful Vancouver, B.C. this year, from August 8-11. The Symposium will consist of contributions by the following:

- W.A. Cote (SUNY, Syracuse): Wood Ultrastructure in Relation to Chemical Composition.
- D. Delmer (MSU, East Lansing): Biosynthesis of Cell Wall Polysaccharides.
- D.T.A. Lamport (MSU, East Lansing): Biosynthesis, Structure and Significance of Cell Wall Glycoproteins.
- G.G. Gross (Ruhr U., Bochum, Germany): Biosynthesis of Lignin and Related Monomers.
- W.E. Hillis (CSIRO, Melbourne, Australia): Wood Transformations During Ageing.
- T.K. Kirk (FPL, Madison): Microbiological Degradation of Lignin.
- E.T. Reese (U.S. Army Natick Devel. Center): Microbiological Degradation of Wood Carbohydrates.
- B.D. Mullick (CFS, Victoria, B.C.): The Non-Specific Nature of Defence in Bark and Wood During Wounding, Insect and Pathogen Attack.
- P.E. Kolattukudy (WSU, Pullman): Lipid Polymers and Associated Phenols; Their Chemistry, Biosynthesis and Role in Pathogenesis.
- H.L. Hergert (ITT Rayonier, New York): Problems and Prospects of Utilization of Wood Extractives.

In addition there will be sessions of contributed papers which should be submitted on the attached "Call for Papers" sheet. The deadline for pre-registration and call for papers is JULY 15.

SOCIAL EVENTS

Sunday, August 8: A no-host mixer will be held in the Nootka Lounge of the Totem Park Residences from 7.30 - 11.00 p.m. for registration and an informal "gathering".

Monday, August 9: Back to the "Good Old Days" in the evening. In fact, very far back for a visit to The Mediaeval Inn in the old Gastown area of Vancouver where a 5-course banquet (including all the wine you can consume!), is being arranged for us in The Armoury. This truly is a mediaeval experience so expect to use a dagger and fingers for eating! You will also enjoy the wandering minstrels and seeing the lusty serving wenches! A great evening's meal and entertainment (including transportation) for only \$15. N.B. Only the first 100 merry makers can be accepted so please indicate your acceptance on the Registration Form.

Tuesday, August 10: A free luncheon will be sponsored by the Province of B.C. for the Society and will take place in the Ballroom of the Graduate Student Centre.

Evening: Another major social event in your calendar! Enjoy an evening cruise through the lovely waters of Indian Arm or Howe Sound against the backdrop of the spectacular coastal mountains and the Vancouver skyline. A bar, snacks and music will be available on board - or perhaps you can just advise the Captain on navigation! A millionaire's cruise for only \$8! Again, space is limited so reserve now on the Registration Form.

PHYTOCHEMICAL SOCIETY OF NORTH AMERICA

EXECUTIVE COMMITTEE - PSNA

1975-1976

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Department of Medicinal Chemistry and Pharmacognosy
School of Pharmacy and Pharmacal Sciences
Purdue University
West Lafayette, IN 47907

Dr. Frank A. Loewus, President, PSNA
Department of Agricultural Chemistry
Washington State University
Pullman, WA 99163

Dr. Jerry W. McClure, President-Elect, PSNA
Department of Botany
Miami University
Oxford, OH 45056

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Biology Department
Western Carolina University
Cullowhee, NC 28723

Dr. V. C. Runeckles, Program Chairman, PSNA
Department of Plant Science
University of British Columbia
Vancouver, BC V6T 1W5
CANADA

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Department of Biology
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Tampa, FL 33620

Dr. Constance Nozzolillo, Secretary, PSNA
Department of Biology
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Ottawa, Ontario K1N 6N5
CANADA

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THE PHYTOCHEMICAL SOCIETY OF NORTH AMERICA

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- P.E. Kolattukudy (MSU, Pullman): Lipid Polymers and Associated Phenols; Their Chemistry, Biosynthesis and Role in Pathogenesis.
- H.E. Hagerst (ITT Rayonier, New York): Problems and Prospects of Utilization of Wood Extractives.

In addition there will be sessions of contributed papers which should be submitted on the attached "Call for Papers" sheet. The deadline for pre-registration and call for papers is July 15.

SPECIAL EVENTS

Sunday, August 6: A no-host mixer will be held in the Kootenai lounge of the Totem Park Residence from 7:30 - 11:00 p.m. for registration and an informal "gathering".

Monday, August 7: Back to the "Good Old Days" in the evening. In fact, very far back for a visit to the Medieval Inn in the old Gastown area of Vancouver where a 2-course banquet (including all the wine you can consume!), is being arranged for us in The Anchor. This truly is a medieval experience so expect to use a dagger and tongs for eating! You will also enjoy the wandering minstrels and seeing the jolly serving wenches! A great evening's meal and entertainment (including transportation) for only \$15. N.B. Only the first 100 merry makers can be accepted so please indicate your acceptance on the registration form.

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REGISTRATION FORM

NAME:

AFFILIATION:

BUSINESS ADDRESS:

CITY:

POSTAL/ZIP CODE:

[If you are registering other participants, please provide names, addresses and other details on the back of this form or on separate sheets].

REGISTRATION:

	<u>CHECK</u>	<u>NUMBER</u>	<u>COST</u>	<u>TOTAL</u>
Registration - member	<input type="checkbox"/>	_____	\$25.00	_____
- non-member	<input type="checkbox"/>	_____	\$35.00	_____
- student	<input type="checkbox"/>	_____	\$ 5.00	_____

SPECIAL EVENTS:

Banquet at Mediaeval Inn (Monday, August 9) 5-course meal, wine, entertainment	<input type="checkbox"/>	_____	\$15.00	_____
Boat Cruise (Tuesday, August 10) Bar, snacks, music	<input type="checkbox"/>	_____	\$ 8.00	_____

TOTAL REMITTANCE (Payable to "PSNA Registration") \$

DAYTIME PROGRAMME:

I am interested in a possible daytime programme for spouses and children

MAIL CHEQUES WITH THE REGISTRATION FORM, CALL FOR PAPERS (IF REQUIRED) AND ACCOMMODATION RESERVATION FORM TO:

Dr. V.C. Runeckles,
Department of Plant Science,
University of British Columbia,
Vancouver, B.C., Canada V6T 1W5.

