

The new scientific director of the National Institute of Child Health and Human Development, NIH, is **Roy Hertz**, chief of the endocrinology branch of the National Cancer Institute.

Major Contracts and Grants

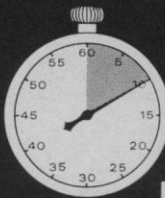
The University of North Carolina will begin a multidisciplinary study of possible **toxic effects of drugs** on man, under an NIH grant. The university has been awarded \$17 million by the National Institute of General Medical Sciences for a 7-year research and training program. The grant, largest ever made by NIGMS, will help the school to establish a new pharmacology-toxicology center at Chapel Hill. Projects will include studies of physical and chemical disposition of drugs, differences in individual responses to drugs, biochemical effects, physiological and clinical pharmacology, and biostatistical studies. Thomas C. Butler, professor of pharmacology at the North Carolina medical school, is director of the center.

The John A. Hartford Foundation has given Duke University a grant of \$252,269 for research on **heart disease**. It will provide funds for improvement of existing techniques and equipment for taking x-ray films of activities of the heart; for an intensive care ward for heart attack victims; and for laboratory projects. The principal investigators are Henry D. McIntosh, head of Duke's cardiovascular research laboratory; David C. Sabiston, chairman of the surgery department; Richard J. Lester, chairman of the radiology department; and Andrew G. Wallace, associate in medicine.

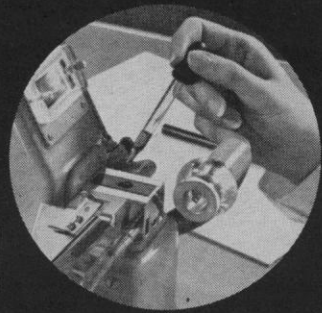
A computer-based **registry of chemical compounds** tested for possible anti-cancer use will be developed by the Chemical Abstracts Service of the American Chemical Society, under a 19-month, \$489,400 contract with the National Cancer Institute. CAS will computerize information on chemicals already tested by the Cancer Chemotherapy National Service Center, and will include new compounds as received. Chemicals will be listed by structural formulas, molecular formulas, various chemical names, bibliographic references where available, and registry index numbers. R. David Nelson is the principal investigator.

REFRACTOMETRY


WITH TOP ACCURACY READINGS IN SECONDS



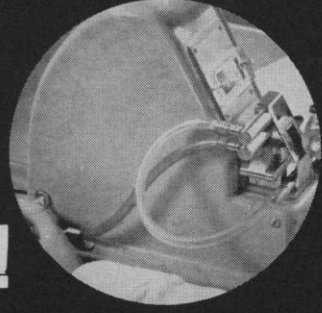
10 SECONDS



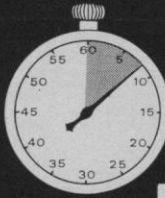
LOAD!




2 SECONDS



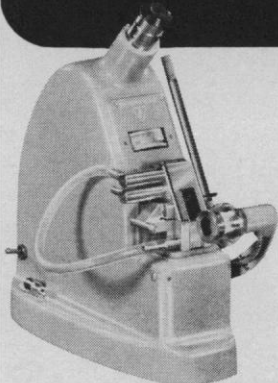
LIGHT!



8 SECONDS




LOOK!



A TOTAL OF 20 SECONDS
...at a fraction of a cent per test

Test any product within an extended range of ND 1.30 to ND 1.71 easily, speedily, accurately with the Abbe 3-L Refractometer. *Loading is quick*... horizontal prisms are right-up-front and unobstructed... permit easy wipe-off to prevent contamination. *Lighting is quick*... a conveniently placed push button illuminates the scales. *Looking is quick*... and sure. Read refractive index instantly to .0005 (with reliable estimates to .0001). Dissolved solids can be read to .2% (estimates to .1%). Solids scale reads 0% to 85%. Either transmitted or reflected illumination can be used. You can make a complete test in just 20 seconds! Instrument costs are less than 29¢ a day!

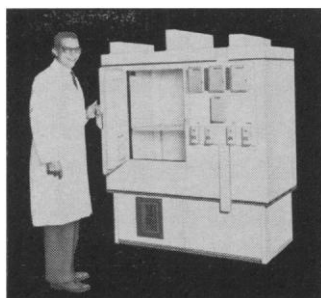
Bausch & Lomb offers you the most complete line of refractometers available... the Abbe 3-L, the High Range Abbe 3-L, the Precision, the Butyro, the Industrial, Hand, Juice and Dipping models. To get complete data on range and application, write for Catalog D-202. Bausch & Lomb, 75924 Bausch Street, Rochester, New York 14602.

