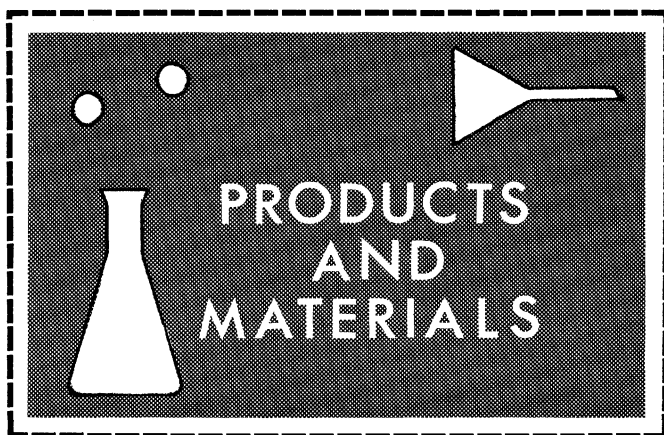


Books Received

- Annual Review of Genetics.** Vol. 18. Herschel L. Roman, Allan Campbell, and Laurence M. Sandler, Eds. Annual Reviews, Palo Alto, Calif., 1984. xiv, 628 pp., illus. \$27.
- Applications of Cognitive-Developmental Theory.** Barry Gholson and Ted L. Rosenthal, Eds. Academic Press, Orlando, Fla., 1984. xiv, 296 pp., illus. \$45. Developmental Psychology Series.
- Applications of X-Ray Topographic Methods to Materials Science.** Sigmund Weissmann, Françoise Balibar, and Jean-François Petroff, Eds. Plenum, New York, 1984. xiv, 536 pp., illus. \$75. From a seminar, Snowmass Village, Colo., Aug. 1983.
- Archaeo Geochemistry.** The Origin and Evolution of the Archaean Continental Crust. A. Kröner, G. N. Hanson, and A. M. Goodwin, Eds. Springer-Verlag, New York, 1984. x, 286 pp., illus. \$30.50. Final Report of the IGCP-Project No. 92.
- Aspects of Microbial Metabolism and Ecology.** G. A. Codd, Ed. Published for the Society for General Microbiology by Academic Press, Orlando, Fla., 1984. x, 282 pp., illus. \$52. Special Publications of the Society for General Microbiology, 11. From a symposium, Dundee, Scotland, Sept. 1982.
- Autonomic Functions in Human Physiology.** G. Thews and P. Vaupel. Springer-Verlag, New York, 1985. x, 384 pp., illus. Paper, \$19. Translated from the German edition (1981) by Marguerite A. Biederman-Thorson.
- Biological Perspectives on Aggression.** Kevin J. Flannely, Robert J. Blanchard, and D. Caroline Blanchard, Eds. Liss, New York, 1984. xii, 359 pp., illus. \$48. Progress in Clinical and Biological Research, vol. 169.
- Biological Spectroscopy.** Iain D. Campbell and Raymond A. Dwek. Benjamin/Cummings Advanced Book Program, Menlo Park, Calif., 1984. xx, 404 pp., illus. \$39.95.
- The Biology of Learning.** P. Marler and H. S. Terrace, Eds. Springer-Verlag, New York, 1984. x, 739 pp., illus. \$31. Dahlem Workshop Reports. Life Sciences Research Report 29. From a workshop, Berlin, Oct. 1983.
- Biology of Opisthobranch Molluscs.** Vol. 2. T. E. Thompson and Gregory H. Brown. The Ray Society (British Museum, Natural History), London, 1984. vi, 229 pp., illus., + plates. £39. Ray Society Series, vol. 156.
- Biosynthesis, Metabolism and Mode of Action of Invertebrate Hormones.** J. Hoffmann and M. Porchet, Eds. Springer-Verlag, New York, 1984. xiv, 519 pp., illus. \$59. Proceedings in Life Sciences. From a meeting, Strasbourg, Aug. 1983.
- C: An Advanced Introduction.** Narain Gehani. Computer Science Press, Rockville, Md., 1984. xvi, 332 pp. \$29.95. Principles of Computer Science Series.
- A Calendar of the Correspondence of Charles Darwin, 1821-1882.** Frederick Buckhardt *et al.*, Eds. Garland, New York, 1985. viii, 690 pp. \$100. Garland Reference Library of the Humanities, vol. 369.
- Cell Membranes. Methods and Reviews.** Vol. 2. Elliot Elson, William Frazier, and Luis Glaser, Eds. Plenum, New York, 1984. xviii, 371 pp., illus. \$52.50.
- Cellular Structures in Instabilities.** J. E. Wesfreid and S. Zaleski, Eds. Springer-Verlag, New York, 1984. vi, 389 pp., illus. Paper, \$18. Lecture Notes in Physics, vol. 210. From a meeting, Gif-sur-Yvette, France, June 1983.
- Cerebellar Functions.** J. R. Bloedel, J. Dichgans, and W. Precht, Eds. Springer-Verlag, New York, 1985. xii, 335 pp., illus. \$46.50. Proceedings in Life Sciences. From a meeting, Sept. 1983.
- Chayanov, Peasants, and Economic Anthropology.** E. Paul Durrenberger, Ed. Academic Press, Orlando, Fla., 1984. xii, 207 pp., illus. \$27.50. Studies in Anthropology.
- Chemistry and Physics of Carbon.** A Series of Advances. Vol. 19. Peter A. Thrower, Ed. Dekker, New York, 1984. xiv, 341 pp., illus. \$79.50.
- Clinical Tests of Respiratory Function.** G. J. Gibson. Raven, New York, 1984. xiv, 334 pp., illus. Paper, \$22.
- Ectodermal Dysplasias.** A Clinical and Genetic Study. Newton Freire-Maia and Marta Pinheiro. Liss, New York, 1984. xxiv, 251 pp., illus. \$58.
- Effects of Acidic Precipitation on Atlantic Salmon Rivers in New England.** Terry A. Haines and John J. Akielaszek. Eastern Energy and Land Use Team, U.S. Fish and Wildlife Service, Washington, D.C., 1984. xii, 109 pp., illus. Paper. Air Pollution and Acid Rain Report 18. FWS/OBS-80/40.18.
- Eigenvalues in Riemannian Geometry.** Isaac Chavel, with a chapter by Bruton Randol and an appendix by Jozef Dodziuk. Academic Press, Orlando, Fla., 1984. xiv, 364 pp. \$62. Pure and Applied Mathematics.
- Electron-Molecule Collisions.** Isao Shimamura and Kazuo Takayanagi, Eds. Plenum, New York, 1984. xiv, 570 pp., illus. \$85. Physics of Atoms and Molecules.
- Embryology and Angiosperms.** B. M. Johri, Ed. Springer-Verlag, New York, 1984. xxvi, 830 pp., illus. \$115.
- The Endocrine Lung in Health and Disease.** Kenneth L. Becker and Adi F. Gazdar. Saunders, Philadelphia, 1984. xiv, 639 pp., illus. \$85.
- Essential Immunology.** Ivan M. Roitt. 5th ed. Blackwell Scientific, Palo Alto, Calif., 1984. xii, 369 pp., illus. Paper, \$17.95.
- Ethics.** The Science of Oughtness. Archie J. Bahm. Abbreviated ed. Published by the author, 1915 Las Lomas R., N.E., Albuquerque, N.M., 1984. Various pages, \$5.
- Ethnography and Qualitative Design in Educational Research.** Judith Preissle Goetz and Margaret Diane LeCompte. Academic Press, Orlando, Fla., 1984. xiv, 292 pp. \$32.
- Ethylene.** Biochemical, Physiological and Applied Aspects. Yoram Fuchs and Edo Chalutz, Eds. Nijhoff/Junk, The Hague, 1984 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xviii, 348 pp., illus. \$53.50. Advances in Agricultural Biotechnology. From a symposium, Oiryat Anavim, Israel, Jan. 1984.
- Facet Theory.** Approaches to Social Research. David Canter, Ed. Springer-Verlag, New York, 1985. xxiv, 306 pp., illus. \$35. Springer Series in Social Psychology.
- Female Strategies.** Evelyn Shaw and Joan Darling. Walker, New York, 1985. x, 164 pp. \$14.95.
- The Fischer-Tropsch Synthesis.** Robert Bernard Anderson, with a chapter by H. Kölb and Michael Ralek. Academic Press, Orlando, Fla., 1984. xiv, 301 pp., illus. \$49.
- Forensic Evidence and the Police.** The Effects of Scientific Evidence on Criminal Investigations. Joseph L. Peterson, Steven Mihajlovic, and Michael Gilliland. National Institute of Justice, Washington, D.C., 1984 (available from the Superintendent of Documents, Washington, D.C.). xxviii, 234 pp. Paper, \$7.50.
- Forward Electron Ejection in Ion Collisions.** K. O. Groeneveld, W. Meckbach, and I. A. Sellin, Eds. Springer-Verlag, New York, 1984. viii, 165 pp., illus. Paper, \$9. Lecture Notes in Physics, vol. 213. From a symposium, Aarhus, Denmark, June 1984.
- Fundamentals of Transonic Flow.** T. H. Moulden. Wiley-Interscience, New York, 1984. xviii, 332 pp., illus. \$46.95.