NOT LATER THAN JULY 15

REGISTRATION FORM

NAME:

AFFILIATION:

BUSINESS ADDRESS:

CITY:

POSTAL/ZIP CODE:

[If you are registering other participants, please provide names, addresses and other details on the back of this form or on separate sheets].

REGISTRATION:

CHECK	NUMBER	COST	TOTAL
<input type="checkbox"/> Registration - member	_____	\$25.00	_____
<input type="checkbox"/> - non-member	_____	\$35.00	_____
<input type="checkbox"/> - student	_____	\$ 8.00	_____

SPECIAL EVENTS:

<input type="checkbox"/> Banquet at Medieval Inn (Monday, August 9) 5-course meal, wine, entertainment	_____	\$15.00	_____
<input type="checkbox"/> Boat Cruise (Tuesday, August 10) Bar, snacks, music	_____	\$ 8.00	_____

TOTAL REMITTANCE (payable to "PSMA Registration") \$ _____

DAYTIME PROGRAMME:

I am interested in a specific daytime programme for spouses and children

MAIL CHECKS WITH THE REGISTRATION FORM, CALL FOR PAPERS (IF REQUIRED) AND ACCOMMODATION RESERVATION FORM TO:

Dr. V.C. Runcieles,
Department of Plant Science,
University of British Columbia,
Vancouver, B.C., Canada V6T 1Z6.

NOT LATER THAN JULY 15

CALL FOR PAPERS

- 1) A 15 minute maximum time allowance for papers.
- 2) Only 2" slides or OH projection can be provided.
- 3) Please indicate the following details; type the abstract within the framework of the box for reduction and duplicating purposes. The speaker's name should be underlined.

EXAMPLE:

(Leave blank)	<u>D. Hoffmann, K.D. Brunnemann, E.L. Wynder and G.B. Gori,</u> American Health Foundation, New York, N.Y., and National Cancer Institute, Bethesda, MD.
ON THE CARCINOGENICITY OF MARIJUANA SMOKE	
.....	
.....	

DEADLINE: JULY 15. Papers can only be accepted concurrently with Registration Form.

PHYTOCHEMICAL SOCIETY OF NORTH AMERICA

NEWSLETTER

SEPTEMBER 1976

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Report of the 1976 annual meeting of the PSNA:

The 16th annual meeting of the Society was held on the beautiful campus of the University of British Columbia at Vancouver. The weatherman cooperated handsomely in providing, according to the locals, the first pleasant summer weather in weeks. A no-host mixer and registration on Sunday evening, August 8, in the residence lounge signaled the formal beginning of the meeting which continued to Wednesday, August 11. Mornings were devoted to symposium papers, abstracts of which are printed below, and afternoons to not the usual one, but to two concurrent sessions of contributed papers. Authors and titles only of the latter are also printed below. The local committee headed by V.C. Runeckles and including Diane Green, G.M. Barton, G.G. Dutton, L. Paszner, and G.H.N. Towers, also organized two highly successful social events- a mediaeval style dinner in Vancouver's Gastown, and an early evening cruise out of Vancouver harbour into the setting sun.

SYMPOSIUM: The Structure, Biosynthesis and Degradation of Wood

(Abstracts arranged in sequence of presentation)

W. A. Côté, State Univ. of New York College of Environmental Science and Forestry, Syracuse, New York

WOOD ULTRASTRUCTURE IN RELATION TO CHEMICAL COMPOSITION

The domain of wood ultrastructure embraces such areas as single cell morphology, cell wall organization and sculpturing, microfibrillar orientation, and the distribution of chemical constituents in the cell wall. The term "ultrastructure" bridges the gap in the realm of structure extending from anatomical features to molecular architecture in wood. In terms of dimensions, it begins at the limit of resolving power of the light microscope (2000 Angstrom units) and extends to approximately 5 Angstrom

units, the present practical limit of resolving power of electron microscopy, when specimen preparation methods and their limitations are considered. In practice, gross structure is needed for bench marks in the exploration of wood ultrastructure, and the scanning electron microscope has taken a place as a useful tool for the study of structure and chemical composition, especially when SEM is interfaced with EDXA (energy-dispersive x-ray analysis). The location and role of each of the major wood constituents: cellulose, hemicelluloses, lignin as well as extractives and crystalline materials is considered in the framework of anatomy and ultrastructure of Angiosperms and Gymnosperms.

D. Delmer, MSU/ERDA Plant Research Laboratory, Michigan State University, East Lansing, MI.

THE BIOSYNTHESIS OF CELLULOSE AND OTHER CELL WALL POLYSACCHARIDES

This lecture will present an assessment of the status of our knowledge about the biosynthesis of higher plant cell wall polysaccharides, with special emphasis placed upon cellulose biosynthesis. The discussion will focus on a) considerations of the structure of the known cell wall polysaccharides relevant to biosynthetic studies, b) synthesis of the matrix components, and c) synthesis of cellulose. Consideration will be given to our knowledge of the sites of polymer synthesis, the substrates utilized, an assessment of the possible role of lipid intermediates, and techniques available for the analysis of the size and structure of the reaction products. The discussion will attempt to point out the difficulties encountered in this field of research and to suggest possible approaches for future experimentation.

D.T.A. Lamport ERDA Plant Research Laboratory, Michigan State University, E. Lansing, Mich. 48824.

STRUCTURE BIOSYNTHESIS, SIGNIFICANCE OF CELL WALL GLYCO-PROTEINS.

