

no effect, suggesting that a sufficient amount of RNA template had been formed for enzyme synthesis. Regulation of glycolysis was discussed by J. V. Passonneau (Washington University) in terms of regulating phosphofructokinase activity; she postulated a number of sites on the enzyme that were distinct from inhibitory and substrate sites previously documented.

Various mechanisms of enzyme induction were discussed by W. E. Knox (Harvard Medical School), who also reported his recent work on tyrosine transaminase. In young rats this enzyme increased after the administration of tyrosine and ascorbic acid prevented the elevation of the enzyme produced by either tyrosine or extra protein feeding. He discovered that older rats failed to respond to these stimulations and suggested that the effects had been missed in the past because of the age limitation of the response and its delayed time course. Knox classified the enzyme-induction mechanisms into "hormone-type" and "substrate-type" induction processes. The hormone (for example, glucocorticoid) increases the amount of certain limiting RNA moieties and thus causes an increased synthesis of the enzyme. He suggested that the "substrate-type" induction results from sequestering an enzyme in a combined form that cannot be degraded.

The cofactor mediating regulation of liver enzyme levels was discussed by O. Greengard (Institute for Muscle Disease); she showed that the amount of rat liver apocysteine sulfinatase decarboxylase and tyrosine transaminase can be influenced in vivo by the concentration of their cofactor. Pyridoxine administration in intact or adrenalectomized rats caused a 200-percent increase in hepatic tyrosine transaminase activity in 4 hours. Greengard showed that this increase reflected a rise in the concentration of the apoenzyme and that puromycin interfered with this cofactor-induced increase. She contrasted the mechanisms in cofactor induction with those of hormonal regulation of enzyme concentrations. A. E. Harper (M.I.T.) showed that ammonia toxicity in the rat depends on the activities of enzymes taking part in urea formation. E. Hirschberg (Columbia) discussed regulatory effects of glutamic dehydrogenases in rodent liver.

Aspects of the production, development, and biological properties of transplantable hepatomas were described by H. P. Morris (Bethesda)

who has produced these tumors by chemical carcinogenesis. The correlation of growth rate with the extent of enzymatic alterations was documented by other investigators. G. Weber reported a gradual decrease in key enzymes of gluconeogenesis (glucose-6-phosphatase, fructose-1,6-diphosphatase, phosphoenolpyruvate carboxykinase, and malic dehydrogenase) as the growth rate of the hepatomas increases. The aforementioned enzymes were markedly decreased or completely absent in the rapidly growing tumors. J. Ashmore reported that with increasing growth rate there was an increase in lactate production, oxidation of glucose at C-1 and C-6, and an incorporation of amino acids into protein (alanine, aspartate, glycine, serine, isoleucine, and valine). In contrast, there was a gradual decrease of glucose production from pyruvate with complete failure of this gluconeogenic pathway in the rapidly growing tumors from which the key gluconeogenic enzymes were missing. G. P. Wheeler (Southern Research Institute, Birmingham) showed that with the increasing growth rate there was a decrease in purine catabolism and a gradual increase in the extent of incorporation of formate-C¹⁴ into the purines of both DNA and RNA.

J. S. Roth (University of Connecticut) reported that thymidylate phosphatase activity was inversely correlated with growth rate, the activity was greatest in slowly growing hepatomas and lowest in the rapidly growing tumors. In contrast, thymidine kinase showed a direct correlation with growth rate, exhibiting low activity in the slowly growing tumors, but high activity in the rapidly growing hepatomas. All investigators pointed out that there were a number of enzymes and metabolic parameters that were either high or low in all tumors or showed no correlation with the growth rate.

V. R. Potter (University of Wisconsin) suggested that certain differences between normal and tumor tissues may be related to growth rate, to invasiveness, to metastatic tendency, or to none of the components of malignancy. The cancer investigators agreed that the exploration of hepatomas of different growth rates permits valuable advances regarding the molecular basis of the biological behavior of liver tumors.

The symposium was sponsored by the Damon Runyon Memorial Fund, Inc., and the Indiana University School

of Medicine. Chairmen of the sessions were Sir H. A. Krebs, J. W. Wilson (Brown University), C. F. Cori (Washington University), V. R. Potter, W. E. Knox, and S. Weinhouse. The full text of the papers, edited by George Weber, will be published in the spring of 1964 as volume 2 of *Advances in Enzyme Regulation* (Pergamon Press, Oxford; Macmillan, New York). Volume 1 of this series of symposia on enzyme regulation in mammalian tissues was published in 1963 and presented the proceedings of last year's meeting.

GEORGE WEBER

Pharmacology Department,
Indiana University School of Medicine,
Indianapolis

Forthcoming Events

April

13-15. Institute of **Environmental Sciences**, annual, Philadelphia, Pa. (J. Breen, RCA Bldg., 10-1-2, Camden 2, N.J.)