- Geodetic Refraction.** Effects of Electromagnetic Wave Propagation through the Atmosphere. F. K. Brunner, Ed. Springer-Verlag, New York, 1984. xii, 213 pp., illus. Paper, \$17. From a symposium, Tokyo, May 1982.
- Graduate Research.** A Guide for Students in the Sciences. Robert V. Smith. ISI Press, Philadelphia, 1984. xii, 182 pp., illus. \$21.95; paper, \$14.95.
- A Guide to Primate Sociobiological Theory and Research.** J. Patrick Gray, Ed. HRAF Press, New Haven, Conn., 1984. x, 597 pp. Paper, \$45. HRAF Theoretical Information Control System—Guide No. 6.
- A Guided Tour of the Living Cell.** Christian de Duve. Illustrated by Neil O. Hardy. Published in collaboration with Rockefeller University Press by Scientific American Library, New York, 1985 (distributor, Freeman, New York). Two volumes. xx, 423 pp. + index. \$55.95.
- The Harvey Lectures.** Series 78, 1982-1983. Academic Press, Orlando, Fla., 1984. xvi, 270 pp., illus. \$45.
- The Hemopoietic Colony Stimulating Factors.** Donald Metcalf. Elsevier, New York, 1984. xvi, 493 pp., illus. \$125.
- Immunobiology of HLA Class-I and Class-II Molecules.** René R. P. de Vries and Jon J. van Rood, Eds. Karger, Basel, 1985. vi, 226 pp., illus. \$73.25. Progress in Allergy, vol. 36.
- Insecticide Microbiology.** Rup Lal, Ed. Springer-Verlag, New York, 1984. xvi, 268 pp., illus. \$47.
- Interferon.** Norman B. Finter, Ed. Vol. 1, General and Applied Aspects. Alfons Billiau, Ed. Elsevier, New York, 1984. xviii, 271 pp., illus. \$72.25.
- International Conference on Magnetism of Rare-Earths and Actinides.** (Bucharest, Sept. 1983.) E. Burzo and M. Rogalski, Eds. Central Institute of Physics, Bucharest, 1983. Two volumes viii, 282 pp., illus.; and x, 145 pp., illus. Paper. Abstracts and Proceedings Series, vol. 4.
- International Review of Cytology.** Vol. 92, Nuclear Genetics. J. F. Danielli, Ed. Academic Press, Orlando, Fla., 1984. x, 196 pp., illus. \$36.50.
- An Introduction to Recombinant DNA.** Alan E. H. Emery. Wiley, New York, 1984. x, 223 pp., illus. Paper, \$17.95.
- Introduction to the Algae.** Structure and Reproduction. Harold C. Bold and Michael J. Wynne. 2nd ed. Prentice-Hall, Englewood Cliffs, N.J., 1985. xvi, 720 pp., illus. \$39.95.
- Knowing and Making Wine.** Emile Peynaud. Wiley-Interscience, New York, 1984. xx, 391 pp., illus. \$34.95. Translated from the French edition (Paris, 1981) by Alan Spencer.
- The Laboratory Microcomputer.** Programming in Pascal and MC68000 Assembly Language on the IBM System 9000. James W. Cooper. Wiley-Interscience, New York, 1984. xx, 328 pp. \$29.
- Large Scale Systems.** Theory and Applications 1983. A Straszak, Ed. Published for the International Federation of Automatic Control by Pergamon, New York, 1984. xviii, 711 pp., illus. \$130. IFAC Proceedings Series (1984), No. 10. From a symposium, Warsaw, July 1983.
- Lasers and Applications.** I. Ursu and A. M. Prokhorov, Eds. Central Institute of Physics, Bucharest, 1983. Two volumes. Part I. vi, 10003 pp., illus. Part 2. vi, 632 pp., illus. Paper. From a conference, Bucharest, Aug. 1982.
- Leptons, Hadrons and Nuclei.** Florian Scheck. North-Holland, Amsterdam, 1983 (U.S. distributor, Elsevier, New York). xx, 388 pp. \$61.50.
- The Leukemias.** Epidemiologic Aspects. Martha S. Linet. Oxford University Press, New York, 1985. xiv, 293 pp. \$43.95. Monographs in Epidemiology and Biostatistics, vol. 6.
- The Living Planet.** A Portrait of the Earth. David Attenborough. Little, Brown, Boston, 1985. 320 pp., illus. \$25.
- Locality in Linguistic Theory.** Peter W. Culicover and Wendy K. Wilkins. Academic Press, Orlando, Fla., 1984. x, 276 pp., illus. \$44.50.
- Marine Environments.** The Fate of Detritus. J. Hylleberg and H. Riis-Vestergaard. Akademisk Forlag, Copenhagen, 1984. viii, 288 pp., illus. Paper, D.kr. 100. Biologiske Studier 5.
- The Mathematical Theory of Turbulence.** M. M. Stanišić. Springer-Verlag, New York, 1985. xvi, 429 pp., illus. Paper, \$29. Universitext.
- Matters of Life and Death.** Risks vs. Benefits of Medical Care. Eugene D. Robin. Freeman, New York, 1984. xvi, 207 pp., illus. \$21.95; paper, \$11.95. Reprint, Portable Stanford edition.
- Methodologies for the Collection and Analysis of Mortality Data.** Jacques Vallin, John H. Pollard, and Larry Heligman, Eds. Ordina Editions, Liège, Belgium, 1984. vi, 512 pp., illus. Paper, \$35. From a seminar, Dakar, Senegal, July 1981.
- Methods in Microbiology.** Vol. 15. T. Bergan, Ed. Academic Press, Orlando, Fla., 1984. x, 375 pp., illus. \$54.
- Microcomputers and Their Interfacing.** R. C. Holland. Pergamon, New York, 1984. viii, 193 pp., illus. Paper, \$11.
- Observations on the Ecology and Biology of Western Cape Cod Bay, Massachusetts.** John D. Davis and Daniel Merriman, Eds. Springer-Verlag, New York, 1984. xiv, 289 pp., illus. Paper, \$20.50. Lecture Notes on Coastal and Estuarine Studies, vol. 11.
- Physical Biochemistry.** K. E. van Holde. 2nd ed. Prentice-Hall, Englewood Cliffs, N.J., 1985. xiv, 287 pp., illus. Paper, \$19.95.
- The Physics of the Violin.** Lothar Cremer. MIT Press, Cambridge, Mass., 1985. xxiv, 450 pp., illus. \$35. Translated from the German edition (Stuttgart, 1981) by John S. Allen.
- Physiology and Pathology of Interferon System.** L. Borecký and V. Lacković, Eds. Karger, Basel, 1984. x, 386 pp., illus. \$47.50. Contributions to Oncology, vol. 20. From a symposium, Smolenice, Czechoslovakia, May 1983.
- Plant Environmental Measurement.** Joe J. Hanan. Bookmakers Guild, Longmont, Colo., 1984. xiv, 326 pp., illus. \$60.
- Practical Application of Azolla for Rice Production.** W. S. Silver and E. C. Schröder, Eds. Nijhoff/Junk, Dordrecht, Netherlands, 1984 (U.S. distributor, Kluwer Boston, Hingham, Mass.). viii, 227 pp., illus. \$35. Developments in Plant and Soil Sciences, vol. 13. From a workshop, Myaguez, P.R., Nov. 1982.
- The Practice of Peptide Synthesis.** M. Bodanszky and A. Bodanszky. Springer-Verlag, New York, 1984. xviii, 284 pp., illus. \$49.50. Reactivity and Structure Concepts in Organic Chemistry, vol. 21.
- Prevention of Physical and Mental Congenital Defects.** Part A, The Scope of the Problem. Maurice Marois *et al.*, Eds. Liss, New York, 1984. xx, 225 pp., illus. \$54. Progress in Clinical and Biological Research, vol. 163A. From a conference, Strasbourg, France, Oct. 1982.
- Principles of Structural Geology.** John Suppe. Prentice-Hall, Englewood Cliffs, N.J., 1985. xviii, 537 pp., illus. \$34.95.
- Programming Languages.** A Grand Tour. Ellis Horowitz, Ed. 2nd ed. Computer Science Press, Rockville, Md., 1984. x, 758 pp. \$39.95. Computer Software Engineering Series.
- Variants of Human Fibrinogen.** E. A. Beck and M. Furlan, Eds. Hans Huber, Berne, 1984. 328 pp., illus. Paper, DM 116. Current Problems in Clinical Biochemistry, vol. 14.



