

Meetings and Societies

Clinical Chemistry

Approximately 700 clinical chemists, representing 34 countries, attended the International Congress of Clinical Chemistry held in New York, 9-14 Sept. 1956. The congress was held under the auspices of the American Association of Clinical Chemists, by authorization of the International Federation of Clinical Chemistry and the Commission on Clinical Chemistry of the International Union of Pure and Applied Chemistry.

Through the good offices of the National Science Foundation and 14 members of the American chemical industry, the American Association of Clinical Chemists was able to invite and partially subsidize the travel expenses of 30 foreign scientists. Many of these foreign scientists participated in the five symposia. In addition to these invited guests, there were official representatives of the various foreign scientific societies and of both foreign and United States government agencies.

The 17 scientific sessions at which 120 contributed papers were presented, were designed around the five symposia, on "Electrolytes," "Porphyrins," "Standardization," "Enzymes," and "Proteins." The symposia and contributed papers contained a wealth of material; limited space prohibits detailed discussion of all of it here. Abstracts of the scientific papers appeared in *Clinical Chemistry* (August and December 1956). The American Association of Clinical Chemists has arranged for publication of all 20 of the invited papers which comprised the symposia, as a supplement to volume 3 of *Clinical Chemistry*, the official journal of the association.

Harry Sobotka, chairman of the Scientific Program Committee, initiated the first of the scientific sessions by introducing Donald D. Van Slyke (Brookhaven National Laboratory), who opened the symposium on blood electrolytes by paying tribute to a pioneer of the science in "Appreciation of the contribution to clinical chemistry by the late Dr. John P. Peters." His talk was followed by discussions of the blood electrolyte problem by C. P. Stewart (University of Edinburgh) and R. Margaria (Univer-

sity of Milan). J. R. Elkinton (University of Pennsylvania) discussed the role of magnesium in body fluids.

The session entitled "Serum proteins in hepatic diseases" featured eight papers on serum flocculation phenomena in both normal and hepatic disease states. E. M. Greenspan (Mt. Sinai Hospital, New York) showed that the fractional assay of the serum globulins may be helpful in the diagnosis of medical, as distinguished from surgical, jaundice.

M. H. Power (Mayo Clinic) presented a rapid procedure for the turbidimetric estimation of potassium in biologic fluids, in which tetraphenylboron is used as a reagent. This procedure is suited for easy detection of abnormal blood potassium levels when a flame photometer is not readily available. In "Electrolyte disturbances in acute uremia," J. Hamburger (Hôpital Necker, Paris), presented data on 60 anuric patients both before and after dialysis with an artificial kidney. His excellent presentation was followed by talks by R. Neher (Basle, Switzerland) and B. Josephsen (St. Erik's Hospital, Stockholm), who discussed "Blood electrolytes under the influence of cortical hormones," and "Fluid compartments and the excretion of electrolytes," respectively.

A number of papers discussed the use of enzymatic tests for the detection of glucose in urine. The investigators utilized the enzyme system, glucose oxidase and horse-radish peroxidase in the presence of *o*-toluidine. The presence of glucose is detected by the formation of a blue color when paper strips, impregnated with this enzyme system, are dipped in a solution containing glucose. The data showed that the test is specific for glucose, with a sensitivity of less than 0.1 percent.

The session on instrumentation featured the presentation by L. T. Skeggs (Western Reserve University), who presented his development of an instrument for automatic colorimetric analysis. This has a recording flow-cell colorimeter, a continuous dialyzer, and an automatic continuous arrangement for addition of reagents. It can run 20 to 30 analyses per hour and has been adopted for the determination of blood urea, calcium, and glucose. The analytic results com-

pare favorably with those obtained by conventional methods.

D. E. Duggan (National Heart Institute, Bethesda, Md.) presented "Spectrophotofluorometry, a new tool for analysis at the submicrogram level." Other papers presented the adaptation of routine macro procedures to micro-analysis.

