



Annual Meeting
Toronto
3-8 January 1981

ADVANCE REGISTRATION FORM
(A)

NAME OF REGISTRANT: _____
(Last Name) (First and Initial)

NAME OF SPOUSE REGISTRANT: _____
(Last Name) (First and Initial)

REGISTRANT'S MAILING ADDRESS: _____
[For receipt of program(s), badges(s),
and *Science* (for new applicants)]
(Street)
(City/State or Province) (Zip Code)

ADDITIONAL REGISTRANTS: _____
(With same mailing address. Use new
form if address differs.)

REGISTRANT'S
INSTITUTION OR COMPANY: _____
(City) (State or Province) (Zip Code)

CONVENTION ADDRESS: _____
(Where you can be reached) (Hotel or Street Address, and/or Phone No.)
Check days attending: Sat Sun Mon Tue Wed Thu
☐ ☐ ☐ ☐ ☐ ☐

☐ Please check here if you need special services due to handicap. We will contact you prior to the meeting.

- Please check appropriate boxes, complete remainder of form (type or print), and **enclose payment**.
- Preconvention Program, badge, and voucher for full Program and Abstracts will be mailed to registrants in early December.
- Full Program and Abstract Volume can be picked up at *Advance Registrants' Desks* at the Sheraton Centre or the Royal York.
- **Registrations received after 12 December will be held at the AAAS Information Booth at the Sheraton Centre.**
- **Refund** requests for registration fees must be made by letter or telegram prior to 26 December 1980 and will be honored after the Annual Meeting. **No refunds are made on cancellation notices received after this date.**
- Special one-day attendance registration will be available at on-site Registration Desks only.

Registration Category	Regular				Student† or Retired			
	Single		Double		Single		Double	
<input type="checkbox"/> AAAS Member	<i>\$US</i>	<i>\$CAN</i>	<i>\$US</i>	<i>\$CAN</i>	<i>\$US</i>	<i>\$CAN</i>	<i>\$US</i>	<i>\$CAN</i>
<input type="checkbox"/> Non-Member:	<input type="checkbox"/> 30	<input type="checkbox"/> 35	<input type="checkbox"/> 45	<input type="checkbox"/> 52	<input type="checkbox"/> 15	<input type="checkbox"/> 17	<input type="checkbox"/> 23	<input type="checkbox"/> 26
<input type="checkbox"/> Meeting registration only	<input type="checkbox"/> 38	<input type="checkbox"/> 44	<input type="checkbox"/> 53	<input type="checkbox"/> 61	<input type="checkbox"/> 19	<input type="checkbox"/> 22	<input type="checkbox"/> 27	<input type="checkbox"/> 31
<input type="checkbox"/> Register and join: Single membership*	<input type="checkbox"/> 68	<input type="checkbox"/> 95 [#]	<input type="checkbox"/> 83	<input type="checkbox"/> 112 [#]	<input type="checkbox"/> 42	<input type="checkbox"/> 64 [#]	<input type="checkbox"/> 50	<input type="checkbox"/> 73 [#]
<input type="checkbox"/> Registration and join: Double membership**			<input type="checkbox"/> 95	<input type="checkbox"/> 125 [#]			<input type="checkbox"/> 62	<input type="checkbox"/> 86 [#]

†Fulltime undergraduate or graduate students only.

*Specify name of new member _____

**Registrant and spouse double membership includes single subscription to *Science* (51 issues per year).

[#]Canadian dollar rates are for Canadian membership, including additional postage.

NOTE: 1980 Membership Dues: Regular Member *\$US* 38; *\$CAN* 60[#]. Student or Emeritus, *\$US* 27; *\$CAN* 47[#]. Spouse or Emeritus without *Science*, *\$US* 12; *\$CAN* 13[#]. For other countries, please inquire.

Mail to: American Association for the Advancement of Science, Dept. R,
1515 Massachusetts Ave., NW, Washington, D.C. 20005

SURVEY OF ATTENDANTS

Annual Meeting, Toronto, 3-8 January 1981

Your answers to the following questions will help us to plan future Annual Meetings. Please complete the form and either return it with your registration form or send in separately (to the same address) if you wish to respond anonymously (the two forms will be processed separately).

Principal Professional Interest		Principal Professional Activity		Institutional Affiliation Type	
11 <input type="checkbox"/> Physical, mathematical	21 <input type="checkbox"/> Teaching, education	31 <input type="checkbox"/> University, 4-year college			
12 <input type="checkbox"/> Biological, medical	22 <input type="checkbox"/> Health practice	32 <input type="checkbox"/> Other educational			
13 <input type="checkbox"/> Engineering	23 <input type="checkbox"/> Other practice, consulting	33 <input type="checkbox"/> Industrial, commercial			
14 <input type="checkbox"/> Social, behavioral	24 <input type="checkbox"/> Research, development	34 <input type="checkbox"/> Other Private			
15 <input type="checkbox"/> Science policy	25 <input type="checkbox"/> Administration	35 <input type="checkbox"/> Government			
16 <input type="checkbox"/> (other)	26 <input type="checkbox"/> (other)	36 <input type="checkbox"/> (other)			

Highest Educational Level		Age		Number of Past AAAS Meetings Attended		Distance Traveled to Meeting	
41 <input type="checkbox"/> Doctoral Degree	51 <input type="checkbox"/> Under 26 years	61 <input type="checkbox"/> None	71 <input type="checkbox"/> Under 51 miles				
42 <input type="checkbox"/> Master's Degree	52 <input type="checkbox"/> 26 to 35 years	62 <input type="checkbox"/> One	72 <input type="checkbox"/> 51 to 150 miles				
43 <input type="checkbox"/> Other professional	53 <input type="checkbox"/> 36 to 45 years	63 <input type="checkbox"/> Two	73 <input type="checkbox"/> 151 to 400 miles				
44 <input type="checkbox"/> Bachelor's Degree	54 <input type="checkbox"/> 46 to 55 years	64 <input type="checkbox"/> Three	74 <input type="checkbox"/> 401 to 1000 miles				
45 <input type="checkbox"/> (other)	55 <input type="checkbox"/> 56 to 65 years	65 <input type="checkbox"/> Four	75 <input type="checkbox"/> 1001 to 3000 miles				
	56 <input type="checkbox"/> Over 65 years	66 <input type="checkbox"/> Five or more	76 <input type="checkbox"/> Over 3000 miles				

HOTEL RESERVATIONS

Annual Meeting
Toronto
3-8 January 1981



Conference Air Services (CAS) has been selected as the official travel coordinator for the AAAS Annual Meeting in Toronto. CAS will handle all housing and travel arrangements. Please take note of the housing information below and the travel information on the back of this page.

- All housing reservations must be submitted to CAS in writing (use housing form below).
- Reservations must be received by *Conference Air Services* **not later than 12 December 1980**; reservations received after that date are conditional upon space availability at the hotels.
- Rooms are assigned on a first come, first served basis. If room rate requested is no longer available, the next available higher rate will be assigned.
- Confirmation will come directly from *Conference Air Services (CAS)*. All changes and cancellations must be made in writing through CAS.

ROOM RATES IN CANADIAN DOLLARS*

Hotels	Single	Double & Twin	Parlor + 1 Bedrm.	Parlor + 2 Bedrms.	Parking (rates subject to change)
SHERATON CENTRE 123 Queen Street West (No. of rooms: 1000)	\$52 56 64	\$66 70 78	\$128 and up	\$192 and up	\$5.50 per 24 hours; no in-and-out privileges. Inquire for hourly rates.
ROYAL YORK HOTEL 100 Front Street West (No. of rooms: 800)	\$53 58 63	\$67 72 77	\$125 and up	\$203 and up	\$5.25 per 24 hours with in-and-out privileges.
HOTEL TORONTO 145 Richmond Street West (No. of rooms: 100)	\$58	\$68	\$150 and up	\$210 and up	\$5.00 per 24 hours with in-and-out privileges.

*\$ (Can) 1.00 = \$ (US) 0.86, with slight daily fluctuations; there is no room tax.

Charges for roll-away beds: Sheraton Centre and Hotel Toronto, \$15; Royal York Hotel, \$12.

Children are accommodated free of charge in same room with parents; age limits are as follows: Royal York, 14 and under; Sheraton Centre and Hotel Toronto, 18 and under.

Please type or print!

AAAS HOUSING FORM

Please type or print!

SEND CONFIRMATION TO:

Name _____ Street _____

City _____ State _____ Zip _____ Phone No. _____

OTHER OCCUPANTS OF ROOM:

Name _____ Name _____

Name _____ Name _____

CHOICE OF HOTEL: First _____ Second _____ Third _____

ROOM: ☐ Single ☐ Double ☐ Twin SUITE: ☐ 1 Bedroom ☐ 2 Bedrooms PREFERRED RATE: \$ _____

PLEASE INDICATE SPECIAL HOUSING NEEDS DUE TO A HANDICAP:

Wheelchair accessible room ☐ Other: _____

ARRIVAL DATE: _____ TIME: _____ ☐ a.m. ☐ p.m. DEPARTURE DATE: _____ TIME: _____ ☐ a.m. ☐ p.m. Be sure to list definite arrival and departure date and time. Hotel reservations will be held only until 6 p.m. unless otherwise specified.

Mail to: AAAS Housing Bureau
c/o CONFERENCE AIR SERVICES
1911 N Ft. Myer Drive
Arlington, Virginia 22209



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AIR TRAVEL RESERVATIONS

Because of the constant increase in air fares, the AAAS is attempting to provide the attendants of its 1981 Annual Meeting in Toronto with the lowest air fares available. Thus, the Association has selected *Conference Air Services (CAS)* as the official travel coordinator for the Toronto Meeting. CAS will endeavor to arrange groups from among those traveling to Toronto from other cities on the same day, thereby offering these travelers group fare savings. CAS guarantees booking of airline space at the best rates available, consistent with travelers' requirements, using group and super saver fares whenever possible.

Please take note of the travel information below and the housing information on the preceding page. We urge you to purchase your tickets through CAS, and to do so early, since air fares are increasing constantly. Volume ticket purchases will enable CAS to form groups at key departure points, thus providing the lowest air fares possible.

SAMPLE ROUNDTRIP AIR FARES TO TORONTO*

City	Coach Fare	Special Group Fare	City	Coach Fare	Special Group Fare
Atlanta	\$299.00	\$221.00	Los Angeles	\$531.00	\$348.00
Boston	180.00	126.00	Miami	349.00	299.00
Chicago	174.00	121.00	New York	160.00	112.00
Cleveland	116.00	98.00	New Orleans	355.00	251.00
Dallas	349.00	255.00	St. Louis	241.00	168.00
Denver	345.00	243.00	San Francisco	547.00	387.00
Detroit	121.00	96.00	Seattle	517.00	358.00
Houston	387.00	274.00	Washington, D.C.	180.00	143.00

*Note: These fares were in effect in July 1980 and are most definitely **subject to change**. Only sample cities have been listed above. Please call CAS for applicable airfares and possible group departure schedules from your home area. Persons for whom group flights cannot be arranged will be booked on the best air fare available.

For assistance with travel reservations call toll-free

800-336-0227

9:00 a.m. to 6:00 p.m.—Monday through Friday

(In Virginia call collect 703/528-0114)

If you are interested in a post convention skiing weekend or vacation in the Laurentian Mountains or at Blue Mountain, Ontario call CAS at the above toll-free number.

Please type or print!

AAAS AIR TRAVEL RESERVATION FORM

Please type or print!

SEND TICKET(S) TO:

Name _____ Street _____

City _____ State _____ Zip Code _____ Phone No. _____

ADDITIONAL PASSENGERS:

Name _____ Name _____

Please make the following flight reservations to Toronto:

Departing from _____ (Airport) on _____ (Date)

Returning from Toronto on _____ (Date), based on: ☐ 1st Class ☐ Coach ☐ Group Fare*

I prefer the following specific flights, times, stopovers: _____

I will pay for my airfare by: ☐ Check based on invoice from CAS ☐ Credit Card**

Name of Card _____ Number _____ Expiration Date _____

Authorization (Signature of Cardholder): _____

*Persons for whom group flights cannot be arranged will be booked on the best air fare available.

**Persons providing credit card information will be fare-protected at the time of booking.

Mail to: AAAS Travel Bureau
c/o CONFERENCE AIR SERVICES
1911 N Ft. Myer Drive
Arlington, Virginia 22209

and subsistence. Site proximity to lakes and marshes is variously interpreted in terms of the grazing potential for herbivorous prey (Bay-Petersen) or of the concentration of plant and fish resources (Welinder). In a stimulating study, Mellars and Reinhardt examine the distribution of three different artifact types in southern England in relation to resources, lithic raw material outcrops, and transportation routes. Their interpretations could, in addition, take into account the probability that such tools as axes would be curated and reworked to a greater extent than microliths not only because of limited distribution of suitable raw materials but also because of the greater labor investment in making an ax.

Because of the many theoretical issues raised and the emphasis on developing hypotheses about prehistoric behavior rather than a history of artifacts, this is an exciting book. It is a welcome addition to the archeological literature and an outstanding contribution to European prehistoric research.

MICHAEL JOCHIM

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University of California,
Santa Barbara 93106*

Developmental Biology

Maternal Effects in Development. Papers from a symposium, Exeter, England, Sept. 1978. D. R. NEWTH and M. BALLS, Eds. Cambridge University Press, New York, 1980. viii, 420 pp., illus. \$77.50.

This volume contains 18 papers that were presented at the fourth symposium of the British Society for Developmental Biology. The book begins with a felicitous essay by J. Cohen, which is partly a history of and commentary on the kind of attention that biologists have paid to the possible roles of maternal constraints on development and partly a survey and classification of the diverse ways maternal factors can influence the course of development. The other papers in the volume describe the effects these factors have on development.

Eight papers deal with various aspects of oogenesis and early development in laboratory amphibians. These stages of development have probably been studied in more detail in amphibians than in any other group of animals. The papers provide a review of much of this material; the topics covered include transcription during oogenesis, stockpiling of proteins and organelles used during early devel-

opment, the action of maternal-effect genes, and the function of cytoplasmic determinants laid down during oogenesis. As one reads through these papers one is struck by the paucity of experimental work that relates events that occur during oogenesis to the early development of the embryo. However, a paper by M. R. Dohmen and N. H. Verdonk on cytoplasmic localization in mosaic eggs and one by A. D. Lees on the maternal environment and control of morphogenesis in insects describe several situations in various animals where special features of development make them amenable to experimental studies linking a particular feature of oogenesis to embryogenesis. One situation that Dohmen and Verdonk describe concerns an RNA-rich structure called the vegetal body, which becomes located at the vegetal pole of the oocyte during vitellogenesis in the snail *Bithynia*. During the first cleavage of the egg the vegetal body is incorporated into a small polar lobe and segregated to only one of the blastomeres. If the polar lobe containing the vegetal body is removed during the first cleavage development does not proceed normally, but if the vegetal body is displaced from its original site by centrifugation prior to the first cleavage deletion of the polar lobe has no effect on development. One situation that Lees describes concerns maternal control of polymorphism in aphids. In these animals, maternal effects frequently cause progressive changes that can be followed over two or more generations.