13-15. **Microelectronics**, 3rd annual symp., St. Louis, Mo. (T. F. Murtha, P.O. Box 4104, St. Louis, Mo. 63136)

13-16. American Acad. of **General Practice**, Atlantic City, N.J. (M. F. Cahal, Volker Blvd. at Brookside, Kansas City 12, Mo.)

13-16. **Industrial Health**, conf., Pittsburgh, Pa. (American Industrial Health Conf., 55 E. Washington St., Chicago, Ill.)

13-16. **Industrial Medical Assoc.** and American Assoc. of **Industrial Nurses**, Pittsburgh, Pa. (C. D. Bridges, 55 E. Washington St., Chicago, Ill. 60602)

13-16. American **Radium Soc.**, White Sulphur Springs, W. Va. (J. J. Stein, U.C.L.A. Medical Center, Los Angeles 24, Calif.)

13-17. **Fluid Power**, intern. conf. and exhibition, London, England. (Secretary of the Conference, The Tower, 229-243 Shepherds Bush Rd., Hammersmith, London, W.6)

14-16. **Power Conf.**, Chicago, Ill. (W. A. Lewis, Illinois Inst. of Technology, Chicago)

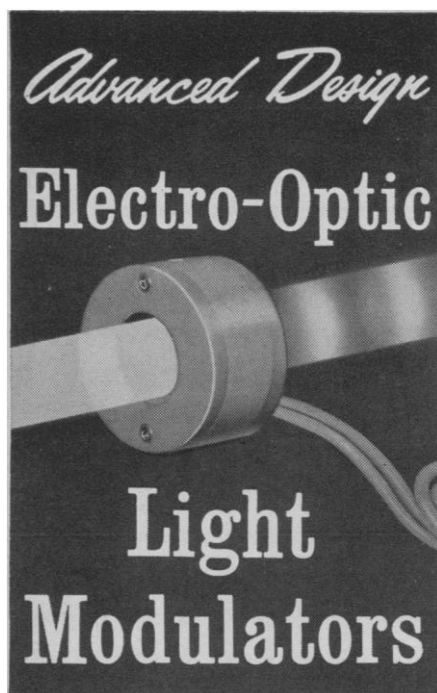
14-18. Primary Disorders of **Heart Muscle** (by invitation), CIBA Foundation symp., London, England (CIBA, 41 Portland Pl., London, W.1)

14-18. **Mathematical Logic**, conf., Oberwolfach, Germany. (M. Barner, Mathematisches Forschungs-institut, Hebelstr. 29, 78 Freiburg im Breisgau, Germany)

15-17. **High Energy Physics**, conf., Chilton, England. (Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London S.W.1, England)

15-17. **Ophthalmological Soc.** of the United Kingdom, annual, Dublin, Ireland. (Secretariat, 47 Lincoln's Inn Fields, London, W.C.2, England)

15-18. British **Paediatric Assoc.**, annual, Scarborough, England. (E. W. Hart, Inst. of Child Health, Hospital for Sick Children, Great Ormond St., London, W.C.1)



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15-18. American Soc. for Public Administration, natl. conf., New York, N.Y. (ASPA, 6042 Kimbark Ave., Chicago, Ill.)

15-18. International Scientific Radio Union (URSI), spring meeting, Washington, D.C. (M. G. Morgan, U.S. Natl. Committee, URSI, Dartmouth College, Hanover, N.H.)

16-17. Fiber Soc., spring meeting, Charlotte, N.C. (I. Rebenfeld, P.O. Box 625, Princeton, N.J.)

16-17. Textile Inst., annual conf., Leeds, England (D. B. Moore, 10 Blackfriars St., Manchester 3, England)

16-18. Eastern Psychological Assoc., Philadelphia, Pa. (M. A. Iverson, Queens College, Flushing 67, N.Y.)

16-18. Teaching of Foreign Languages, 1964 northeastern conf., Washington, D.C. (S. Isaacs, 1110 Patterson Plank Rd., North Bergen, N.J.)

16-18. Western Psychological Assoc., annual, Portland, Ore. (J. Matarazzo, Univ. of Oregon Medical School, Portland)

16-19. Cooper Ornithological Soc., annual, San Diego, Calif. (C. V. Duff, 2911 Antelo View Dr., Los Angeles 24, Calif.)

17-18. Arkansas Acad. of Science, Conway. (R. R. Corey, Dept. of Botany and Bacteriology, Univ. of Arkansas, Fayetteville)

17-18. Iowa Acad. of Science, Decorah. (D. C. Foley, Iowa State Univ., Ames)

17-18. Resonance Physics, New York State section, American Physical Soc., Corning, N.Y. (J. T. Kerr, Corning Glass Works, Corning)

17-19. Association of Southeastern Biologists, 25th annual, Atlanta, Ga. (W. D. Burbanck, Dept. of Biology, Emory Univ., Atlanta)

18-23. American Ceramic Soc., 66th annual, Chicago, Ill. (ACeS, 4055 N. High St., Columbus 14, Ohio)

19-22. Association for Educational Data Systems, natl. conv., Santa Barbara, Calif. (J. Caffrey, Systems Development Corp., Santa Monica)

19-22. American Oil Chemists' Soc., 55th spring meeting, New Orleans, La. (AOCS, 35 E. Wacker Dr., Chicago 1, Ill.)