Biomedical Image Analysis

Model 850 is a turnkey system for statistics database management and image capture, enhancement, segmentation, analysis, storage, and retrieval. A workstation, joystick cursor control, and menu selection interact to perform all tasks. Hardware is configured to accept input from film or microscope slides, to enhance the input images and gather data, to store information on disk, and to display or print results. Spatial Data Systems. Circle 560.

Database Hardware Sorter

The DBA 1000 Database Accelerator is a hardware sorter designed to off-load a host computer's data-sequencing overhead and accelerate sort-intensive operations at speeds in excess of 1 megabyte per second. This peripheral processor combines advances in circuitry with patented data-rearrangement technology. Data is manipulated much as numbers are manipulated in a floating point processor. Accel Technologies. Circle 561.

Spectrophotometry Software

Super Spectrum Match (SSM) is analytical software for the System 5000 energy-dispersive x-ray spectrometer. SSM is capable of determining simple traits, sorting alloys, and performing other comparative analyses. The program searches a library of reference spectra on

disk for closest matches. The operator may print a detailed report of any one of the displayed spectra or a summary report of the ten closest matches. Raw data and filtered data may be compared. EG&G Ortec. Circle 562.

Programmable Machine Vision Systems

The Viking series comprises Viking Magnum, Viking and MicroViking. Hardware options may be tailored to meet specific speed and resolution requirements from 320 by 240 by 4 bits up to 768 by 480 by 8 bits. The software (Machine Vision Language, MVL) is based on structured programming. With a 1-step incremental compiler, the operator may type out a language statement and execute it immediately. This is most useful in prototype development. Octek. Circle 573.

Pipetting Software

Pro/Pette EXPRESS is a file-link feature that allows users to program several titrations and pipetting operations in sequence. Up to four reagent additions may be delayed by several hours each for automation of complex, time-dependent assays. Liquid transfer is rendered more precise and easier. Applications include plate filling, microtitration, and lymphokine and hybridoma cell transfer. Cetus. Circle 559.

Scientific Computer

Model FPS-264 is an enhanced 64-bit computer with processing power of up to 38 million floating point operations per second. Applications include structural analysis, computational chemistry, electronic circuit design, computational physics, and reservoir simulation. Fea-

tures include parallel processing, pipelining, large memory (main memory of 512K words, expandable to 4.5M words or 36 megabytes), emitter-coupled logic design of components, and 64-bit accuracy. The optimizing FORTRAN 77 compiler and other software advances enhance the system's flexibility. Floating Point Systems. Circle 565.