R. Schmid (National Institutes of Health, Bethesda, Md.) discussed data showing that bilirubin glucuronide is the compound that reacts directly with diazotized sulfanilic acid. The nonconjugated bilirubin, owing to its insolubility in water below a pH of 8, will react with the diazotized reagent only after the addition of alcohol. T. H. J. Huisman (Groningen, the Netherlands) discussed the properties, estimation methods, hematologic features, and certain aspects of abnormal human hemoglobins.

Contributed papers on enzymes presented data on tributyrinase, cholinesterase, and aldolase activity in blood. Increases of serum acid phosphatase levels in cases of Gaucher's and Niemann-Pick disease were reported. The clinical significance of alterations in the serum transaminases and simplified procedures for the determination of this activity as a test for myocardial infarction and hepatic damage were presented.

The symposium on "Standardization" featured talks by I. D. P. Wootton (University of London), D. Seligson (University of Pennsylvania), M. Guillot (University of Paris) and M. C. Sanz (University Hospital, Geneva) and covered the problem of standardization of clinical chemical procedures on an international scale. The resolution of the standardization problem through the use of a "standard serum" was discussed as well as new basic ultramicro equipment covering all phases, from specimen collection to precise automatic reagent delivery.

An evaluation of trends in electrophoresis instrumentation was presented by A. Henley (National Instrument Laboratories, Riverdale, Md.). Henley pointed out the many contributions made by the late Kurt G. Stern to the development of compact, practical, moving-boundary electrophoretic apparatus. M. Reiner (D.C. General Hospital, Washington) spoke on the personal character of Stern, emphasizing especially the infectious enthusiasm for science which he imparted to his graduate students. N. F. MacLagan (Westminster Medical School, London) discussed the value of mucoprotein estimations in clinical chemistry. He pointed out that, in general, serum mucoprotein estimations are preferred to those on urine. The results obtained in cancer, inflammations, and in liver and collagen diseases were reviewed. The relationship

between the mucoprotein levels and flocculation tests and liver function were also discussed.

Z. Stary (Istanbul University) developed further the role of mucoproteins in clinical chemistry. He discussed the large number of pathologic conditions and the accompanying changes which are observed in the level of the protein-bound carbohydrates. The last paper of the symposium was presented by J. C. M. Verschure (State University, Utrecht, the Netherlands). He spoke on the significance of lipoproteins in clinical chemistry and emphasized the role of lipid diagrams obtained by paper electrophoresis. Verschure summarized and discussed, from a critical standpoint, the rich new literature in this field and pointed out some of the limitations and possibilities of the technique for the clinical laboratory.

The session on "Lipoid analysis and lipoproteins" presented new methodology for the study of blood cholesterol (R. Jonnard, Paterson General Hospital, New Jersey) as well as for fats and fatty acids. H. P. Schwarz (Philadelphia General Hospital) discussed data on infrared analysis of tissue lipids, serum glycoproteins, lipoproteins, and lipoprotein constituents.

The diabetogenic action of xanthurenic acid was reported by Y. Katake (Wakayama Medical College, Japan) in two papers presented at the symposium on "Enzymes." This session also featured a discussion of B-complex vitamins by N. Siliprandi (University of Camerino, Italy), one on products of the citric acid cycle, by Jo Nordmann (Paris), and a paper entitled "Significance of enzymes in clinical chemistry," by E. J. King (Postgraduate Medical School, London).

Newer methodology for the study of inorganic blood constituents and their relation to health and disease was discussed in many contributed papers in the sessions devoted to this subject. Studies of improved volumetric and colorimetric procedures for calcium, as well as studies on calcifying mechanisms and bone-bank preservation, were discussed. I. Sunshine (Cleveland, Ohio) presented data showing the value of barbiturate analysis for the differential diagnosis of a comatose patient. Micro procedures for the determination of ammonia in biologic fluids were given by Seligson, and the problem of specificity in the determination of urinary catecholamines was discussed by W. B. Mason (University of Rochester).