19-25. Aerospace Electrotechnology, intern. conf., Phoenix, Ariz. (A. A. Sorensen, Mail 3016, The Martin Co., Baltimore 3, Md.)

20-21. Solar-Terrestrial Relationships, symp. of Intern. Scientific Radio Union, American Geophysical Union, American Astronomical Soc., Washington, D.C. (M. G. Morgan, U.S. Natl. Committee, URSI, Dartmouth College, Hanover, N.H.)

20-22. Radioisotope Conf., 2nd annual, Gatlinburg, Tenn. (R. T. Overman, Special Training Div., Oak Ridge Inst. of Nuclear Studies, P.O. Box 117, Oak Ridge, Tenn.)

20-23. American Mathematical Soc., New York, N.Y. (G. L. Walker AMS, 190 Hope St., Providence, R.I.)

20-24. Medical Radioisotope Scanning, symp., Athens, Greece. (E. H. Belcher, Div. of Isotopes, IAEA, Kärlntnerring 11, Vienna 1, Austria)

20-24. Research Administration Inst., American Univ., Washington, D.C. (American Univ., 1901 F St., NW, Washington 6, D.C.)

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20-24. Fluid Dynamic Aspects of **Space Flight**, Marseilles, France. (Fluid Dynamics Panel, NATO, 64, rue de Varenne, Paris 7^e, France)

20-24. American Soc. of **Tool and Manufacturing Engineers**, annual, Detroit, Mich. (L. S. Fletcher, ASTM, 10700 Puritan Ave., Detroit 38)

20-25. American Acad. of **Neurology**, 16th annual, Denver, Colo. (AAN, 4307 E. 50 St., Minneapolis 17, Minn.)

21. Association for **Symbolic Logic**, New York, N.Y. (Mrs. R. Drew-Bear, Special Projects Dept., American Mathematical Soc., 190 Hope St., Providence, R.I.)

21-23. Joint **Computer** conf., Washington, D.C. (C. S. Jones, 8227 Woodmont Ave., Bethesda 14, Md.)

21-23. **Engineering with Nuclear Explosives**, 3rd "Plowshare" symp., Davis, Calif. (Plowshare Symp. Committee, Lawrence Radiation Laboratory, Building T-105, P.O. Box 808, Livermore, Calif.)

21-24. American **Geophysical Union**, Washington, D.C. (AGU, 1515 Massachusetts Ave., NW, Washington, D.C.)

21-30. **Seismology**, intergovernmental meeting, Paris, France. (UNESCO, Place de Fontenoy, Paris 7^e)

22-24. Institute of **Electrical and Electronics Engineers**, 16th annual southwestern conf., Dallas, Tex. (F. E. Brooks, Jr., Military Electronics Div., Ling Temco Vought, P.O. Box 6118, Dallas 75222)

22-24. British Inst. of **Radiology**, 25th congr., London, England (BIR, 32 Welbeck St., London, W.1)

22-25. National Council of **Teachers of Mathematics**, Miami Beach, Fla. (H. T. Karnes, Dept. of Mathematics, Louisiana State Univ., Baton Rouge 3)

23-25. American **Gastroenterological** Conv., Philadelphia, Pa. (C. E. Nelson, 313 N. First St., Ann Arbor, Mich.)

28-1. Dallas-Southwest **Industrial Trade** Fair, Dallas, Tex. (C. L. Wells, P.O. Box 26010, Dallas 26)

29-1. **Acoustical Fatigue**, 2nd intern. conf., Dayton, Ohio (D. M. Forney, Research and Technology Div., U.S. Air Force Systems Command, Wright-Patterson Air Force Base, Dayton)

29-2. **Peaceful Uses of Space**, 4th natl. conf., Boston, Mass. (G. A. Rogovin, 501 Boylston St., Boston 16)

29-2. American **Thyroid** Assoc., annual, Rochester, Minn. (T. Winship, ATA, 110 Irving St., NW, Washington, D.C. 20010)

30-1. Institute of **Hospital Administrators**, annual, Edinburgh, Scotland. (IHA, 75 Portland Place, London, W.C.1, England)