The extracellular matrix secreted by eukaryotic cells characteristically contains both enzymic and purely structural glycoproteins. Plants are no exception and structural glycoproteins occur in the cell walls of the simplest algae and the most complex higher plants. These structural glycoproteins of plants share one important feature with the major matrix glycoprotein of animals (collagen); both are hydroxyproline-rich. If these hydroxyproline-rich glycoproteins are members of the same protein "super family" their significance in the evolution of early plants and animals is profound. The structural significance of these hydroxyproline-rich glycoproteins is clear in primitive algae such as Chlamydomonas where they account for virtually all of the cell wall. In higher plants the significance is less obvious but current work supports the hypothesis that these glycoproteins act as crosslinks between the polysaccharides of the cell wall. Hydroxyproline and serine are the two most likely polysaccharide attachment sites judging from the presence of arabinosyl hydroxyproline and galactosyl serine in extensin. We and others have isolated polysaccharide attached directly to hydroxyproline from various cell fractions (including the so-called arabinogalactan of sugar maple sap) but not from cell walls. We therefore examined the possible involvement of galactosyl serine. There is good correlation between β -eliminative cleavage of galactosyl serine and solubilisation of extensin. In addition the extensin fragments produced by oxidation with sodium chlorite also contain several moles of galactose for each mole of serine. Supported by ERDA under contract E (11-1) - 1338.

A. Sakakibara, Forest Products Department, Faculty of Agriculture, Hokkaido University, Sapporo, Japan.

DEGRADATION PRODUCTS FROM PROTOLIGNIN AND STRUCTURE OF LIGNIN.

The studies on the enzymatic dehydrogenation of coniferyl alcohol by K. Freudenberg and his coworkers suggested the existence of various kinds of linkage types in lignin macromolecule. These results were, of course, not obtained from native lignin. Essentially, it is necessary to obtain direct proof on the lignin structure by its degradation products. In our laboratory, two different degradation processes were applied to protolignin, namely, hydrolysis by dioxane and water at 180°C, and catalytic dehydrogenolysis on CuCrO at about 220°C under hydrogen pressure. From the reaction products, about 30 dilignols and trilignols were isolated and characterized. These compounds represent almost all linkage pattern exist in enzymatic dehydrogenation products from coniferyl alcohol: Aryl glycerol-aryl ethers, phenylcoumarans, pinosresinol and other lignan type compounds, biphenyls etc. Moreover, many new types of linkage between phenylpropane units were found in these products: Linkage pattern with -1, -6, - - , etc. Chemical structure of lignin could not be established like many other natural macromolecules or low molecular compounds, but only given as statistical one from information about linkage types between lignin units which can be derived from various degradation products from protolignin and their quantitative analysis.

G.G. GROSS,
Lehrstuhl für Pflanzenphysiologie, Ruhr University,
West Germany

BIOSYNTHESIS OF LIGNIN AND RELATED MONOMERS

In the past, the pathways leading to lignin have been studied almost exclusively by tracer experiments. More recently, the extensive application of enzymatic studies has considerably augmented our knowledge of the reactions and reaction mechanisms involved in this biosynthetic process. These enzymatic studies have been particularly pertinent to the question of how cinnamic acids are reduced to the corresponding alcohols. With extracts from a variety of plants, it was shown that this conversion is catalyzed by three enzymes: cinnamate:CoA ligase, cinnamoyl-CoA reductase and cinnamyl alcohol dehydrogenase. These enzymes are absolutely specific for cinnamyl substrates and appear to occur in lignifying tissues. Their activities can also be correlated with wood content. Furthermore, they are associated predominantly with the xylem tissues. Evidence has revealed that the H_2O_2 required in the subsequent oxidative polymerization of these alcohols is produced at the expense of NAD(P)H, which in turn may be provided by the catalysis of a cell wall-bound malate dehydrogenase.

W.E.Hillis, CSIRO, Melbourne, Australia.

SECONDARY CHANGES IN WOOD

Secondary changes of different types affect the properties of the wood formed by the cambium. Most attention will be given in this paper to the changes involving the formation of heartwood and extractives. One consistent feature in the several types of heartwood is the increase in amount of extractives on transformation from sapwood. This increase, and sometimes the composition of the extractives, can be very marked. Chemomorphological studies show in some species a very specific formation of pure compounds in different anatomical elements at the heartwood boundary. A distinct transition or dry zone can be observed between sapwood and heartwood in a number of species.

The ethylene content in this zone in 4 species was higher than in adjacent tissues and it varied throughout the year. Ethylene has been found to be involved in the formation of extractives in wood and phenolic exudates from cambial regions. Ethylene is also involved in the formation of fibres with thick cell walls. Current evidence indicates the complexity of the controls involving ethylene and other hormones.

T. Kent Kirk, J. G. Zeikus*, and W. J. Connors, Forest Products Laboratory, USDA Forest Service, Madison, WI, 53705; and Department of Bacteriology*, University of Wisconsin, Madison, WI, 53706.

ADVANCES IN UNDERSTANDING OF THE MICROBIOLOGICAL DEGRADATION OF LIGNIN

The microbial degradation of lignin is a most important aspect of the carbon cycle. Not only is lignin one of the most abundant repositories of reduced carbon on earth, but it protects the carbohydrates in lignocelluloses from decomposition by most carbohydrate-degrading microbes, and it hampers the bioconversion of most cellulosic wastes. In recent years the study of lignin biodegradation has become an increasingly active research area. Important progress has been made particularly in methodology, and this is aiding greatly in elucidating various microbiological and environmental facets, in increasing the understanding of the chemistry of fungal attack, and in clarifying the biodegradability of industrial lignins. The immediate future will witness very significant breakthroughs in understanding the various aspects of lignin biodegradation.

E.T. Reese, Food Sciences Laboratory, U.S. Army Natick Research and Development Command, Natick, MA 01760.

