

Schwarz/Mann Bulletin Board



High specific activity deoxynucleotides available from Schwarz/Mann

Cat. No.		0.25mC	1.0mC	5.0mC	25mC
2433-58	Deoxyguanosine 5' Triphosphate (8- ³ H) Li.	\$51.50	\$123.50	\$391.50	
2433-56	Deoxyguanosine 5' Triphosphate (8- ³ H) Na.	\$51.50	\$123.50	\$391.50	
	Specific Activity 10-c/mM				
2433-94	Thymidine 5' Triphosphate (Methyl- ³ H) Li.	\$51.50	\$125.00	\$391.00	
2433-95	Thymidine 5' Triphosphate (Methyl- ³ H) Na.	\$51.50	\$125.00	\$391.00	
	Specific Activity 40-60c/mM				

Also available at high specific activities

2533-98	Thymidine (Methyl- ³ H)	\$12.50	\$35.00	\$100.00	\$400.00
	Specific Activity 40-60c/mM				
1533-90	Uridine (5, 6- ³ H)	\$15.50	\$40.00	\$105.00	\$345.00
	Specific Activity 40-60c/mM				

Immediately available from stock

Please write to Schwarz/Mann
Division of Becton, Dickinson and Company [B D]
Orangeburg, New York 10962
Telephone 914-359-2700

Circle No. 105 on Readers' Service Card

SUPERVISOR

BIO-CHEMICAL PHARMACOLOGY

... to have responsibility for bio-chemical aspects of food additive and drug programs including design of protocols for determining metabolic rate, pharmacokinetic studies, bio-availability determinations. Will supervise staff including several Ph.D.'s.

Requires a Ph.D. in Pharmacology having strong bio-chemical interests and one who is an experienced investigator with supervisory experience. Candidates should have at least 4 years' experience in industry.

Excellent opportunity to work as part of a top-notch medical research department in a dynamic growth organization. ICI AMERICA (including the former Atlas Chemical Industries) is a subsidiary of one of the world's leading industrial organizations. Send résumé in confidence, including present salary, to:

DONALD P. WHITELEY
Department 2001



ICI AMERICA INC.

Wilmington, Delaware 19899

An Equal Opportunity Employer

Personnel Placement

It is requested that only those employers who will not discriminate on the basis of race, sex, religion, color, or national origin submit positions open advertising.

POSITIONS WANTED: 40¢ per word, minimum charge \$10. Use of Box Number counts as 10 additional words. Payment in advance is required. These rates apply to individuals only. Personnel agencies and companies take display rate for all advertising.

POSITIONS OPEN: \$110 per inch. No charge for Box Number. Rates net. No agency commission allowed for ads under 4 inches. No cash discount. Ads over 1 inch will be billed to the nearest half inch. Payment in advance is required except where satisfactory credit has been established.

COPY for ads must reach SCIENCE 4 weeks before issue date (Friday of every week). Send copy for Personnel Placement advertising to:

SCIENCE, Room 211
1515 Massachusetts Ave., NW
Washington, D.C. 20005

Replies to blind ads should be addressed as follows:

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

POSITIONS WANTED

Assistant to Research Director/Project Manager, and so forth, position sought by Ph.D. (physics), August 1973. Enjoys helping people in all fields of science, engineering. More than 15 years of diversified industrial experience. Box 377, SCIENCE. X

POSITIONS WANTED

Biochemist-Chemist, Ph.D. 1966. Experience in lipid biochemistry and in the chemistry of natural products. Well versed in analytical methods—TLC, GLC, IR, UV, NMR, mass spectrometry and all types of chromatographic procedures. Publications. Teaching experience. Currently on the faculty of a university. Seeks teaching/research position. Box 378, SCIENCE. X

Biomedical Engineering Ph.D., EE background, experience in electronics and computers, seeks academic or industrial position. Box 379, SCIENCE. X

Biophysics, Ph.D., 1969, woman. Four years' postdoctoral R & D and teaching in clinical medicine. Three plus years' pre- and postdoctoral teaching experience. Interested in position in western Oregon or Washington teaching biophysics, physics, cell biology, science for non-science majors, immunology, biochemistry, and physiology. Will consider solely teaching or teaching/research position. Box 368, SCIENCE. 7/27