The last five papers deal with mammals. British developmental biologists are currently doing much of the best and most imaginative work on mammalian development. Because of the special environment in which mammals develop they are a natural in any symposium on maternal effects. One particularly interesting paper in this group is by the late E. M. Deuchar on the effects of maternal diabetes on embryonic mammals. Her review of the work on animal models that have been used to study the subject points up the subtlety of this nutritional effect. The other papers on mammals are concerned with utero-placental circulation, teratogenesis, and immunological interactions between mother and fetus, in addition to the more traditional oocyte-mediated maternal effects.

The book has a feature that is rapidly disappearing from the scientific literature; the full title of each paper cited is given.

GARY FREEMAN

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Books Received

Advances in Computers. Vol. 18. Marshall C. Yovits, Ed. Academic Press, New York, 1979. xiv, 308 pp., illus. \$31.

Advances in Digital Image Processing. Theory, Application, Implementation. Proceedings of a symposium, Bad Neuenahr, Germany, Sept. 1978. Peter Stucki, Ed. Plenum, New York, 1979. x, 332 pp., illus. + plates. \$37.50.

Advances in Insect Physiology. Vol. 14. J. E. Treherne, M. J. Berridge, and V. B. Wigglesworth, Eds. Academic Press, New York, 1979. viii, 440 pp., illus. \$57.

Advances in the Study of Behavior. Vol. 10. Jay S. Rosenblatt, Robert A. Hinde, Colin Beer, and Marie-Claire Busnel, Eds. Academic Press, New York, 1979. xviii, 314 pp., illus. \$26.50.

Advances in Vaccination against Virus Diseases. Papers from a symposium, Bern, June 1978. Karger, Basel, 1979. viii, 74 pp. Paper, \$22.50. Monographs in Paediatrics, vol. 11.

The Alaskan Shelf. Hydrographic, Sedimentary, and Geochemical Environment. G. D. Sharma. Springer-Verlag, New York, 1979. xiv, 498 pp., illus. \$29.80.

Alkaline Phosphatase. Robert B. McComb, George N. Bowers, Jr., and Solomon Posen. Plenum, New York, 1979. xviii, 986 pp., illus. \$75.

An Amateur Radio Telescope. G. W. Swenson, Jr. Pachart Publishing House, Tucson, 1980. vi, 58 pp., illus. Paper, \$6.95. Reprinted from *Sky and Telescope*. The Astronomy Quarterly Library, 4.

The American Heart Association Heartbook. A Guide to Prevention and Treatment of Cardiovascular Diseases. Illustrations by Ilil Arbel. Dutton, New York, 1980. xiv, 370 pp. \$25.

Annual Review of Entomology. Vol. 25. Thomas E. Mittler, Frank J. Rodovsky, and Vincent H. Resh, Eds. Annual Reviews, Palo Alto, Calif., 1980. xxviii, 552 pp. \$17.

The Ant Heap. V. G. Dethier. Illustrated by Martha Huehnergath. Darwin Press, Princeton, N.J., 1979. 152 pp. \$7.95.

Anxiolytics. Stuart Fielding and Harbans Lal, Eds. Futura Publishing Company, Mount Kisco, N.Y., 1979. xxvi, 420 pp. \$31.50. Industrial Pharmacology, vol. 3.

Application of Short-Term Bioassays in the Fractionation and Analysis of Complex Environmental Mixtures. Proceedings of a symposium, Williamsburg, Va., Feb. 1978. Michael D. Waters, Stephen Newnow, Joellen L. Huisingh, Shahbeg S. Sandhu, and Larry Claxton, Eds. Plenum, New York, 1979. xiv, 588 pp., illus. \$49.50. Environmental Science Research, vol. 15.

Applications of Sheaves. Proceedings of a symposium, Durham, England, July 1977. M. P. Fourman, C. J. Mulvey, and D. S. Scott, Eds. Springer-Verlag, New York, 1979. xiv, 780 pp., illus. Paper, \$37.60. Lecture Notes in Mathematics, vol. 753.

Applied Functional Analysis. Jean-Pierre Aubin. Exercises by Bernard Cornet and Jean-Michel Lasry. Translated from the French by Carole Labrousse. Wiley-Interscience, New York, 1979. xviii, 424 pp. \$26.95. Pure and Applied Mathematics.

Aquatic Plants, Lake Management, and Ecosystem Consequences of Lake Harvesting. Proceedings of a conference, Madison, Wis., Feb. 1979. James E. Breck, Richard T. Prentki, and Orie L. Loucks, Eds. University of Wisconsin Institute for Environmental Studies, Madison, 1979. 436 pp., illus. Paper.

- Biologic Basis of Pigmentation.** Proceedings of a conference, Cambridge, Mass., Oct. 1977. Sidney N. Klaus, Ed. Karger, Basel, 1979. xviii, 358 pp., illus. \$104. *Pigment Cell*, vol. 4.
- Biological Effects of Radiations.** Daniel S. Grosch and Larry E. Hopwood. Academic Press, New York, ed. 2, 1979. xvi, 338 pp., illus. \$27.50.
- Biopolitics.** Search for a More Human Political Science. Thomas C. Wiegeler. Westview Press, Boulder, Colo., 1980. xvi, 160 pp. Cloth, \$17.50; paper, \$8. *A Westview Special Study*.
- Black's Medical Dictionary.** William A. R. Thomason. Barnes and Noble (Harper and Row), New York, ed. 32, 1980. viii, 974 pp., illus. \$22.95.
- Blood.** Rheology, Hemolysis, Gas and Surface Interactions. D. N. Ghista, E. Van Volkenhove, W.-J. Yang, and H. Reul, Eds. Karger, Basel, 1979. x, 166 pp., illus. \$64. *Advances in Cardiovascular Physics*, vol. 3.
- Blood Pressure Variability.** Proceedings of a workshop, Ghent, Belgium, June 1978. D. L. Clement, Ed. University Park Press, Baltimore, 1979. 112 pp., illus. \$19.95.
- Cast Manual for Adults and Children.** F. Freuler, U. Wiedmer, and D. Bianchini. Translated from the German edition (Berlin, 1975/76). Springer-Verlag, New York, 1979. xii, 248 pp., illus. \$19.80.
- Cerebral Aneurysms.** Advances in Diagnosis and Therapy. Papers from a workshop, Giessen/Bad Nauheim, Germany, Mar. 1977. H. W. Pia, C. Langmaid, and J. Zierski, Eds. Springer-Verlag, New York, 1979. xiv, 470 pp., illus. \$99.50.
- Checklist of United States Trees (Native and Naturalized).** Elbert L. Little, Jr. Forest Service, Washington, D.C., 1979 (available from the Superintendent of Documents, Washington, D.C.). iv, 376 pp. \$10. *Agriculture Handbook* No. 541.
- Chemistry Reviews.** Vol. 1. M. E. Vol'pin, Ed. Translated from the Russian. Soviet Scientific Reviews, Moscow, 1979 (U.S. distributor, Harwood Academic Publishers, New York). x, 278 pp., illus. \$46. *Soviet Scientific Reviews*, Section B, vol. 1.
- Chemodynamics.** Environmental Movement of Chemicals in Air, Water, and Soil. Louis J. Thibodeaux. Wiley-Interscience, New York, 1979. xxvi, 502 pp., illus. \$29.50.
- Chemorheology of Polymers.** Kenkichi Murakami and Katsumichi Ono. Elsevier, New York, 1979. x, 216 pp., illus. \$48.75. *Polymer Science Library* 1.
- Choice and Perceived Control.** Papers from a conference, Blacksburg, Va., Feb. 1978. Lawrence C. Perlmutter and Richard A. Monty, Eds. Erlbaum, Hillsdale, N.J., 1979 (distributor, Halsted [Wiley], New York). xvi, 384 pp. \$19.95.
- Climate and Weather in the Tropics.** Herbert Riehl. Academic Press, New York, 1979. xii, 612 pp., illus. \$59.
- The Clinical Biochemistry of Cancer.** Proceedings of a conference, San Antonio, Tex., 1978. Martin Fleisher and Virginia S. Marcum, Eds. American Association for Clinical Chemistry, Washington, D.C., 1979. xiv, 406 pp., illus. \$29.50.
- Clinical Psycholinguistics.** Theodore Shapiro. Plenum, New York, 1979. xiv, 180 pp. \$22.50. *Cognition and Language*.
- The Colder the Better.** David Wilson. Atheneum, New York, 1980. 272 pp. \$9.95.
- Color Theory and Its Application in Art and Design.** George A. A. Agoston. Springer-Verlag, New York, 1979. xii, 140 pp., illus. \$24.80. *Springer Series in Optical Sciences*, 19.
- Combinatorial Complexes.** A Mathematical Theory of Algorithms. Peter H. Sellers. Reidel, Boston, 1979. xvi, 184 pp. \$18.95. *Mathematics and Its Applications*, vol. 2.
- Compendium of Immunology.** Vol. 1. Lazar M. Schwartz. Van Nostrand Reinhold, New York, 1980. xxxvi, 516 pp., illus. \$32.50.
- Compliance and Public Authority.** A Theory with International Applications. Oran R. Young. Published for Resources for the Future, Baltimore, 1979. x, 172 pp. \$12.95.
- A Computational Logic.** Robert S. Boyer and J. Strother Moore. Academic Press, New York, 1979. xiv, 400 pp. \$29.50. *ACM Monograph Series*.
- Darwin.** A Norton Critical Edition. Philip Appleman, Ed. Norton, New York, ed. 2, 1979. xvi, 582 pp. Cloth, \$24.95; paper, \$4.95.
- Deepsea Mining.** Papers from seminars, Cambridge, Mass., Dec. 1978 and Jan. 1979. Judith T. Kildow, Ed. MIT Press, Cambridge, Mass., 1980. xii, 252 pp., illus. \$17.50.
- Domestic Water Treatment.** Jay H. Lehr, Tyler E. Gass, Wayne A. Pettyjohn, and Jack DeMarre. McGraw-Hill, New York, 1980. viii, 264 pp., illus. \$19.50.
- Drug Carriers in Biology and Medicine.** Gregory Gregoriadis, Ed. Academic Press, New York, 1979. xviii, 364 pp., illus. \$46.
- Drugs and Immune Responsiveness.** Papers from a symposium, London, Apr. 1978. J. L. Turk and Darien Parker, Eds. University Park Press, Baltimore, 1979. x, 254 pp., illus. \$44.50.
- Drugs and the Elderly.** Perspectives in Geriatric Clinical Pharmacology. Proceedings of a symposium, Dundee, U.K., Sept. 1977. J. Crooks and I. H. Stevenson, Eds. University Park Press, Baltimore, 1979. x, 304 pp., illus. \$49.50.
- Echocardiology.** Papers from a symposium, Rotterdam, June 1979. Charles T. Lancée, Ed. Nijhoff, Boston, 1979. xx, 490 pp., illus. \$73.70. *Developments in Cardiovascular Medicine*, vol. 1.
- The Ecology of Regulated Streams.** Proceedings of a symposium, Erie, Pa., Apr. 1979. James V. Ward and Jack A. Stanford, Eds. Plenum, New York, 1979. xii, 398 pp., illus. \$35.
- Elliptic Pseudo-Differential Operators.** An Abstract Theory. H. O. Cordes. Springer-Verlag, New York, 1979. x, 332 pp. Paper, \$18. *Lecture Notes in Mathematics*, vol. 756.
- Emotion.** A Psychoevolutionary Synthesis. Robert Plutchik. Harper and Row, New York, 1979. xx, 440 pp., illus. \$15.95.
- Employee Ownership in Plant Shutdowns.** Prospects for Employment Stability. Robert N. Stern, K. Haydn Wood, and Tove Helland Hammer. W. E. Upjohn Institute for Employment Research, Kalamazoo, Mich., 1979. xii, 220 pp. Cloth, \$6; paper, \$4.
- Employment Hazards.** An Investigation of Market Performance. W. K. Viscusi. Harvard University Press, Cambridge, Mass., 1979. viii, 312 pp., illus. \$20. *Harvard Economic Studies*, vol. 148.
- Energy and Combustion Science.** Selected Papers from "Progress in Energy and Combustion Science." Student Edition 1. N. A. Chigier, Ed. Pergamon, New York, 1979. viii, 326 pp., illus. Paper, \$12.50.
- Energy Conservation.** Self Evaluation Manual. Fairmont Press, Atlanta, Ga., 1979. 108 pp. Paper, \$15.
- Energy for Survival.** Papers from a school, Sydney, Aug. 1979. H. Messel, Ed. Pergamon, New York, 1979. viii, 440 pp., illus. Cloth, \$33; paper, \$13.75.
- Engineering Formulas.** Kurt Gieck. McGraw-Hill, New York, ed. 3, 1979. Unpaginated, illus. \$11.95.
- Engineering Graphic Modelling.** A Workbook for Design Engineers. E. Tjalve, M. M. Andreassen, and F. Frackmann Schmidt. Geoff Pitts, Transl. Ed. Newnes-Butterworths, Boston, 1979. vi, 120 pp., illus. Paper, \$13.95.
- Environmental Contaminants in Food.** Office of Technology Assessment, Washington, D.C., 1979 (available from the Superintendent of Documents, Washington, D.C.). x, 230 pp., illus. Paper, \$5.50.
- The Epilepsy Fact Book.** Harry Sands and Frances C. Minters. Scribner, New York, 1980. xii, 116 pp., illus. \$8.95.
- Epoxy Resin Chemistry.** Papers from a symposium, Miami Beach, Sept. 1978. Ronald S. Bauer, Ed. American Chemical Society, Washington, D.C., 1979. x, 272 pp., illus. \$27.75.
- Equations of State in Engineering and Research.** Papers from a symposium, Miami Beach, Sept. 1978. Kwang Chu Chao and Robert L. Robinson, Jr., Eds. American Chemical Society, Washington, D.C., 1979. x, 466 pp., illus. \$54. *Advances in Chemistry Series*, 182.
- Essays in Commutative Harmonic Analysis.** Colin C. Graham and O. Carruth McGehee. Springer-Verlag, New York, 1979. xxii, 466 pp. \$42. *Grundlehren der mathematischen Wissenschaften* 238.
- ESP and Parapsychology.** A Critical Reevaluation. C. E. M. Hansel. Prometheus Books, Buffalo, N.Y., 1980. vi, 326 pp. Cloth, \$15.95; paper, \$7.95.
- European Ecosystems.** Giorgio Marcuzzi. Junk, The Hague, 1979 (U.S. distributor, Kluwer Boston, Hingham, Mass.). x, 780 pp., illus. \$157.90. *Biogeographica*, vol. 15.
- Food, Politics, and Agricultural Development.** Case Studies in the Public Policy of Rural Modernization. Papers from meetings, St. Louis, Feb. 1977, and Washington, D.C., Feb. 1978. Raymond F. Hopkins, Donald J. Puchala, and Ross B. Talbot, Eds. Westview Press, Boulder, Colo., 1980. xvi, 312 pp. \$24.75. *Westview Special Studies in Social, Political, and Economic Development*.
- Fundamentals of Enzyme Kinetics.** Athel Cornish-Bowden. Butterworths, Boston, 1979. xiv, 230 pp., illus. \$19.95.
- Fundamentals of Mathematics and Statistics for Students of Chemistry and Allied Subjects.** C. J. Brookes, I. G. Betteley, and S. M. Loxton. Wiley, New York, 1979. viii, 496 pp., illus. Paper, \$20.25.
- Das Gedächtnis.** Ein neues psychophysisches Konzept. Hans-Joachim Flechtner. Hirzel, Stuttgart, 1979. xiv, 480 pp., illus. Paper, DM 25. *Memoria und Mneme*, Band 3.
- The Gemini Syndrome.** Star Wars of the Oldest Kind. Roger B. Culver and Philip A. Ianna. Pachart Publishing House, Tucson, 1979. viii, 216 pp., illus. \$11.95. *The Astronomy Quarterly Library*, 1.
- Genetic Disorders and the Fetus.** Diagnosis, Prevention, and Treatment. Aubrey Milunsky, Ed. Plenum, New York, 1979. xxvi, 704 pp., illus. \$49.50.
- Handbook of Energy Audits.** Albert Thumann. Fairmont Press, Atlanta, Ga., 1979. x, 444 pp., illus. \$32.