ON MICROBIAL DECOMPOSITION OF PLANT POLYSACCHARIDES

An organism is able to grow on insoluble substrates only if it is able to produce the enzymes required for the hydrolysis of those materials. Induction results from introduction into the cell of dimer and trimer products of the enzyme to be produced. Thus cellobiose induces cellulase. The liberated enzyme is restricted in its mobility by the pore size of the cell wall, and much of the activity is localized about the hyphal tip. The greater the localization, the less is the change in the properties of the residual cellulose. The hydrolytic enzymes involved are highly specific in their actions, and so limited by changes in the polymeric substrate, such as the introduction of a different sugar, a different linkage, addition of a branch, deletion of a branch, or organization into a highly organized ("crystalline") structure. There are also means of depolymerization other than hydrolysis, involving transfer, and oxidation.

D. B. Mullick, Department of the Environment, Canadian Forestry Service, Pacific Forest Research Centre, Victoria, B.C..

THE NON-SPECIFIC NATURE OF DEFENSE IN BARK & WOOD DURING WOUNDING, INSECT & PATHOGEN ATTACK

Investigations of host-pathogen interactions presents a problem in that no suitable control process is available with which to compare the infection process. The ideal control is one in which the host response is occurring without external injurious influences.

Within a species, reddish-purple pigments in periderms of Abies amabilis, Abies grandis, Tsuga heterophylla and Thuja plicata were chemically identical at sites of host-pathogen interaction, at sites of wound healing and at non-induced, pathogen-free sites, eg. rhytidome formation. This identity suggested that a common process occurred at all these diverse sites, and

that phellem pigmentation was the end point. By use of cryofixation, a new technique for studying biochemical and physiological processes, the process was backtracked from pigmentation through necrophylactic periderm and non suberized impervious tissue formation and finally to non-functional or lost phellogen, as the common causal factor. Thus the process of phellogen restoration was occurring at all sites. Evidence shows that this is one of a few fundamental host processes involved in host-pathogen interactions, and successful interference with this process leads to susceptibility. Two other such processes, vascular cambium restoration and the formation of impermeability in wood, are examined by the author. The significance of these non-specific host processes as controls and their advantages over conventional controls in investigating biochemistry of host-pathogen interactions and quantifying the effects of external variables on resistance is discussed.

P. E. Kolattukudy, Department of Agricultural Chemistry,
Washington State University, Pullman, Washington.

LIPID POLYMERS AND ASSOCIATED PHENOLS. THEIR CHEMISTRY, BIOSYNTHESIS AND ROLE IN PATHOGENESIS

Cutin and suberin are protective polymers of higher plants. The former is an extracellular biopolyester composed of ω -hydroxyacids, dihydroxy C₁₆ acids, 18-hydroxy-9,10-epoxy C₁₈ acids, and 9,10,18-trihydroxy C₁₈ acids together with much smaller amounts of esterified phenolic acids. The latter is deposited within the cell wall in lamellar structure and is composed of phenolic materials and aliphatic components. The major aliphatic components of suberin are ω -hydroxy acids, dicarboxylic acids, very long (>C₂₀) fatty acids and fatty alcohols. The biosynthesis of most of the aliphatic components of cutin and suberin involve ω -hydroxylation. In addition hydroxylation at a specific carbon within the aliphatic chain, epoxidation of an olefinic function and subsequent hydration of the epoxide are involved in the biosynthesis of cutin acids. After such modifications the hydroxy-acyl groups are transferred to the free hydroxyl groups of the growing polymer. Biosynthesis of the aliphatic components of suberin involves ω -hydroxylase, ω -hydroxyacid dehydrogenase, ω -oxoacid dehydrogenase, and a chain elongation system. Pathogenesis involves penetration of these protective polymers. Enzymes which catalyze hydrolysis of these polyesters have been isolated from pathogens and these enzymes have been characterized. Supported by NSF grant BMS 74-09351 A02.

F. W. Herrick and H. L. Hergert, ITT Rayonier Inc., Shelton,
Wash., and New York, N.Y.

UTILIZATION OF CHEMICALS FROM WOOD: RETROSPECT AND PROSPECT

Chemicals obtainable by direct processes or degradation of wood and bark will be reviewed. These include terpenes, resin and fatty acids, lignans (condendrin and plicatic acid derivatives), bark wax, polyphenols and their polymers, wood sugars, furfural and hydroxymethylfurfural, levulinic acid, isosaccharinic acids, vanillin, catechol and related phenols, dimethyl sulfide, and lignin polymers. Success (or lack of same) in various projects will be discussed, and a prognosis for the future will be presented.

Contributed Papers, (arranged in order of presentation)

SESSION 1A: Plant Phenolics: Analysis and Identification

C.K. Wilkins and B.A. Bohm, Potany Department, University of British Columbia, Vancouver, V6T 1W5

ON THE FLAVONOIDS OF HEUCHERA MICRANTHA VAR. DIVERSIFOLIA

L. Jurd and G. Manners, Western Regional Research Center, Agricultural Research Service, Berkeley, CA.

ISOFLAVENE AND ISOFLAVAN CONSTITUENTS OF GLIRICIDIA SEPIUM

Helen M. Habermann, Department of Biological Sciences, Goucher College, Towson, Baltimore, Maryland 21204.

ALLAGOCHROME PURIFICATION AND CHARACTERIZATION

G. Johnson, J.A. Adamovics and F.R. Stermitz, Department of Chemistry, Colorado State University, Fort Collins, Colorado 80523

FREE FERULATES OF HIGHER ALCOHOLS ASSOCIATED WITH SUBERIZATION OF POTATO TUBER TISSUE

C.F. Van Sumere, M.R. Degrauw-Van Bussel and K. Vande Castele, Laboratorium voor Plantenbiochemie, Rijksuniversiteit Gent, Belgium.