Cancer Immunologist: Ph.D. seeks research/teaching position. Experience and interest in quantitative tumor biology, human tumor immunology, normal immune profiles, serum protein polymorphisms, analytical and preparative PAGE, histochemistry, immunohistochemistry, immunomethodology, applicable to clinical pathology, microbicidal and cytotoxic mechanisms. Medical (pathology), paramedical-graduate teaching (microbiology) experience. Publications. Will consider challenging research position. Box 380, SCIENCE. X

CNS-Behavior Neuroscientist, Ph.D. 1972, degrees in psychology, pharmacology; clinically related postdoc. in psychopharmacology. Seeks permanent position or 1-year postdoc. leading to research/academic position. Twelve papers in psychobiology of memory, motivation. Box 381, SCIENCE. X

Ph.D. Cytogeneticist; experience in human and mammalian chromosomes, tissue-culture, amniocentesis and teaching in genetics. Box 382, SCIENCE. X

Developmental Biologist, Ph.D. Author of a textbook and many articles. Teaching-research experience, 8 years. Seeks teaching, teaching-research position. Box 383, SCIENCE. X

POSITIONS WANTED

Environmental Impact Analyst, U.S. and overseas experience in environmental and economic impact analysis, engineering, and management. U.S. citizen, B.S. engineering, Ph.D. physical science. Seeks position involving environmental impact analysis for major engineering projects. Willing to travel. Box 384, SCIENCE. X

Immunologist, Ph.D. Experienced; research; management; publications. Specialist in medical immunology, particularly in area of diagnostic laboratory techniques. Interested in a senior position within a challenging environment. Box 385, SCIENCE. X

Pharmacologist: Ph.D. Five years of postdoctoral experience in autonomic and endocrinology. NIH traineeship in diabetes. Sixteen publications. Seeking research, teaching, or government position. Patel, 4660 Waldo Avenue, Riverdale, New York 10471. X

Professorship-Chairmanship-Research Position, 1973 or 1974, Ph.D., numerous publications, good references, experience in electron and light microscopy, neurophysiology, cancer research, teaching. Box 386, SCIENCE. X

Science and Engineering Information Specialist, 18 years' experience information gathering, communication, and analysis (meeting, laboratory and supplier visits; literature searches; etc.) in industry, university. Education: physics, nuclear engineering, applied mathematics. Seeks industrial, academic, government, or foundation position. Box 387, SCIENCE. X

POSITIONS OPEN

TERRESTRIAL ECOLOGIST

Terrestrial Ecologist is needed to develop and supervise contract programs that describe the existing environment and assess the impact of disruption to the natural systems. He will be responsible for planning, proposing and managing field programs and analysis. Applicants should have a doctorate, systems orientation, some years of responsible experience and entrepreneurial skills. Send curriculum vitae and salary requirements to **Mr. B. Mulnard, Gramman Ecosystems Corporation**, Bethpage, New York 11714.

POSITIONS OPEN

AQUACULTURE RESEARCH DEPARTMENT HEAD

Applications are requested for a senior position in the Syntex Aquaculture Sciences Division, Palo Alto, California, to lead a team of qualified research staff in studies of intensive and extensive rearing of *Macrobrachia* (freshwater prawn). Areas of study include larval rearing and genetic improvement, nutritional development, hormone studies of molting and behavior, medicinals for disease, water quality, among others. Candidates should possess an M.S. or Ph.D. with several years of experience in aquaculture as manager of a research team. Preference will be given to persons with experience in intensive systems rearing *Macrobrachia*. Résumés should be addressed to: **Karl McCalla, Personnel Department, Syntex Corporation, 3401 Hillview Avenue, Palo Alto, California 94304, 415-855-5401 (collect).**

SYNTEX

SCRIPPS INSTITUTION OF OCEANOGRAPHY invites application for position at the **Assistant or Associate Professor** level with active research and teaching interests in a broad range of quantitative field and theoretical approaches to ecological processes in the marine environment, preferably with special competence in population dynamics and biological oceanography. Level to be determined by qualifications. Send curriculum vitae, bibliography, and list of references to: **Professor James T. Enright, Scripps Institution of Oceanography, Box 1529, La Jolla, California 92037.** The University of California is an equal opportunity employer with an affirmative action program.