BAUSCH & LOMB 

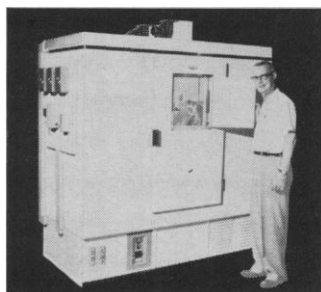
INDEX TO ADVERTISERS—3 December 1965

Aldrich Chemical Co., Inc.	1376	Honeywell	1245	Phoenix Precision Instrument Co. ...	1386
Allied Chemical	1215	Houghton Mifflin Co.	1363	Photovolt Corp.	1376
Aloe Scientific	1395	Hyland Laboratories	1387	Precision Scientific Co.	1383
American Optical Co.	1396			Professional Tape Co., Inc.	1372
Aquarium Systems, Inc.	1373	Instruments for Research & Industry	1375		
		Instrumentation Specialties Co., Inc.	1384	Radiation Instrument Development	
Baird-Atomic, Inc.	1242, 1243	International Equipment Co.	1210, 1363	Laboratory	1224
Bausch & Lomb	1234, 1381, 1391			Reeve Angel	1366
Beckman Instruments, Inc. ...	1218, 1244	Klett Manufacturing Co., Inc.	1299	Revco Inc.	1384
Bel Art Products	1388				
Blackstone Ultrasonics, Inc.	1300	Labindustries	1385	Sage Instruments, Inc.	1364
Brinkmann Instruments	1222	Laboratory Construction Co.	1387	Sigma Chemical Co.	1374
		Lea & Febiger	1226	Sigmamotor Inc.	1373
California Computer Products, Inc.	1212	Leitz, E., Inc.	1246	Sorvall, Ivan, Inc.	1206
Celanese Plastics Co.	1232, 1233	London Co.	1235	Syston Donner Corp.	1227
Chemical Rubber Co.	1388	Lourdes Instrument Corp.	1214		
Clay-Adams, Inc.	1213			Technicon Chromatography Corp.	1211
Columbia University Press	1369	Materials Research Corp.	1373	Tektronix, Inc.	1223
		Matheson Co.	1382	Thermolyne Corp.	1382
E-C Apparatus Corp.	1364, 1370	Melabs	1365	Thermoplastic Processes, Inc.	1378
Edmund Scientific Co.	1216	Mercer Glassworks Inc.	1389	Tri-R Instruments	1374
Electro-Optical Instruments	1372	Mettler Instrument Corp.	1207		
E & M Instrument Co., Inc.	1380	Millipore Filter Corp.	1386	Unitron Instrument Co.	1241
		Mistaire Laboratories	1372		
Fish-Schurman Corp.	1384	Nalge Co., Inc.	1368	Van Nostrand	1377
Flow Laboratories Inc.	1217	Nikon Inc., Instrument Div.	1229	Varian Associates	1219
General Motors Research		Ohio Chemical	1363	Welch Scientific Co.	1374, 1386
Laboratories	1228	Optics Technology Inc.	1366	White, S. S., Co.	1379
Gilford Instrument Laboratories Inc.	1248	Oxford University Press	1378, 1390	Whittaker Corp., Gencom Div.	1368
				Wild Heerburg Instruments, Inc.	1371
Hacker, William J., & Co., Inc.	1367	Percival Refrigeration & Mfg. Co.	1392	Wiley, John, & Sons, Inc. ...	1230, 1231
Hamilton Co.	1390	Perkin-Elmer Corp.	1225	Worthington Biochemical Corp. ...	1380
Harvard Apparatus Co., Inc.	1389	Pharmacia Fine Chemicals Inc.	1220		
Hewlett Packard, Mechrolab Div. ...	1221	Phipps & Bird, Inc.	1387	Zeiss, Carl, Inc.	1238

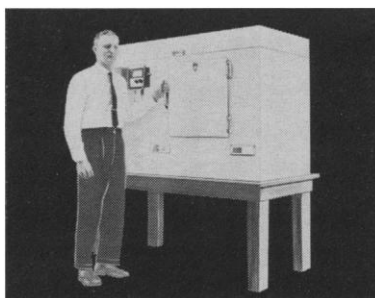
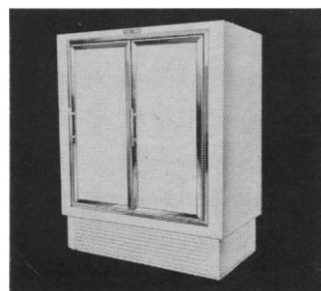
Model MB-54 — The smallest floor model. Inside working area 44" x 26" with 34" height. Has self-contained unit. Same features as larger models.



