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Box (give number) SCIENCE 1515 Massachusetts Ave., NW Washington, D.C. 20005

POSITIONS WANTED

(a) Chemistry Ph.D., biochemistry minor; cancer, genetics, virus research exp., medical research or teaching position.
(b) Microbiology Ph.D., research-teach exp., available for senior faculty appointment. For details write Woodward Medical Personnel Bureau, 185 N. Wabash, Chicago 60601.

15 MAY 1964

POSITIONS WANTED

(a) **Ph.D. Organic Chemist**; strong pharmaceutical experience oriented to documentation/ information retrieval; prefers research or administration. (b) 1964 **Ph.D. Radiation Biologist** (M.S. biology, biochemistry); immune response research; prefers research, teaching. (c) **Ph.D. Botanist** (bacteriology minor), trained ecology, physiology of higher plants, microorganisms; cellular slime mold research; prefers teaching with research. (Please write for information regarding these and other scientists, senior and junior, in all fields.) Science Division, The Medical Bureau, Inc., 900 North Michigan Avenue, Chicago, Illinois 60611. X

Writer-Editor. Ph.D., social science. Accepts quality assignments. Principles of confidentiality, professional competence observed. Box 415, SCIENCE. X

POSITIONS OPEN

(a) Bacteriologist, direct dept., teach approv. lab. sch., some research; 250-bed hosp. univ. affil; MidW; to \$12,000. (b) Pharmacologist, cardiovascular exp. for R&D new products; large chemical mfr.; E; \$11,000 up. (c) Biochemist, M.S. head Dept. 200-bed hosp univ. affil; scenic Mt. area; W; \$8-10,000. (d) Immunologist, teach w. research, 900-bed univ. hosp; E; \$7-13,000. (e) Director clinical lab, teach program; administration exp. nec., 200bed hosp; Calif; \$8-10,000. (f) Pharm. Chemist develop dosage forms, large drug mfr; E; \$12,000. (g) Physiologist medical research, teach; large clinic w. 400-bed hosp; MidW; \$10,000. For details of our nationwide positions at B.S., M.S., Ph.D., M.D. levels write Woodward Medical Personnel Bureau, 185 N. Wabash, Chicago, Illinois 60601. X Professional Placement Bureau for 68 Years

POSITIONS OPEN

Graduate assistantships and research associates in Tropical Medicine and Medical Parasitology are available beginning September 1964. Salary ranges from \$2400 to \$3000. Course and research activities leading to the M.S. or Ph.D. are available. Departmental research activities include studies on the ultrastructure, immunology, and biochemistry of endoparasites. Interested applicants should apply to Dr. J. C. Swartzwelder, Chairman, Department of Tropical Medicine and Medical Parasitology, Louisiana State University School of Medicine, 1542 Tulane Avenue, New Orleans 12, Louisiana. 5/8, 15, 22

(a) M.S. Clinical Chemist, adminster chemistry service, assist in research; 225-bed hospital; West. (b) Histology Supervisor; staff of eight; large eastern hospital. (c) M.S./B.S. Research Assistant, chromosome studies, tissue culture; Central research institute; to \$645. (d) Ph.D. Biological Science, or predoctoral; strong biochemistry/cell physiology background; hormone research; to \$8000. Faculty Appointments: (e) Ph.D. Physical

mone research; to \$8000. Faculty Appointments: (e) Ph.D. Physical Chemist, teach senior course; to \$9000; southeastern state college. (f) Biologist, teach varied biology courses; small Central college. (g) Botanist, Ph.D. preferred; teach botany, cell physiology, help build department in bacteriology; expanding metropolitan college; East. (h) Ph.D. Biologist in health-related area; develop research in growing department with hospital affiliation; small mideastern liberal arts college. (i) Ph.D. Embryologist-Zoologist; state university college; East. (j) Ph.D. Animal Physiologist, vertebrate mammalian training, teaching stressed, research included; Southwestern university. (k) Ph.D./M.S. Biologist, anatomy, embryology training; northwestern university. Many other opportunities available for junior and senior scientists.

Please write to Science Division, The Medical Bureau, 900 North Michigan Avenue, Chicago, Illinois 60611. X

POSITIONS OPEN

Biophysics Training Program Fellowships Applications are invited from candidates with M.S. or Ph.D. degrees in either physical or bio-logical sciences. A major aspect of the program is the conduct of a specific research project and current studies include problems in radiobiology, neutron activation and neutron dosimetry, process-ing of biological data and medical engineering. Training stipends in the range of \$5000-6500. Further information from Dr. G. L. Brownell, Head, Physics Research Laboratory, Massachu-setts General Hospital, Boston 14, Massachusetts.

Full-time Researchers in the fields of internal medicine, biochemistry and physiology desired for research-teaching program in continuing education. \$25,000 to \$30,000 per annum. Salary

Box 367, SCIENCE

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Box 416, SCIENCE

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THEORETICAL BIOLOGY

Positions are available for biologically ori-ented, post-doctoral physical chemists, physi-cists, engineers and mathematicians interested in theoretical investigations of the funda-mentals of living cells. Biogenesis and repli-cation of macro-molecular structures and membrane and surface phenomena have been selected for immediate study. Successful ap-plicants will be required to think imagi-natively of the dynamic molecular level and to construct useful (although not necessarily conventional) models compatible with avail-able data. There are prospects of faculty advancement in an expanding unit of major potential. Initial salary range \$7-\$10,000 per annum. Reply, with curriculum vitae, to:

Dr. J. F. Danielli, Chairman Department of Biochemical Pharmacology School of Pharmacy State University of New York at Buffalo Buffalo 14, New York

Zoologist, recent Ph.D. with teaching experience. to teach general zoology and ecology, plus alternating years in histology and comparative anatomy. Position starts 1 September 1964. Send résumés to Chairman, Biology Department, Philadelphia College of Pharmacy and Science. Philadelphia, Pennsylvania 19104. х AWARDS FOR MEDICAL RESEARCH. The new LAWSON TAIT MEMORIAL TRUST of London, England, is offering awards up to £3000 for original research, done without the use of living animals. These awards will appeal to men and women who are interested in trying new fields of medi-cal research based on clinical work. For further information, write our Canadian branch: THE LAWSON TAIT MEMORIAL TRUST, Box 674, Station "F", Charles Street East, Toronto 5, Ontario, Canada.