Software for Data Acquisition

The Series 500 Data Acquisition and Control System offers modified versions of Soft500 compatible with the IBM PC AT and Apple II+ and IIe computers. Applications include graphing, disk access, background and foreground graphing, foreground data sampling, peripherals communication, and increased analytical capacities and speed. Soft500 works with BASIC to provide specialized measurement and control functions. It extends the language's power and ease of use and is simultaneously easily accessible to the user. Keithley DAS. Circle 570.

Viscometer Software

Enhanced software is available for the Rotovisco rotational viscometer and its accompanying computer and interface system. Automatic viscosity/temperature profiles are now provided with automatic programming of temperature under control of the computer. A routine is provided for programming shear rate (rotational speed) in increments rather than continuously. Haake Buchler Instruments. Circle 568.

Array Processor Software Library

A catalog of mini-MAP array processor software routines is available. It consists of the functions, mnemonics, and timings for the Scientific Subroutine Library, FORTRAN Intrinsics, and the Host Support Library. Close to 400 functions are cataloged including algorithms for signal processing, matrix arithmetic, vector operations, scalar operations, and image processing. CSPI. Circle 576.

Microcomputer Software for Chemists

ASYST is an integrated, interactive package for analytical chemistry. ASYST offers minicomputer speed and precision and runs on IBM PC's and

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 394A and 510G) and placing it in a mailbox. Postage is free.

—RICHARD G. SOMMER

Now available from a VAX DBMS: New and Improved Users.

The real cost of data management is not the software. It's your most expensive and most neglected resource: DBMS users.

In fact, the software that claims to be the best value for your dollar can actually be the worst value for your users.

System 1032™ is different. It's a relational DBMS that actually improves your users. Your seasoned experts as well as your beginners.

System 1032 Talks Back

What good is software that sits silently while your users flounder through mistakes? Or that forces you to communicate in awkward SQL, QUEL, or one of their many dialects?

Only 1032 helps users think. It works with you the natural, real-world way: one thought at a time. First, it remembers your context from previous commands, so each thought builds on the last. Then it gives you immediate feedback at each step, so you know that you're on the right track.

That's relational DBMS with a powerful addition: common sense!

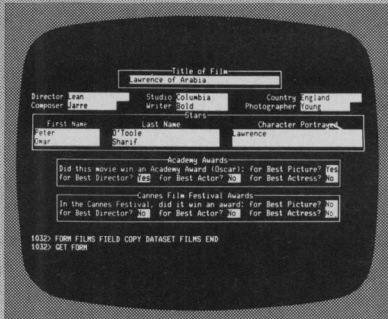
Use Your Finger, Not Your Lap

If you get stuck, just touch a key. Even right in the middle of a word. System 1032's unique information keys tell you exactly what you need to know. You get all the benefits of menus with none of their hassles.

With other software, you'd have to struggle with a manual in your lap or huddle over lunch with your DP experts.

Everyone Speaks The Same Language

As you work, System 1032 envelops you in its integrated fourth-generation environment. Whether you're a new



The 1032 Screen Forms Generator automatically produces eye-pleasing screen layouts from the data base. Fully integrated into the command language, it makes on-line examination and updating fast and practically foolproof.



Ask for instant information when you want it, without annoying menus. From simple reminders to complete explanations and examples.

user or an experienced programmer.

You don't run a separate program for each task. Instead, everyone uses one language for full boolean retrievals, multi-level reports, value distributions, data base creation, updates, and more.

Intelligent defaults help you work faster to turn raw data into real information. You do less fiddling with the software. Fewer problems, more problem solving.

Plus, 1032 gives you elegant PASCAL-like flow control. So you can customize command sequences to the limits of your imagination. Test them interpretively or compile them for efficient repeated execution. From

minor routines to major production applications.

Nothing Missing At The Top

System 1032's full complement of features improves you in areas other software neglects, saving precious time and machine resources.

Its native VAX design efficiently sup-

ports multi-million-record databases and asynchronous I/O. So you see results in the absolute minimum time.

You need to share your data without giving it away. That's why System 1032 offers field-level security, record locking, and multi-user simultaneous access over DECnet and VAX clusters. And 1032 performs identically from all VAX languages—without messy preprocessing or relinking when structures change.

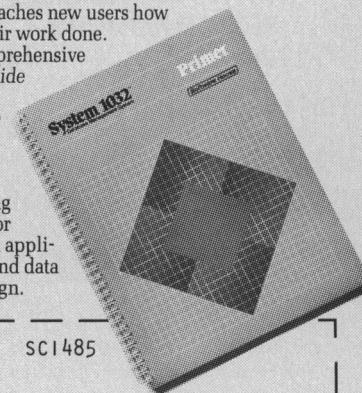
\$85 Workout

We've made System 1032 remarkably easy for you to try. A 60-day trial period costs just \$85. Give it the full workout with your own data (or ours) in your own environment. You get fully operative software, three sets of manuals, and our hot-line support.

Call us at (617) 661-9440 for a free kit describing everything we've built into 1032 for you. Or send in the coupon below. Your users will never be the same.

System 1032's self-instructional Primer teaches new users how to get their work done.

The comprehensive User's Guide and Host Language Interface manual describe everything needed for advanced applications and data base design.



SCI485

System 1032™

- ☐ Call me. ☐ Send me product literature.
☐ Send me your paper "Human Factors in Data Base Design." ☐ I'm an OEM.

My hardware and operating system are:

Send to:

Marketing Department
Software House
1105 Massachusetts Avenue
Cambridge, MA 02138
Telephone (617) 661-9440

Name

Title

Company

Street

City

State/Prov

Zip/PC

Telephone

Software House

Cambridge Los Angeles Sydney Stockholm London

Copyright © 1984 Software House. System 1032 is a trademark of Software House. VAX and VMS are trademarks of Digital Equipment Corporation. Pyrex is a trademark of Corning Glass.

BURN YOUR REFERENCE CARDS!

REF-11TM

Computerizes your REFERENCES
and prepares your BIBLIOGRAPHIES

- ☐ Maintains a data base of references
- ☐ Searches for any combination of authors, years of publication, reference title (or any words in the title), and topics covered by the reference
- ☐ Formats bibliographies exactly as you want them
- ☐ Alphabetizes references
- ☐ Menu driven dialogue
- ☐ Abbreviates journal titles
- ☐ Compact storage format
- ☐ Runs on any video terminal and printer
- ☐ 20 lines of comments for each reference

IBM PC/XT/AT, MS-DOS, CP/M 80 ... **\$195⁰⁰**

RT-11, TSX-Plus, RSX-11, P/OS **\$250⁰⁰**

VAX/VMS (native mode) **\$350⁰⁰**



ANY MANUAL **\$15⁰⁰**

ANY MANUAL & DEMO **\$20⁰⁰**

322 Prospect Ave., Hartford, CT 06106
(203) 247-8500

Connecticut residents add 7½% sales tax.