FACULTY POSITION IN BIOCHEMISTRY. Research-teaching position available immediately at Assistant Professor level or possibly higher. Biochemical areas: animal viruses, enzymes, membranes, or neurobiology. Candidate must be active researcher with postdoctoral experience. Women and minority candidates encouraged, especially those interested in helping recruit graduate students. **Dr. M. V. Simpson, Department of Biochemistry, State University of New York, Stony Brook, N.Y. 11790.** An equal opportunity employer.

BIOCHEMIST, Ph.D.

Excellent professional staff opportunity at modern, 1000-bed university-affiliated hospital center for Biochemist, Ph.D., with experience in serum protein fractionation and the utilization of chromatographic and electrophoretic techniques. U.S. citizenship required. Send complete curriculum vitae to: **Dr. Leo M. Meyer, Chief, Hematology Section, Brooklyn V.A. Hospital, 800 Poly Place, Brooklyn, New York 11209.**

A position as director of the Laboratory of **Fetal Medicine** in a university-affiliated hospital is available for a Ph.D. **BIOCHEMIST** possessing both postdoctoral training and excellent references. His duties will include supervision of the limited clinical services of this laboratory and creation of an independent research program, of his choosing, in the general area of fetal metabolism or development. Cooperative research projects with several university departments are currently under way. Appropriate faculty rank will be tendered to qualified applicant. This is an excellent position for someone interested in both basic research and its application to clinical medicine.

Send curriculum vitae to **Dr. J. M. Gibbons, Director of OB-GYN, St. Francis Hospital, 114 Woodland Street, Hartford, Conn. 06105.**

CELL BIOLOGISTS VIROLOGISTS

Immediate openings available for recent Ph.D.'s with training in cell biology, somatic cell genetics, tumor virology, immunology, lipid biochemistry. Send complete résumé to:

**Miss Sandy D'Ambrosio
Wistar Institute
36th and Spruce Streets
Philadelphia, Pennsylvania 19104**

POSITIONS OPEN

DEAN, SCHOOL OF MEDICINE

The University of Arkansas announces a vacancy in the position of Dean of the School of Medicine and invites interested, qualified persons to submit résumés. The U of A Medical Center is an equal opportunity employer. Inquiries should be addressed to the **Vice President for Health Sciences, University of Arkansas Medical Center, Markham at Hooper Drive, Little Rock, Arkansas 72201.**

OPPORTUNITY: MEDICAL EDUCATION-COMPUTER-ASSISTED INSTRUCTION. Ph.D. or M.D. to direct and/or participate in transfer of unique program in medical education to University of Illinois PLATO system. Must be creative, have strong interest in educational process, and broad background in biological sciences. Applicants should enclose curriculum vitae and list three referees to **Dean, Medical School, 1205 West California, Urbana, Illinois 61801.**

PH.D. SENIOR MICROBIOLOGIST

with experience in
ANTIBIOTIC PRODUCING ORGANISMS

for high-priority program involving studies of fermentation and production of new and useful antibiotic substances. Background in biosynthetic processes and strain selection desirable.

Schering, a major pharmaceutical company with a history of notable success in antibiotics, carries on a vigorous research program and offers excellent facilities and support services. Our suburban location is close to New York City. Please direct resume in confidence to: Research Personnel



**SCHERING
CORPORATION**

60 Orange St.
Bloomfield, New Jersey 07003

Applicants of all races are encouraged to apply
Female-Male

INSTITUTE OF PARASITOLOGY MCGILL UNIVERSITY

Applications are invited from established scientists for the position of Professor and Director of this Institute, which is well equipped for research in experimental parasitology. The post will become available in the summer of 1974. Inquiries or applications should be addressed to:

**Professor E. J. Stansbury
Dean, Faculty of Science
McGill University
Montreal, P.Q., Canada**

PHARMACOLOGISTS, PHYSIOLOGISTS, GENETICISTS and HEMATOLOGISTS

The Peoria School of Medicine, a 3-year clinical school in the University of Illinois, College of Medicine, has four staff positions for persons who can teach neurosciences, endocrinology, genetics, immunology or hematology in an integrated organ systems program in the clinical years. Applicants must hold the Ph.D. or M.D. with a minimum of 2 years' experience and will be expected to develop research programs in community-related areas. Peoria School of Medicine is a new school offering challenging opportunities in education and research. A job description is available on request. Applications with curriculum vitae and letters of recommendation should be sent to the **Coordinator of Basic Science Program, Peoria School of Medicine, 1400 West Main Street, Peoria, Illinois 61606.** The University of Illinois is an equal opportunity employer.