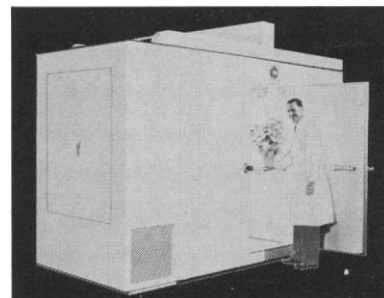
Model PGC-78 — Portable model with self-contained unit. Inside working area 66" x 30"; 52" high. Door has observation window. Comes fully assembled.



Model CE-20 — New portable model with self-contained unit. Has two doors and two benches. Inside working area 45" x 22½"; height 48". Single temperature control and lights.



Model E-57 — A self-contained portable bench model. Same climatic control as larger models. Inside working area 36" x 24" with 24" height. Takes a minimum of laboratory space.



Model PGW-132 — A walk-in unit with 90" x 52" inside working area. Has self-contained refrigeration unit. For same size model with remote refrigeration, ask for Model PGW-108.

PERCIVAL ENVIRONMENTAL LABS

Standard or custom-engineered models to meet your specific requirements

To obtain a wide range of temperatures from 45° to 90° F., light intensities from 200 to 4000 ft. candles, and controlled photo periods, select a Percival Environmental Lab. Just tell us your requirements—space, light, temperature. One of our basic styles of units, with modifications if necessary, will do the job you require. Constant temperature rooms available, too.



Write for further details today.

PERCIVAL REFRIGERATION AND MANUFACTURING CO.

Box 589-S • Boone, Iowa

PERSONNEL PLACEMENT

POSITIONS WANTED

Anatomist Ph.D. Teaching experience gross and microscopic anatomy, research interest neuro-anatomy, papers, societies, seeks academic position. Box 281, SCIENCE. X

(a) **1966 Ph.D. Physiologist** (biochemistry minor); desires research (life sciences) and teaching; Northeast preferred. (b) **Ph.D. Industrial Microbiology** (biochemistry minor); R&D, teaching experience. (c) **M.S. Physical Chemistry**; aerospace experience; nuclear, computer, radiological effects, human exposure; desires assignment with good potential. Please write to Science Service, The Medical Bureau, Inc., 900 North Michigan Avenue, Chicago, Illinois 60611. X

Business Administrator. A combination of administrative strengths which have achieved results in medical college, industrial research, medical research and animal farm. Can supply creativity and effectiveness to any executive challenge. Language facility in French, Spanish, Italian and German. Eager for career opportunity. Minimum \$20,000. Box 296, SCIENCE. X

(a) **Zoology Ph.D.**; chemistry minor; tissue culture, cell biology, genetics experience; seeks research or administrative appointment. (b) **Dairy Microbiology Ph.D. 1965**; BVS degree; available for research position. Write Woodward Medical Personnel Bureau, 185 North Wabash, Chicago 60601. X

POSITIONS OPEN

Applications are invited for appointments combining teaching and research in the Department of Physiology, University of Western Ontario. This Department is responsible for instruction in general and mammalian physiology in graduate, medical, dental, Honors B.Sc. and other programs. Research encouraged. Rank and salary commensurate with training and experience. Special consideration in at least one appointment for physiologist with dentistry background; and in another for a circulatory and/or respiratory physiologist. Write, giving pertinent information, to Professor J. A. F. Stevenson, Department of Physiology, Health Sciences Centre, University of Western Ontario, London, Ontario, Canada.

Faculty appointments: (a) **General Anatomist**, \$14,000; Midwest U. (b) **Professor Genetics**, cytogenetics; \$11,500 up; Eastern U. (c) **Director, Marine Biology**, \$15,000 up; East. (d) **Microbiologist, Parasitology**, to \$10,000; January 1966; Midwest. (e) **Physiologist**; to \$9,500; Southeast. (f) **Biochemist**, physical biochemistry, proteins; to \$10,000; West. (g) **Ecologist**, modern; "core," graduate and research in specialty; Southeast U; to \$10,000. Write **Science Service, The Medical Bureau**, 900 North Michigan Avenue, Chicago, Illinois 60611.