E. Heftmann (National Institutes of Health) presented his method for the determination of individual adrenocortical steroids in urine by use of silicic acid columns and assay by ultraviolet absorption and tetrazolium blue reduc-

tion. R. E. Peterson (National Institutes of Health) reported that his group had developed a method of assay for plasma corticosterone based on the principle of isotope dilution, in which corticosterone-4-C¹⁴ was used. Data from a variety of clinical syndromes which suggest that the urinary potassium/sodium ratio parallels endogenous aldosterone activity were discussed by C. L. Fox, Jr. (New York Medical College).

The hard-working committees appointed by the AACC and the host, the Metropolitan-New York Section, were responsible for the success of the congress. The scientific program, exhibits, and social events scheduled by Albert E. Sobel, congress chairman, John G. Reinhold, congress secretary, and Sobotka, scientific program chairman, and by members of the exhibit and hospitality committees made the congress an outstanding scientific event.

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American Nuclear Society

The American Nuclear Society, which is composed of scientists and engineers interested in nuclear science and technology, held its first winter meeting in Washington, D.C., 10-12 Dec. 1956. Most of the 22 sessions dealt rather directly with reactor problems, including those of theory, kinetics, physics, engineering, and plant design. Related sessions were on "Health physics and radiobiology," "Chemistry and metallurgy," and "Experimental techniques and instrumentation." These sessions were of great interest to those active in the nuclear-power area. However, a comprehensive summary is beyond the scope of this report.

One meeting highlight was a session of invited papers on "Thermonuclear reactions," chaired by T. H. Johnson (Atomic Energy Commission). Speakers included R. F. Post and Stirling Colgate (Livermore), J. Tuck (Los Alamos), W. H. Bostick (Stevens Institute of Technology and Livermore), E. Friedman (Princeton University), and A. C. Kolb (U.S. Naval Research Laboratory). The reason for the great interest in trying to obtain controlled thermonuclear power was outlined by Post as follows. Past history shows that our power requirements double every 10 years. If this continues, a century from now we will use energy at 1000 times the present rate. Our currently known reserves of oil would furnish this energy for only 2 months, our coal for 3 years, and our fissionable material for 25 years, but the energy available in the deuterium

in the oceans of the world would furnish this power for 1 million years. One obtained the impression from the session that controlled thermonuclear power would eventually be obtained but that a great deal of scientific investigation would be required before we learn how to heat the thermonuclear fuel to the required temperature (about 100 million degrees Kelvin) and how to hold it at that temperature long enough to get useful thermonuclear power. However, a great deal will be learned, in the process, about high-temperature physics and technology, which will be useful in many areas outside that of thermonuclear power.

Lauriston S. Taylor (National Bureau of Standards) gave a luncheon address titled "Current situation with regard to permissible radiation exposure levels." He reviewed, in considerable detail, the current problem, referring to the work of the National Committee on Radiation Protection and the International Commission on Radiation Protection. It is likely, he said, that the permissible levels of occupational radiation-exposure in industry will be reduced by a factor of 3 in the not too distant future. The chief motivating consideration is the fact that a larger fraction of the population will be exposed to radiation in their occupations; thus, a lower per capita exposure is advisable.

The chief banquet speaker was Lewis L. Strauss, chairman of the Atomic Energy Commission, who discussed a proposal, subsequently adopted by the commission, for a third round of power demonstration reactors. The program will not be limited with regard to type of reactor but lays stress on proposals to build a large, natural-uranium-fueled and heavy-water-moderated reactor and a large fluid-fuel reactor system.

The highlight of the session on experimental reactor kinetics was the four-paper presentation describing the work done by Phillips Petroleum Corporation in investigating the stability of heterogeneous reactor cores. It was reported that such a reactor usually becomes unstable when 1.5 to 2 percent excess reactivity is held in steam voids in the core—a phenomenon that is not at present understood. Motion pictures were shown of the unstable behavior of such a core.