NEW METHODS FOR THE QUANTITATIVE DETERMINATION OF SOME PHENOLIC COMPOUNDS IN THE LIGHT (L) AND SHADOW SIDES (S) OF PISUM SATIVUM EPICOTYLS GROWN UNDER WHITE (PHOTOTROPY) OR ORANGE LIGHT (NO PHOTOTROPY)

T. J. Watson, Jr. Department of Botany, The University of Montana, Missoula, Montana

PRELIMINARY CHEMOTAXONOMIC OBSERVATIONS IN THE PYROLOIDEAE (ERICACEAE)

S. J. Sheen, Department of Plant Pathology, University of Kentucky, Lexington, KY.

AMINO ACID COMPOSITION AND SOME PHYSICAL AND PYROLYTIC PROPERTIES OF TOBACCO BROWN PIGMENTS.

W. Majak, A. McLean and A.L. van Ryswyk, Agriculture Canada Research Station, Kamloops, British Columbia, Canada.

FLUCTUATION IN MISEROTOXIN CONCENTRATION OF TIMBER MILK VETCH ON RANGELANDS IN BRITISH COLUMBIA.

Chi-Kit Wat, Wei-Wei Wang and G.H.N. Towers, Botany Dept., University of British Columbia, Vancouver, B.C.

METHYLATED PHENOLIC ACIDS AND O-METHYLATING ENZYME IN SPECIES OF LENTINUS

SESSION 2A: Enzymology

R.K. Ibrahim and H. Grisebach, Dept. of Biol. Sci., Concordia University, Montreal, Canada and Biology. Institut II der Universität Freiburg, W. Germany.

PURIFICATION AND PROPERTIES OF UDP-GLUCOSE:CONIFERYL ALCOHOL GLUCOSYL-TRANSFERASE FROM CELL SUSPENSION CULTURES OF ROSE.

D.S. Dhillon and Stewart A. Brown, Department of Chemistry, Trent University, Peterborough, Ontario K9J 7B8

LOCALIZATION, PURIFICATION, AND CHARACTERIZATION OF DIMETHYLLALLYLPYROPHOSPHATE:UMBELLIFERONE DIMETHYLLALLYLTRANSFERASE FROM Ruta graveolens

G. Hrazdina, Cornell University, New York State Agricultural Experiment Station, Geneva, N.Y. F. Kreuzaler and H. Grisebach, University of Freiburg, Germany.

SUBSTRATE SPECIFICITY OF FLAVANONE SYNTHASE FROM CELL SUSPENSION CULTURES OF PARSLEY

Joe Mack and Eric E. Conn, Dept. of Biochemistry and Biophysics, University of California, Davis, CA 95616

INHIBITION STUDIES ON PHENYLALANINE AMMONIA LYASE FROM RHODOTORULA GLUTINUS

John R. Bowen and Tsune Kosuge, Department of Plant Pathology, University of California, Davis, CA.

PURIFICATION AND CHARACTERIZATION OF SHIKIMATE KINASE FROM SORGHUM

L.L. Creasy, S.C. Tan and T.S. Handwerker, Cornell University, Ithaca, NY.

PHENYLALANINE AMMONIA-LYASE INACTIVATING SYSTEM OF HELIANTHUS ANNUUS.

SESSION 1B: Metabolism and Biological Activity

Stafford, H.A. & M.A. Brown, Biology Dept., Reed College, Portland, Oregon. 97202.

A PHOTOCHEMICAL DIMERIZATION OF FERULIC ACID BY CHLOROPLASTS IN SORGHUM

James A. Saunders and Eric E. Conn, Dept. of Biochemistry and Biophysics; Chin Ho Lin and Ralph C. Stacking, Dept. of Botany, University of California, Davis, CA 95616.

SUBCELLULAR LOCALIZATION OF THE CYANOGENIC GLUCOSIDE (DIHURIN) OF SORGHUM BY AUTORADIOGRAPHY

Birger Lindberg Moller and Eric E. Conn, Department of Biochemistry and Biophysics, University of California, Davis, CA

N-HYDROXYTYROSINE, AN INTERMEDIATE IN THE BIOSYNTHESIS OF THE CYANOGENIC GLUCOSIDE DIHURIN BY SORGHUM MICROSOMES.

S. Prasad and B.E. Ellis Guelph-Waterloo Centre for Graduate Work in Chemistry, University of Guelph, Ontario.

IN VIVO CHARACTERIZATION OF CATECHOL RING-CLEAVAGE IN PLANT CELL CULTURES

J. Berlin and J.M. Widholm, Dept. of Agronomy, Univ. of Illinois, Urbana, Illinois, 61801.

CHARACTERIZATION OF A TOBACCO CELL LINE RESISTANT TO PFP (p-fluorophenylalanine), WHICH ACCUMULATES HIGH LEVELS OF PHENOLICS.

H. Wroblewski, A.H. Conner, and J.W. Rowe, U.S. Forest Products Laboratory, Madison, WI 53705 U.S.A.

TREATMENT OF EUROPEAN SPECIES PINUS SYLVESTRIS AND PICEA ABIES WITH PARAQUAT TO INDUCE LIGHTWOOD

William Chalmers and G.H.N. Towers Department of Botany, University of British Columbia, Vancouver, B.C.

MICROBIAL DEGRADATION OF LICHEN PHENOLIC PIGMENTS

J. Kuhnle, G. Fuller, B. Mackey and J. Corse, USDA, Agricultural Research Service, Western Regional Research Service, Berkeley, California 94710.

ANTISENESCENCE ACTIVITY OF NATURAL CYTOKININS

S.H. Wender, J.D. Hoover, and E.C. Smith, Chemistry Department, University of Oklahoma Norman, Oklahoma 73069. U.S.A.

EFFECT OF PHENOLIC COMPOUNDS ON THE ACTIVITY OF TWO ISOENZYMES OF GLUCOSE-6-PHOSPHATE DEHYDROGENASE FROM WR-132 TOBACCO SUSPENSION CULTURE

G.H.N. Towers, J. Lam, Chi-Kit Wat, G.F.Q. Chan and R.J. Bandoni. Botany Dept. and Faculty of Pharmaceutical Sciences, University of British Columbia and Chemical Institute, University of Aarhus, Denmark.