(a) **Microbiologist** direct busy lab, teach, conduct research; 500-bed hosp; \$15,000; Midwest. (b) **Prof. Chemistry** develop program, teach; expanding lib arts college; \$11,000 up; E. (c) **Biochemist** strong mgt ability; direct large dept 500-bed modern hosp \$20,000; Midwest. (d) **Production Mgr.** chemist pharmacologist; supv exp; leading drug mfr; \$15,000; E. (e) **Asst. Prof. Microbiology**, teach, supv. lab; research encouraged; med school; \$10,000; Midwest. Write **Woodward Med. Pers. Bureau**, 185 N. Wabash, Chicago 60601.

Professional Placement Services for 69 years

PREDOCTORAL ASSISTANTSHIPS available in the Department of Nutrition and Food Science at the Massachusetts Institute of Technology for 1966-1967 for qualified candidates wishing to pursue a training and research program in Nutrition, Food Science & Technology, Physiological Chemistry, Food Toxicology, Food Engineering, and Biochemical Engineering.

For application form and information write: **Professor Nevin S. Scrimshaw, Head of Department of Nutrition and Food Science, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.**

VIROLOGIST-CELL BIOLOGIST

To assume responsibility for supervising virus-cancer research program and carry out independent research. New University Research Institute in St. Louis vicinity. Position as Research Associate with opportunity for faculty appointment for well qualified applicant. Salary \$10,000 to \$16,000. Only those dedicated to scientific research need apply. Write Box 295, SCIENCE.

POSITIONS OPEN

BIO-ANALYTICAL CHEMIST or CLINICAL CHEMIST Ph.D. required

Unusual opportunity to assume responsibility for a new group interested in developing assays and conducting clinical chemistry studies. Send confidential resume and salary required to Personnel Manager.

Carter-Wallace, Inc.
Cranbury New Jersey
An equal opportunity employer

MICROBIAL ENZYMOLOGIST

Hazleton Laboratories, a rapidly expanding company located in suburban Washington, D.C., requires a Microbial Enzymologist (Ph.D.) with a minimum of 1 to 3 years experience in microbial metabolism, enzymology of biochemical problems. Position entails direction of research programs including the detection of microbial ATP by firefly bioluminescent reactions, as well as microbial research and identification. Excellent employee benefit programs including profit sharing. Please write:

HALL A. ACUFF
Assistant Personnel Manager
Hazleton Laboratories, Inc.
P. O. Box 30
Falls Church, Virginia
An equal opportunity employer

Predoctoral Traineeships in Biochemistry are available at the University of Kentucky to qualified applicants who are U.S. citizens. Stipends for first-year Trainees are \$2,400 plus tuition, plus a \$500 allowance for each dependent. The department is well equipped and the research interests of the staff are diverse. Inquiries should be addressed to **Director of Graduate Studies, Department of Biochemistry, Medical Center, University of Kentucky, Lexington, Kentucky 40506.**

POSITIONS OPEN

Academic Vacancy. June or September 1966. Mathematics, head of department. Recent Ph.D. required. Rank and salary dependent on training and experience. State supported school. Urban. Please send vitae with picture and references in first letter to

Dr. Mary Kapp, Chairman School of Science
Richmond Professional Institute
901 West Franklin Street
Richmond, Virginia 23220

SCIENTISTS

for
Agricultural Research
various centres across Canada

The Canada Department of Agriculture requires a number of scientists with advanced training and experience for both basic and applied research.

Applicants should be interested in a career which provides excellent opportunities to conduct independent research and to publish.

Positions are available in ANIMAL SCIENCE, PLANT SCIENCE, SOIL SCIENCE, CROP PROTECTION with emphasis on genetics and breeding, biochemistry, physiology, pathology, nutrition, taxonomy and microbiology.

Resumes should be submitted to the **CIVIL SERVICE COMMISSION OF CANADA, OTTAWA 4, ONTARIO.** Please quote file reference 65-1350.