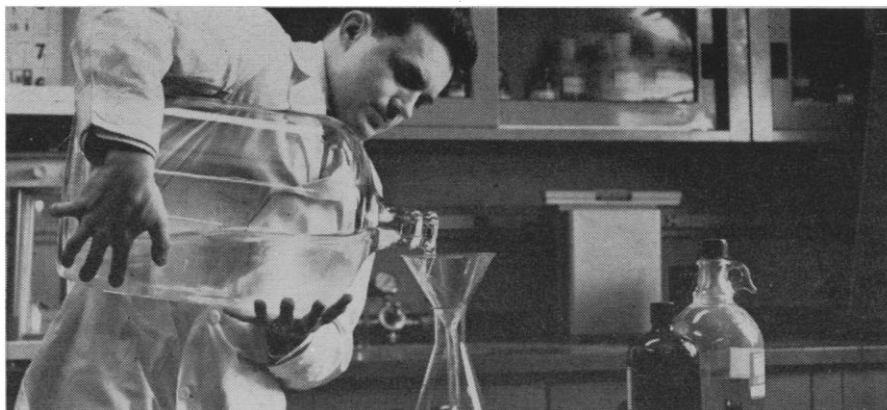
30-1. **Zonal Centrifugation Systems**, Oak Ridge, Tenn. (F. C. Von der Lage, Office of Industrial Cooperation, Oak Ridge Natl. Laboratory, P.O. Box X, Oak Ridge, Tenn. 37831)

30-2. **Agricultural History** Soc., annual, Cleveland, Ohio (A. G. Bogue, History Dept., Univ. of Iowa, Iowa City)

30-2. American **Cleft Palate** Assoc., 22nd annual, Los Angeles, Calif. (ACPA, Parker Hall, Univ. of Missouri, Columbia 65202)

30-2. **Midwestern Psychological** Assoc., 36th annual, St. Louis, Mo. (F. A. Mote, Psychology Dept., Univ. of Wisconsin, Madison 53706)

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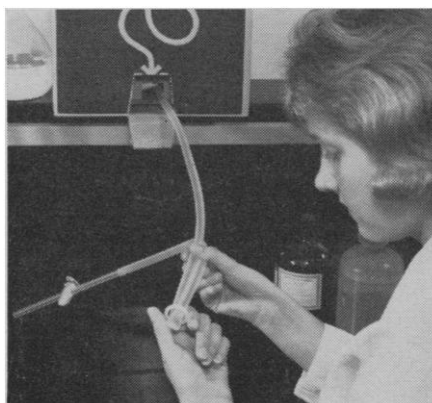
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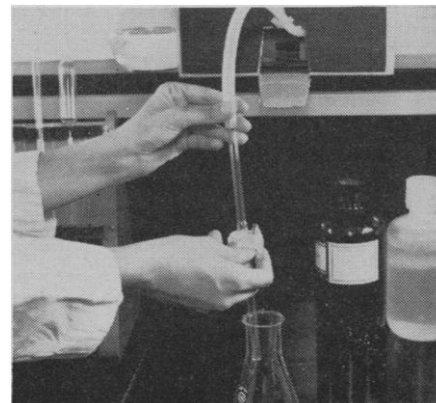
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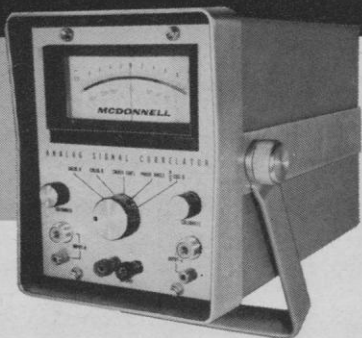
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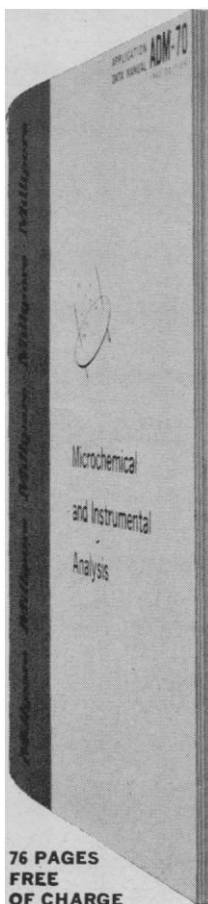
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30-3. Wilson Ornithological Soc., Kalamazoo, Mich. (P. B. Hofslund, Biology Dept., Univ. of Minnesota, Duluth)

30-6. Mexican Natl. Acad. of Medicine, Mexico City. (A. Lavarez-Bravo, Unidad de Congresos del Centro Mexico, Bloque "B", Av. Chauhtenoc 330, Mexico, D.F.)

May

1. Chemical Inst. of Canada. Rubber Chemistry Div., annual, Niagara Falls, Ont. (CIC, 48 Rideau St., Ottawa, Ont.)

1-2. American Type Culture Collection, Washington, D.C. (W. A. Clark, 12301 Parklawn Dr., Rockville, Md.)

1-2. Association of Clinical Scientists, Philadelphia, Pa. (R. P. MacFate, 54 W. Hubbard St., Chicago, Ill. 60610)

1-2. Minnesota Acad. of Science, Moorhead. (M. R. Boudrye, 3100 38th Ave. S., Minneapolis 6, Minn.)

1-2. Nebraska Acad. of Sciences, Lincoln. (C. B. Schultz, 101 Morrill Hall, Univ. of Nebraska, Lincoln 8)

1-2. North Dakota Acad. of Science, Fargo. (B. G. Gustafson, Univ. of North Dakota, Extension Div., Grand Forks)

1-3. Society of Biological Psychiatry, Los Angeles, Calif. (H. E. Himwich, SBP, Galesburg State Research Hospital, Galesburg, Ill.)