Circle No. 28 on Readers' Service Card

VENTURE DRUG DEVELOPMENT CAPITAL OPPORTUNITIES

Available to develop potential new drugs discovered by independent investigators in academic, government or private institutions.

We are a Swiss development and financial institution and would be pleased to consider preliminary non-confidential proposals on novel chemical or biological compounds which have already shown evidence of therapeutic potential. For further information write to:

DEBIOPHARM S.A.
Rue du Petit-Chêne 38
1003 Lausanne - SWITZERLAND

Circle No. 210 on Readers' Service Card

SCIENTIFIC/ENGINEERING PC GRAPHICS TOOLS

GRAFMATICTM PLOTMATICTM for FORTRAN/PASCAL PROGRAMMERS

The GRAFMATIC (screen graphics) and companion PLOTMATIC (pen plotter) libraries of modular scientific/engineering graphics routines let you easily create 2D and 3D plots in customized or default formats. Pen plot preview with GRAFMATIC. Plot interactively or in deferred mode. **Primitives** (mode, color, cursor, character, pixel, line, paint...) plus auto-scaling, auto-axis generation, auto-tic mark labeling, **function** plots, **tabular** plots, error bars, auto-function plots (complete plot in default format with one easy call), auto-tabular plots, **log/parametric/contour** plots, 3D rotation/scaling/translation, **wire frame** model (for old time's sake), **hidden line removal** for solid models (GRAFMATIC only), cubic and bicubic spline interpolants, least squares fits, bar and pie charts, screen dump... You name it. We have it! Best of all, the clearest and most complete documentation to be found in microcomputerland. User support? Of course, call us! We offer a no questions asked money-back guarantee.

SCREEN and PEN PLOTTER Software Libraries for the IBM PC Tandy 2000 TI Professional



MICROCOMPATIBLES

301 Prelude Dr.
Silver Spring, MD 20901
(301) 593-0683

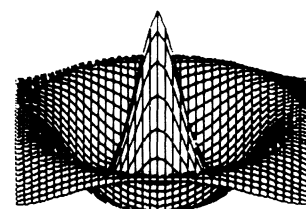
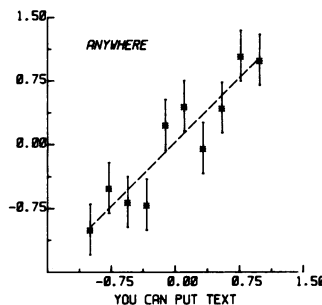
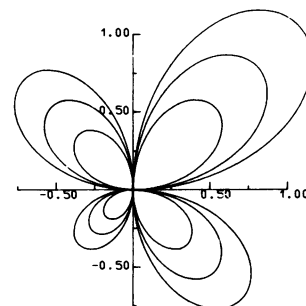
GRAFMATIC*	\$135
PLOTMATIC*†	\$135
BOTH	\$240
OMNILOT [S]	\$135
OMNILOT [P]†	\$135
BOTH	\$240

*Specify Compiler (Mfg. and Version): IBM/MS/IBM Prof. FORTRAN
†Specify Plotter: HP/Hi/IBM

OMNILOT [S] OMNILOT [P] NO Programming Required

Integrated stand-alone graphics libraries to drive your CRT monitor or your pen plotter. Key in data in response to menu prompts or read your data from a disk file. Choose from an assortment of graphics formats: **tabular**, **line**, **bar** or **pie charts**. **Contour plots**. (YES! Just part of our integrated OMNILOT library, not an expensive individual item). Create 3-D plots with a choice of **wire frame** or **hidden surface removal** for added realism. Choose **standard**, **semi-log** or **log-log** scales; gridding; error bars; line colors and types; marker symbol colors and types. Cubic spline interpolations and least squares fitting options. As with our other professional packages we offer clear and careful documentation filled with examples, user support, and a no-questions asked money-back guarantee.

Ask for OMNILOT [S] for screen graphics and OMNILOT [P] for the pen plotter software library.



other compatible computers. Data acquisition, analysis, and graphics applications are all supported. Module 1 establishes the system environment, stores data, and provides graphics, math, and statistics functions. Module 2 reduces, manipulates, and analyzes data and provides advanced math capabilities and variable analysis. Module 3 allows interface with scientific instruments to capture data. Macmillan Software. Circle 572.

Graphics System

The Golden Graphics System is an integrated package that produces contour maps and three-dimensional surface plots in addition to a variety of charts and graphs. The system consists of five applications: TOPO, for contour maps; SURF, for three-dimensional surface drawings; GRAFIT, for X-Y plots, bar charts, pie charts, line graphs, and scatter charts; QGRID, which creates a regularly spaced grid from irregularly spaced data; and PLOTCALL, which creates plots from commands in a data file. The Golden Graphics System runs on the IBM PC AT, IBM PC, and other compatible devices and requires 128K bytes of memory and one disk drive. Golden Software. Circle 567.

Chromatography Data System

LABNET-XT is based on the IBM PC XT, the SP4200, and SP4270 computing integrators and special hardware and software that links the computer to Spectra-Physics' proprietary local area network. LABNET-XT acts as a mass storage device for accumulating chromatographic data and permits display of chromatograms. The user may reprocess the chromatogram with a cursor. The software offers multitasking and the operator is clearly guided through all operations. Spectra-Physics. Circle 574.

Temperature Plotter for Classroom

Temperature Plotter allows an Apple II (+, e, or c) computer to monitor up to four temperature probes. Data may be displayed, stored, or edited. The program will produce graphs of temperature versus time as temperature is monitored or from stored data. Temperature units and time units may be specified by the user. The temperature probe system (four probes and an interface) is available in kit form or assembled. Vernier Software. Circle 575.

STAT/PROTRAN IMSL's Natural Resource for Statistical Problem Solving

In the plethora of statistical software systems available today, only one was designed for the professional who expects a straightforward approach to problem solving — STAT/PROTRAN, one of IMSL's Natural Resources.

You don't need any programming knowledge to use this remarkable system. In a surprisingly short time, STAT/PROTRAN is at your command. Convenient "help" files provide on-line reference, and the system automatically checks your statements for errors.

STAT/PROTRAN lets you define problems naturally. Your data and a few simple commands are all that STAT/PROTRAN needs to generate accurate, detailed analyses, including frequency tables and crosstabulation, analysis of variance, correlation, regression analysis and random number generation.

If you're now solving problems using FORTRAN, you'll appreciate the ability to combine FORTRAN and PROTRAN statements for tailored problem solving. This added measure of flexibility sets STAT/PROTRAN apart from other statistical systems.