BIOLOGICAL SCIENTISTS Ph.D. level

Appointments affording opportunity to contribute new dimensions to extant & proposed fields of basic as well as applied research now available for:

AUTONOMIC PHARMACOLOGIST

To supervise section involved in design & improvement of animal models for screening & studying new drugs of potential therapeutic value in treatment of hypertension and/or allergy & asthma. Prefer candidate with some relevant experience; however, recent graduates familiar with field will be considered.

NEURO-PHYSIOLOGIST/PHARMACOLOGIST

To develop a research unit in active psycho-pharmacology group. Areas of interest may include neuro-surgical techniques, brain electrodes & cannulae, CN's regulation of muscle tone & electro-physiological effect of drugs.

Excellent milieu for interdisciplinary exchange. Meeting attendance, publications & professional society memberships encouraged.

In confidence kindly submit curriculum vitae including salary requirements to Professional Employment Manager

Schering

CORPORATION

Manufacturers of
Fine Pharmaceuticals

Bloomfield, New Jersey 07003

POSITIONS OPEN

Predocutorial Assistantships and Traineeships in Physiology

Excellent opportunities for graduate students leading to the Ph.D. Ample stipends and free tuition. Training and research in endocrinology, muscle, water and electrolyte metabolism, cardiovascular, gastrointestinal, sensory physiology and biophysics. Write for details to:

Head, Department of Physiology
University of Illinois at the Medical Center
P. O. Box 6998
Chicago, Illinois 60680

VIROLOGIST

An opening for a Virologist at federal laboratory engaged in research in avian leukosis. Ph.D. necessary; D.V.M. optional. Will be leader of group studying basic virological properties of viruses causing leukotic diseases and related neoplasms, including development of in vitro detection and assay procedures and development of vaccines or other agents or procedures useful in control of these diseases. Must have proven research ability and be able to direct assistants and technicians. Starting salary \$10,250 per annum or higher depending on qualifications and experience. Liberal fringe benefits. Nondiscrimination in selection.

BIOCHEMIST

An opening for a Biochemist with Ph.D. degree, at Federal laboratory engaged in research at the molecular level investigating host-cell virus relationships of the Rous sarcoma-avian leukosis complex. Will be leader of the biochemical investigations. The current program under way includes in vivo and in vitro studies of the ultrastructure, biochemistry, and genetic constitution of tumor cells, oncogenic viruses, and susceptible hosts. Starting salary \$10,250 per annum or higher depending on qualifications and experience. Liberal fringe benefits. Nondiscrimination in selection.

Inquire: Director, Regional Poultry Research Laboratory
U.S. Department of Agriculture
Dept. AH-10
3606 E. Mt. Hope Road
East Lansing, Michigan 48823

THE WORLD HEALTH ORGANIZATION requires a TOXICOLOGIST

Applications are invited for a new post in the Nutrition Unit, WHO, Geneva. The successful candidate will assist the staff in matters relating to the toxicological and nutritional aspects of international food standards. These will include problems concerning food additives and pesticides.

Requirements: Postgraduate training (M.Sc. or Ph.D. or equivalent) and some research experience in toxicology, nutrition, or related sciences; excellent knowledge of English; working knowledge of French desirable.

Conditions: Initial salary \$US 6130, net of national income taxes; this base salary is supplemented by various allowances which relate to cost of living factors and to dependency status; 6 weeks' holidays; home leave; health insurance; pension plan; removal of household goods and personal effects to Geneva. Write for application form to: Chief, Personnel, WHO, Geneva, Switzerland

POSITIONS OPEN

Wanted Senior Laboratory Technician for modern diversified **Cardio Pulmonary Diagnostic Laboratory** in large county hospital 30 miles from New York City: Prior experience in different methods of blood and respiratory gas analysis, spirometry and evaluation of vascular pressure curves is very desirable but the most essential characteristic is mental curiosity and interest in learning new procedures. Salary according to experience. One position open now, a second one in January 1966. Contact **Thomas F. Leo, M.D.**, Meadowbrook Hospital, East Meadow, New York 11554.

FELLOWSHIPS

BIOPHYSICS TRAINING PROGRAM FELLOWSHIPS

Applications are invited from candidates with graduate degrees in physical, biological or medical sciences. This U.S.P.H. supported program is essentially a postdoctoral one, emphasizing research training in a specific area. Current studies include problems in radiobiology, neutron activation and dosimetry, biological data processing and medical engineering. Training stipends for Ph.D.s are \$5500-\$6500 with dependent allowances. Inquire: **Dr. G. L. Brownell**, Physics Research Laboratory, Massachusetts General Hospital, Boston, Massachusetts 02114

Physical Chemist-Biophysicist

A challenging opportunity for a qualified person to establish a group to conduct basic and applied research. Ph.D. degree required with 5 years experience in membrane permeability, diffusion and colloids, etc.