1-4. American Psychoanalytic Assoc., annual, Los Angeles, Calif. (Mrs. H. Fischer, APA, 1 E. 57 St., New York N.Y. 10022)

2-3. Academy of Psychoanalysis, annual, Los Angeles, Calif. (J. R. Royce, The Academy, 125 E. 65 St., New York, N.Y. 10021)

3-7. Electrochemical Society, spring meeting, Toronto, Ont., Canada. (ES, 30 E. 42 St., New York, N.Y. 10017)

3-7. American Soc. for Microbiology, annual, Washington, D.C. (American Inst. of Microbiology, 115 Huron View Blvd., Ann Arbor, Mich.)

3-9. Medical Biological Congr., Mutters, Austria. (P. Newhaüser, Abilindastr. 52a, München-Gräffelfing, Germany)

4-5. Bioengineering, 1st annual Rocky Mountain symp., U.S. Air Force Acad., Colorado Springs, Colo. (R. J. Gowan, Dept. of Electrical Engineering, U.S. Air Force Acad., Colorado Springs 80840)

4-5. Chemical and Petroleum Instrumentation, 5th natl. symp., Instrument Soc. of America, Wilmington, Del. (G. H. Robinson, Engineering Dept., E. I. duPont de Nemours Co., Wilmington)

4-6. Instrument Soc. of America, Bio-medical Sciences Div., 2nd natl. symp., Albuquerque, N.M. (R. F. Rust, Brooks, Feeger Assoc., 1238 Ortiz S.E., Albuquerque)

4-6. American Inst. of Aeronautics and Astronautics, Aerospace Propulsion meeting, Cleveland, Ohio. (AIAA, 500 Fifth Ave., New York, N.Y. 10036)

4-6. Aerospace Instrumentation, 10th natl. symp., Instrument Soc. of America, New York, N.Y. (ISA, 530 William Penn Pl., Pittsburgh 19, Pa.)

4-6. Asymptotic Solutions of Differential Equations and Their Applications, symp., Madison, Wis. (C. Wilcox, Mathematics Research Center, Univ. of Wisconsin, Madison 53706)

4-6. American Soc. for Quality Con-

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trol, 18th annual conv., Buffalo, N.Y. (ASQC, 161 West Wisconsin Ave., Milwaukee 3, Wis.)

4-6. Inhaled Radioactive Particles and Gases, symp., Richland, Wash. (W. J. Bair, Biology Laboratory, Hanford Laboratories, Richland, Wash.)

4-7. Biomedical Sciences Instrumentation, 2nd natl. symp., Instrument Soc. of America, Univ. of New Mexico, Albuquerque. (P. F. Salisbury, St. Joseph Hospital, 501 S. Buena Vista St., Burbank, Calif.)

4-8. American Psychiatric Assoc., 120th annual, Los Angeles, Calif. (W. E. Barton, 1700 18th St., NW, Washington, D.C.)

4-8. Strata Control and Rock Mechanics intern. conf., New York, N.Y. (S. Boshkov, School of Mines, Columbia Univ., New York, N.Y.)

4-22. United Nations Commission on Narcotic Drugs, 19th session, Geneva, Switzerland. (UN, Palais des Nations, Geneva)

5-6. Human Factors in Electronics, 5th natl. symp., San Diego, Calif. (M. Freitag, 1910 Shire Dr., El Cajon, Calif.)

5-7. Electronic Components Conf., Washington D.C. (J. Bohrer, 401 N. Broad St., Philadelphia, Pa.)

5-9. Nuclear Radiation Hazards, intern. symp., Intern. Civil Defence Organization, Monaco. (ICDO, 28 avenue Pictet-de-Rochemont, Geneva, Switzerland)

5-9. Virginia Acad. of Science, Charlottesville. (R. C. Berry, P.O. Box 8315, Richmond, Va.)

6-7. Laser/Electron Beam, seminar, Chicago, Ill. (R. Aptekar, Information Services Dept., American Soc. of Tool and Manufacturing Engineers, 10700 Puritan Ave., Detroit, Mich. 48238)

6-7. Optical Masers Symp., Toronto, Ont., Canada. (R. N. Hall, General Electric Research Laboratory, P.O. Box 1088, Schenectady, N.Y.)

6-8. American Assoc. of Genito-urinary Surgeons, Rye, N.Y. (2020 93rd St., Cleveland 6, Ohio)

6-8. Psychosomatic Research, European conf., Athens, Greece. [G. S. Philippopoulos, 4 Monis Petraki St., Athens (140)]

6-8. Society for Experimental Stress Analysis, spring meeting, Salt Lake City, Utah. (B. E. Bossi, 21 Bridge Sq. Westport, Conn.)

6-9. Acoustical Soc. of America, 66th spring meeting, New York, N.Y. (W. Waterfall, 335 E. 45 St., New York, N.Y.)