ON THE UV-MEDIATED ANTIBIOTIC ACTIVITY OF SOME ACETYLENES OF COMPOSITAE.

SESSION 2B (Room 214): Plant Pathology and Biological Activity

S.S. Martin, USDA, Agricultural Research Service, Crops Research Laboratory, Colorado State University, Fort Collins, CO.

HOST-PATHOGEN BIOCHEMICAL INTERACTION IN CERCOPORA LEAF SPOT DISEASE OF SUGARBEET.

Michio Suzuki, Research Station, Agriculture Canada, Charlottetown, Prince Edward Island.

FLUORESCENT GLYCOSIDES IN ALFALFA ROOTS INFESTED WITH SOIL-BORNE PATHOGENS

J.F. Rahe, Pestology Centre, Department of Biological Sciences, Simon Fraser University, Burnaby, British Columbia, Canada V5A 1S6

BIOSYNTHESIS OF ¹⁴C-LABELLED PHYTOALEXINS WITH HIGH SPECIFIC ACTIVITY.

M.N. Wiens and J.E. Rahe Simon Fraser University, Burnaby, B.C. Canada V5A 1S6

EVALUATION OF PHYTOALEXINS FROM BEANS AS PROTECTIVE FUNGICIDES AGAINST SOME FOLIAR PATHOGENS

Edith L. Carr, Chi-Kit Wat and G.H.N. Towers. Botany Dept., University of British Columbia, Vancouver, Canada.

AN ASSESSMENT OF THE ROLES OF FURANOCOUMARINS IN HERACLEUM LANATUM

Floj Rodriguez, G.H.N. Towers and J.C. Mitchell, Department of Botany and Division of Dermatology, University of British Columbia, Vancouver, B.C.

CHEMICAL RACES IN NORTH-SOUTH AMERICAN AND ASIAN POPULATIONS OF PARTHENIUM HYSTEROPHORUS (COMPOSITAE), AN IMPORTANT SOURCE OF WEED DERMATITIS

Creeland, University of California at Los Angeles and Berkeley, CAL.

BIOCHEMICAL SEPARATION OF ANTIGENIC COMPONENTS OF RHIZIS ALGINATE

David L. Dreyer and Gene Trousdale, Department of Chemistry, San Francisco State University, San Francisco, California

David L. Dreyer, Dept. of Chemistry, San Francisco State Univ., San Francisco, CA, F.D. Bennett, U.S. Dept. of Agriculture, Pasadena, CA, and S.C. Basa, Regional Research Laboratory, Orissa, India.

OCCURRENCE OF CUCURBITACINS IN PURSHIA TRIDENTIA (ROSACEAE)

G.D. Manners and L. Jurd, Western Regional Research Laboratory, Agricultural Research Service, United States Dept. of Agriculture, Berkeley, CA.

R. Croteau and F. Karp, Department of Agricultural Chemistry, Washington State University, Pullman, Washington 99163.

HYDROQUINONE - TERPENOID CONSTITUENTS OF CORDIA ALLIODORA

Isamu Arai, David L. Dreyer, William R. Anderson, Jr., and G. Doyle Daves, Jr., Oregon Graduate Center, Beaverton, OR.

BIOSYNTHESIS OF MONOTERPENES: PARTIAL PURIFICATION AND CHARACTERIZATION OF 1,8-CINEOLE SYNTHETASE FROM SALVIA OFFICINALIS.

G.A. Cordell, M. Ogura and N.R. Farnsworth, Department of Pharmacognosy and Pharmacology, College of Pharmacy, University of Illinois at the Medical Center, Chicago, Illinois 60612.

NMR STUDIES ON THE KARWINSKIA NEUROTOXINS

NEW ANTICANCER AGENTS FROM PLANTS

Minutes of the annual business meeting of the Phytochemical Society of North America, August 10, 1976.

The meeting was convened immediately after a luncheon generously provided by the government and people of the province of British Columbia for registrants at the annual meeting of the Society.

It was chaired by Frank Loewus, out-going president of the Society, with 29 members, including the President-Elect, the Treasurer, the Program Chairman, and the Secretary, in attendance.

1. The nominating committee, Heinz Floss, Past-President, Eric Conn, and V.C. Runeckles, presented their choice for Vice-President or President-Elect. V.C. Runeckles as spokesman for the committee put forward the name of George Waller. Nominations from the floor were then called for. Dreyer, seconded by Brown, nominated Brian Ellis and Aronoff, seconded by Towers, nominated Helen Stafford. On a motion by Brown, seconded by Towers, a vote by ballot was taken rather than by a show of hands since two of the nominees were present at the meeting. Stafford obtained the largest number of votes and will therefore serve as President-Elect for 1976-77.

2. The President asked whether Dick Mansell, who has been Treasurer for 3 years, should continue in this office. Barton, seconded by Ellis, proposed that he should, a proposal unanimously accepted.

3. At the request of the President, Charles Fuchsman repeated a request circulated in the January newsletter for information on courses in Phytochemistry given in US universities. He offered to serve as collector of such information. Eloy Rodriguez suggested that a form requesting such information could be printed in the newsletter. (see p 11)

4. re BAPA: Loewus, seconded by Towers, proposed that the Society drop the idea of joining BAPA since a) it is primarily medically oriented, b) the AIBS is not interested and c) it does not reflect the international aspect of the PSNA. No objections were raised to this proposal.