(Continued on page 1269)



Growth Factors

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Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card (on pages 1178A and 1266E) and placing it in the mailbox. Postage is free.

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Spectrophotometers

The UVIKON model 810 offers wavelengths from 185 to 900 nanometers with halogen and deuterium light sources. The standard 2-nanometer bandwidth may be reset manually to 0.5, 1, or 4 nanometers. Model 820 offers keyboard selection of bandwidth. These double-beam, ultraviolet-visible spectrophotometers have ten separate memory files. The operator may select any program via keyboard. All operating functions from selection of wavelength to integration of results may be keyed. The monochromator features resolution of 1500 lines per millimeter. Kontron Analytical. Circle 814.

Software

Reliance II is an integrated transaction-processing software system that runs on Perkin-Elmer's 32-bit Megamini computers and controls up to 128 transaction-processing terminals on each computer. Interactive Query System IQ/32 provides a user interface for inquiries to a data base. Although they are designed for business applications, these two software systems are adaptable for use in large academic, government, or industrial research centers to coordinate the use, purchase, and disbursement of laboratory apparatus and supplies. Perkin-Elmer Computer Systems. Circle 816.

Spectrometer

The Unispec System 55 analyzer collects, reduces, and displays data obtained simultaneously with energy-dispersive x-ray spectrometry and surface and thin-film techniques including Auger, photoelectron, and secondary ion mass spectroscopy. A mainframe houses memory and signal-processing electronics and a control console with keyboard and color video display. Data reduction and quantitation programs for various techniques are stored on a disk and a

second disk is available for data storage. Results from separate techniques are obtained, compared, and contrasted simultaneously to rapidly identify and quantify samples. Kevex. Circle 819.

Sterilizers

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Literature

Centrifugal Air Sampler describes a hand-held device for estimating the number of microbial colony-forming units in room air. Folex-Biotest-Schleussner. Circle 808.

Teflon Products includes many items for scientific research laboratories. Berg-hof/America. Circle 810.

Osmometers is devoted to multi-sample, automatic, single-sample, and research models. There is a discussion of the merits of freezing-point osmometry and the measurement of osmolality. Advanced Instruments. Circle 811.

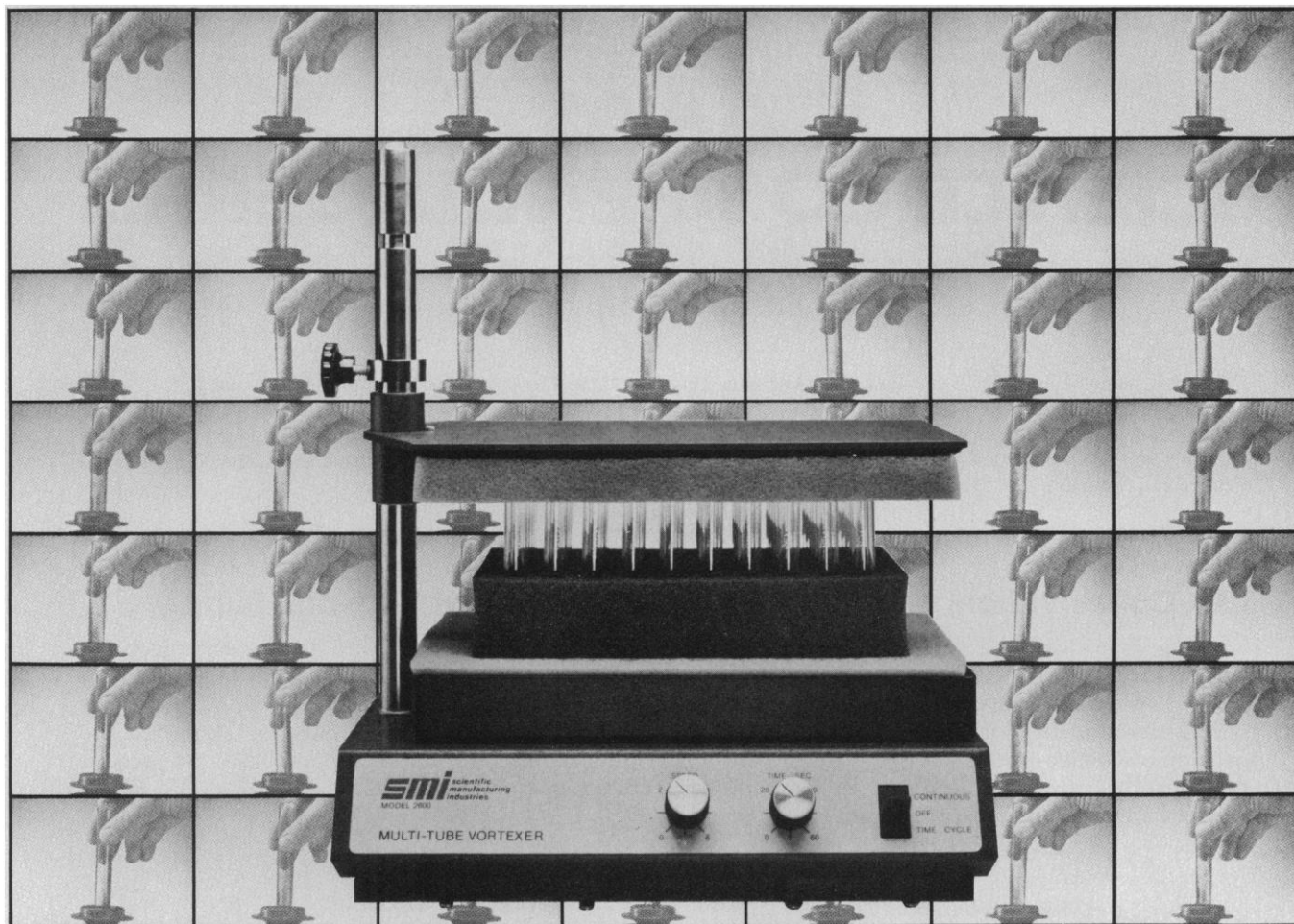
Distillation Systems lists all-glass pilot plant, production, or analytical scale apparatus, components, and solid-state control models. Kontes. Circle 812.

Clinical Microscopes features equipment, optics, light sources, and stages for high-contrast phase and reflected-light microscopy in hematology, cytology, microbiology, and pathology laboratories. Carl Zeiss. Circle 821.

Laboratory Products includes balances, automated systems for wet chemical analyses, and equipment for thermal analysis. Mettler Instrument. Circle 822.

Synthetic Peptides describes central nervous system peptides, calcium metabolism hormones, hypothalamic peptides, gastrointestinal hormones, peptides of the renin-angiotensin system, and others. Beckman Instruments Bioproducts. Circle 823.

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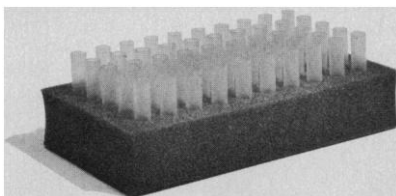
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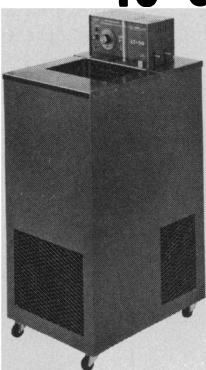
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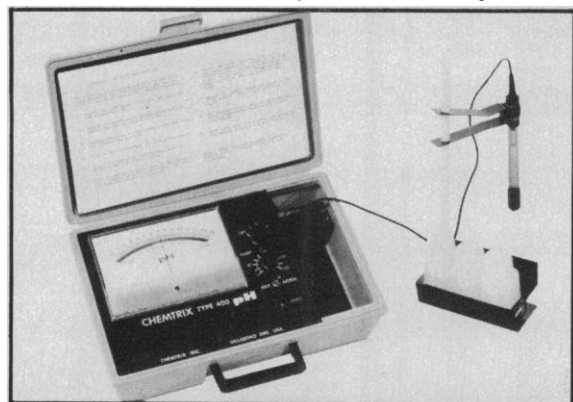
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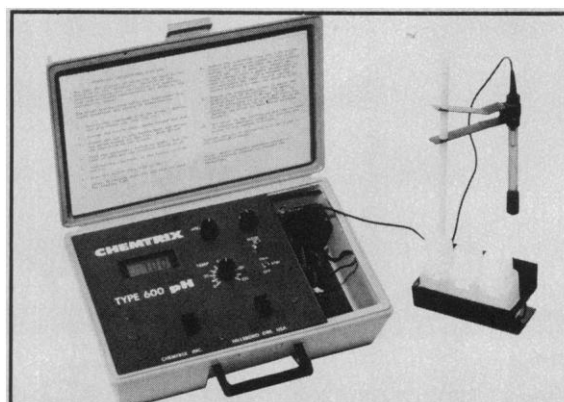
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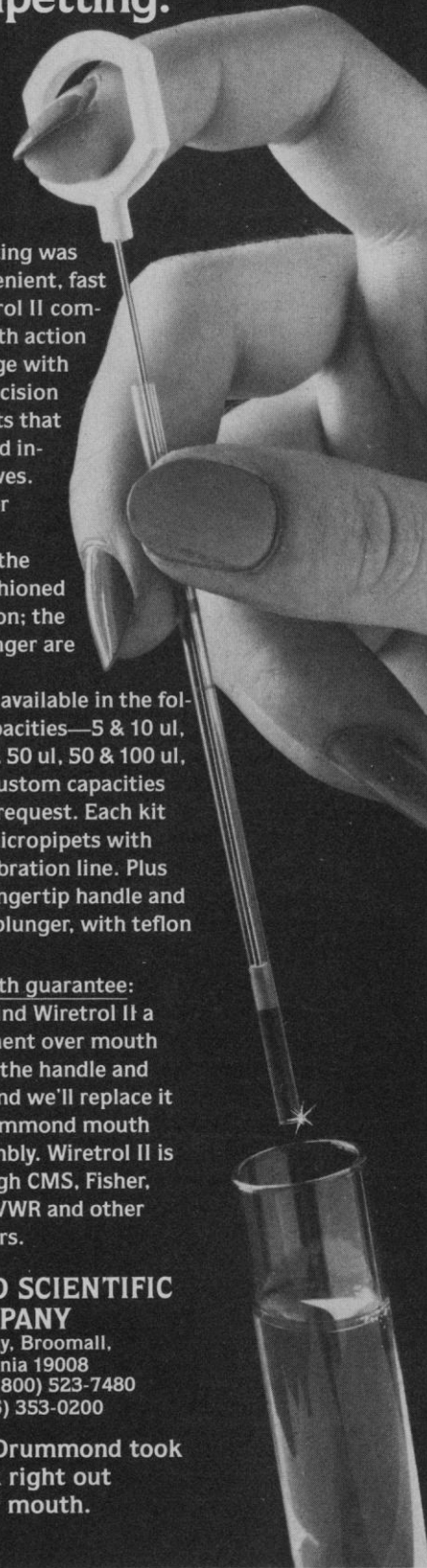
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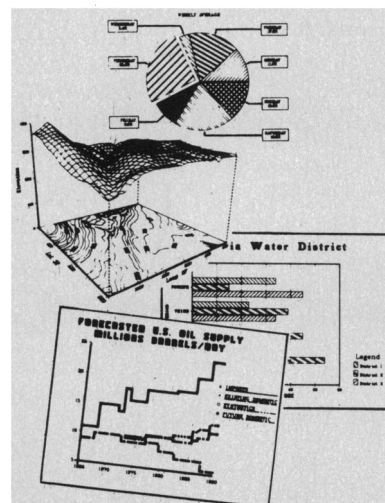
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Handbook of Microcircuit Design and Application. David F. Stout. Milton Kaufman, Ed. McGraw-Hill, New York, 1980. Various pages, illus. \$32.50.

Handbook of Optical Holography. H. J. Caulfield. Academic Press, New York, 1979. xvi, 638 pp., illus. \$55.

Health Care Technology Evaluation. Proceedings of a meeting, Columbia, Mo., Nov. 1978. Jay Goldman, Ed. Springer-Verlag, New York, 1979. viii, 118 pp. Paper, \$12.50. Lecture Notes in Medical Informatics, vol. 6.

Healthy People. The Surgeon General's Report on Health Promotion and Disease Prevention 1979. Public Health Service, Washington, D.C., 1979 (available from the Superintendent of Documents, Washington, D.C.). xiv, 178 pp., illus. Paper, \$5.

Helping the Retarded Child in the Elementary School Years. John B. Fotheringham and Joan Morris. University of Toronto Guidance Centre, Toronto, 1979. x, 148 pp. Paper, \$5.95.

High-Performance Liquid Chromatography. John H. Knox and five others. Edinburgh University Press, Edinburgh, 1979 (U.S. distributor, Columbia University Press, New York). viii, 206 pp., illus. \$12.

A History of Mathematics. Florian Cajori. Chelsea, New York, ed. 3, 1980. x, 524 pp. \$18.50.

History of the Inca Empire. An Account of the Indians' Customs and Their Origin together with a Treatise on Inca Legends, History, and Social Institutions by Father Bernabe Cobo. Translated and edited by Roland Hamilton. University of Texas Press, Austin, 1979. xxii, 280 pp. \$14.95. The Texas Pan American Series.

Interpretations of Complex Arrhythmias. Alfred Pick and Richard Langendorf. Lea and Febiger, Philadelphia, 1979. xii, 586 pp., illus. \$58.50.