7-8. Vacuum Microbalance Techniques, 4th conf., Pittsburgh, Pa. (F. A. Brassart, Westinghouse Research and Development Center, Beulah Rd., Pittsburgh 35)

7-8. International College of Surgeons, British section, summer meeting, London. (Secretariat, 1516 Lake Shore Dr., Chicago, Ill. 60610)

7-9. Society for American Archaeology, 30th annual, Chapel Hill, N.C. (W. H. Sears, Florida State Museum, Gainesville)

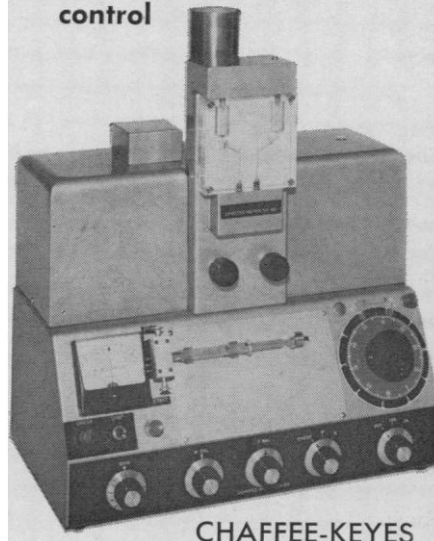
7-9. Society of Neurological Surgeons, Rochester, Minn. (SNS, Duke Univ. Medical Center, Durham, N.C.)

7-10. International Assoc. for Bronchology, 14th congr., Vienna, Austria. (Secretariat, Vienna Acad. of Medicine, 4, Alserstr., Vienna 9)

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8-9. **Colorado-Wyoming Acad. of Science**, Denver, Colo. (Mrs. C. Norton, Dept. of Botany, Colorado State Univ., Fort Collins)

8-9. **North Carolina Acad. of Science**, Davidson. (J. A. Yarbrough, Meredith College, Raleigh, N.C.)

8-9. **Surgical Research Soc.**, Sheffield, England. (A. P. M. Forrest, Surgical Unit, Cardiff Royal Infirmary, Newport Rd., Cardiff, South Wales)

8-9. **Surface Physics**, Washington State Univ. Pullman. (E. E. Donaldson, Physics Dept., Washington State Univ., Pullman)

8-20. **Space Research**, 7th plenary meeting, ICSU committee, Florence, Italy. (E. R. Dyer, Jr., National Acad. of Sciences-National Research Council, 2101 Constitution Ave., Washington, D.C.)

10-14. **Cardiology**, 3rd Asian-Pacific Congr., Kyoto, Japan. (S. Hayase, Medical Clinic, Kyoto Univ. Hospital, Sakyo-ku, Kyoto)

10-14. **French Soc. of Ophthalmology**, 71st Congr., Paris. (M. A. Dollfus, Société Française d'Ophthalmologie, 27, rue du Faubourg-Saint-Jacques, Paris 16*)

10-14. **American Proctologic Soc.**, Philadelphia, Pa. (APS, 7815 East Jefferson, Detroit 14, Mich.)

10-15. **Photographic Science and Engineering**, intern. conf., Palisades Park, N.J. (Executive Secretary, Soc. of Photographic Scientists and Engineers, Box 1609, Main Post Office, Washington, D.C.)

11-13. **Aerospace Electronics**, 16th natl. conf., Dayton, Ohio. (Y. Jacobs, 1917 Burbank Dr., Dayton 45406)

11-14. **Society for Industrial and Applied Mathematics**, spring meeting, Washington, D.C. (SIAM, Box 7541, Philadelphia 1, Pa.)

11-14. **American Urological Assoc.**, annual, Pittsburgh, Pa., (AUA, 1120 North Charles St., Baltimore, Md.)

11-16. **Assessment of Radioactive Body Burdens in Man**, symp., IAEA, Heidelberg, Germany. (IAEA, Div. of Public Information Kärntnering 11, Vienna, Austria.)

11-14. **Aerospace Medical Assoc.**, 35th annual, Bal Harbour, Fla. (W. J. Kennard, c/o Washington Natl. Airport, Washington, D.C. 20001)

11-14. **Biological Editors**, conf., Ann Arbor, Mich. (R. L. Zwemer, Committee on European Editors, c/o American Physiological Soc., 9650 Wisconsin Ave., Bethesda, Md. 20014)

11-16. **International College of Surgeons**, 14th intern. Congr., Vienna, Austria. (S. E. Henwood, 1516 Lake Shore Dr., Chicago, Ill. 60610)

12. **American Inst. of Chemical Engineers**, tri-sectional symp., Newark, N.J. (R. H. Dodds, Gibbs & Hill, Inc., 393 Seventh Ave., New York, N.Y.)

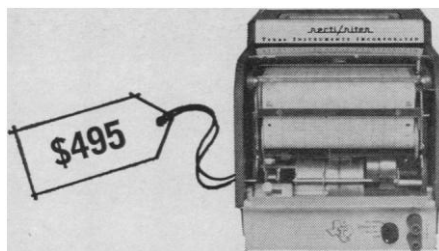
13-14. **Society of Plastics Engineers**, plastics in space, conf., Garden City, N.J. (D. Hassel, Grumman Aircraft Engineering Corp., Bethpage, L.I., N.Y.)