POSTDOCTORAL FELLOW in biophysics, physiology, cellular physiology, or biochemistry, depending upon interest and background of applicant. To be member of multidisciplinary research group (biochemist, immunologist, morphologist, physicist, physiologist) developing methods to separate constituent cell types of mammalian lung. Position available immediately. Send résumé to: **Dr. Lee Hoffman, Department of Medicine, Albert Einstein College of Medicine, Bronx, N.Y. 10461.**

POSITIONS OPEN

BIOCHEMIST

New England Nuclear Corporation, located in Boston, Mass., is currently seeking a chemist to meet the demands of its rapid growth and expansion.

The position of biochemist is new and will offer the most qualified applicant an opportunity to develop within an established group.

This position, which reports directly to the Group Leader, will be involved with preparations of radioactive (Carbon-14, Tritium and Sulphur-35) amino acids. In order to optimize within this context, you should have substantive experience in the chemistry and biochemistry of amino acids. You will also be expected to have a working knowledge of biosynthesis and the metabolic interconversion of amino acids as well as their isolation and purification at a micromolar level.

Successful candidates will be offered an excellent compensation package which includes interview and relocation expense reimbursement. We are suggesting that qualified individuals submit resume and salary history in complete confidence to **J.R. Chabot, C/O Personnel Division, New England Nuclear Corporation, 575 Albany Street, Boston, Mass. 02118** or call collect for information, (617) 426-7311, Ext. 338.



New England Nuclear
An Equal Opportunity Employer

The Market Place

MICROELECTRODE Stainless Steel Electrodes

Insulated, 2 µ tip, length 75 mm
Dia. 0.5mm, 12 electrodes \$28.00
Catalog No. 406-20



Transidyne General Corporation
462 South Wagner Road
Ann Arbor, Michigan 48106

Attention

ULTRACENTRIFUGE users

Density Gradient Markers
1 mm calibrated spheres
Pat. No. 3,437,266

available through **Beckman Instruments**
1117 California Ave., Palo Alto, CA 94304
— for special densities send inquiries direct to

REPRODUCTIVE SYSTEMS, INC.
P.O. Box 304, Dept. B, Menlo Park, CA 94025



SORVALL MAKES THE ULTRA DIFFERENCE

Only the new Sorvall OTD-2 Ultra Centrifuge has Oil Turbine Drive.

Gears, belts, and motor brushes are a big drag when it comes to fast, efficient ultra-centrifugation. Which is why Sorvall engineers developed the exclusive, patented Oil Turbine Drive for our new OTD-2 Ultra Centrifuge.

Oil Turbine Drive uses very few moving parts—fewer parts, less trouble—and the turbine itself touches only the drive fluid. Uneven bearing loads are practically eliminated; vibration, friction and wear are cut to the barest minimum. Result: less drag. And when you have less drag, you get better ultra-performance. Which means speeds to 65,000 RPM and RCF's to 424,000 *g*—smoothly, quietly, reliably. The Oil Turbine makes the big difference in drive efficiency; but what about the "brains" behind all that drive?

The logical capabilities of this centrifuge are, in a word, multi-dimensional. Just a few simple controls direct all major operating modes—press a button and

the electronic logic does the rest: The OTD-2 is completely self-programming. Conditions are set up automatically to suit the requirements of your particular procedure and your valuable sample. You can even pre-cool the rotor. Back-up and double back-up systems protect all the critical functions, and a self-diagnosing system of checks-and-balances keeps things like speed and temperature *right on*. Protection circuits prevent no-load and overspeed operation. A key lock rules out unauthorized runs.

The OTD-2 also features an interchangeable drive cartridge, easy-to-clean rotor chamber, and stainless-steel top. Used in conjunction with angle, horizontal and zonal rotors—including Sorvall's specially designed Ultra Rotors—the OTD-2 provides truly superior performance in the ultra range. Full details are yours for the asking: just write or call Ivan Sorvall, Inc., Newtown, Connecticut 06470. (203) 426-5811.

