

in their biochemical and clinical implications; stimulation of drug metabolism was shown by Fouts to depend on the synthesis of new enzymes in liver.

Malhotra (Lady Hardinge Medical College, New Delhi) introduced a discussion of the mechanism of drug action by describing original experiments on the role of cholinergic mechanisms in brain function as revealed by the action of various depressants of the central nervous system. This discussion was continued by E. Costa (National Heart Institute) who presented a provisional model of the integrated biophysical unit, which, in nerve endings, controls synthesis, storage, release, and metabolism of norepinephrine. Costa emphasized that synthesis, storage, release, and metabolism of norepinephrine are not unrelated phenomena and must be considered together in interpreting drug action. The action of various drugs that act on sympathetic tone was discussed in relation to the neurochemical transducer. The validity of this model was also investigated in adrenergic mechanisms present in the olfactory bulb of rabbits; data obtained in this structure were not at variance with the model prepared to explain the function of peripheral sympathetic nerve endings. In discussing the mechanism of action of reserpine, Costa pointed out that the effect of the alkaloid on brain concentrations of amine indicates that a new dynamic equilibrium has been obtained as a result of the drug action; therefore the rate of serotonin biosynthesis, higher than that of norepinephrine, becomes of paramount importance in explaining reserpine action. The fast turnover of serotonin, when only a portion of the storage process is blocked, assures that enough serotonin occupies receptors to produce a sedative response.

Both the liveliness of the discussions and Indian hospitality were admirable.

E. COSTA

Laboratory of Chemical Pharmacology,
National Heart Institute,
Bethesda, Maryland

Forthcoming Events

May

12-13. Control of Water Quality, natl. forum, American Soc. for Testing and Materials, Philadelphia, Pa. (ASTM, Committee D-19 on Industrial Water, 1916 Race St., Philadelphia 19103)

12-24. Power Instrumentation, 8th

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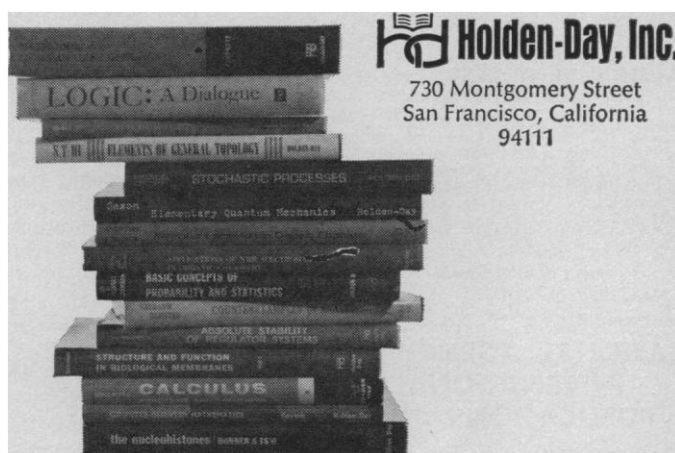
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MEDICAL RADIOISOTOPE SCANNING

Proceedings of a symposium organized by IAEA and held in Athens, April 20-24, 1964. Some 180 scientists from 26 countries and five international organizations attended the symposium.

Contents: (Vol. I) Theory of scanning. Moving detectors and collimators. Stationary detectors. Display systems.

(Vol. II) Choice of isotopes and labelled compounds; Clinical applications: brain; stomach, bone marrow, lymph nodes, kidneys; pancreas, lungs, spleen; liver.

(1964) Vol. I: 560 pp., Vol. II: 470 pp. Price: In US and Canada Vol. I: US \$11.50, Vol. II: US \$9.50. Elsewhere: Vol. I: £3.90, Vol. II: £2.17.0.

BIOLOGICAL EFFECTS OF NEUTRON AND PROTON IRRADIATIONS

Proceedings of a symposium organized by IAEA and held in Upton, New York at the invitation of the Brookhaven National Laboratory from October 7-11, 1963. Subjects: dosimetry, estimation of absorbed dose of neutrons in biological material; biological effects of high-energy protons; cellular and genetic effects; pathology of neutron irradiation, including acute and chronic radiation syndromes (mortality, anatomical and histological changes), biological and metabolic disturbances and delayed consequences; relative biological effectiveness of neutrons evaluated by different biological tests.