AWARDS

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13 times in 1 year 26 times in 1 year	50 per inch 50 per inch

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BOOKS AND MAGAZINES

GRASSLANDS

Editor: Howard B. Sprague

6" x 9", 424 pp., 37 illus., index, cloth. Price \$9.00, AAAS members' cash or-ders \$8.00. AAAS Symposium Volume No. 53.

1959

This volume is intended as a review of knowledge on many aspects of grass-lands resources. The 44 authors were selected by their own professional colleagues as being particularly competent to present the respective subjects. Thirty-seven papers are arranged under these chapter headings:

- 1. Sciences in Support of Grassland Research
- 2. Forage Production in Temperate Humid Regions 3. Engineering Aspects of Grassland
- Ägriculture
- 4. Forage Utilization and Related Ani-mal Nutrition Problems 5. Evaluation of the Nutritive Signifi-
- cance of Forages Grassland Climatology
- 7. Ecology of Grasslands 8. Range Management

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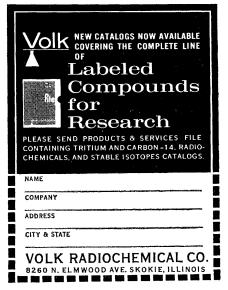
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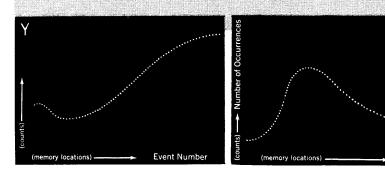
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Interspike intervals, action potential firing rates, amplitudes of nerve firings, etc.

R-R intervals, P-R-T amplitude distributions, etc.

ELECTROENCEPHALOGRAPHY

Amplitude distributions of evoked responses, latency distributions, wave intervals, etc.

BEHAVIORAL PSYCHOLOGY

Reaction time distributions, learning time curves, etc.

CELL BIOLOGY

Spontaneous firing rates, action potential amplitude distributions, etc.

Automated histograms permit detection and quantification of pattern changes over a complete range of information. The investigator need no longer limit himself to confined, and therefore biased, samples in order to be able to effectively interpret his data. Previously, interpretation required tedious, time-consuming manual processing of strip-chart' or film records. However, recent advances in digital computer techniques now provide for on-line data reduction and immediate analysis of bioelectric phenomena. Thus, the researcher can quickly obtain statistical information in a condensed and easily comprehensible form.

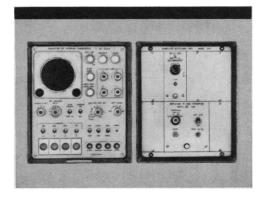
Results may be represented in diverse forms of amplitude or time interval histo-

grams. In the case of amplitude histograms, counts proportional to the amplitude of the input signal are deposited in a memory location - or, a count is deposited in a memory location whose number is proportional to the amplitude of the signal. In the case of time interval histograms, counts proportional to the time interval of the input signal are deposited in a memory location - or, a count is deposited in a memory location whose number is proportional to the signal time interval. Hence, the investigator is supplied with a distribution curve of the signal source and can easily determine preferential amplitudes or time intervals.



Variables reflected by X or Y may be:

- Time interval between successive events.
- Time latency of stimulated responses.
- Time that a signal dwells above a preset level.
- Time of occurrence of specific events after stimulation.
- Time duration of an event.
- Amplitude of successive events.
- Amplitude of signal at specific points in time.
- Amplitude of signal peaks.
- Amplitude of signal after fixed delay from stimulation.

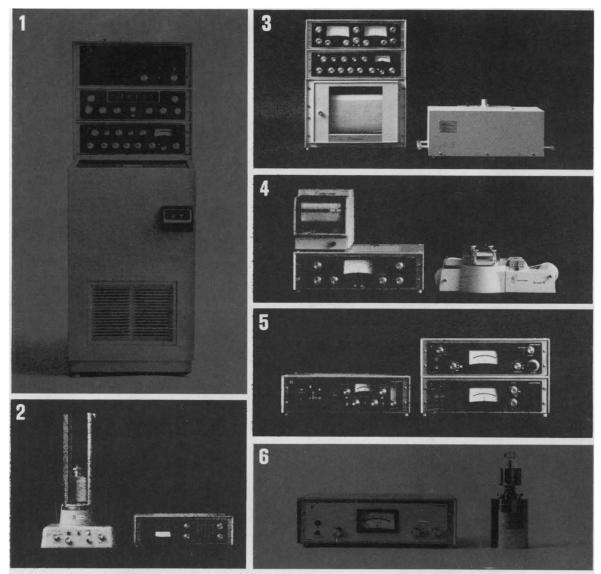


Our application engineers are available for consultation concerning specific applications.

See us at Booth 33, Interamerican Congress of Cardiology, Queen Elizabeth Hotel, Montreal, Canada; June 14-19, 1964.

Division Sales Office: 202 Mamaroneck Ave., White Plains, N. Y. Phones: (212) 876-1444 (914) 761-5000 Cable: MNEMOTRON, WHITEPLAINSNY

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in order to obtain accurately the most information from every sample.

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