Good starting salary plus a superior benefits program including profit sharing. Relocation expenses paid. Send resume of jobs held, salaries received, expected salary and personal data to:

H. G. MacMillan, Placement Representative, Dept. 238-A

AMES COMPANY, INC.

Division of Miles Laboratories, Inc.

ELKHART, INDIANA

An Equal Opportunity Employer

The Market Place

BOOKS • SERVICES • SUPPLIES • EQUIPMENT

BOOKS AND MAGAZINES

WANTED TO PURCHASE: SCIENTIFIC JOURNALS

In the Biological and Medical Sciences, both American and Foreign. Sets, runs, and scattered issues are needed. Please submit lists for prompt estimates. **Fred. Ludwig, Route 4, Box 115 Tucson, Arizona 85704**

PROFESSIONAL SERVICES

CONTRACT STERILIZATION AVAILABLE.

Wilmot Castle Company offers a wide variety of methods and equipment for sterilizing and certified sterility testing on production line basis. Many years experience with a wide range of products. Our R & D facilities are staffed with skilled researchers specializing in sterilization and ready to undertake solution of your sterilization problems. Call, write or wire, Research Lab, Wilmot Castle Company, Rochester, New York.

HISTOLOGY SERVICE

RAPID SERVICE Large Orders Quickly Processed! Quickly Shipped! Professional supervision of every order. Free estimates on special problems. Distant points serviced swiftly. Special stains and techniques available. Fully protected shipments. **HISTOLOGY SERVICE, INC.** 4801 N. Broad St., Philadelphia, Pa. Zipcode 19141, (215) DAVenport 4-5800

SUPPLIES AND EQUIPMENT

STOP "BUMPING"!

Pure, inert **HENGAR** Granules do it best. A few granules in any boiling liquid prevent superheating, stop that explosive "bumping" vaporization that may cost you time and equipment. Speed distillation, prevent boiling losses with Hengar Granules. Call or write **HENGAR COMPANY**, 6827 Greenway Ave., Philadelphia, Pa. 19142. Phone (215) 724-0800.

A division of Henry **TROEMNER, Inc.**

• HYPOPHYSECTOMIZED RATS

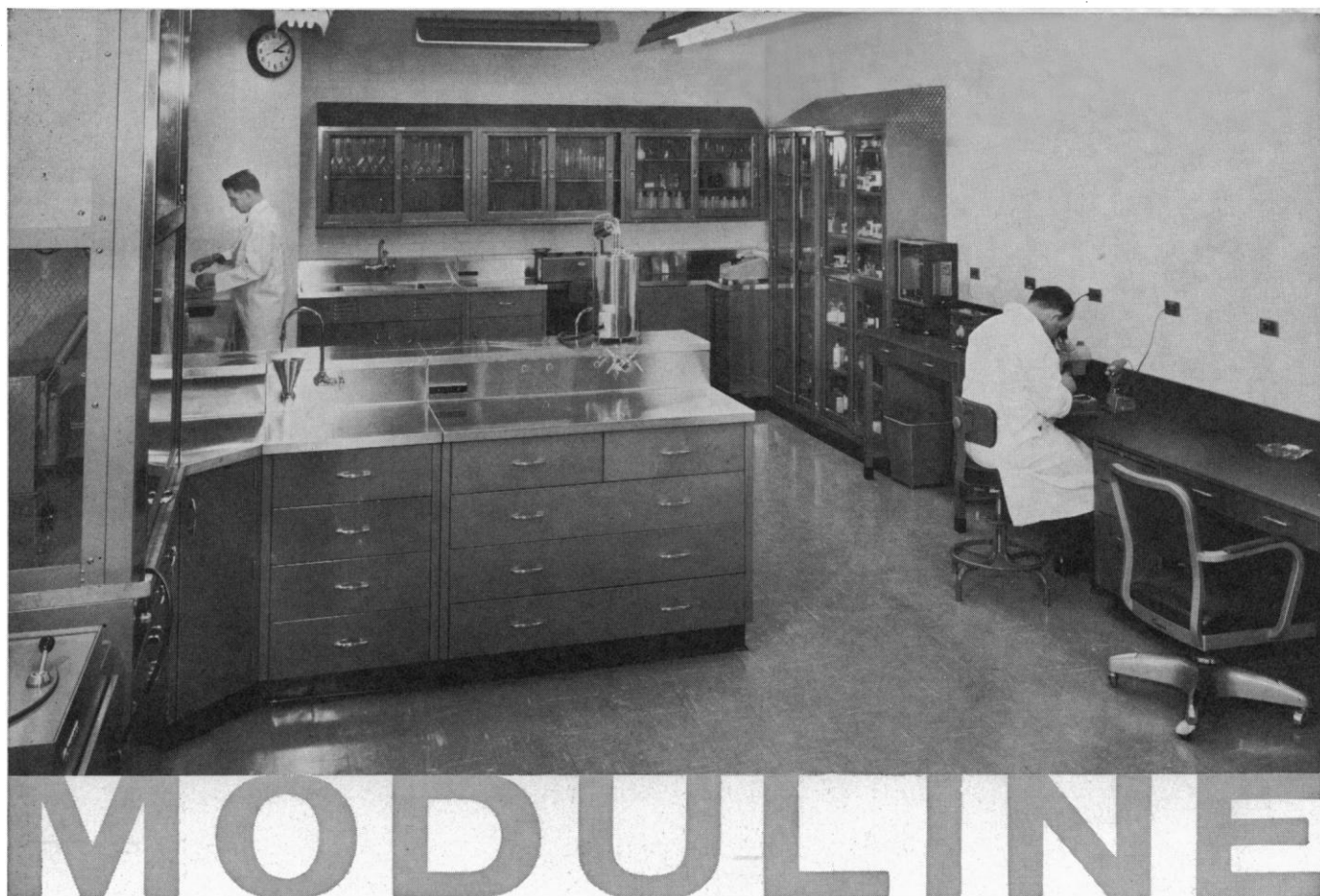
Shipped to all points via Air Express
For further information write