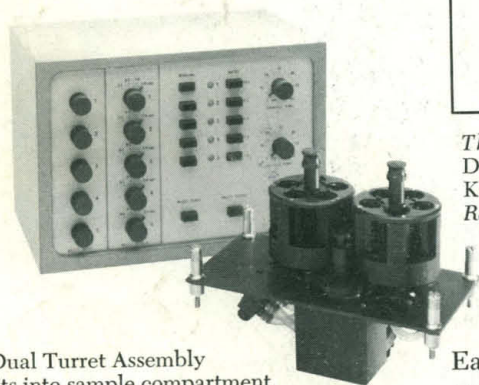
Ask for Bulletin SCE-7UD

SORVALL®

Run up to Five DNA Denaturations, Simultaneously!

... with Varian Techtron's new Auto-5 Cell Programmer!

Thermal denaturations of DNA establish its uncoiling temperature, indicating the number of G-C pairs present. This DNA "melting point" (T_m) is also influenced by pH, ionic strength and solvent polarity ... and the simplest way to study these



Dual Turret Assembly fits into sample compartment.

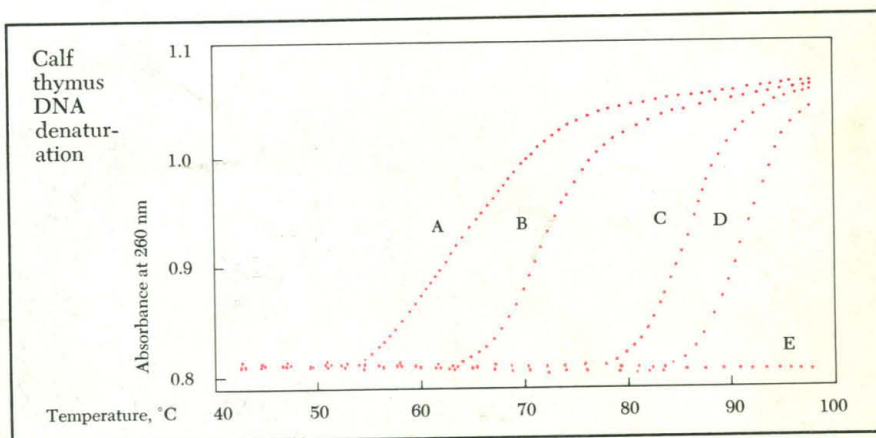
effects is to analyze several DNA solutions simultaneously. With all samples heated uniformly, the Absorbance-Temperature curves are easily compared.

The Varian Techtron 635 Spectrophotometer and the Auto-5 Cell Programmer, with Temperature Readout Accessory, perform these multi-sample T_m analyses handily ... as shown by the denaturation curves at the right.

Push buttons program the Auto-5 dual turrets: each pair (sample and reference material) may be studied

*For meter version only (Model 635)

Circle No. 3 on Readers' Service Card



Thermal Denaturation of DNA: Effect of ionic strength on T_m . Sample: calf thymus DNA dissolved in pH7 phosphate buffer $\mu=0.005M$ with KCl additives: Curve A: no KCl; Curve B: 0.005M KCl; Curve C: 0.05M KCl; Curve D: 0.1M KCl; Curve E: control. Range: 0.5 abs full scale with 0.8 abs initial zero suppression. Wavelength: 260 nm.

for any interval up to 60 seconds, with up to 60 minutes between each set of readings. Each sample may have its own reference ... or all may use the same, with the reference turret locked in one position. Both turrets index precisely in the optical path ... and are simply lifted out for convenient cell transfer.

Optional modules for the Auto-5 Programmer include *multi-zero* and *multi-range*[®] capabilities: the instrument zero and the most suitable absorbance span can be preset for each of the five sample/reference pairs.

You'll find the Varian Techtron 635 and Auto-5 Programmer indispensable

able whenever multiple samples can be run simultaneously: in kinetic assays, analysis of column effluents, titrations ... even the most complex reaction rate studies become routine.

At Varian Instruments we design simpler ways to answer your life science problems ... may we send you free literature showing how? Write 611 Hansen Way, Box D-070, Palo Alto, California 94303.

varian instruments



Brand names: ANASPECT™ • CARY® • MAT • VARIAN®
VARIAN AEROGRAPH® • VARIAN TECHTRON