13-15. **Biomathematics and Computer Science in the Life Sciences**, 2nd annual symp., Houston, Tex. (Univ. of Texas Graduate School of Biomedical Sciences, 102 Jesse Jones Bldg., Texas Medical Center, Houston 77025)

13-15. **Society of Professional Well Log Analysts**, 5th intern. symp., Midland,

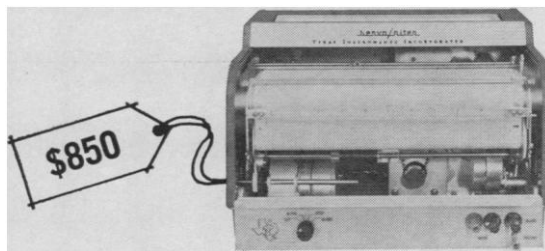
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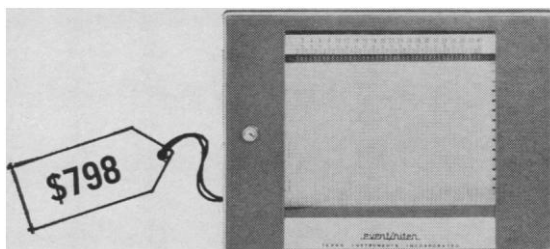
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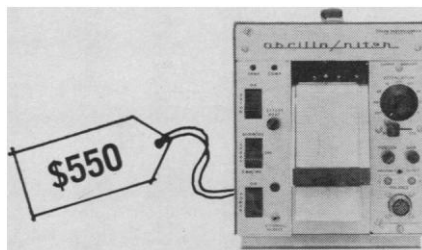
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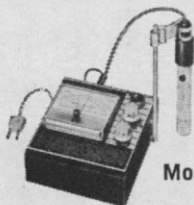
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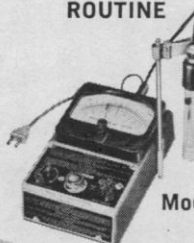
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14-15. **Radiochemical Processing Symp.**, Buffalo, N.Y. (R. F. Lumb, Western New York Nuclear Research Center, Power Drive, Buffalo 14214)

14-15. **Scandinavian Biochemistry Meeting**, Stockholm, Sweden. (Sveriges Biokemiska Körenig, Karolinska Inst., Stockholm 60)

14-16. **American Inst. of Industrial Engineers**, 15th annual conf., Philadelphia, Pa. (W. J. Jaffe, Dept. of Management Engineering, Newark College of Engineering, Newark, N.J.)

14-16. **Central States Anthropological Soc.**, annual, Milwaukee, Wis. (N. O. Lurie, Dept. of Anthropology, Univ. of Wisconsin, Milwaukee 11)

14-16. **Society of Technical Writers and Publishers**, 11th annual conv., San Diego, Calif. (C. M. Johnson, U.S. Navy Electronics Laboratory, San Diego 92132)

16-2. **European Energy Conf.**, Paris, France. (H. Perdon, Institut Français des Combustibles et de l'Energie, 3, rue Henri-Heine, Paris 16^e)

17-20. **American Inst. of Chemical Engineers**, natl. meeting, Pittsburgh, Pa. (F. J. Van Antwerpen, 345 E. 47 St., New York, N.Y. 10017)

18-20. **Radiation Research Soc.**, 12th annual, Miami Beach, Fla. (G. D. Adams, Radiological Laboratory, Univ. of California Medical Center, San Francisco 22)

18-20. **Water**, 2nd conf., Technical Assoc. of the Pulp and Paper Industry, Green Bay, Wis. (H. O. Teeple, TAPPI, 360 Lexington Ave., New York, N.Y.)

18-21. **Society of Economic Paleontologists and Mineralogists**, Toronto, Ont., Canada. (R. H. Dott, Box 979, Tulsa 1, Okla.)

18-21. **American Assoc. of Petroleum Geologists**, 49th annual conv., Toronto, Ont., Canada. (R. E. King, American Overseas Petroleum, Ltd., 485 Lexington Ave., New York, N.Y. 10017)

19-20. **Council on Medical Television**, 6th annual, Atlanta, Ga. (S. A. Agnello, Duke Univ. Medical Center, Box 3163, Durham, N.C. 27706)

19-21. **Microwave Theory and Techniques**, intern. symp., New York, N.Y. (H. L. Browman, Airborne Instruments Laboratory, Deer Park, N.Y. 11729)

19-22. **German Metallurgical Soc.**, general assembly, Bremen. (Deutsche Gesellschaft für Metallkunde, An der Alteburger Mühle 12, Köln-Marienburg, Germany)

19-22. **German Soc. for Applied Optics**, 65th, Gmunden am Traunsee. (H. Volkman, Deutsche Gesellschaft für Angewandte Optik, Zeppelinstr. 23, 7920 Heidenheim, Germany)