5. re the 1977 meeting: Dr. C. van Sumere from Belgium presented a brief on the joint meeting he is organizing in Ghent. The dates set are for August 30-September 3, 1977. Aronoff enquired of the possibility of changing the dates, but the problem is to fit in with the two other societies and to have the reservations at the university. However, a slight shift, eg. to September 1-7 might be possible, and will be reported on later. Van Sumere read a list of 20 speakers with lecture titles and said that there would also be 2-3 concurrent sessions of short communications and poster sessions. He emphasized the financial problems, especially travel costs for speakers. Brown raised the question of costs and commitments on the part of the Society. The Treasurer reported that a \$1000 advance had already been made for organizational expenses and that Heinz Floss had promised \$3000 at the organizational meeting in November last. He pointed out that the Society will give the royalty rights to the

6. re the 1978 meeting: This will be a joint meeting also and George Waller, E. Caspi, and E. Conn along with the incoming president, Jerry McClure comprise the organizing committee. The organizers will meet with representatives of the American Society of Pharmacognosy at Purdue in October to iron out problems of publishing the symposium. The President requested the membership to condone payment of partial costs of this organizational meeting which one member can attend as an invited, expenses paid, seminar speaker.

7. re the 1979 meeting: The chairman presented the invitation from DeKalb and asked that it be accepted. Objections to a second consecutive meeting in the mid-west were raised although the vote was for acceptance. Brown suggested postponing final acceptance for a year. Loewus argued that the problem of shortage of lead time and a lack of future planning has been a major drawback in past meetings. Fuchsman, seconded by Stafford, moved that acceptance be postponed for 60 days to permit time for further invitations. This motion was amended to state that the executive should make the choice, if any were necessary, and further amended by motion of Mansell, seconded by Brown, to state that the members express their views by a mail ballot. Both amendments and the motion were passed.

8. re the 1980 meeting: The Society has an invitation from Washington State University in Pullman to hold a joint meeting there with the American Society of Plant Physiologists. There was a general willingness to accept this invitation, although Wender suggested that the PSNA meeting time overlap, rather than coincide exactly with, that of the ASPP.

9. re the Editor-in Chief: The President learned only immediately prior to the meeting that Jim Wallace was en route to New Zealand where he would be for at least a year and possibly longer. At the Executive Committee meeting, it was decided that it would not be practical for him to handle all the problems of editing the symposium volume from that distance. Thus a new Editor-in Chief is being sought.

10. Change in the By-Laws: The motion to amend Article IX, Section 1 of the Society By-Laws to "The membership mailing list of the Society will be released to private or commercial interests only when in the judgement of the Executive Committee such a distribution will be to the benefit of the Society" was put forward by the Secretary. Some discussion ensued examining the historical reasons for its inclusion in the first place and posing questions of price and tax implications. The Treasurer stated that the going price was 9-11¢ per name, i.e. about \$25, but that sales would not be solicited and mailing labels would be sent only in response to requests such as those received recently from Freeman and the NAS. Stafford, seconded by Ellis, moved that the motion be accepted and a show of hands indicated general agreement with the motion.

11. Treasurer's report: Mansell distributed the report reproduced below. The book order forms incorporated in recent issues of the newsletter have elicited a minor flood of orders, with resultant beneficial effects on royalties. The Treasurer will have a membership list ready for distribution by about November.

12. By this time the 3.00 p.m. deadline for resumption of the contributed sessions forced a rapid conclusion. The meeting was adjourned following formal introduction of the new President and the usual round of expressions of gratitude to the retiring President, to the meeting organizers, and to the host university.

Treasurer's..... Interim Financial Report

1 January 1976-31 July 1976

Receipts	Expenditures
Membership dues.....\$2,134.78	Secretary expenses.....\$ 150.00
Royalties, Academic Press... <u>2,364.05</u>	1975 Symposium..... 586.30
\$4,498.83	Vol. 10 expenses..... 350.00
	editor, typing..... 305.00
Assets of 1 January	T.C. T50-BAPA Meeting... 9.00
Checking account.....\$ 302.56	Vol. 10 registrants..... 643.20
Savings account..... <u>6,721.40</u>	1976 Symposium..... <u>1,009.00</u>
7,023.96	\$3,045.50
	31 July 1976
	Checking account.....\$2,592.88
	Savings account..... <u>5,884.41</u>
	<u>\$8,477.29</u>
<u>Summary</u>	
Receipts..... \$ 4,498.83	
Expenditures.... <u>3,045.50</u>	
Net Gain: \$ 1,453.33	

Notes: 1976

1) New Members	15
2) Yet to Pay	30
3) Members C ropped or Deaths	33
4) Members Paid	244

Total Membership:

U.S.A.	235
Canada	34
Other	<u>17</u>
	286

Orders for symposium volumes. The Treasurer has offered to handle orders for the volumes of Recent Advances in Phytochemistry, at least to the extent of forwarding your order to the publisher(s), but leaving the details of billing etc. to them. If you are interested, tear off the form below and send it to: Dr. R.L. Mansell, Dept. of Biology, Univ. of S. Florida, Tampa FL 33620.

Please enter my order for the volumes checked off below:

Volume #	Publisher	Price*	Volume #	Publisher	Price*
--- 10	Plenum		--- 8	Academic	\$22.50
--- 9	Plenum	\$27.50	--- 7	Academic	\$18.50
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Recent Advances in Phytochemistry:

Volume IX- edited by V.C. Runeckles, 1975, 309 pages, \$27.50(\$16.50), based on the 1974 symposium "Phytochemistry as Related to Disease and Medicine". (Plenum Press).

Contents:- 1- Present knowledge of hallucinogenically used plants: a tabular study, R.E. Schultes. 29- Recent advances in the chemistry and metabolism of cannabinoids, M.E. Wall. 63- On the carcinogenicity of marijuana smoke, D. Hoffman, K.D. Brunnemann, G.B. Gori & E.L. Wynder. 83- Crop plant chemistry and folk medicine, J.A. Duke. 119- Contact allergy from plants, J.C. Mitchell. 139- Teratogenic constituents of potatoes, J. Kuć. 151- Plant neurotoxins (Lathyrogens and cyanogens), C. Ressler. 167- Advances in the chemistry of tumor-inhibitory natural products, S.M. Kupchan. 189- Laboratory models for the biogenesis of indole alkaloids, A.I. Scott. 243- Antimicrobial agents from higher plants, L.A. Mitscher. 283- Structure of the insect antifeedant Azadirachtin, K. Nakanishi. 299- Index.