HORMONE ASSAY LABORATORIES, Inc.
8159 South Spaulding Ave., Chicago 29, Ill.

Purebred Animals, Inc.

Golden Hamsters, ICR Mice, Gerbils

P.O. Box 272
North Billerica, Mass.
617-933-5312



Casework With A Future

Casework quality cannot be measured solely on the gauge of steel used to construct the cabinets. Structural strength is determined by the form, not gauge of the sheet steel. Quality is also workmanship, skill in welding, proper grinding, painting — and in general the manner in which the equipment is crafted — to give it a future.

Coved inside front corner posts for added strength, hat section stiffeners along shelves for heavy loads, welded inverted pan stiffeners on floor and wall cases for rigidity, full height internal channel stiffeners in doors, $\frac{1}{2}$ " shelf adjustment on applied pilasters in lieu of perforated louvers in the corner post, nylon drawer rollers with ball bearings rather than just nylon rollers — these are some of the quality features that make Moduline laboratory furniture structurally superior and new looking year after year under constant heavy usage.

The list can go on and on — modular design provides for future modification and arrangement and simplifies installation. Walk-in fume hoods, illuminated titration tables, distillation racks, lazy susans — formerly custom built pieces — are now part of the standard line.

Look to Moduline for advanced ideas in laboratory furniture — better built to give it a future.

For details see your Aloe Scientific representative or write Aloe Scientific, 1831 Olive Street, St. Louis 3, Mo.

Serving the Sciences that Serve Mankind

HEALTH AND SCIENCE DIVISION  BRUNSWICK CORPORATION





two heads really are better than one...

when two persons can see the same magnified image simultaneously through a Dual Viewing Microstar.[®] Each viewer enjoys the same superb flat field, high-quality image that is available only with the AO Series 10 Microstar. An illuminated, transparent arrow is superimposed on the field of view. It can be freely positioned to pinpoint any

minute detail for both observers. Applications are limitless. It's specially suited for consultations, training and advanced teaching because it offers simultaneous viewing and critical resolution that is impossible to achieve by projection methods. The Dual Viewing Microstar gives you a new method of effective communication.

©REGISTERED TRADE MARK AMERICAN OPTICAL COMPANY



AMERICAN OPTICAL COMPANY
INSTRUMENT DIVISION • BUFFALO, NEW YORK 14215

Dept. X-1

Gentlemen: Please send complete information on the AO Dual Viewing Microstar.

Name _____

Address _____

City _____

State _____

Zip Code _____