(1964) Vols. I and II: 433 pp. each. Price per volume: In US and Canada \$9.00. Elsewhere: 54s.stg.

OPERATING EXPERIENCE WITH POWER REACTORS

Proceedings of an IAEA conference held in Vienna, June 4-8, 1963, on operating experience with 20 power stations having a combined output of 1700 megawatts. Representatives of all of the nuclear power producing countries spoke, and their papers covered the five principal types of power reactors: pressurized water, heavy water, boiling water, gas-cooled, fast.

(1963) Vol. I: 526 pp., Vol. II: 412 pp. Price: In US and Canada: Vol. I: US \$10.00, Vol. II: US \$8.50. Elsewhere: Vol. I: 60s.stg., Vol. II: 51s.stg.

EXPONENTIAL AND CRITICAL EXPERIMENTS

Proceedings of an IAEA symposium held in Amsterdam, September 2-6, 1963. Contents: (Vol. I) The general role of critical and exponential experiments; Fast assemblies; Subcritical H_2O assemblies. (Vol. II) Subcritical water assemblies— H_2O or D_2O ; Water assemblies— H_2O and/or D_2O ; D_2O assemblies. (Vol. III) Assemblies with graphite; Special theoretical and experimental techniques; Organic-moderated or cooled assemblies.

(1964) Vol. I: 480 pp., Vol. II: 610 pp., Vol. III: 482 pp. Price: In US and Canada: Vols. I, III: US \$10.00 each; Vol. II: \$12.00. Elsewhere: Vols. I, III: 60s.stg. each; Vol. II: 72s.stg.

TREATMENT AND STORAGE OF HIGH-LEVEL RADIOACTIVE WASTES

Proceedings of a symposium held in Vienna, October 1962. Subjects: problems and practices; calcination and storage; solidification and fixation of liquids; treatment of solid wastes; shipment of large quantities of radioactive materials.

(1963) 666 pp. Price: In US and Canada: US \$13.00. Elsewhere: 78s.stg.

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natl. symp., New York, N.Y. (H. H. Johnson, 4 Irving Pl., New York 10013)

13. Society for **Personnel Administration**, 4th annual conf., Catholic Univ., Washington, D.C. (H. G. Vavra, SPA, 1221 Connecticut Ave., NW, Washington, D.C.)

13-14. American Inst. of **Mining, Metallurgical, and Petroleum Engineers**, New England regional conf., Hartford, Conn. (AIMMPE, 345 E. 47 St., New York 10007)

13-14. Canadian Council of **Professional Engineers**, annual, Charlottetown, Prince Edward Island. (CCPE, 116 Albert St., Ottawa 4, Ontario)

13-14. **Signal Transmission and Processing**, symp., New York, N.Y. (L. E. Franks, Bell Telephone Laboratories, 1600 Osgood St., North Andover, Mass. 01845)

13-15. American Inst. of **Industrial Engineers**, 16th annual, Chicago, Ill. (W. J. Jaffe, Dept. of Industrial Engineering, Newark College of Engineering, Newark, N.J. 07102)

13-15. **Powder Metallurgy**, 3rd intern., Eisenach, East Germany. (Gesellschaft Deutscher Berg- und Hüttenleute, Wallstr. 68, Berlin C.2, East Germany)

13-19. **Space Science**, 6th intern. symp., Buenos Aires, Argentina. (COSPAR Secretariat, 55, Boulevard Maiesherbes, Paris 8^e, France)

14-15. Association of **University Radiologists**, annual, Seattle, Wash. (A. R. Margulis, AUR, Dept. of Radiology, Univ. of California Medical Center, San Francisco)

16-19. American Inst. of **Chemical Engineers**, 56th natl., San Francisco, Calif. (A. E. Aronson, A. B. Dick Co., 5700 W. Touhy Ave., Chicago 48)

16-20. Institute of **Food Technologists**, annual, Kansas City, Mo. (C. L. Wiley, Suite 1350, 170 W. Adams St., Chicago, Ill. 60603)

16-21. **Mass Spectrometry**, 13th annual conf., St. Louis, Mo. (H. M. Rosenstock, Natl. Bureau of Standards, Washington, D.C. 20234)

17-18. Canadian **Aeronautics and Space Inst.**, annual, Vancouver, B.C. (H. C. Luttman, 77 Metcalfe St., Ottawa 4, Ont.)