An Introduction to Human Biochemistry. C. A. Pasternak. Oxford University Press, New York, 1979. xii, 272 pp., illus. Paper, \$15.95. Oxford Medical Publications.

Introduction to Modern Liquid Chromatography. L. R. Snyder and J. J. Kirkland. Wiley-Interscience, New York, ed. 2, 1979. xxii, 864 pp., illus. \$29.50.

An Introduction to Seed Technology. J. R. Thomson. Halsted (Wiley), New York, 1979. viii, 252 pp., illus. \$44.95.

Introduction to Solar Radio Astronomy and Radio Physics. A. Krüger. Reidel, Boston, 1979. xviii, 332 pp., illus. Cloth, \$49.94; paper, \$23.50. Geophysics and Astrophysics Monographs, vol. 16.

Introductory Mycology. Constantine J. Alexopoulos and Charles W. Mims. Artwork by Sung-Huang Sun and Raymond W. Scheetz. Wiley, New York, ed 3, 1979. xx, 632 pp., illus. \$24.95.

The Kidney in Arterial Hypertension. Proceedings of a symposium, Venice, June 1978. G. Bianchi and G. Bazzato, Eds. University

Park Press, Baltimore, 1979. x, 182 pp., illus. Paper, \$24.50.

The !Kung San. Men, Women, and Work in a Foraging Society. Richard Borshay Lee. Cambridge University Press, New York, 1979. xxvi, 526 pp., illus. Cloth, \$34.95; paper, \$10.95.

Landscape Ecology. Landschaftsforschung und Ökologie. Volume in Honour of Prof. Dr. J. Schmithüsen. Junk, Boston, 1979. vi, 224 pp., illus. \$52.65. Biogeographica, vol. 16.

The Languages of Native America. Historical and Comparative Assessment. Lyle Campbell and Marianne Mithun, Eds. University of Texas Press, Austin, 1979. vi, 1034 pp. \$22.50.

Laser Handbook. Vol. 3. M. L. Stitch, Ed. North-Holland, Amsterdam, 1979 (U.S. distributor, Elsevier, New York). x, 878 pp., illus. \$122.

Metal Vapour Synthesis in Organometallic Chemistry. J. R. Blackborow and D. Young. Springer-Verlag, New York, 1979. xiv, 202 pp., illus. \$53.90. Reactivity and Structure Concepts in Organic Chemistry, vol. 9.

Microwaves. An Introduction to Microwave Theory and Techniques. A. J. Baden Fuller. Pergamon, New York, ed. 2, 1979. xii, 326 pp., illus. Paper, \$13.

Models of Thought. Herbert A. Simon. Yale University Press, New Haven, Conn., 1979. xviii, 524 pp., illus. Cloth, \$45; paper, \$14.95.

Modern Aspects of Electrochemistry. No. 13. B. E. Conway and J. O'M. Bockris, Eds. Plenum, New York, 1979. xii, 430 pp., illus. \$42.50.

Modulation of Protein Function. Proceedings of a symposium, Keystone, Colo., Feb. 1979. Daniel E. Atkinson and C. Fred Fox, Eds. Academic Press, New York, 1979. xvi, 470 pp., illus. \$22. ICN-UCLA Symposia on Molecular and Cellular Biology, vol. 13.

The Molecular Basis of Immune Cell Function. Proceedings of a conference, Ottawa, Canada, May 1979. J. Gordin Kaplan, Ed. Elsevier/North-Holland, New York, 1979. xvi, 782 pp., illus. \$70.75.

New Frontiers in Psychotropic Drug Research. Stuart Fielding and Richard C. Effland, Eds. Futura Publishing Company, Mount Kisco, N.Y., 1979. xviii, 262 pp., illus. \$28.50.

Newly Characterized Vertebrate Viruses. Heinz Fraenkel-Conrat and Robert R. Wagner, Eds. Plenum, New York, 1979. xviii, 544 pp., illus. \$45. Comprehensive Virology, vol. 14.

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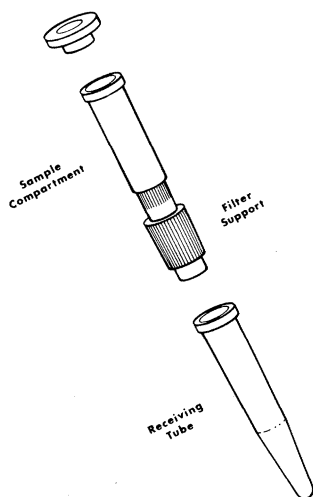
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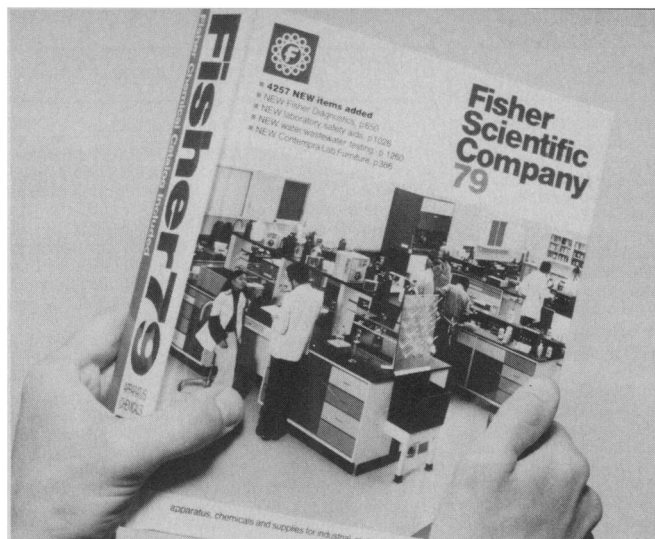
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Research in **ENDOCRINOLOGY**. Studies on the biochemistry, structure, and mechanism of action of steroid hormones. Position available immediately. Send application to:

Dr. Richard Hochberg
Department of Obstetrics and Gynecology
Yale University
School of Medicine
New Haven, Connecticut 06510

BIOCHEMICAL PHARMACOLOGY/TOXICOLOGY. Position available starting 1 January 1981 is associate professor, tenure-track, 12-month appointment. Ph.D. in pharmacology/toxicology required. Applicants should have established research program with current grant support. Successful candidate will be expected to develop cooperative research projects and apply for research funding with current faculty. Participation in undergraduate pharmacology/toxicology teaching program required as well as other normal faculty duties. Application deadline: 15 October 1980. Send current curriculum vitae and names and addresses of three references to: **Dr. William M. Hadley, College of Pharmacy, University of New Mexico, Albuquerque, New Mexico 87131.** *Affirmative Action/Equal Opportunity Employer.*

BIOLOGICAL OCEANOGRAPHER

The University of Puerto Rico's Center for Energy and Environment Research (CEER), operated for U.S. Department of Energy, invites applications of qualified Ph.D. biological oceanographers to conduct research on the ocean processes and interactions between the open ocean and nearshore waters of a tropical island. The applicants should have strong interest and experience in quantitative plankton ecology. The appointee will work in an interdisciplinary program, and interact with other marine scientists concerned with upwelling, circulation around islands, productivity and biological processes in the oceanic versus nearshore systems. Salary open. Qualified applicants should send résumé to: **Dr. José M. López, Marine Ecology Division, CEER, College Station, Mayaguez, P.R. 00708.**

CHEMIST/MICROBIOLOGIST

Postdoctoral. Available 1 December. To work on identification, quantitation, and metabolism of organometals. Experience with GC, HPLC, AA essential. GC/MS desirable. Send résumé and three letters of recommendation to: **J. J. Cooney, Chesapeake Biological Laboratory, University of Maryland, Box 38, Solomons, Maryland 20688.** *The University of Maryland is an Affirmative Action/Equal Opportunity Employer.*

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE FACULTY POSITION IN ENDOCRINOLOGY/METABOLISM

Assistant or associate professor, tenure-track position sought to assume research teaching and patient care responsibilities. Candidate can be already at the junior faculty level or be in transition to faculty status. There is no particular preference as to a candidate's field of research interest within the general area of endocrinology and metabolism. Submit letter of application and curriculum vitae to: **Dr. Jerrold M. Olefsky, Professor of Medicine, Head, Division of Endocrinology, B151, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, Colo. 80262.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

CHAIRMAN, DEPARTMENT OF ANATOMY COLLEGE OF MEDICINE UNIVERSITY OF TENNESSEE CENTER FOR THE HEALTH SCIENCES

The University of Tennessee College of Medicine seeks a new chairman for its Department of Anatomy. In addition to creative leadership abilities, the ideal candidate should have: (i) significant and continuing research achievements, (ii) an appropriate background in the anatomical sciences, (iii) commitment to excellence in teaching at the professional and graduate and postgraduate levels, and (iv) academic administrative experience. Continuation of an active research program with extramural support is expected and ability to interact effectively with both preclinical and clinical colleagues is essential. The department's current faculty members, who number more than 20, have diverse research interests in neurobiology, reproductive and developmental biology, endocrinology, and other aspects of cell biology. The new chairman should continue the development of a department with strong research programs in several areas but is expected to maintain the current highly respected teaching programs. New faculty openings, as well as replacements for faculty approaching retirement, are expected to provide excellent growth potential over the next several years. Nominations or applications, including curriculum vitae and the names of three or more individuals who will provide references on request, are to be sent to: **Dr. Robert E. Taylor, Jr., Chairman, Anatomy Search Committee, University of Tennessee Center for the Health Sciences, 800 Madison Avenue, Memphis, Tennessee 38163.** *An Equal Opportunity/Affirmative Action Employer.*

CHAIRPERSON— DEPARTMENT OF PATHOLOGY

Responsible for pathology instruction, research, and service for Colleges of Human Medicine, Osteopathic Medicine, Veterinary Medicine, and the Agricultural Experiment Station.

Earned doctorate (Ph.D., M.D., D.O., or D.V.M.); evidence of funded, published scholarly research, and administrative abilities required.

Please submit nominations and application letters with curriculum vitae and names and addresses of three references by 1 November 1980. Position available 1 July 1981 at earliest. Contact:

Pathology Search Committee
Department of Pathology
A622 East Fee Hall
Michigan State University
East Lansing, Mich. 48824

DEAN, COLLEGE OF SCIENCE OREGON STATE UNIVERSITY CORVALLIS, OREGON

Nominations and applications are invited for Dean of Science, available 1 July 1981. The chief administrative officer for this college at Oregon's Land-Grant institution is responsible for 14 departments and 12 additional college programs with about 250 faculty, 2100 undergraduate majors, and 600 graduate students. Qualifications include an earned doctorate, university-level teaching experience, distinction in scholarship and research, and an appropriate combination of significant administrative experiences. Application deadline: 1 November 1980. Send names of nominees or résumé and names of three references to: **W. Curtis Johnson, Chairman, Search Committee, Department of Biochemistry/Biophysics, Oregon State University, Corvallis, Oregon 97331.**

Oregon State University is an Equal Opportunity/Affirmative Action Employer and complies with Section 504 of the Rehabilitation Act of 1973.

MATERIALS SCIENCE

A materials scientist is sought to assist in the analysis of laminated fiber reinforced composites. Candidates should have specific background in vibrations and stress analysis of laminated material and in methods of solving boundary value problems, including finite element techniques. Salary is \$33,010 per year. Persons applying must have Ph.D. in materials science or related field. Please send résumé and three letters of professional reference to:

Rodney C. Darrah
3195 Plainfield Road
Dayton, Ohio 45432

POSITIONS OPEN

UNIVERSITY OF QUEENSLAND CHAIR OF AGRICULTURE

The University invites applications for the William Robertson Chair of Agriculture to replace Professor E. J. Britten, who retires at the end of the year. The applicant should present evidence of substantial achievement in one of the several disciplinary areas in which the Department of Agriculture is currently involved—crop and pasture sciences, soil science, animal science, land resources, agricultural economics, and agricultural extension.

The successful applicant will be responsible through the head of department for undergraduate and postgraduate teaching appropriate to his field of interest and in keeping with faculty and department requirements. He/she will be expected to provide leadership in research and to direct postgraduate research.

The present salary for a professor is A\$37,151. The University provides prescribed traveling and removal expenses, superannuation, and housing assistance, and the appointee will be eligible to apply for special studies programs.

Additional information and application forms are available from: **Staff Officer, University of Queensland, St. Lucia, Queensland, 4067, Australia.** Applications, with the names of three referees, should be forwarded as soon as possible and must reach him by 17 October 1980.

CHAIRPERSON DEPARTMENT OF BIOLOGY

The School of Biology, Chemistry and Ecology of the State University of New York (SUNY) College of Environmental Science and Forestry seeks a chairperson for the Department of Environmental and Forest Biology. The successful candidate should be a demonstrated successful administrator, have achieved high scholarly attainment, and possess strong leadership abilities to direct and expand the department's instructional, research, and public service programs. Candidates should have an organizational or ecologic orientation and awareness of major biologic issues associated with forest or other natural ecosystems. The department has 34 faculty, 15 adjuncts, 6 nonteaching professionals, and 5 secretaries. An undergraduate program in biology involves 300 students. Graduate program areas include ecology, entomology, fish and wildlife biology and management, forest pathology and mycology, plant science, zoology, environmental physiology, and soil ecology. More than 100 graduate students are currently enrolled. Competitive research grants at present exceed \$2 million. The department is housed in a modern 5½ storied building containing 85,000 sq. ft. of laboratories, classrooms, and supporting facilities. About 25,000 acres of College forest properties offer unique support facilities. The position is available 1 September 1981 or earlier by arrangement. Closing date for application is 1 November 1980. Send letter of application, résumé, and three reference letters to: **Dr. R. A. Zabel, Environmental and Forest Biology Department, SUNY College of Environmental Science and Forestry, Syracuse, N.Y. 13210.** *State University of New York is an Equal Opportunity/Affirmative Action Employer.*

THE UNIVERSITY OF CHICAGO DEPARTMENT OF MICROBIOLOGY, MICROBIOLOGIST/CELL BIOLOGIST. The Department of Microbiology is accepting applications for a tenure-track faculty position. The major criteria for consideration are: (i) demonstrated potential for developing an active research program in molecular biology, particularly in the area pertaining to the pathogenesis of infectious disease, and (ii) desire and ability to participate in the department's teaching program. Send curriculum vitae and the names of three references to: **Professor Patricia G. Spear, Search Committee Chairman, Department of Microbiology, The University of Chicago, 920 East 58 Street, Chicago, Illinois 60637.** *An Affirmative Action/Equal Opportunity Employer.*

RESEARCH BIOPHYSICIST. Career federal service. To conduct research on the energetics of chemical and physical associations existing among selected plant components leading to new concepts and techniques for separating components from plant tissue. Salary based on qualifications and experience (GS-11 salary range: \$20,611 to \$26,794). Position located at Northern Regional Research Center, Peoria, Illinois. For application forms and complete details, contact: **William M. Doane, Biomaterials Conversion Laboratory, Northern Regional Research Center, 1815 North University Street, Peoria, Illinois 61604.** *An Equal Opportunity Employer.*

POSITIONS OPEN

The Directorate for Biological, Behavioral and Social Sciences of the National Science Foundation is seeking qualified applicants for the positions of **DIRECTOR**, Division of Physiology, Cellular and Molecular Biology, **SECTION HEAD**, Molecular and Genetic Biosciences (MGB), and **SECTION HEAD**, Cellular and Physiological Biosciences (CPB). The MGB section includes programs in biophysics, biochemistry, genetics, and metabolic biology. The CPB section includes programs in cellular, developmental, and regulatory biology and anticipates initiating a new program in the cellular area in the future. In addition to these programs, there is also a divisional program for biological instrumentation.