In conjunction with the meeting, approximately 400 American Nuclear Society members took advantage of the arranged tours to visit a recently completed research reactor and other selected facilities at the U.S. Naval Research Laboratory. The meeting was very well attended, with a total of more than 1000 registrants.

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Washington, D.C.*

Pest-Control Chemicals in Plants

The National Academy of Sciences-National Research Council has approved the holding in October 1957 of an international conference on the fundamental processes of plant metabolism as related to the systemic action of pest-control chemicals, which include antibiotics, insecticides, fungicides, and weed-control chemicals. The conference will be patterned after the first International Conference on Use of Antibiotics in Agriculture that was held under similar auspices in October 1955. The program will include: discussion of the mode of action of antibiotics and other systemics on insects, plant diseases, and plant-growth processes; the genetic and structural aspects of plant reactions to systemic chemicals; the mechanisms of absorption and translocation as related to systemic chemical behavior; and the practical applications and limitations of systemic chemicals.

Approximately 40 American and 20 foreign scientists from the fields of plant physiology, pathology, and morphology, biochemistry, entomology, and so forth, may be invited to participate in the program. The conference will be open to all interested scientists from industry, government, and private research organizations.

If sufficient funds are assured, the conference will be held in Washington, D.C., under the auspices of the Agricultural Board-Agricultural Research Institute of the NAS-NRC Division of Biology and Agriculture and in cooperation with the U.S. Department of Agriculture. The tentative dates are 16-18 Oct. Further information may be obtained from the NAS-NRC Division of Biology and Agriculture, 2101 Constitution Ave., Washington 25, D.C.

Structure of Electrolytes

On 13-15 May the Theoretical Division of the Electrochemical Society, in conjunction with the National Science Foundation, will sponsor a symposium on the structure of electrolytic solutions at the spring meeting of the Electrochemical Society in Washington, D.C. Thirty-six papers will be presented at the 3-day symposium on all phases of fundamental studies of electrolytes. Included among the participants are 12 invited speakers from abroad.

The principal speaker at the symposium luncheon will be Peter Debye, physicist, Raytheon Manufacturing Company. General chairman for the symposium is Walter Hamer of the National Bureau of Standards. Further information may be obtained by writing to the Electrochemical Society, 216 W. 102 St., New York, N.Y.

Physics Colloquium

The 19th annual Colloquium of College Physicists will take place at the State University of Iowa, 12-15 June. The program will consist of lectures on contemporary physics by well-known physicists and round-table discussions on the teaching of physics and current problems. One evening will be devoted to an exhibit of recent publications and of original demonstration equipment and other teaching devices.

Four associated lectures will be given by R. P. Feynman of the California Institute of Technology. There will be no registration fee. For further information write to J. A. Van Allen, Department of Physics, State University of Iowa, Iowa City, Ia.

Equipment Exhibit and Symposium

The seventh annual Research Equipment Exhibit and Symposium, sponsored by research equipment manufacturers and local scientific groups, will be held 13-16 May at the National Institutes of Health, Bethesda, Md. This year's display will include the latest in electronic, optical, radiation, and surgical equipment. One hundred manufacturers will participate. An invitation to attend is extended to technical and professional people who wish an opportunity to view new research instrumentation and to exchange information with the manufacturers' technical representatives accompanying the equipment.

The symposium that is to be held concurrently with the exhibit will offer such topics as "Automation in the laboratory," "Mass spectroscopy," "Nuclear magnetic resonance and paramagnetic resonance," and "Tissue culture and its significance in bacteriology and virology." Rounding out the 4-day program will be daily motion pictures on selected scientific subjects and tours of NIH buildings and grounds. Last year's exhibit attracted approximately 5000 visitors.