17-19. **Application of Computing Methods to Reactor Problems**, conf., Argonne, Ill. (B. J. Toppel, Reactor Physics Div., Argonne Natl. Laboratory, 9700 S. Cass Ave., Argonne)

17-19. American College of **Physicians**, Far East session, Tokyo, Japan. (Session Coordinator ACP, USAF Hospital Tachikawa, APO 323, San Francisco, Calif.)

17-21. American Soc. of **Civil Engineers**, Minneapolis, Minn. (W. H. Wisely, ASCE, 345 E. 47 St., New York 10017)

17-21. **Nondestructive Testing in Nuclear Technology**, symp., Bucharest, Rumania. (P. Ghelardoni, Div. of Scientific and Technical Information, Intern. Atomic Energy Agency, Kärntner Ring 11, Vienna 1, Austria)

17-21. Society of **Photographic Scientists and Engineers**, annual conf., Cleveland, Ohio. (W. E. Granshaw, Eastman Kodak Co., 4605 Mackall Rd., South Euclid 21, Ohio)

17-21. Technical Literature Abstracting and Indexing, American Univ., Washington, D.C. (P. W. Howerton, 2000 G St., NW, Washington 20006)

18-20. **Aerospace Fluid Power Systems and Equipment**, conf., Los Angeles, Calif. (Soc. of Automotive Engineers, 485 Lexington Ave., New York 10017)

18-20. **Power Sources**, 20th conf., U.S. Army Electronics Research and Development Laboratories, Atlantic City, N.J. (H. W. Schwarz, PSD, Fort Monmouth, N.J. 07703)

18-20. **Telemetry**, intern. conf., Washington, D.C. (J. D. Cates, ITC/USA/65, White Sands Missile Range, N.M.)

19. **Memorial Hospital of Long Beach**, symp., Long Beach, Calif. (G. X. Trimble, Memorial Hospital, 2801 Atlantic Ave., Long Beach 90801)

19-21. **Atherosclerosis**, Czechoslovak-Italian symp., Prague, Czechoslovakia. (T. Zempenyi, Thomayerova nemocnice, Prague-Krc, Czechoslovakia)

19-21. **Computer Applications**, power industry conf., Clearwater, Fla. (G. W. Stagg, American Electric Power Service Corp., 2 Broadway, New York 10008)

19-21. **Gamete Transport, Fertilization, and Preimplantation Mechanisms**, conf., Vanderbilt Univ., Nashville, Tenn. (Dept. of Obstetrics and Gynecology, Vanderbilt Univ. School of Medicine, Nashville 37203)

19-21. **Mathematical and Quantitative Linguistics**, intern. conf., New York, N.Y. (Y. Gentilhomme, 11, rue Linne, Paris 5^e, France)

19-22. Society of **Technical Writers and Publishers**, 12th annual conv., New York, N.Y. (H. Adler, Data Communication, Inc., 404 Park Ave. South, New York 10016)

19-22. Southern **Textile Research** conf., 5th annual, Hildon Head Island, S.C. (W. H. Martin, Inst. of Textile Technology, Charlottesville, Va.)

20. Institution of **Mining and Metallurgy**, annual, London, England. (The Institution, 44 Portland Pl., London, W.1)

20-21. **Chemical Engineering**, conf., Sydney, Australia. (Secretary, Inst. of Engineers, Australia, Science House, Gloucester and Essex St., Sydney)

20-21. **Electrical Conduction at Low Temperatures**, European symp., London, England. (Administration Assistant, Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1)

20-21. **Fiber Soc.**, Atlanta, Ga. (L. Rebenfeld, Box 625, Princeton, N.J.)