Applicants must have a Ph.D. or equivalent in the biological sciences or a closely related field, have established a national and international reputation for high-quality research in one of the appropriate program areas, and demonstrated successful leadership in administration. These positions are part of the Senior Executive Service with salaries limited by law to \$50,112 per annum. Entrance on duty date for these positions is late summer or early fall 1981. Interested applicants should contact: **Margaret Cademartori, telephone: 202-357-7857**, for information regarding application procedures. Send applications to: **The National Science Foundation, DPM, 1800 G Street, NW, Washington, D.C. 20550**. The deadline for application for these positions has been extended from 30 September to 31 October 1980.

NATIONAL SCIENCE FOUNDATION Washington, D.C. 20550

The Directorate for Biological, Behavioral and Social Sciences is seeking qualified applicants for the position of **DIRECTOR, DIVISION OF ENVIRONMENTAL BIOLOGY**. The director manages a division responsible for the support of research in systematics, population biology and physiological ecology, ecology, and ecosystem studies, as well as support for biological research resources.

Applicants must have a Ph.D. or equivalent in the biological sciences or a closely related field, have established a national and international reputation for high-quality research in one of the appropriate program areas and demonstrated successful leadership in administration. These positions are part of the Senior Executive Service with salaries limited by law to \$50,112 per annum. Appointment may be permanent or on a rotational basis. Entrance on duty date for this position is late summer or early fall 1981. Send SF-171 and supplemental narrative to: **National Science Foundation, 1800 G Street, NW, Washington, D.C. 20550**. For information on application procedures, telephone: **Margaret Cademartori, at 202-357-7857**. The deadline has been extended from 30 September to 31 October 1980.

DIRECTOR OF RADIOIMMUNOASSAY LABORATORY

The Department of Surgery at the University of Texas Medical Branch, Galveston, Texas, is interested in seeking qualified applicants for a position as the director of the Surgical Biochemistry Laboratory at the assistant or associate professor level. The laboratory is involved with basic and applied research relating to gastrointestinal, pituitary, and pancreatic hormones. Qualifications are a Ph.D. in biological, biochemical, or biophysical science with an orientation towards development and validation of radioimmunoassay systems. The person chosen for the position will be engaged primarily in the day-to-day operation of the RIA laboratory, in supervising members of the technical staff and consulting with faculty and fellows in the laboratory. Some teaching responsibilities may be required, as well as other duties associated with a faculty level position. Salary: negotiable. Interested persons should contact: **James C. Thompson, M.D., Professor and Chairman, Department of Surgery, University of Texas Medical Branch, Galveston, Texas 77550. An Affirmative Action/Equal Opportunity Employer. Applications from women and minorities are encouraged.**

EXECUTIVE SECRETARY (part-time) for the Council of Biology Editors, a society devoted to improving scholarly communications in the biological and medical sciences. Experience preferred as an executive secretary, officer, or professional knowledgeable in scientific society management, with related experience as an editor. Target date for formation of a secretariat, site undetermined, is January 1981. Send curriculum vitae with letter of application to: **Margaret Foti, Chairman, Council of Biology Editors, Cancer Research Editorial Office, Temple University School of Medicine, Philadelphia, Pennsylvania 19140**, no later than 30 September.

POSITIONS OPEN

DIRECTOR DEPARTMENT OF CHEMICAL CARCINOGENESIS

The Roswell Park Memorial Institute invites nominations and applications for the position of director of a new Department of Carcinogenesis. Criteria for selection of a nationally recognized investigator will include leadership in developing research programs, broad interests in basic and health science aspects of carcinogenesis, commitment to graduate education, and demonstrated administrative skills. Roswell Park Memorial Institute is a comprehensive cancer treatment and research center which includes medical and surgical oncology, cancer control and education, and biological and clinical research. Candidates should have an M.D. and/or Ph.D. degree. Letters of application should include curriculum vitae plus names and addresses of three persons who will provide letters of reference.

Applications and nominations should be sent before 3 October 1980 to: **Dr. E. Mihich, Chairman of Search Committee, Grace Cancer Drug Center, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263**.

An Equal Opportunity/Affirmative Action Employer

UNIVERSITY OF ARIZONA Department of Internal Medicine FACULTY POSITION

College of Medicine, Section of Cardiology, is seeking a postdoctoral fellow for a research associate position.

Major responsibilities will be the initiation and pursuit of independent research efforts in the area of structure and function of contractile proteins in heart and skeletal muscle. Salary is negotiable. Please send letter of application, curriculum vitae, and three letters of reference to:

**Eugene Morkin, M.D.
Cardiology Section
Arizona Health Sciences Center
Tucson, Arizona 85724**

The University of Arizona is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS IN ANATOMY

The Department of Anatomy, University of Rochester School of Medicine, invites applications for two junior faculty positions to begin about 1 July 1981 and 1 January 1982. We are interested primarily in individuals with research talents which are complementary to those existing within the department. Major research emphasis in the department is in neurobiology with particular focus on central endocrine systems, aging, transplantation, toxicology development, and plasticity. Teaching responsibility will be in one of our three medical courses and in the training of graduate and postdoctoral students. Please send curriculum vitae, representative publications, and addresses of three references by 15 October 1980 to: **Dr. John J. Sladek, Jr., Chairman, Anatomy Search Committee II, Department of Anatomy, University of Rochester, School of Medicine and Dentistry, Rochester, N.Y. 14642**.

FACULTY POSITIONS IN ENDOCRINOLOGY. Co-director at the professor level. Also assistant professor level position available. Tenure-track. Research, teaching, and patient care responsibilities. Laboratory space and initial research support provided. Submit curriculum vitae to: **Dr. Bernard Landau, Department of Medicine, University Hospitals of Cleveland, 2065 Adelbert Road, Cleveland, Ohio 44106. Equal Opportunity/Affirmative Action Employer.**

FACULTY RESEARCH POSITIONS: anatomy/cell biology, biochemistry. Academic appointments commensurate with experience. Anticipated vacancies. *An Equal Opportunity/Affirmative Action Employer, M/F. Write or call:*

**Stuart I. Brown, M.D., Professor and Chairman
Department of Ophthalmology
University of Pittsburgh School of Medicine
Eye and Ear Hospital
230 Lothrop Street
Pittsburgh, Pa. 15213
Telephone: 412-647-2205**

Research Psychologist

IBM has an immediate position available for a Research Staff Member Psychologist at their Thomas J. Watson Research Center in Yorktown Heights, New York. We are seeking a person who is interested in studying behavioral aspects of computer use and application. A person at any post-doctoral level or with equivalent experience, who has knowledge of a broad range of methods for observing, analyzing, and describing mental processes, and who has a record of research productivity in some area of applied cognitive science. IBM offers excellent benefits.

If you're interested, send your resume in confidence, to Dr. Josina Arfman, Manager of Corporate PhD Programs, IBM Research Center, Dept. SC, Box 218, Yorktown Heights, NY 10598.



THE GERMAN CANCER RESEARCH CENTER a Public Foundation in Heidelberg and the UNIVERSITY OF HEIDELBERG, Heidelberg, FRG wish to appoint a qualified scientist as HEAD of a DIVISION to work on TUMOR INVASION AND METASTASIS.

This division of the Cancer Research Center is expected to work on interactions between neoplastic cells and normal cells, in particular on problems relevant for tumor invasion and metastasis.

Qualifications: Recognized scientific experience in the research area mentioned above, as well as willingness to collaborate with other scientists at the Cancer Research Center who are already engaged in a multidisciplinary approach to the problem of metastasis and invasive growth. Applicants should be experienced in histomorphological, biochemical, cytogenetic, or other cell-biological methods.

Conditions: The position will be either at the C3 level or equivalent to this level. Provided approval of the C3 position in the budget, there exists the possibility of becoming appointed as a Professor of the University. The division offered is equivalent in space, personal and financial support to other divisions of the Cancer Research Center. Also available are central facilities, including animal laboratory, electronic data processing unit, library, electronic microscope and spectroscopy unit.

Applications together with a curriculum vitae and a list of publications are to be sent by the 31st of October 1980 to the German Cancer Research Center, Vorsitzender des Stiftungsvorstands, Im Neuenheimer Feld 280, D-6900 Heidelberg, FRG.

POSITIONS OPEN

EXPERIMENTAL POPULATION GENETICS. The Department of Ecology and Evolution at State University of New York at Stony Brook invites applications for a faculty position to begin 1 September 1981. Applicants should have an active research program in experimental population/evolutionary genetics. Although some preference will be given to candidates working with *Drosophila*, those studying other organisms, such as plants, will also be considered. The candidate must possess a distinguished record with a strong academic background, and a commitment to research and graduate education. Teaching responsibilities open. Excellent research facilities available. Level of position dependent on qualifications, but preference is for associate professor. Reply with curriculum vitae and names of three references by 15 October 1980 to: **Dr. Robert R. Sokal, Chairman, Department of Ecology and Evolution, State University of New York at Stony Brook, Long Island, N.Y. 11794.** An Equal Opportunity/Affirmative Action Employer.

EXECUTIVE DIRECTOR CALIFORNIA ACADEMY OF SCIENCES

The California Academy of Sciences is seeking an executive director to succeed George Lindsay, who has held the position since 1963 and will retire in August 1981.

The Academy is a private, nonprofit corporation which includes Steinhart Aquarium, Morrison Planetarium, and the Natural History Museums located in Golden Gate Park, San Francisco. In addition to the public areas, which are visited by more than 1.5 million people each year, the Academy maintains eight research departments and large systematic collections that are cared for by 16 curators and a support staff of 35. The Academy has about 175 employees and an operating budget of about \$4 million.

The California Academy of Sciences is governed by a board of 25 Trustees, five of whom are scientists. The executive director is employed by and serves at the pleasure of the Trustees. Past directors have had a Ph.D. degree and a professional scientific background, but in this search the candidate's record of sound administrative experience is of equal importance.

Applications for the position of executive director of the California Academy of Sciences should include a full résumé of educational background and experience, a bibliography, and references. Applications or requests for additional information may be addressed to: **Rudolph A. Peterson, Chairman, Search Committee, California Academy of Sciences, Golden Gate Park, San Francisco, California 94118.** Telephone inquiries may be made to: **Dr. George Lindsay at 415-221-5100.**

FIELD REP AFRICA

International development organization seeks person for 2-year East Africa assignment. Will promote and monitor appropriate energy technology projects with African groups. Extensive regional travel required. Requires 4-year technical degree and 2 to 3 years of overseas experience. Starting salary: \$25,075, commensurate with experience. Excellent benefits. Reply in writing by 30 September. **Field Rep Africa, 3706 Rhode Island Avenue, Mt. Rainier, Md. 20822.** Equal Opportunity Employer.

IMMUNOGENETICIST

The Laboratory of Genetics at the University of Wisconsin invites applications for a faculty position from persons doing research in immunogenetics. Applications accepted through 11 October 1980. Send curriculum vitae, reprints, and at least three letters of recommendation to:

**Professor William F. Dove, Chairman
Immunogenetics Search Committee
Laboratory of Genetics
University of Wisconsin
Madison, Wis. 53706**

The University of Wisconsin is an Equal Opportunity Employer.

PHYSIOLOGY DEPARTMENT. Accredited medical school in Puerto Rico is seeking all ranks, full-time staff. Teaching areas: central and autonomous nervous systems, sensory, gastrointestinal, endocrinology, respiratory, cardiovascular, and others. Laboratory instructor at either master's, Ph.D., or M.D. level is also needed. Research and supporting grants emphasized. Please send résumé and three references to: **Chairperson, Physiology Department, P.O. Box 7004, Ponce School of Medicine, Ponce, Puerto Rico 00731.**

POSITIONS OPEN

IMMUNOLOGIST. A full-time faculty position at the level of associate professor or professor. Candidate must have a Ph.D., M.D., or equivalent degree, have an established research program in some aspect of modern immunology, and experience in the training of young scientists. Duties will include teaching of graduate and medical students. This position offers an opportunity for a scientist to play a major role in the further development of active and ongoing research and training programs in immunology of this department and institution. Send curriculum vitae and references to: **Dr. Gerald D. Shockman, Professor and Chairman, Department of Microbiology and Immunology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140.** An Equal Opportunity/Affirmative Action Employer.

MARINE SCIENCE—UNIVERSITY OF MIAMI

The University of Miami is searching for a director of its oceanographic and atmospheric institution which has 77 full-time faculty, 170 graduate and 350 undergraduate students, and an \$11 million budget. The main function of this position is to provide leadership to a thriving, multidisciplinary community of oceanographic researchers and students, including biological, chemical, physical and geological oceanographers, ocean engineers, atmospheric scientists, and specialists in marine affairs. The person who directs this institution will be expected to promote its aims and provide liaison with federal agencies as well as private foundations, and to encourage new programs to meet the needs of both developed and developing nations, especially those of the Caribbean and South America.

Applications, including a current professional résumé, nominations, and further information should be sent to: **Dr. Michael R. Reeve, Chairman of the Search Committee, RSMAS, University of Miami, 4600 Rickenbacker Causeway, Miami, Fla. 33149.** Nominations and applications desired by 15 November 1980. Position will remain open until filled.

An Equal Opportunity/Affirmative Action Employer

NEUROBIOLOGIST

The Worcester Foundation for Experimental Biology has several faculty-level openings for neurobiologists with a commitment to cellular approaches to understanding the functions and organization of the nervous system. Areas of interest include, but are not limited to: developmental neurobiology, synaptic morphology and physiology, neuropeptides, and neuroendocrinology. Faculty, postdoctoral fellows, and students at the Worcester Foundation are presently conducting basic research in neurobiology, cell biology, and endocrine/reproductive biology. Current research in neurobiology includes studies in the following areas: olfactory and limbic physiology, psychopharmacology, membrane biophysics, sleep, monoamine systems, protein malnutrition, aging, and the cellular basis of perception and behavior. Excellent facilities, a minimum of nonscientific obligations, and a strong administrative commitment to productive research all contribute to a supportive environment highly conducive to scientific interactions. The Foundation is situated on a wooded 100-acre campus only a few minutes from the University of Massachusetts Medical Center and in close proximity to all major Boston area academic and research institutions. Send résumé, statement of research plans, and the names of at least three references to: **Neurobiology Search Committee, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

An Equal Opportunity/Affirmative Action Employer

PLANT MOLECULAR BIOLOGY— PLANT CELL BIOLOGY

The Department of Biological Sciences, Purdue University, invites applications for a tenure-track position (rank and salary negotiable) in plant science. Applicants should have research experience and teaching interests in one or more of the following areas: molecular genetics, biochemistry, cellular physiology, or development of plant systems.