Work and the Heart

The first Wisconsin Conference on Work and the Heart will be sponsored jointly by the Marquette University School of Medicine and the Wisconsin Heart Association, 15-18 May. Elston L. Belknap, director of the department of occupational and environmental medicine at Marquette is chairman of the conference, which will have the support of the American Heart Association, the National Heart Institute, and the Industrial Health Council of the American Medical Association. Publication of the proceedings is planned.

The conference will be divided into five concurrent panels on basic physiology, clinical physiology, pathology, work classification, and workmen's compensation. In each of the panels 10 to 12 participants will present a 10-minute summary of formal papers submitted by them in advance and distributed in advance among the other panelists. Following each summary will be a group discussion of the presentation. Reports from the various panels then will be presented to the full conference.

Panel moderators will be Maurice Visscher, professor of physiology at the University of Minnesota School of Medicine, basic physiology panel; Howard B. Burchell of the Mayo Clinic, Rochester, Minn., clinical physiology panel; Jesse Edwards of the Mayo Clinic pathology department, pathology panel; Leonard Goldwater, professor of occupational medicine at the Columbia University School of Public Health, work classification panel; and Rodney Beard, professor of public health and preventive medicine at the Stanford University School of Medicine, the workmen's compensation panel.

Foreign participants will include H. H. Weber of Heidelberg, Germany; Matti J. Karonen of Helsinki, Finland; A. Morgan Jones of Cheshire, England, and Gunnar Birock of Malmo, Sweden.

International Symposium on Gas Chromatography

The Analysis Instrumentation Committee of the Instrument Society of America has announced that it will hold its first 3-day International Symposium on Gas Chromatography at the Kellogg Center for Continuing Education in East Lansing, Mich., 28-30 Aug. The symposium is to be directed toward discussion of theoretical and practical advances in the field of gas chromatography as it applies to both laboratory analysis and industrial process control.

Each session will consist of a 1-hour paper on a specific phase of gas chromatography, presented by a U.S. or European authority, followed by related 10- to 15-minute contributed papers. The object of the contributed papers is to present data and theories representing the most recent developments in this important new field.

An unusual feature of the conference is the program itself, which purposely includes both active thought-stimulating sessions and relaxed recreational or leisure periods. The goal is to insure maximum interchange of information between the registrants. This is to be accomplished by conducting technical sessions from 8:30 A.M. to noon, and 7:30 to 10:30 P.M., with afternoons left open for discussion groups or recreational activity.

Full use of the Michigan State University recreational facilities, including golf course, tennis courts, and swimming pool, will be available to the registrants.

Attendance is being limited to the capacity of the Kellogg Center. The registration fee is \$20. Pre-registration is required to accommodate representatives from as many industrial and academic fields as possible. Additional information and preregistration request forms may be obtained by writing Henry J. Noebels, General Chairman, IGC Symposium, Instrument Society of America, 313 6th Ave., Pittsburgh, Pa. Contributed papers relating to specific major or minor advances in gas chromatography are now being solicited by the program chairman of the symposium, Vincent J. Coates, Perkin-Elmer Corporation, Norwalk, Conn.

Society Elections

■ National Council of Teachers of Mathematics: pres., Howard F. Fehr, Columbia University; past pres., Marie S. Wilcox; exec. sec., M. H. Ahrendt, 1201 Sixteenth St., NW, Washington 6, D.C.; rec. sec., Houston T. Karnes, Louisiana State University. The vice presidents are Francis G. Lankford, Jr., Milton W. Beckmann, Donovan A. Johnson, and Laura K. Eads.

■ American Nature Study Society: pres., Richard Weaver, University of Michigan; v. pres., H. Seymour Fowler, State Teachers College, Cedar Falls, Ia.; sec., Helen B. Ross, State Teachers College, Fitchburg, Mass.; treas., Howard Weaver, University of Illinois. Representative to the AAAS Council is E. Lawrence Palmer.