20-21. Medical Diagnostic Applications of **Ultrasound**, conf., Pittsburgh, Pa. (C. Moses, Univ. of Pittsburgh School of Medicine, Pittsburgh 15213)

20-22. American **Cleft Palate Assoc.**, annual, New York, N.Y. (C. O. Wells, Parker Hall, Columbia, Mo.)

20-22. **Diabetology**, Paris, France. (M. Rathery, Hôtel-Dieu, 1, Pl. du Parvis Notre-Dame, Paris 4^e)

20-22. American **Gynecological Soc.**, New York, N.Y. (C. J. Lund, 260 Crittenden Blvd., Rochester 20, N.Y.)

20-25. **Intersexuality in Fishes**, Sarasota, Fla. (E. Clark, Cape Haze Marine Laboratory, 9501 Blind Pass Rd., Sarasota)

21-22. **Surface Physics**, 3rd annual symp., Pullman, Wash. (E. E. Donaldson, Dept. of Physics, Washington State Univ., Pullman)

21-22. **Women of Science**, symp., Ben-

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21-23. **Exfoliative Cytology**, 2nd intern. congr., Paris, France. (Intern. Acad. of Cytology, 5841 Maryland Ave., Chicago, Ill. 60637)

23-24. **American Laryngological Assoc.**, annual, Colorado Springs, Colo. (L. G. Richards, 12 Clovelly Rd., Wellesley Hills 82, Mass.)

23-26. **Administrative Management Soc.**, 46th intern. conf., Minneapolis, Minn. (R. C. Walter, 32 W. 40 St., New York 10018)

23-26. **Radiation Research**, 13th annual, Philadelphia, Pa. (A. C. Upton, Biology Div., Oak Ridge Natl. Laboratory, Oak Ridge, Tenn.)

23-26. **Social Medicine**, intern. conf., Berlin, Germany. (Secretariat, Deutsche Gesellschaft für Sozialmedizin, Alsterglac 3, Hamburg 13, Germany)

24-26. **Hygiene and Preventive Medicine**, 4th intern. congr., Vienna, Austria. (Vienna Acad. of Medicine, Alserstr. 4, Vienna 9)

24-26. **Standardization of Pharmaceutical Preparations**, 2nd intern. congr., Leipzig, East Germany. (J. Richter, Deutsches Inst. für Arzneimittelwesen, Grosse Seestr. 4, Berlin-Weissensee, East Germany)

24-27. **Thyroid**, 5th intern. conf., Rome, Italy. (T. Winship, American Thyroid Assoc., 110 Irving St., NW, Washington, D.C. 20010)

24-28. **Australian Inst. of Metals**, annual conf., Brisbane. (Secretary, AIM, P.O. Box 107, North Quay, Brisbane)

24-28. **International Planned Parenthood Federation**, Western Pacific regional conf., Seoul, Korea. (T. Katagiri, IPPF Western Pacific Regional Office, No. 2, 1-chome, Sadohara-cho, Ichigaya, Shinjuku, Tokyo, Japan)

24-28. **Radioisotope Sample Measurement Techniques** in Medicine and Biology, intern. symp., Vienna, Austria. (J. H. Kane, Intern. Conferences Branch, Div. of Special Projects, U.S. Atomic Energy Commission, Washington, D.C. 20545)

24-29. **International Federation for Information Processing**, congr., New York, N.Y. (AFIP, 345 E. 47 St., New York 10017)

24-1. **Cloud Physics**, intern. conf., Tokyo and Sapporo, Japan. (H. Hatakeyama, Japan Meteorological Agency, Otemachi Chiyoda-ku, Tokyo)

25. **American Iron and Steel Inst.**, annual, New York, N.Y. (G. S. Rose, 150 E. 42 St., New York 10017)

25-26. **American Otological Soc.**, Colorado Springs, Colo. (J. A. Moore, 525 E. 68 St., New York 10021)

25-27. **Armed Forces Communications and Electronics Assoc.**, 19th annual conv., Washington, D.C. (AFCEA, 1725 Eye St., NW, Washington 20006)

25-27. **American Astronautical Soc./Aerospace Electrical Soc.**, **Space Electronics** symp., Los Angeles, Calif. (L. T. Isaacs, Douglas Aircraft Corp., Long Beach, Calif.)