Send curriculum vitae, including a brief description of research experience, a brief statement of proposed research goals, and names of three references to: **Search Committee for Plant Science Position, Department of Biological Sciences, Purdue University, West Lafayette, Ind. 47907.** Applications will be accepted through 31 October 1980.

Purdue University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

NEUROBIOLOGIST—Assistant professor-level or level commensurate with experience. Research and teaching position available after 1 January 1981. Ph.D. or M.D. and postdoctoral experience required as well as interest and aptitude for research on cellular basis of learned motor performance in mammals. Candidates with in vivo or in vitro experience in behavioral electrophysiology, cellular neurobiology, or membrane biophysics are particularly encouraged to apply. If interested, please send curriculum vitae and two letters of recommendation to: **Professor C. D. Woody, Department of Psychiatry, University of California, Los Angeles, Medical Center, 760 Westwood Plaza, Los Angeles, Calif. 90024.** Equal Opportunity/Affirmative Action Employer.

NEUROBIOLOGIST

The Department of Anatomy and Neurobiology currently has a tenure-track faculty position available at the assistant or associate professor level. Preference will be given to neuroscientists or cell biologists whose research interests concern immunocytochemistry, neurochemistry, or developmental neurobiology. Applicants should have Ph.D. and/or M.D. degree and at least 2 years of postdoctoral training. Successful candidates expected to establish independent research programs meritorious of extramural support. Teaching duties include participation in either histology or neuroscience courses to medical students and participation in a multidisciplinary neuroscience graduate program. Send curriculum vitae, brief description of research interests, and summary of teaching experience with names of three references by 1 November 1980 to: **Dr. Rodney Parsons, Chairman, Department of Anatomy and Neurobiology, University of Vermont College of Medicine, Burlington, Vermont 05405.**

An Affirmative Action Employer

The Department of Neurology at the University of California, Los Angeles (UCLA) School of Medicine is seeking a **NEUROLOGIST/CLINICAL NEUROLOGIST** interested in developing and expanding the ataxia-neuromuscular program at UCLA. Opportunities available for independent and collaborative research. Applicants must be Board-eligible in neurology and have demonstrated expertise in ataxias and/or neuromuscular disease. Prefer demonstrated expertise in neurochemical research. Appointment at the assistant or associate professorial level depending upon qualifications. *The University of California is an Affirmative Action/Equal Opportunity Employer.* Submit curriculum vitae to: **R. A. Pieter Kark, M.D., Associate Professor of Neurology, Reed Neurological Research Center, UCLA School of Medicine, Los Angeles, California 90024.**

POPULATION GENETICIST

The Department of Biology at the University of California, Riverside, invites applications for a faculty position in population genetics beginning 1 September 1981. Candidates must have a Ph.D. and evidence of ability to initiate and sustain a creative research program, and enthusiasm and skill in teaching and supervision in both undergraduate and graduate programs. Teaching duties will consist of undergraduate and graduate courses in empirical and theoretical population genetics. The appointment will be made as assistant professor and a regular member of the department.

Applicants should send up-to-date curriculum vitae, a brief description of research and teaching goals, reprints of scientific papers, and request letters from three individuals who, from close personal knowledge, can evaluate the applicant. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

Applications are invited from all qualified individuals. Send applications by 21 November 1980 to:

**Professor R. Ruibal, Chairman
Department of Biology
University of California
Riverside, California 92521**

POSTDOCTORAL POSITION available January 1981 to study aspects of fetal lung development as it relates to surfactant synthesis and secretion. Current areas of investigation include regulation and hormonal control of phospholipid biosynthesis, mechanism of pulmonary surfactant secretion, and control of fetal lung glycogen metabolism. Experience in phospholipid or glycogen metabolism desirable. Salary: \$12,000 to \$15,000. Send curriculum vitae and names of references to: **Seamus A. Rooney, Ph.D., Department of Pediatrics, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn. 06510.**

Drug Safety Evaluation

Outstanding growth opportunity for a recent Ph.D. in toxicology or equivalent (some industrial experience preferred) to assume study director responsibilities and function as supervisor of a data management, evaluation and reports preparation group. The individual selected for this key position must be quantitatively oriented, able to organize, analyze and interpret animal toxicity data and have above average writing ability. The selected candidate will be offered a competitive salary commensurate with experience and a liberal benefits package. Relocation will be assisted. Please forward your resume in confidence to:

Personnel Department

Endo Laboratories, Inc.
Subsidiary of E. I. du Pont de Nemours & Co. (Inc.)

1000 Stewart Avenue
Garden City, New York 11530

An Equal Opportunity Employer M/F

Anti-Arthritis Research and Development

Senior Pharmacologist

Riker Laboratories, Inc., (subsidiary of 3M) seeks a PhD pharmacologist or equivalent with at least 3 years post graduate experience, preferably in anti-inflammatory R&D. The anti-arthritis team comprises biochemists, immunologists, microbiologists and medicinal chemists. Functions of the senior pharmacologist will include screening, investigation and development of immunologically-based models. Opportunities for independent and collaborative contributions in the field of inflammatory diseases mechanisms and treatment are substantial. This position is available immediately. Salary commensurate with experience.

The Twin Cities area offers a superb educational, recreational and cultural environment. If you are interested in a challenging position in a major therapeutic area for Riker, please send your resume, references and salary history to or call (612) 733-0544, Dennis G. Nelson, Technical Placement Manager/3M.

3M Center
St. Paul, Minnesota 55144

We Are An Equal Opportunity Employer M/F

3M

FUNGUS GENETICIST

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GRANNYS

PEPPERIDGE FARM

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EFFICIENCY

HANOVER TRAIL

Porter's White Casserole

Herby's

The Campbell Institute for Research and Technology invites applications for the position of Research Associate. Candidates must have a PhD Degree in Molecular or Microbial Genetics with evidence of expertise in fungus genetics. Preference will be given to those with postdoctoral training or comparable research experience and publications in refereed journals. Applications should include a curriculum vitae, copies of publications, transcripts, statement of research orientation, and 3 references sent to:

Dr. William R. Sharp
Pioneer Research

CAMPBELL INSTITUTE for RESEARCH and TECHNOLOGY

Campbell Soup Company

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RECIPE

2611 Branch Pike
Cinamminson, NJ 08077

An Equal Opportunity Employer M/F

RESEARCH ASSOCIATE Immunochemistry

RUSH-PRESBYTERIAN-ST. LUKE'S, a well-known, well-respected medical center located in Chicago, currently is looking for a Ph.D. in immunochemistry to participate in studies of humoral immunity in cancer patients. Some experience in cell mediated immunity desirable. Candidate should be interested in developing an independent program of study concerned with immunochemical aspects of human tumor immunity.

Salary will range between \$14,000 to \$18,000, depending on experience; available immediately. Any interested candidates are invited to contact: **Dr. Donald P. Braun, Immunology Laboratory, Section of Medical Oncology, Department of Medicine**, at:

RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER



1753 West Congress Parkway
Chicago, Illinois 60612
Telephone: 312-942-8395

Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL POSITION available in protein chemistry and affinity labeling of purine nucleotide sites in enzymes. Recent Ph.D. in biochemistry. Salary: \$14,000 to \$16,000. Send résumé and names of three references to: **Dr. Roberta F. Colman, Chemistry Department, University of Delaware, Newark, Delaware 19711. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION for research on receptors for PHORBOL ESTER TUMOR PROMOTERS. Strong background in biochemistry or chemistry and interest in carcinogenesis required. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. Peter M. Blumberg, Department of Pharmacology, Harvard Medical School, 250 Longwood Avenue, Boston, Mass. 02115. An Equal Opportunity/Affirmative Action Employer**

POSTDOCTORAL POSITION. Postdoctoral position available to study the molecular biology of rotaviruses. Research involves protein purification, in vitro RNA-protein synthesis, and analysis of post-translational polypeptide modifications. Experience in nucleic acid and/or protein biochemistry required and experience in tissue culture preferred. Send curriculum vitae and names of three references to: **Dr. Mary Estes, Department of Virology, Baylor College of Medicine, 1200 Moursund Avenue, Houston, Texas 77030. Equal Opportunity Employer.**

POSTDOCTORAL POSITION to study biochemistry of complement proteins and their relationship to acute lung injury. Knowledge of protein and/or immunochemistry preferable. Salary: NIH equivalent range; 1 year with negotiable renewal. Send résumé and two reference letters to: **J. O. Shaw, M.D., Department of Medicine, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284.**

POSITION FOR RECENT POSTDOCTORATE with knowledge of biochemistry and cell biology and interest in cellular differentiation, development of immunocompetent cells, and effect of drugs and hormones on immune processes. Also: **RECENT Ph.D. in BIOCHEMISTRY** with knowledge of protein peptide and amino acid chemistry and enzymology. Techniques of peptide purification, isolation, and primary structure determination preferred. Send curriculum vitae and salary requirements, indicating which position you are applying for, to: **M. Kerans, Personnel Department, NEW YORK UNIVERSITY MEDICAL CENTER, 560 First Avenue, New York, N.Y. 10016. An Equal Opportunity/Affirmative Action Employer, M/F.**

POSTDOCTORAL POSITION available immediately for biochemist or molecular biologist to study the transforming products of the DNA tumor virus, SV40, and its interaction with and induction of host tumor antigens. Experience in protein and enzyme characterizations useful. Must be U.S. citizen or permanent resident. Send curriculum vitae and three references to: **Dr. Robert B. Carroll, Pathology Department, New York University School of Medicine, 550 First Avenue, New York, N.Y. 10016. An Equal Opportunity/Affirmative Action Employer, M/F.**

POSTDOCTORAL POSITION IN IMMUNOLOGY available immediately. Studies of immune regulations and/or tumor immunity in the chicken. Ph.D. in immunology, biochemistry, or related field; \$14,760 per year. Send curriculum vitae and three reference letters to: **Dr. G. J. Thorbecke, Department of Pathology, New York University School of Medicine, 550 First Avenue, New York, N.Y. 10016. An Equal Opportunity/Affirmative Action Employer, M/F.**

POSTDOCTORAL POSITION available October 1980 to study folate enzymes, coenzymes, and anti-metabolites. Send résumé and three references to: **Dr. Roy L. Kisliuk, Department of Biochemistry and Pharmacology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, Mass. 02111. We are an Equal Opportunity Employer.**

POSTDOCTORAL POSITION available November-December 1980, for candidates having Ph.D. or M.D. degree with experience in molecular biology, biochemistry, and recombinant DNA technology. On-going project involves studies on hormonal regulation of eukaryotic gene expression, in cultured cells. Send curriculum vitae with names of three references to: **Secretary, Laboratory of Pharmacology, Harvard School of Dental Medicine, 188 Longwood Avenue, Boston, Mass. 02115.**

POSITIONS OPEN

POSTDOCTORAL POSITION in studying the stimulus-secretion coupling mechanism in salivary gland cells, role of Ca^{2+} , cyclic AMP, and cyclic GMP in the secretory process. Experience in enzyme purification, subcellular fractionation, radioimmunoassay, or gel electrophoresis desirable. Salary commensurate with experience. Please send curriculum vitae and two letters of reference to: **Dr. David Quisell, Department of Biochemistry, Biophysics and Genetics, University of Colorado Health Sciences Center, School of Medicine, 4200 East Ninth Avenue, B-121, Denver, Colorado 80262. An Equal Opportunity/Affirmative Action Employer**

POSTDOCTORAL POSITION available immediately to isolate and characterize human tumor enzymes that are targets of anti-cancer drugs and to study the mechanism of action and metabolism of these drugs. Stipend competitive. Send résumé to: **Dr. P. V. Danenberg, University of Southern California Comprehensive Cancer Center, 1303 North Mission Road, Los Angeles, Calif. 90033.**

POSTDOCTORAL POSITION, starts fall 1980. Sequence and structure of mitochondrial transfer RNA from mammalian and insect systems. Salary: \$16,000 to \$17,000. Respond with curriculum vitae and names of two references to: **Dr. Donald T. Dubin, Department of Microbiology, COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY, Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854. An Equal Opportunity/Affirmative Action Employer, M/F.**

POSTDOCTORAL POSITIONS IN PHYSICAL OCEANOGRAPHY. FIRST OPENING is a 1-year postdoctoral position in the area of COASTAL OCEANOGRAPHY dealing with studies of the physical processes of advection and turbulent diffusion and their application to coastal pollution problems. Applicant should have a background in dynamical oceanography with interest in analyzing and interpreting current meter, drogus, and dye tracer measurements. Résumés and three letters of reference for this position should be directed to: **H. H. Carter.** SECOND OPENING is a 1-year postdoctoral position in the area of ESTUARINE AND COASTAL OCEANOGRAPHY dealing with advection and diffusion within coastal embayments, with exchange of waters between the embayment and the open coastal waters, and with storm surge modeling for such waters. Applicant should have a background in dynamic physical oceanography with interest in field measurements as well as analysis, interpretation and model development. Résumés and three letters of reference for this position should be directed to: **Dr. D. W. Pritchard, Associate Director of Research.** Application deadline for both positions, which should be available on or before 1 January 1981, is 1 December 1980. **Marine Science Research Center, State University of New York at Stony Brook, Long Island, N.Y. 11794. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL AND RESEARCH ASSISTANT PROFESSOR OPENINGS are available for immunological, chemical modification, and characterization studies on mitochondrial proton pumps. Starting time is flexible for a 2-year appointment. Salary: \$12,000 to \$15,000, depending on qualifications. Send curriculum vitae and names of three references to: **Dr. Ronald R. Fisher, Chairman, Department of Chemistry, University of South Carolina, Columbia, S.C. 29208. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE position available from 1 October 1980. To study molecular biology and immunology of RNA tumor viruses. Emphasis on gene expression in feline leukemia virus system. Ph.D. in virology or biochemistry preferred. Send curriculum vitae and names of three references to: **Dr. L. F. Velicer, Department of Microbiology and Public Health, Michigan State University, East Lansing, Mich. 48824. Michigan State University is an Affirmative Action/Equal Opportunity Institution.**

POSTDOCTORAL RESEARCH POSITION available immediately for recent Ph.D. with interest in cell membrane to study the mechanism of shedding and degradation of cell surface macromolecules and tumor antigens by melanoma cells. Send curriculum vitae and statement of research interest to: **Dr. J. C. Bystryn, Dermatology Department, New York University School of Medicine, 550 First Avenue, New York, N.Y. 10016. An Equal Opportunity/Affirmative Action Employer, M/F.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately to study several human enzymes, including terminal deoxynucleotidyl transferase, adenosine deaminase, and deoxyadenosine kinase. Experience in protein purification and characterization is desirable. Purine metabolism and its perturbations in severe combined immunodeficiency disease and as a consequence of pharmacologic inhibition of adenosine deaminase are active study areas. Techniques utilized include HPLC, immunofluorescence, development and detection of monoclonal antibodies. Salary: \$14,000 to \$17,000, depending on experience. Please contact: **Dr. Mary Sue Coleman, Department of Biochemistry, University of Kentucky Medical Center, Lexington, Ky. 40536. An Equal Opportunity University.**