■ Society of Vertebrate Paleontology: pres., J. LeRoy Kay, Carnegie Museum; sec.-treas., Joseph T. Gregory, Peabody Museum, Yale University.

■ Western Society of Naturalists: pres., William M. Hiesey, Carnegie Institute of Washington; v. pres., Tracy I. Storer, University of California at Davis; treas., Marion Ownbey, State College of Washington; sec., John P. Harville, San Jose State College. Representatives to the AAAS Council are William M. Hiesey and Tracy I. Storer.

■ Society of Economic Paleontologists and Mineralogists: pres., Richard V. Hollingsworth, Paleontological Laboratory; past pres., Robert R. Shrock, Massachusetts Institute of Technology; v. pres., Stuart A. Levinson, Humble Oil and Refining Company; sec.-treas., Samuel P. Ellison, Jr., University of Texas. Representatives to the AAAS Council are Verner Jones and George Wilson.

Forthcoming Events

May

1-2. Image Formation and Measurement with Electronic Techniques, symp., Boston, Mass. (F. Brech, 26 Farwell St., Newtonville, Mass.)

1-3. Electronic Components Conf., Chicago, Ill. (R. M. Soria, 1830 S. 54 Ave., Chicago 50.)

1-3. Society for Experimental Stress Analysis, spring, Boston, Mass. (W. M. Murray, SESA, P.O. Box 168, Cambridge 39, Mass.)

2-3. Basic Problems of Biological Aging, internatl. conf. of AIBS, Gatlinburg, Tenn. (H. T. Cox, AIBS, 2000 P St., NW, Washington 6.)

2-4. American Philosophical Assoc., annual, Chicago, Ill. (W. H. Hay, Bascom Hall, Univ. of Wisconsin, Madison 6.)

2-4. Animal Disease and Human Health Conf., New York, N.Y. (Mrs. E. T. Miner, New York Acad. of Sciences, 2 E. 63 St., New York 21.)

2-4. Illinois State Acad. of Science, annual, Normal. (R. A. Evers, Illinois Natural History Survey, Urbana.)

2-4. Kansas Acad. of Science, annual, Manhattan. (C. T. Rogerson, Dept. of Botany, Kansas State College, Manhattan.)

2-4. Midwestern Psychological Assoc., annual, Chicago, Ill. (D. W. Fiske, Dept. of Psychol., Univ. of Chicago, Chicago.)

2-5. Society for American Archaeology, annual, Madison, Wis. (D. A. Baerreis, Dept. of Sociology and Anthropology, Univ. of Wisconsin, Madison 6.)

3. Engineers and Architects Conf., 4th annual, Columbus, Ohio. (G. B. Carson, College of Engineering, Ohio State Univ., Columbus 10.)

3-4. Minnesota Acad. of Science, Rochester. (B. O. Krogstad, Univ. of Minnesota, Duluth 5B.)

3-4. North Carolina Acad. of Science, annual, Winston-Salem. (J. A. Yarbrough, Meredith College, Raleigh, N.C.)