STAT/PROTRAN is a member of the PROTRAN family of problem-solving systems for mathematics, linear programming and statistics. These systems use accurate, reliable numerical techniques to give you the consistently dependable results you have come to expect from IMSL, a world leader in affordable technical software.

STAT/PROTRAN is the natural resource for a wide variety of statistical applications. And the low subscription rate makes this powerful system extremely affordable, even if only one person in your organization uses it.

To find out more, return this coupon to:
IMSL, NBC Building, 7500 Bellaire Boulevard, Houston, Texas 77036 USA. In the U.S., call, toll-free, 1-800-222-IMSL. Outside the U.S. (and in Texas), call (713) 772-1927. Telex: 791923 IMSL INC HOU.

Please send complete technical information about STAT/PROTRAN.

Name _____
Dept. _____ Title _____
Organization _____
Address _____
City _____ State _____ Zip _____
Area Code / Phone _____
Computer Type _____ SCI255

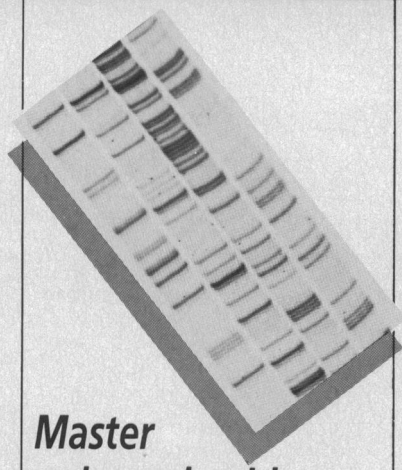
Copyright © 1984 IMSL, Inc., Houston, Texas

IMSL

Problem-Solving Software Systems

The IMSL PROTRAN problem-solving systems are compatible with most Control Data, Data General, Digital Equipment and IBM computer environments.

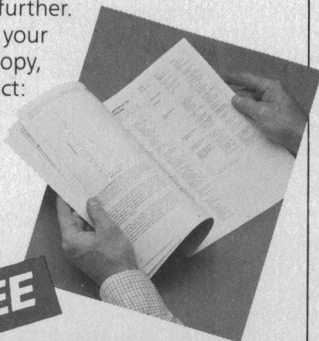
**Page
after page
on
PAGE.**



Master polyacrylamide gel electrophoresis.

You don't need to be a polymer chemist to master polyacrylamide gel electrophoresis (PAGE). At least not if you have Bio-Rad's new Technical Bulletin 1156, "Acrylamide Polymerization—A Practical Approach." It includes page after page of useful information on such topics as • critical parameters • polymerization protocols • polymerization analysis • handling of gel reagents. Also a section on troubleshooting! With this document to help, the novice can master PAGE and the experienced user can optimize separations even further.

For your
free copy,
contact:

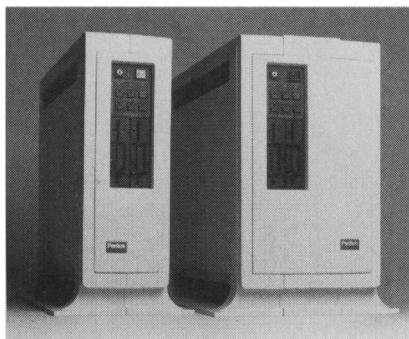


FREE

BIO-RAD

Bio-Rad Laboratories—
Chemical Division
2200 Wright Avenue
Richmond, CA 94804
(415) 234-4130

Circle No. 62 on Readers' Service Card



Finally! A computer graphics system built for the researcher.

- ♦ Open architecture.
- ♦ Adapts to thousands of tasks.
- ♦ Expandable with modules from us and many others.
- ♦ Obsolescence proof.
- ♦ Color or monochrome.

Our new Perigraf 1 is built around a standard Q-bus with slots for many extra cards to expand or customize your system.

Peritek offers cards for color or monochrome, for dot graphics or alpha-numerics, for low to high resolution, and for one or more display channels.

You can choose a single unified bus or a bus split for two microprocessors. Choose a standard single-wide enclosure or a double-wide enclosure for super micros.

You get a hard disk and two floppies on a single plug-in module that you can replace in one minute.

You can link up to six Perigraf's for parallel data transfer by DMA at 250,000 bytes/sec.—or link any number for local area networking by Ethernet.

Complete development software is included. Image editor. Vector de-jagging. System diagnostics. GKS-compatible software. All supported by popular operating systems.

Basic \$14,500 price includes 11/73 CPU, 512 Kb RAM, 2 RX50 type floppies, 36 Mb hard disk, 4 port serial I/O, RT clock, and graphics interface.

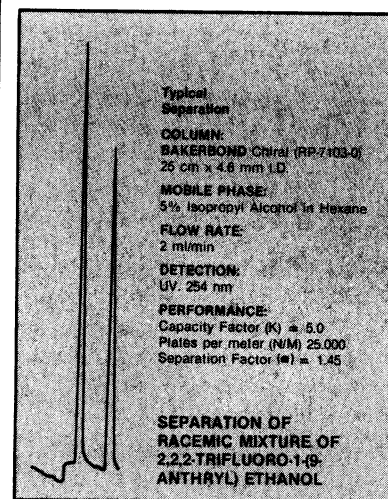
Contact Peritek Corporation, 5550 Redwood Road, Oakland, CA 94619 (415) 531-6500. Eastern Regional Sales Office (516) 931-4664. TWX 910-366-2029.

Peritek

Circle No. 132 on Readers' Service Card

J.T. Baker RESEARCH
PRODUCTS

Separate thousands of racemic mixtures by chromatography



J.T. Baker Research Products can supply all the appropriate materials you need for chromatographic chiral separations.

BAKERBOND™ Chiral Phase HPLC Columns use high purity DNBPG ((R)-N-3,5-dinitro-benzoylphenylglycine) bonded to aminopropyl silica to separate a wide range of optical isomers. Up to 10 mg of sample can be applied to the column in a single injection.

Preparative chiral sorbents, in 40 µm particle size, are also available for scale-up of separations. In addition, longer column life can be achieved with our Chiral Column Regenerating Solution. For more information, call or write today.

J.T. BAKER RESEARCH PRODUCTS

222 Red School Lane
Phillipsburg, NJ 08865 USA
(201) 859-2151

Outside New Jersey (800) 526-0239

Gross Gerau, W. Germany • Deventer, Holland
Mexico City, Mexico • Singapore

© J.T. Baker Chemical Co. 1983

Circle No. 228 on Readers' Service Card

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

LINE CLASSIFIED ADVERTISING DEADLINES:

17 May issue (mailed 10 May): **26 April**
24 May issue (mailed 17 May): **3 May**
31 May issue (mailed 24 May): **10 May**
7 June issue (mailed 31 May): **17 May**

POSITIONS WANTED: 40¢ per word, plus \$4 for use of box number, per week. \$10 minimum, per week. Prepayment required. This rate is available only to individuals seeking jobs.