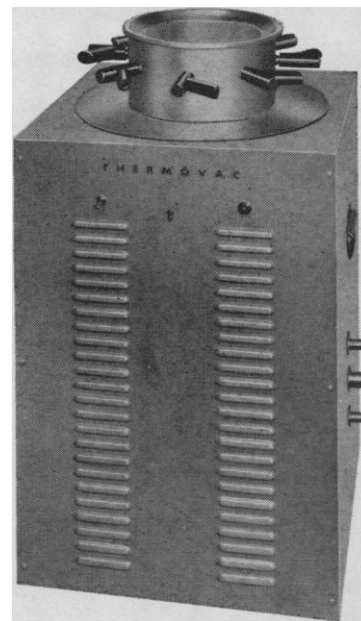
19-23. **Energy Metabolism**, 3rd symp., Ayr, Scotland. (European Assoc. for Animal Production, Corso Trieste, 67, Rome, Italy)

19-30. **International Electrotechnical Commission**, general meeting, Aix-les-Bains, France. (American Standard Assoc., 10 E. 40 St., New York 16)

20. **Memorial Hospital of Long Beach, medical staff symp.**, Long Beach, Calif. (G. X. Trimble, Memorial Hospital of Long Beach, 2801 Atlantic Ave., Long Beach 6)

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20-23. Canadian Assoc. of Geographers, 14th annual, London, Ont. (CAG, P.O. Box 421, Ottawa, Ont., Canada)

20-27. Air Pollution, European conf., Strasbourg, Austria (A. Stern, Div. of Air Pollution, U.S. Public Health Service, Washington, D.C. 20201)

20-28. Modern Methods for Analysis of Organic Compounds, symp., Eindhoven, Netherlands. (Gesellschaft Deutscher Chemiker, Postfach 9075, Frankfurt-am-Main, Germany)

21-22. American Geological Inst., Toronto, Ont., Canada. (D. M. Kinney, U.S. Geological Survey, Washington, D.C.)

21-22. Southern Textile Research Conf., Hilton Head Island, S.C. (American Assoc. of Textile Chemists and Colorists, P.O. Box 886, Durham, N.C.)

21-23. Minerals, 9th annual symp., Moab, Utah. (J. C. Fox, Soc. of Mining Engineers, 345 E. 47 St., New York, N.Y.)

21-23. California Soc. of Professional Engineers, annual, Palm Springs, Calif. (J. C. Huisking, 970 Hillcrest Dr., Pomona, Calif.)

23-24. Radiosensitizers and Radioprotective Drugs, 1st intern. symp., Milan, Italy. (R. Paoletti, Pharmacology Inst., Via A. del Sarto, 21, Milan)

24-28. Near and Middle East Medical conf., Istanbul, Turkey. (P. Ponthus, Institut de Radiologie et de Lutte Contre le Cancer, Hotel-Dieu de France, Beirut, Lebanon)

24-29. International Federation for Information Processing, global conf., New York, N.Y. (A. P. Speiser, I.B.M. Research Laboratory, Zurichstr. 108, Adliswil-Zurich, Switzerland)

25. Organic Solid State, 2nd symp., Franklin Inst., Philadelphia, Pa. (M. M. Labes, Franklin Inst. Laboratories, 20th and The Parkway, Philadelphia 3)

25-27. American Gynecological Soc., Hot Springs, Va. (AGS, 3800 Reservoir Rd., Washington, D.C. 20007)

25-27. Power Reactors and Radioisotopes, Canadian Nuclear Assoc., Toronto, Ont. (CNA, 19 Richmond St. West, Toronto 1, Ont.)

25-29. Society of Physical Chemistry, 14th annual, Bordeaux, France. (G. Emschwiller, Soc. de Chimie physique, 10, rue Vauquelin, Paris 5^e, France)

26-29. Water Studies, 17th intern. conf., Liège, Belgium. (Cebedeau—Journées 1964, 2, rue A. Stevart, Liège)

27-29. American Ophthalmological Soc., Hot Springs, Va. (AOS, 108 E. 68 St., New York, N.Y. 10021)

27-29. Canadian High Polymer Forum, 12th, Ste. Marguerite, Quebec. (H. Daoust, Dept. of Chemistry, University of Montreal, P.O. Box 6128, Montreal, P.Q.)

27-29. Operations Research Soc. of America, Montreal, P.Q., Canada. (G. D. Shellard, New York Life Insurance Co., 51 Madison Ave., New York, N.Y. 10010)

28-30. American Assoc. of Museums, St. Louis, Mo. (S. F. Borhegyi, Milwaukee Public Museum, Milwaukee 3, Wis.)

28-31. Rockets and Space Flight, 13th symp., Darmstadt, Germany. (A. F. Staats, Hermann-Oberth-Gesellschaft, Gesellschaft zur Förderung der Erforschung und Erschliessung des Weltraumes, Fritz-Beindorff-Allee 9, Hanover, Germany)

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