3-4. North Dakota Acad. of Science,

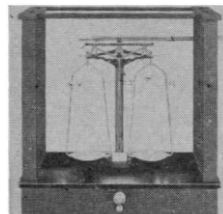
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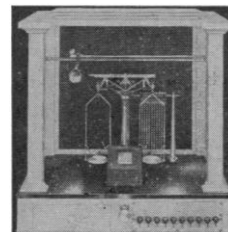
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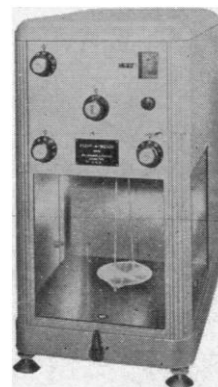
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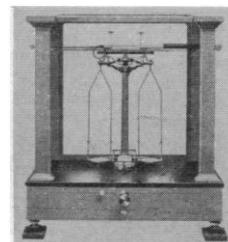
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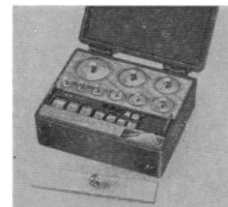
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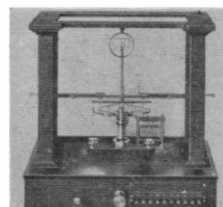
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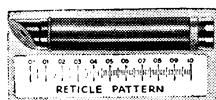
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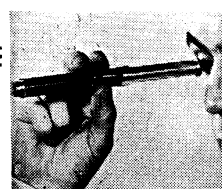
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annual, Grand Forks. (B. G. Gustafson, Chemistry Dept., Univ. of North Dakota, Grand Forks.)

3-9. Food Additives, 3rd symposium, Como, Italy. (International Bureau of Analytical Chemistry of Human and Animal Food, 18, avenue de Villars, Paris 73, France.)

4-5. American Psychosomatic Soc., 14th annual, Atlantic City, N.J. (I. A. Mirsky, APS, 551 Madison Ave., New York 22.)

4-5. Population Assoc. of America, annual, Philadelphia, Pa. (D. O. Price, Inst. for Research in Social Science, Univ. of North Carolina, Chapel Hill.)

4-7. American Assoc. for Thoracic Surgery, Chicago, Ill. (H. T. Langston, 600 S. Kingshighway, St. Louis 10, Mo.)

5-7. American Soc. for Clinical Investigation, Atlantic City, N.J. (W. H. Wheat, Jr., Steven K. Herlitz, Inc., 280 Madison Ave., New York 16.)

5-9. American Ceramic Soc., 59th annual, Dallas, Tex. (C. S. Pearce, ACS, 4055 N. High St., Columbus 14, Ohio.)

5-10. International Cong. of Otolaryngology, 6th, Washington, D.C. (P. H. Holinger, 700 N. Michigan Ave., Chicago.)

6-8. Institute on Lake Superior Geology, 3rd annual, East Lansing, Mich. (J. Zinn, Dept. of Geology, Michigan State Univ., East Lansing.)

6-9. American Trudeau Soc., 52nd annual, Kansas City, Mo. (National Tuberculosis Assoc., 1790 Broadway, New York 19.)

6-9. American Urological Assoc., Pittsburgh, Pa. (W. P. Didusch, 1120 N. Charles St., Baltimore 1, Md.)

7. International Hydrographic Conf., 7th, Monte Carlo, Monaco. (International Hydrographic Bureau, Quai des Etats-Unis, Monte Carlo.)

7-24. World Health Assembly, 10th, Geneva, Switzerland. (World Health Organization, Palais des Nations, Geneva.)

8-9. European Federation of Chemical Engineering, 12th, Amsterdam, Netherlands. (Federation, Frankfurt/Main, 7, Germany.)

8-11. American Astronomical Soc., Cambridge, Mass. (J. A. Hynek, Smithsonian Astrophysical Observatory, 60 Garden St., Cambridge 38.)

8-11. American Helicopter Soc., 13th annual, Washington, D.C. (H. M. Lounsbury, AHS, 2 E. 64 St., New York 21.)

9. Dietary Essential Fatty Acids, Assoc. of Vitamin Chemists, Chicago, Ill. (M. Freed, Dawe's Laboratories, Inc., 4800 S. Richmond St., Chicago 32.)

9-10. Microwave Ferrites and Related Devices and Their Applications, New York, N.Y. (S. Weisbaum, Bell Telephone Laboratories, Murray Hill, N.J.)

9-10. Operations Research Soc. of America, 5th annual, Philadelphia, Pa. (M. L. Ernst, P.O. Box 2176, Potomac Sta., Alexandria, Va.)