POSTDOCTORAL/RESEARCH ASSOCIATE—Position available immediately for research into mechanisms of growth factor action. Studies will include the purification, localization, and physiology of growth factors. Background in biochemistry and cell biology as well as familiarity with immunological techniques desirable. Salary: mid-teens, commensurate with experience, plus fringe benefits. Send résumés to: **Dr. Michael Klagsbrun, CHILDREN'S HOSPITAL MEDICAL CENTER/Harvard Medical School, Enders Building, Room 1008, 300 Longwood Avenue, Boston, Mass. 02115. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH POSITION

Applications are invited for a molecular biologist to investigate genetic control of aerobic and anaerobic branches of metabolic pathways in bacteria. Experience with microbial genetics and DNA technology is highly desirable. The appointment will be for 1 to 3 years with a starting date of 1 July 1981, or by arrangement. Salary will be commensurate with experience. Applications to and further details from: **E. C. C. Lin, Department of Microbiology and Molecular Genetics, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115.**

POSTDOCTORAL RESEARCH POSITION

Available September or October 1980 for Ph.D. or M.D. wishing to study the molecular aspects of expression of messenger RNA in herpesvirus-infected cells. Interest in state of the art techniques essential. Send curriculum vitae and three letters of reference to: **Professor E. K. Wagner, Department of Molecular Biology and Biochemistry, University of California, Irvine, Calif. 92717. The University of California is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH POSITION in biochemistry available fall 1980. Research will concern the structure and mechanism of the (Na,K)-ATPase or other membrane transport systems. Send curriculum vitae and three letters of reference to: **Dr. L. C. Cantley, Department of Biochemistry and Molecular Biology, Harvard University, 16 Divinity Avenue, Cambridge, Mass. 02138. Harvard University is an Equal Opportunity Employer.**

DUKE UNIVERSITY DEPARTMENT OF RADIOLOGY

Is inviting applications for a tenure-track faculty position in radiation research; level of appointment and salary commensurate with qualifications. Applicants should possess a Ph.D. or equivalent degree. Postdoctoral experience is highly desirable. Preference will be given to those with research interests in carcinogenesis, radiation effects in normal tissues, hyperthermia, or hypoxic cell sensitizers. Interested candidates should summarize their qualifications for this particular position and send curriculum vitae, pertinent publications, and three letters of reference to:

**Dr. Charles E. Putnam
Chairman and Professor
Department of Radiology
Duke University Medical Center
Box 3808
Durham, N.C. 27710**

An Equal Opportunity/Affirmative Action Employer

RESEARCH ASSOCIATE. Research position available immediately for Ph.D. biochemist. Experience in RNA tumor virology preferable. Interdisciplinary collaboration encouraged. U.S. citizenship or permanent resident visa required. Salary negotiable. Send résumé or telephone: **Dr. Gardner or Dr. S. Rasheed, University of Southern California School of Medicine, 1840 North Soto Street, Los Angeles, Calif. 90032; telephone: 213-224-7429 or 224-7415.**

POSTDOCTORAL POSITION

The laboratory for Recombinant DNA Research, Hoffmann-LaRoche, will offer a limited number of post-doctoral positions to individuals who wish to apply recombinant DNA technology to challenging *basic* biomedical problems. These positions are temporary, renewable annually for up to a total of three years, and carry a competitive salary and benefit package.

Send curriculum vitae and names of three references to: Mrs. Eleanor M. Malone, Professional Placement Specialist, Hoffmann-LaRoche Inc., Nutley, New Jersey 07110.

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DIGESTIVE DISEASES RESEARCH SCIENTIST

The Upjohn Company is seeking a Biological Scientist to conduct imaginative exploratory research directed towards understanding digestive system diseases at the cellular and subcellular level, and to contribute to the development of drugs to control such disorders. The research would be performed in collaboration with members of a multidisciplinary group of scientists whose primary current efforts are directed towards studying the role of prostaglandins in the digestive system.

The successful candidate will have a Ph.D. in a biological science, with strong emphasis on biochemistry and/or cell biology. Postdoctoral training or experience, preferably in the biochemistry, physiology or pharmacology of the digestive system is highly desirable.

Living in Kalamazoo, a mid-sized Southwestern Michigan community, provides immediate access to an excellent mix of cultural/recreational opportunities including lakes, nearby colleges, and a four-season climate. Excellent salary and benefits programs are available.

Please send resume in confidence to:

Upjohn

William J. Hall 11144-J
The Upjohn Company
7000 Portage Road
Kalamazoo, Michigan 49001

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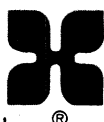
COORDINATOR, AGRI-BUSINESS FIELD OPERATIONS

This major Food Processing Corporation, located in South Central Pennsylvania, is seeking to fill the position of Coordinator, Field Operations in Agri-Business.

The principle duties include the coordination of the Agri-Business Operations in the tropics; translate farm reality and corporate policy into effective management strategy; the transferring of technology from projects in Central America to other users of this technology in the region.

The successful candidate will possess a minimum of a BS degree in Plant Science or Soil Science, plus a proven track record of project development work, and have the ability to manage and coordinate operational sub-unit in the tropics. Fluency in Spanish will be a plus. Those interested professionals should send their resume and salary history in confidence to:

B.D. Lundell



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Engineers/ Scientists

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If you are seeking a fulfilling technical career with a diversified high-technology company, contact us to learn more about our exceptional research opportunities.

To qualify, you must be an appropriately experienced professional with an advanced degree in Physics or Electrical Engineering.

Prefer individual with a strong theoretical background, experimental intuition and experience or significant interest in developing new signal processing techniques. We will also consider a person who has worked in acoustics, sonar, radar or optics research. You will evaluate, modify and develop signal processing techniques such as homomorphic deconvolution and null processing in concert with mathematical analysis and programming. You will also collaborate in research involving human auditory and biological experiments.

For confidential consideration, send resume and salary history to: George A. Giza, Manager, Professional Placement, The Bendix Corporation, 20800 Civic Center Drive, Southfield, Michigan 48037.



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POSITIONS OPEN



PRESIDENT MARLBORO COLLEGE

Marlboro College, a small, rural, accredited, 4-year liberal arts institution in Vermont, seeks a creative, broadly experienced president.

Established in 1946, Marlboro offers programs in the arts, humanities, social and natural sciences. The College's primary commitment is to the liberal arts and to excellence in undergraduate education.

The position will be available 1 September 1981. Applicants should submit a résumé, a brief statement outlining their interest in the position, and have four letters of reference sent to:

**Hilly van Loon, Secretary
Presidential Search Committee
Marlboro College
Marlboro, Vermont 05344
Telephone: 802-348-7817**

Applications must be submitted by 30 October 1980. *Marlboro College is an Equal Opportunity Employer.*

RESEARCH ASSOCIATE, Yale University School of Medicine. To perform voltage-clamp studies on single mammalian myelinated nerve fibers in problems concerning electrophysiological and pharmacological aspects of multiple sclerosis. Ph.D. in area of neurophysiology required and preferably 3 years of postdoctoral experience in this field. Candidates must have expertise in using the nodal voltage-clamp, and proven skill in having successfully worked with mammalian myelinated nerve. Salary range: \$15,000 to \$17,500 per year. Interested applicants should send their résumés to: **Box 215, SCIENCE**, before 10 October 1980. *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE—Position immediately available for Ph.D. or M.D. for ongoing studies of murine MCF viruses. Experience in nucleic acid biochemistry, cDNA hybridization and/or nucleic acid sequencing techniques highly desirable. Salary range is \$14,500 to \$20,000, depending on qualifications. Position is for 2 years and could lead to permanent staff position. Please send résumé and names of three references to: **Dr. R. G. Krueger, The Christ Hospital Institute of Medical Research, 2141 Auburn Avenue, Cincinnati, Ohio 45219.** *An Affirmative Action/Equal Opportunity Employer.*

RESEARCH SCIENTIST—CLINICAL BIOCHEMIST. M.D./Ph.D., clinical chemistry, with experience in use and maintenance of amino acid analyzers, GLC-mass spectrometer, and RIA techniques for diagnosis and research in metabolic diseases causing mental retardation and/or developmental disabilities. Knowledge of computer use desirable. New York State clinical chemist license or eligibility for same. Minimum of 3 years of experience in a recognized diagnostic center and proven research experience required. Salary: \$32,675. Send résumé to: **Personnel, Position Number 180, Institute for Basic Research in Mental Retardation, 1050 Forest Hill Road, Staten Island, N.Y. 10314.** *Affirmative Action/Equal Opportunity Employer.*

SENIOR STAFF POSITION

Applications are invited for a senior staff position (associate professor, professor) in the area of tumor virology and/or immunology, starting as early as January 1981. Priority will be given to those individuals with interests in the molecular aspects of tumor virus replication and viral immunology. The applicant should have a doctoral degree, postdoctoral experience, an active research program, evidence of success in obtaining extramural funding, and experience and an active interest in collaborative research. This expanding, nonprofit, private research institute provides excellent physical facilities, ample laboratory space, hard money for salaries and research support, and opportunities for collaborative research with present staff. Appointment to the faculty in a department at the University of Cincinnati is available, if desired. Send curriculum vitae, bibliography, statement of research interests, and names of three or more references to: **Dr. R. G. Krueger, The Christ Hospital Institute of Medical Research, 2141 Auburn Avenue, Cincinnati, Ohio 45219**, before 1 November 1980. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

A RESEARCH ASSOCIATESHIP is available immediately for developmental and experimental work in biological applications of 1-MeV electron microscopy. Major projects currently in progress include the activation and evaluation of a recently completed helium-cooled cryostat for the direct observation of frozen hydrated specimens and completion of a novel electronic imaging system. A Ph.D. degree is required and background in physics, biophysics, and/or biology is preferred. Specialized experience is expected in electron microscopy, cell biology, cryogenics, electronics, and minicomputer interfacing. Appointment is for 1 year with possibility of renewal. Salary commensurate with experience. Qualified applicants with good references should send curriculum vitae and arrange for three letters of recommendation to be sent to: **Professor M. Fotino, Laboratory for High-Voltage Electron Microscopy, Department of Molecular, Cellular and Developmental Biology, University of Colorado, Boulder, Colorado 80309.** *An Equal Opportunity/Affirmative Action Employer.*

The Cleveland Clinic Foundation has a position available for a **RESEARCH FELLOW** who will be engaged in biomedical statistics and data management and records analysis of patients involved in a radiological research program. Comprehension of medical procedures, including various treatment modalities and radiologic and pathologic findings required. The fellow will be required to operate computerized data systems and associated office equipment. Normal working hours 8:30 a.m. to 5 p.m. weekdays in research laboratories and medical offices. Master's degree in statistics and/or biological sciences required. Stipend: \$11,000 per year. Contact: **John R. Irwin, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44106; telephone: 216-444-2342.** *An Equal Opportunity Employer.*

RESEARCH STAFF APPOINTMENT. The Center for Policy Alternatives at the Massachusetts Institute of Technology (MIT) is seeking candidates for domestic and international policy-related research in areas of technological innovation, productivity, industrial development, resource conservation, job design, and work satisfaction. Candidates should have experience in one or more of the fields of labor economics, industrial innovation, organization theory, management, or technology policy. Academic training in science or engineering and a doctoral degree or equivalent research experience are required. Foreign language skills are helpful. Please submit résumé, referring to Job Number R80-234, to: **Dr. J. H. Hollomon, c/o MIT Personnel Office, 77 Massachusetts Avenue, Cambridge, Mass. 02139.** *MIT is an Equal Opportunity/Affirmative Action Employer.*

VERTEBRATE ANATOMIST. A tenure-track assistant professor position in the Department of Biological Sciences for January or August 1981 to teach human anatomy, comparative anatomy (alternate years), an advanced course in area of expertise, and develop a M.S. research program. Candidates must hold a Ph.D.; postdoctoral experience and an emphasis in functional or biochemical anatomy preferred. Send curriculum vitae, statement of research interests, transcripts, and three letters of reference to arrive by 15 October 1980 to: **Dr. L. R. Fox, Biology Department, Wichita State University, Wichita, Kans. 67208.** *Wichita State University is an Affirmative Action Employer.*

POSITIONS OPEN

RESEARCH ASSOCIATE (postdoctoral) to work on cloning the cellulase genes of the wood rot mold *Trichoderma viride*, \$14,000 per year, effective immediately.

Preferred qualifications include experience with microbiology and enzymology. Experience with nucleic acids and in vitro protein synthesis would also be helpful. Contact: **D. W. Stafford, 442 Wilson Hall 046A, Zoology Department, University of North Carolina, Chapel Hill, N.C. 27514.** *The University of North Carolina is an Affirmative Action/Equal Opportunity Employer.*

RESEARCH OPPORTUNITIES WITH SANOFI

- ▶ If you are an experienced research scientist
- ▶ If there are no possibilities in your present position for significant advancement
- ▶ If you are attracted by biological and therapeutic research
- ▶ If you feel that human contacts are important
- ▶ If you are ready to organize and animate a research unit
- ▶ If you are fluent in French and English

then a major French pharmaceutical group can offer you in France or in Belgium a responsible research position in one of the following fields:

- Neurophysiology
- Neurobiochemistry
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The directorship of a research center could be offered to an outstanding candidate. All applications together with a curriculum vitae should be mailed to: **C.R.E.P. (subsidiary of SANOFI), Attention: J. SINGIER, 37, Avenue Pierre 1^{er} de Serbie, F-75008 Paris, France.**

DEPARTMENT OF SOIL SCIENCE, UNIVERSITY OF SASKATCHEWAN. Position: **SOIL MICROBIOLOGIST.** *Appointment level:* This is a full-time, tenurable faculty position. *Available:* 1 July 1981 or earlier. *Description:* Teaching, undergraduate and graduate classes in soil microbiology; research, biological nitrogen fixation and soil organic matter transformations; extension, the candidate will preferably have some background knowledge of Western Canadian soil and cropping practices. *Minimal qualifications:* Ph.D. in soil microbiology. *Contact:* **Dr. D. A. Rennie, Department of Soil Science, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0, or telephone: 306-343-5184,** for further information.