LINE DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$11.40 per millimeter; \$285 minimum, per week (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing address required for all other advertising.

Send copy for all **Positions Wanted** ads and **Line Display** ads less than 1/6 page in size (125 millimeters) to:

SCIENCE, Room 107
1515 Massachusetts Avenue, NW
Washington, D.C. 20005
Telephone: 202-467-4456

Send copy for **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads to:

Scherago Associates, Inc.
1515 Broadway
New York, N.Y. 10036
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

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

POSITIONS WANTED

Anatomy-Teratology-Life Sciences. Doctorate. Experience: Teaching—anatomy, embryology, biology, research—teratology, reproduction, growth. Interdisciplinary health/life sciences background. Seeks term academic, industry position. Available immediately. Box 99, SCIENCE. 4/26; 5/3, 10

Biochemist/Physiologist. Ph.D. 1982. Experience in protein purification, enzymology, immunoassays, drug metabolism, steroid chemistry, HPLC, GC, and spectroscopic techniques. Postdoctoral experience with excellent publications and references. Seeks challenging academic or industrial R&D position. Box 94, SCIENCE. 4/26; 5/3

Biologist. B.S. 1983. Currently research technician in neurochemistry laboratory (Johns Hopkins University). Experienced in conducting enzymatic neurotransmitter receptor binding, synaptosomal uptake assays. Looking for a research job in animal behavior/zoology. Good field/laboratory experience with vertebrates in the areas of herpetology/primatology. Lecturing experience. Publications. Scuba diver. Seeking position in industry/academia/government. Will relocate. Curriculum vitae, references supplied. L. McCall, Department of Psychology, Johns Hopkins University, Baltimore, Md. 21218. X

Established Professor. Biophysics/physiology/physical chemistry at major midwestern university; more than 150 publications, active researcher, well-funded ongoing projects. Seeks change to position in academy, government, industry, preferably in balmy climate. Box 96, SCIENCE. X

Fishery Biologist with interest in modeling. Recent Ph.D. now at a small university. Excellent computing, writing skills; published articles, reports. Seeks to broaden background with a challenging position in an outstanding fisheries organization. Box 88, SCIENCE. X

POSITIONS WANTED

Cell and Neurobiology. Ph.D. (1980). Postdoctoral training (Yale). Skills in recombinant DNA, protein characterization, intracellular recording, freeze-fracture EM. Publications (11) and awards. Desires permanent/postdoctoral appointment. Box 97, SCIENCE. X

Computational Chemist. Experienced Ph.D. is looking for product development or research group leader position in pharmaceutical, data acquisition, instrumentation, or chemical information areas. Broad experience with chemical software. Good communication skills. Publications. Frank Tobin, 1821 Fairbank Road, Baltimore, Md. 21209. Telephone: 301-821-5980. 4/26; 5/3

Invertebrate Zoologist. Ph.D., 1960. Recent Smithsonian curator, will accurately identify freshwater or intertidal to abyssal marine mollusks and other invertebrates for reasonable remuneration. Telephone: 512-643-1689. X

In Vitro Fertilization Laboratory Director (Ph.D.) of large, highly successful and visible private program, seeks similar position in academic or private setting. Box 82, SCIENCE. X

Pharmacologist. Ph.D. 1985 (expected). Experience in role of PG's, LT's, HETE's, PAF, and ANF in renal function and BP regulation; chronic and acute surgery and instrumentation, HPLC, RIA, bioassay, tissue culture, computerized data management, and graduate teaching. Extensive business training. Desires industrial postdoctoral research position. Box 90, SCIENCE. X

Research Technician—B.S. Biology-1985. B.A. German 1985. Looking for opportunity with pharmaceutical company engaged in microbial research. Hands-on experience in microbiology, GC/MS, and translation. Successful programming in BASIC, PASCAL. Very familiar with computer systems and statistical packages. No geographical limitations. Box 95, SCIENCE. X

Technology Transfer in Biomedical Science. German professor of internal medicine, 20 years of experience. Successful in administration, nephrology research, and medical education. Previous full-time work in the United States and current part-time. Seeks sabbatical, or potentially longer, challenging position in industry/university, United States or worldwide. Box 98, SCIENCE. X

POSITIONS OPEN

AGRICULTURAL BIOTECHNOLOGY

Postdoctoral position available 1 July 1985 at Ohio State University's Agricultural Research and Development Center, to study the molecular biology of the avian pituitary gonadotrophic hormone genes. Candidates should have strong background in endocrinology and/or recombinant DNA technology. Salary range of \$20,000 to \$22,000.

Send curriculum vitae and three letters of reference to: **Dr. Douglas N. Foster, Department of Poultry Science, 207 Gerlaugh Hall, The Ohio State University, OARDC, Wooster, Ohio 44691.** An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR. The Ohio State University, Department of Entomology, to begin 1 January 1986. Ph.D. in entomology or biology, research and teaching in honey-bee genetics. Expected to teach apiculture and another course in entomology or biology and conduct a vigorous research program. Send letter of application, curriculum vitae, transcripts, reprints, short statement of professional goals, and names of five references by 1 June to: **Dr. W. F. Hink, Ohio State University, Department of Entomology, 1735 Neil Avenue, Columbus, Ohio 43210.** An Affirmative Action/Equal Opportunity Employer.

ASSISTANT RESEARCH IMMUNOLOGIST. Candidate should have at least 2 years of postdoctoral experience in cellular immunology. Experience in mouse tumor immunology desirable. Demonstrated ability to conduct independent research is essential. Salary will be commensurate with qualifications. Applicants should submit curriculum vitae, brief statement of research interests, representative reprints, and names and addresses of three references to: **Dr. S. D. Nathanson, Director, Surgical Research, Education and Research Building, Room 4044, Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, Mich. 48202.**

POSITIONS OPEN

ASSISTANT IN COMPARATIVE AND EXPERIMENTAL PATHOLOGY/ POSTDOCTORAL POSITION

Immediate opening for recent Ph.D. with pharmacology/biochemistry background to study binding site on gamma interferon for membrane receptor and second messenger signals that regulate production and action of gamma interferon. Experience in cyclic nucleotide and protein kinase activities preferred. A detailed position description is available upon request. Salary will be commensurate with training and experience. Send curriculum vitae and three letters of recommendation no later than 17 May 1985 to:

Dr. Howard M. Johnson
Department of Comparative and
Experimental Pathology
College of Veterinary Medicine
University of Florida
Box J-145, JHMC
Gainesville, Fla. 32610
Telephone: 904-392-1221