Volume X- edited by J.W. Wallace, Jr. and R.L. Mansell, 1976, 425 pages, , based on the 1975 symposium "Biochemical Interaction Between Plants and Insects". (Plenum Press).

Contents:- 1- Plant apparency and chemical defense, P. Feeny. 41- Insect-plant interactions: nutrition and metabolism, S.D. Beck and J.C. Reese. 93- Milkweed cardenolides and their comparative processing by monarch butterflies (Danaus plexippus L.), C.N. Roeske, J.N. Seiber, L.P. Brower, and C.M. Moffitt. 168- A general theory of plant antiherbivore chemistry, D.F. Rhoades and R.G. Cates. 214- Biochemical parallelisms of repellants and attractants in higher plants and arthropods, E. Rodriguez and D.A. Levin. 271- Cotton plant and insect constituents that control boll weevil behavior and development, P.A. Hedin, A.C. Thompson, and R.A. Gueldner. 351- Chemical messengers in insects and plants, L.B. Hendry, J.G. Kostelc, D.N. Hindenlang, J.K. Wichmann, C.J. Fix, and S.H. Korzenowski. 385- Secondary plant substances as materials for chemical high quality breeding in higher plants, K. Mothes. 406- Index.

Survey of Phytochemistry Instruction in the U.S., Canada, and Mexico:

Dr. C.H. Fuchsman has provided the following questionnaire.
If your institution offers courses in phytochemistry, please take
a few moments to fill in the blank spaces and return the form to:

Dr. C. H. Fuchsman, Director
Center for Environmental Studies
Bemidji State University
Bemidji, MN 56601
USA

Name and mailing address of respondent _____

Name of institution _____

Are courses with substantial phytochemical content taught at your institution
at the graduate level? _____ at the undergraduate level? _____

If the answer to either of the above questions is yes, please supply the
following information with respect to each applicable course. (Catalogue
description, syllabi, course outlines and examination papers would also be
welcomed.)

1. Title of course _____
2. Undergraduate? _____ Graduate? _____
3. Prerequisites for enrolment _____
4. Number of hours per week of lecture _____;
laboratory _____
5. Recommended textbooks _____

6. Recommended reference books _____

7. Most recent enrolment _____ (no. of students)
8. No. of times course was offered in last five years _____
Estimated frequency of future offerings _____
9. If this course is required in a "major" or "specialization" program,
please identify the course of study for which it is a requirement.

10. Identify those of the following elements which receive significant
emphasis in the course.
 - _____ Techniques of isolation of natural products
 - _____ Metabolic pathways for biosynthesis and degradation
 - _____ Industrial (economic) significance of plant organic
compounds
 - _____ Medico-pharmaceutical significance of plant organic
compounds
 - _____ Ecological (environmental) significance of plant organic
compounds
 - _____ Chemical taxonomy of plants
 - _____ In vitro synthesis and proof of structure of plant
compounds
 - _____ Familiarity with current phytochemical literature
 - _____ Field collection of plant samples

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Miscellany

Gestur Johnson, a life member of the Society, retired July 1, 1975 as professor in the Chemistry and Food Science and Nutrition Departments, Colorado State University, Fort Collins. He still continues part-time work in the laboratory, however, studying 1) the stimulation of wound healing in potatoes by a fraction from Douglas fir bark and 2) the carotenoids in alfalfa (in cooperation with agricultural engineers) with the practical aim of controlling their levels in chicken feed.

Two symposia held during the XIIth International Botanical Congress are now available in book form from Springer-Verlag as part of the series "Plant Systematics and Evolution". They are: 1) Vol. 125 #3 Systematic, Evolution, and Taxonomic Categories, edited by F. Ehrendorfer, 72 pages, \$18.10, and 2) Vol. 126 #1, Evolution of Centrospermous Families, edited by T.J. Mabry and H.D. Behnke, 110 pages, \$27.60.

* [Dr. G.A. Rosenthal, School of Biological Sciences, U. of Kentucky, Lexington, KY 40506, is organizing a symposium entitled "Herbivore-Secondary Plant Metabolite Interactions" which will be presented in the morning of February 21, 1977 at the Denver Hilton Hotel as part of the 1977 AAAS national meeting (February 20-25, 1977 in Denver, Colorado). It will be sponsored by the AAAS, Section G and the ASPP.

Two reminders:

1) Dr. J.W. Rowe is chairman of a symposium on tall oil, oleoresins and naval stores-derived products to be held as part of the ACS national meeting, March 20-25, 1977 in New Orleans. A call for papers was announced in the January newsletter, deadline October 1, 1976. Send to: Forest Products Laboratory, Forest Service, U.S.D.A., P.O. Box 5130, Madison WI 53705.

2) Dr. G. Waller, Department of Biochemistry, Oklahoma State University Stillwater, OK 74074, is organizing a NSF travel grant application for U.S. residents planning to attend the Ghent meeting next September. Applicants must contribute an oral or poster presentation. Deadline for submission of title and abstract is October 1, 1976.

If you have news, views, announcements, comments, suggestions or whatever, send them along to the Secretary for inclusion in the next issue of the Newsletter (early January). This issue will include the list of symposium speakers for the Ghent meeting and complete information on the meeting itself.

Constance Nozzolillo
Sect 4 PSA/A

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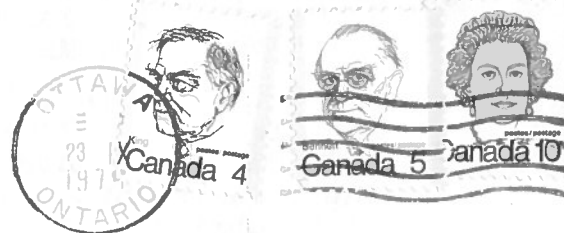
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