25-28. **American Assoc. for Contamination Control**, 4th annual, Miami Beach, Fla. (W. T. Maloney, AACC, 6 Beacon St., Boston, Mass. 02108)

25-29. **Structure and Control of the**

Melanocyte, conf., Sofia, Bulgaria. (N. Anchev, c/o Oncological Inst., Sofia)

25-29. **American Assoc. on Mental Deficiency**, 89th annual, Miami Beach, Fla. (J. E. Horner, AAMD, Oregon Fairview Home, 2250 Strong Rd., SE Salem)

26-28. **Canadian Botanical Assoc.**, Carleton University, Ottawa, Ont. (R. L. Taylor, Plant Research Inst., C.E.F., Ottawa, Canada)

26-28. **Cineradiography**, 3rd symp., Antwerp, Belgium. (S. Masy, Steenweg op Waver 256, Heverle, Belgium)

26-28. **Peaceful Uses of Space**, 5th natl. conf., St. Louis, Mo. (G. W. Ferguson, Fleishman-Hillard, Inc., 407 N. 8 St., St. Louis 63101)

26-28. **Analysis Instrumentation** and Chemical and Petroleum Instrumentation, 1st ISA intern. symp., Montreal, Quebec, Canada. (E. J. Minnar, ISA, 530 William Penn Pl., Pittsburgh, Pa. 16219)

26-29. **Biological Characterization of Human Tumors**, intern. symp., Abbaye de Royaumont, France. (W. Davis, c/o Chester Beatty Research Inst., Fulham Rd., London, S.W.3, England)

26-29. **Electrochemical Aspects of Molecular Biology**, symp., Jena, East Germany. (H. Berg, Inst. für Mikrobiologie und Experimentelle Therapie, Deutsche Akademie der Wissenschaften zu Berlin, Beuthenbergstr. 11, Jena)

27-29. **American Gastroenterological Assoc.**, Montreal, Quebec, Canada. (D. Cayer, 2240 Cloverdale Ave., Winston-Salem, N.C.)

27-29. **American Ophthalmological Soc.**, Hot Springs, Va. (S. D. McPherson, Jr., 1110 W. Main St., Durham, N.C.)

27-29. **American Assoc. of Physical Anthropologists**, annual, Pennsylvania State Univ., University Park. (F. E. Johnston, Dept. of Anthropology, Univ. of Pennsylvania, Philadelphia 4)

27-30. **Neuro-Ophthalmology and Neurogenetics**, intern. congr., Albi, France. (M. Amalric, Congrès Intern. de Neuro-Ophthalmologie et Neuro-Génétique, B.P. 79, Albi, Tarn, France)

27-30. **German Bunsen Soc. for Physical Chemistry**, 64th general assembly, Innsbruck, Austria. (Deutsche Bunsen-Gesellschaft für Physikalische Chemie, Varrentrappstr. 40-42, 6 Frankfurt am Main, Germany)

27-11. **World Meteorological Organization**, 17th executive committee session, Geneva, Switzerland. (WMO, 41 avenue Giuseppe Motta, Geneva)

28-1. **Canadian Assoc. of Geographers**, annual, Vancouver, B.C. (Local Arrangements Committee, Dept. of Geography, University of British Columbia, Vancouver)

30-2. **Recent Advances in Adrenal Steroid Metabolism**, symp., Montreal, Quebec, Canada. (Chemical Inst. of Canada, 48 Rideau St., Ottawa 2)

30-2. **Canadian Dental Assoc.**, conv., Quebec. (L. Bernier, 1024, avenue des Erables, Quebec)

30-2. **American Thoracic Soc.**, Chicago, Ill. (F. W. Webster, 1790 Broadway, New York 10019)

30-2. **National Tuberculosis Assoc.**, Chicago, Ill. (S. Wicker, 1790 Broadway, New York 10019)

30-3. **Medical Library Assoc.**, annual, Philadelphia, Pa. (MLA, 919 N. Michigan Ave., Chicago 11, Ill.)