TOXICOLOGIST to conduct health hazard assessments for various environmental and industrial chemicals. Initial assignment will be the preparation of reports based on an evaluation of the literature and/or experimental studies. Ph.D./toxicology or related discipline and minimum of 2 years of laboratory experience necessary. Candidate should have a demonstrated ability to prepare lucid, cogent reports, and to plan, execute, and manage experimental toxicologic studies in mammalian species. Position is in Menlo Park, Calif., on the SAN FRANCISCO PENINSULA. Please send curriculum vitae and salary requirements to: **Beth J. Solomon, Personnel Services, SRI INTERNATIONAL, 333 Ravenswood Avenue, Menlo Park, Calif. 94025.** *An Equal Opportunity Employer.*

RESEARCH INVESTIGATOR/ ASSISTANT RESEARCH SCIENTIST Nontenured

Position open for biochemist-geneticist to play key role in adopting 2-D gel electrophoresis to study of mutations. Ph.D. required in biochemistry or genetics; 2 years of work experience; complete commitment to problems. Contact: **James V. Neel, M.D., University of Michigan Medical School, Department of Human Genetics, Box 015, Ann Arbor, Mich. 48109.**



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and invites applications from:

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- Molecular Geneticists
- Experts in recombinant DNA techniques and chemical synthesis of DNA

at the post doctoral level, or having at least 2 to 3 years of practice in the aforementioned fields.

Salaries will be competitive and commensurate with qualification.

Initial contract duration will be 3 years.

Knowledge of French is not necessary.

STRASBOURG is a pleasant historical town, located in the heart of Europe, very close to GERMANY and SWITZERLAND.

The laboratory will be located next to the University and will have close contacts with well known groups in fundamental research.

For confidential consideration, send a CV, a list of publications and an indication of salary requirements to:

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Announcing The First International Congress For INTERFERON RESEARCH

WASHINGTON, DC, 9-12 NOVEMBER, 1980

The CONGRESS will be chaired by William E. Stewart II, of the Sloan Kettering Institute For Cancer Research, and organized jointly by Scherago Associates and the **Journal of Interferon Research**.

Approximately fifty (50) papers will be presented by recognized authorities from North America, Europe, the Middle East, and Japan. There will also be numerous poster presentations dealing with all aspects of interferon research.

For more information, please write to:

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The Optics Section of the Division of Physics, Ottawa, requires a Physicist to conduct research in instrumental optics, including study of user needs, research on performance criteria, and the development and application of methods of evaluating all factors affecting the performance of a variety of optical devices. The work entails the planning of improvements in, or development of, optical devices for special purposes, including mechanical and electrical design (in co-operation with a lens designer, electronics group and drafting facility).

Applicants must have a M.S.C. or PH.D. in Physics or Engineering with specialisation in Optics, and several years' experience in optical research and/or optical instrument design and testing.

SALARY: up to approximately 34,000 dollars per annum (under review), depending on qualifications and experience.

Apply in writing to the Employment Officer, National Research Council of Canada, Ottawa, Ontario, K1A 0R6. In reply, please quote P-80-1097S.

NRC

12 SEPTEMBER 1980

G.I. Pharmacology

G. D. Searle & Co. Research & Development Division currently has two openings in Gastrointestinal Pharmacology. This section of Biology conducts original research aimed at the discovery of new agents to treat G.I. diseases and add new knowledge about the Physiology and Biochemistry of the G.I. tract.

Research Scientist

Expansion dictates the need for this position which requires a minimum of a Ph.D. or equivalent in Gastrointestinal Pharmacology or Physiology and 3-5 years postdoctoral experience, preferably in industry.

Research Investigator

This position requires a minimum of a Ph.D. or equivalent in Gastrointestinal/Biochemical Pharmacology and 0-3 years postdoctoral experience.

We offer a stimulating research environment and opportunity for professional achievement. Qualified applicants are encouraged to submit a detailed curriculum vitae or resume to:

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Research & Development Division
G. D. Searle & Co.
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POSITIONS OPEN

TOXICOLOGY

We seek to appoint at Ph.D. level an individual having the necessary expertise and commitment to initiate, develop, and direct a regional toxicology laboratory within an academic framework. The programmatic components will include therapeutic drug evaluation, substance abuse, and a major thrust in industrial toxicology. The appointee would have opportunity for individual and/or collaborative research in a multidisciplinary department and be encouraged to develop relevant training programs for area health professionals. The appointment carries academic rank (assistant/associate professor), and professional growth is encouraged. Complete curriculum vitae and the names of three references should accompany the application and be addressed to:

D. Salafsky, Ph.D.
Head, Department of Biomedical Sciences
Rockford School of Medicine
University of Illinois at the Medical Center
1601 Parkview Avenue
Rockford, Ill. 61101

An Affirmative Action/Equal Opportunity Employer

TUMOR IMMUNOLOGIST

Research position available immediately. Applicant must have at least 2 to 3 years of postdoctoral experience. Salary in the \$24,000 to \$28,000 range.

Submit curriculum vitae, bibliography, and two letters of recommendation to: **Dr. Beppino C. Giovanna, The Stehlin Foundation for Cancer Research, 777 St. Joseph Professional Building, Houston, Texas 77002.**

TRAINEESHIPS

Postdoctoral Training Program

CELLULAR AND MOLECULAR ENDOCRINOLOGY

Postdoctoral traineeships are available immediately and for 1981 in a new NIH-supported program. Trainees with a Ph.D. or M.D. degree will participate in a research program of one of 14 faculty from the Biochemistry Department and the Program in Biomedical Sciences on the campus of the University of California, Riverside. The purpose of the program is to provide for research training at the post-doctoral level in the following four major areas of focus.

- 1) Cell culture model systems for hormone action;
- 2) Intracellular events in control of cell growth and metabolism;
- 3) Endocrinology of vitamin D, calcium, and phosphorus metabolism; and
- 4) Structure and properties of hormones and their receptors.

For detailed information and application forms write to:

Dr. Anthony W. Norman,
Program Director
Department of Biochemistry
University of California
Riverside, California 92521
Telephone: 714-787-4227

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FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS IN NEUROBIOLOGY

Open to holders of Ph.D., M.D., D.Sc. Stipends (depending on experience): \$14,000 to \$18,000. Available preceptors: Drs. Wayne Albers, Gilbert Ashwell, Roscoe Brady, Harold Gainer, Helen Hess, William B. Jakoby, Phillip Nelson, Marshall Nirenberg, Thomas Reese, and Henry DeF. Webster. Send curriculum vitae, undergraduate and graduate school transcripts, and three letters of recommendation to: **Dr. Sean O'Reilly, George Washington University Medical Center, 2150 Pennsylvania Avenue, NW, Washington, D.C. 20037.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP UNIVERSITY OF WESTERN ONTARIO

Ph.D. with experience in membrane biochemistry, lipid metabolism per physical biochemistry, or perinatal development. Salary: \$13,100 per annum for recent Ph.D. or consistent with experience. Write to: **Dr. Fred Possmayer, Department of Biochemistry, University of Western Ontario, London, Ontario, Canada N6A 5A5.**

POSTDOCTORAL FELLOWSHIP in the area of cellular/mediator regulation of IgA responses and host-microbial interactions. Position available 1 January 1981. Ph.D., M.D., or equivalent in immunology, infectious diseases, or cell biology. Submit curriculum vitae and four references to: **Dr. Jerry R. McGhee, Department of Microbiology, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIP IN PALYNOL-OGY. A 12-month postdoctoral position with a 1 January, 1 June, or 1 September 1981 appointment date is currently available for a research project dealing with the comparative pollen morphology and systematics of primitive monocotyledons. Applicants must have completed all requirements for Ph.D. by date of appointment. Preference given for prior experience working with pollen and especially using SEM and/or TEM, although most important qualifications are outstanding background in plant systematics and demonstrated ability and desire to carry out scientific research. Deadline for applications: 15 November 1980. Applicants should send curriculum vitae, undergraduate and graduate transcripts, and names and telephone numbers of major professor and at least two other faculty members familiar with their work to: **Dr. James Walker, Department of Botany, Morrill Science Center III, University of Massachusetts, Amherst, Mass. 01003. An Affirmative Action/Equal Opportunity Employer**

POSTDOCTORAL RESEARCH FELLOWSHIP in the MOLECULAR GENETICS of the endothelial cell and concerned with the molecular biology of proteins of this cell as part of a program addressing the molecular biology of the hemostatic system and vessel wall. Ph.D. with training and evident promise in molecular genetics of eukaryotic cells can be appointed for a 2-year period, renewable, starting within the next year. Work will involve use of immunochemical approaches including hybridoma antibodies coupled with DNA cloning and will require a strong background in biochemistry and molecular genetics. Send curriculum vitae and three letters of reference to: **Dr. Thomas Edgington, Department of Molecular Immunology, The Research Institute of Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, Calif. 92037.**

SCIENTIFIC EXCHANGE

NAS SCIENTIFIC EXCHANGE PROGRAMS WITH U.S.S.R. AND EASTERN EUROPE

Applications are invited from American scientists who wish to make professional visits in the U.S.S.R., Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia between September 1981 and December 1982. Applicants must be U.S. citizens and have a doctoral degree in the natural or social and behavioral sciences by the time of visit. Deadline for requesting applications is Friday, 17 October 1980. Please contact:

Section on U.S.S.R. and Eastern Europe
National Academy of Sciences
2101 Constitution Avenue, NW
Washington, D.C. 24018
Telephone: 202-389-6228 or 389-6616

REQUEST FOR PROPOSALS

SOLICITATION OF PROPOSALS

Proposals are solicited on the introduction by recombinant DNA methods of the human nervous system gene of acetylcholinesterase from human neuroblastoma cells into a bacterium. The purpose of the research is to obtain a microorganism which synthesizes the human enzyme so that it can be isolated for biochemical, neurochemical, and pharmacological studies. RFQ DAMD17-80-Q-0017. Attention: **Nancy H. Shea, U.S. Army Medical Research and Development Command, SGRD-RMA, Fort Detrick, Frederick, Md. 21701. Quotations due 3 November 1980.**

ASSOCIATESHIPS

JOINT INSTITUTE FOR LABORATORY ASTROPHYSICS (JILA)

Applications are invited for **RESEARCH ASSOCIATESHIPS** (recent Ph.D.'s) and **VISITING FELLOWSHIPS** (senior scientists). JILA (jointly run by the U.S. National Bureau of Standards and the University of Colorado) is devoted to research, study, and teaching in low-energy atomic and molecular physics, theoretical astrophysics, precision measurements, and other closely related areas. Applications for Research Associateships can be accepted anytime throughout the year, but completed applications for Visiting Fellowships must be received by 16 January 1981. Further information can be obtained from: **Secretary, Visiting Scientists Program, JILA, Box 440, University of Colorado, Boulder, Colo. 80309. The University of Colorado is an Affirmative Action/Equal Opportunity Institution.**

SYMPOSIUM

INTERNATIONAL SYMPOSIUM ON ABNORMAL HEMOGLOBINS: GENETICS, POPULATIONS, AND DISEASES HADASSAH UNIVERSITY HOSPITAL, MT. SCOPUS— JERUSALEM, ISRAEL 7 to 11 SEPTEMBER 1981

A symposium to cover the interface between genetic and molecular biological studies and the clinical manifestations of diseases related to hemoglobin is planned for next November. The symposium will bring together physicians, geneticists, and molecular biologists interested in sickle cell anemia, thalassemia syndromes, and other hemoglobinopathies. Plenary sessions, invited poster sessions, and contributed poster sessions are planned. Submitted papers will be accepted until 15 April 1981.

The symposium is being sponsored by Hebrew University Hadassah Medical School and the Albert Einstein Medical College. The Organizing Committee is Doctors J. I. Hercules, R. L. Nagel, E. A. Rachmilewitz, and A. N. Schechter.

For further information, please contact: **Naomi Kabak, Daphna Tours Ltd., 444 Madison Avenue, New York, N.Y. 10022; telephone: 800-223-6874 or 212-688-7020.**

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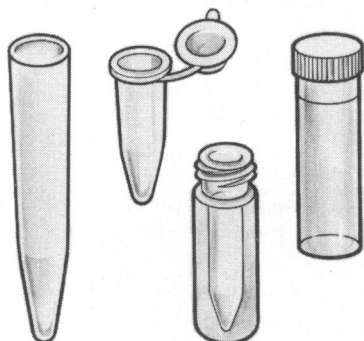
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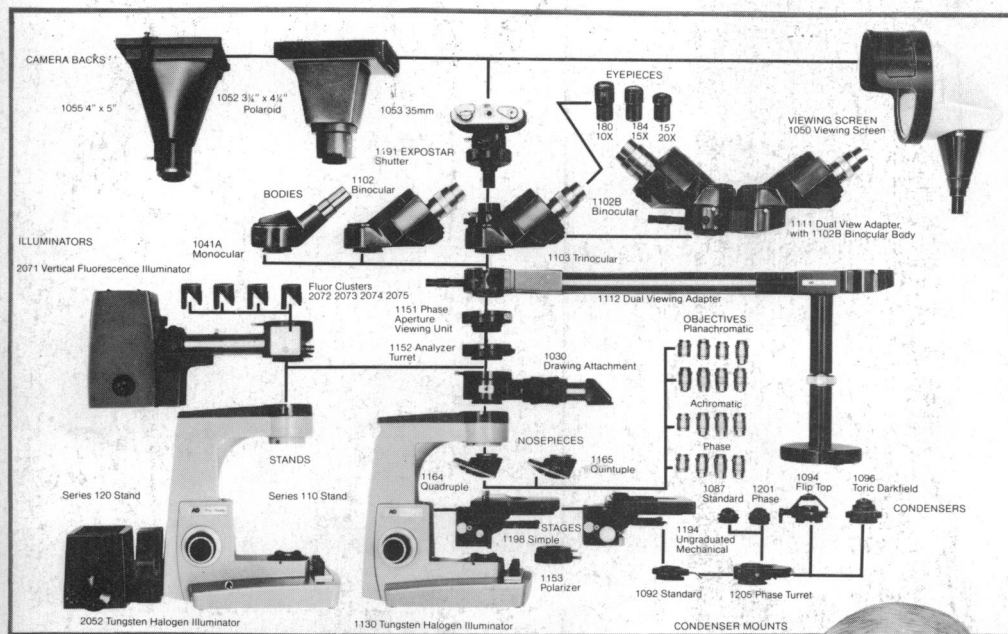


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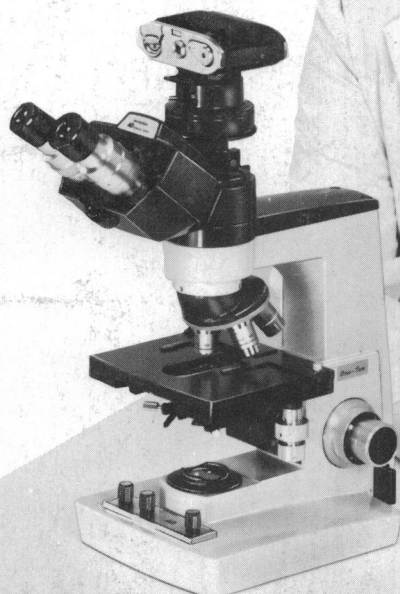
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