9-11. Drugs in Psychotherapy, internat. symp., Milan, Italy. (Secretary, Pharmacology Inst., Via Andrea del Sarto 21, Milan.)

9-11. Virginia Acad. of Science, Old Point Comfort. (F. F. Smith, Box 1420, Richmond, Va.)

9-12. American Psychoanalytic Assoc., Chicago, Ill. (J. N. McVeigh, APA, 36 W. 44 St., New York 36.)

10-11. Indiana Acad. of Science, Turkey Run State Park, Ind. (H. Crull, Dept. of Mathematics, Butler Univ., Indianapolis 7.)

10-11. Vocational Training and Rehabilitation of the Mentally and Physically Handicapped, Woods Schools Conf., Chicago, Ill. (J. M. MacDonald, Woods Schools, Langhorne, Pa.)

12-13. International Soc. of Bronchoesophagology, cong., Philadelphia, Pa. (C. L. Jackson, 1901 Walnut St., Philadelphia 3.)

12-16. Electrochemical Soc., Washington, D.C. (H. B. Linford, 216 W. 102 St., New York 25.)

12-16. Institute of Food Technologists, annual, Pittsburgh, Pa. (C. S. Lawrence, IFT, 176 West Adams St., Chicago 3, Ill.)

13-15. Industrial Waste Conf., 12th Lafayette, Ind. (D. E. Bloodgood, Purdue Univ., Lafayette.)

13-15. Radiation Research Soc., annual, Rochester, N.Y. (A. Adelman, Nuclear Science and Engineering Corp., P.O. Box 10901, Pittsburgh 36, Pa.)

13-15. Recent Developments in Research Methods and Instrumentation, symp., Bethesda, Md. (J. A. Shannon, National Institutes of Health, Bethesda.)

13-15. Structure of Electrolytic Solutions, NSF symp., Washington, D.C. (H. B. Linford, Electrochemical Soc., 216 W. 102 St., New York 25.)

13-16. American Orthodontic Assoc., New Orleans, La. (S. D. Goal, 1037 Maison Blanche Bldg., New Orleans.)

13-16. Semiconductor Symposium, 5th annual, Washington, D.C. (H. M. Pollack, Semiconductor Div., RCA, 415 S. 5 St., Harrison, N.J.)

13-17. American Psychiatric Assoc. annual, Chicago, Ill. (D. Blain, APA, 1785 Massachusetts Ave., NW, Washington 6.)

14-16. Industrial Nuclear Technology Conf., Chicago, Ill. (L. Reiffel, Armour Research Foundation, Illinois Inst. of Technology, 10 W. 35 St., Chicago 16.)

14-16. International Soc. of Audiology, cong., St. Louis, Mo. (S. R. Silverman, 818 S. Kingshighway, St. Louis 10.)

14-18. Biochemistry of Cancer, symp. of International Union against Cancer, London, England. (E. Boyland, Chester Beatty Research Inst., Royal Cancer Hospital, Fulham Rd., London, S.W.3.)

15-16. Space Age Symposium, Southern Research Inst., Birmingham, Ala. (R. D. Osgood, Jr., Southern Research Inst., 917 S. 20 St., Birmingham 5.)

15-18. American College of Cardiology, Washington, D.C. (S. Fiske, 150 E. 71 St., New York 21.)

15-18. Work and the Heart Medical Conf., Milwaukee, Wis. (E. L. Belknap, Dept. of Occupational and Environmental Medicine, Marquette School of Medicine, Milwaukee.)

16-17. Space Age Symp., Southern Research Inst., Birmingham, Ala. (R. D. Osgood, Jr., Southern Research Inst., 2000 Ninth Ave. South, Birmingham 5.)

16-18. Engineering Industries Exposition, New York, N.Y. (H. Becher, New York State Soc. of Professional Engineers, 1941 Grand Central Terminal Bldg., New York 17.)

(See issue of 15 March for comprehensive list)