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

ASSISTANT DIRECTOR. Clinical Chemistry Division—Position available now. Ph.D. or equivalent required; Board-certification preferred. Service laboratory teaching and research experience desired. Civil Service position; *Equal Opportunity Employer*. Submit résumé to: **Dr. L. Edwards, Chairman, Search Committee, Erie County Laboratory, Erie County Medical Center, 462 Grider Street, Buffalo, N.Y. 14215-3098.**

CHIEF TOXICOLOGIST position available now. Ph.D. or equivalent preferred; experienced in clinical and forensic toxicology. Work involves service, teaching, and research. Civil Service position with *Equal Opportunity Employer*. Submit résumé to: **Dr. L. Edwards, Chairman, Search Committee, Erie County Laboratory, Erie County Medical Center, 462 Grider Street, Buffalo, N.Y. 14215-3098.**

ASSISTANT PROFESSOR

University of California, Irvine, Department of Pathology, is recruiting for a faculty position at the assistant professor level. Required: M.C., eligible for licensure in California and APCP certification. Established documented research experience in recombinant DNA technology. Duties: Mount an independent research program in the use of recombinant DNA technology for the development of surgical pathology diagnostic methods. Instructing medical students and residents in pathology. Present conferences for the medical staff and residents in the teaching hospital. Send curriculum vitae and references to: **E. R. Arquilla, M.D., Ph.D., Professor and Chair, University of California, Irvine, Department of Pathology, 101 City Drive South, Orange, California 92668,** by 3 June 1985. *Affirmative Action/Equal Opportunity Employer.*

VACANCY: 368-409-V36

The University of Alberta invites applications for an immediate position at the **ASSISTANT PROFESSOR** level (appointment salary range: \$29,720 to \$33,020, under review) in the area of **PLANT MOLECULAR BIOLOGY**. Preference will be given to applicants with experience in recombinant DNA methodologies or immunology. Candidates must have a Ph.D. degree and preferably 2 years of postdoctoral experience.

Curriculum vitae, plus copies of three publications that best exemplify their work, and the names of three referees should be sent by candidates to:

Dr. Keith Denford, Chairman
Department of Botany
University of Alberta
Edmonton, Alberta, Canada T6G 2E9

Application due: 31 July 1985.

The University of Alberta is an Equal Opportunity/Affirmative Action Employer, but in accordance with Canadian immigration, priority will be given to Canadian citizens and permanent residents of Canada.

ONE-YEAR REPLACEMENT to teach one semester each of an upper-division laboratory and another course, and to participate in ongoing research of present faculty. A Ph.D. and evidence of teaching ability required. Salary: \$20,000 for 9 months. Send résumé and three letters of recommendation by 15 May to: **Search Committee, Department of Biochemistry, Kansas State University (KSU), Manhattan, Kans. 66506.** *KSU is an Affirmative Action/Equal Opportunity Employer.*

NATIONAL SCIENCE FOUNDATION

Washington, D.C.

NSF's **DIRECTORATE FOR ENGINEERING** is seeking qualified applicants for the following senior-level positions.

—**DIRECTOR, DIVISION FOR SCIENCE BASE DEVELOPMENT IN DESIGN, MANUFACTURING AND COMPUTER ENGINEERING**—Division supports research in design methodology; computer-aided engineering and system integration; theoretical, experimental, and design investigations in computer building blocks and systems; very large scale integrated (VLSI) design; algorithms and architectures; design tools; factory automation; and software and data base engineering.

—**DEPUTY DIRECTOR, ENGINEERING SCIENCE DIVISION IN CHEMICAL, BIOCHEMICAL, AND THERMAL ENGINEERING**—Division includes programs in chemical, biochemical and thermal engineering.

—**DIRECTOR, DIVISION FOR FUNDAMENTAL RESEARCH IN EMERGING AND CRITICAL ENGINEERING SYSTEMS (ECES)**—Division includes programs in biotechnology, lightwave technology, bioengineering and research to aid the handicapped, earthquake hazard mitigation, natural and man-made hazard mitigation, environmental engineering and systems engineering for large structures.

—**HEAD, CRITICAL ENGINEERING SYSTEMS SECTION, ECES**—Section includes programs in earthquake hazard mitigation, natural and man-made hazard mitigation, environmental engineering and systems engineering for large structures.

These positions are in the Senior Executive Service with a salary range from ES-1 (\$61,296) to ES-4 (\$68,700) for new SES appointment. Appointment may be on either a career or one- to three-year rotational basis. Applicants should contact Margaret Cademartori on 202-357-7857 (hearing impaired individuals may call TDD 202-357-7492) to request vacancy announcements which contain specific qualification requirements and application procedures. Applications must be received by May 31, 1985.

EQUAL OPPORTUNITY EMPLOYER

IMMUNOLOGIST

We're Land O'Lakes, a leader in the food marketing and processing industry. As one of the 50 largest food processing companies, we've been producing sales of \$2.3 billion annually and expanding our product line.

We have an exciting new position for an immunologist in an expanding program at Land O'Lakes. An applicant should have a PhD in Immunology and 2 or more years of industry experience. Expertise in protein chemistry, biochemistry or microbiology would also be desirable. This person will conduct research on recovery and analysis of immunoglobulins in areas of interest to Land O'Lakes.

Land O'Lakes Corporate Research facilities are located in a northern suburb of the Twin Cities. We offer attractive salaries, excellent benefits and exceptional opportunities for personal and professional growth. If you seek an exciting growth-oriented future, please send your resume with salary requirements to: **Corporate Human Resources, LAND O'LAKES, INC., P.O. Box 116, Minneapolis, MN 55440.**

An Equal Opportunity Employer M/F/H/V

Land O'Lakes, Inc.

Immunologist/ Cell Biologist

Immunopharmacology
Research



An equal opportunity employer

Pfizer Inc., a rapidly growing leader in the pharmaceutical and healthcare industries, has an excellent career opportunity for a highly motivated PhD Immunologist/Cell Biologist at its Central Research facility in Groton, Connecticut. As a key member of the Department of Immunology and Infectious Diseases, you will help formulate and carry out research aimed at the development of human immunotherapeutics. Entry position and level of responsibilities will be commensurate with experience.

The successful candidate will join a research team working to assess and modify immunologic function in anergic and infected hosts. Qualified applicants must have a PhD in immunology, microbiology, cell biology or biochemistry and postdoctoral training with relevant work experience. Demonstrated expertise in analyzing humoral and cellular mechanisms of immune regulation is essential. A working knowledge of lymphokine mediators and the complement system is desirable. Candidates with relevant supervisory or industrial experience are encouraged to apply.

This position offers an excellent opportunity for professional recognition and career growth. Publication of important findings will be encouraged. We also offer a competitive compensation, benefit and relocation package and the opportunity to live in an attractive shoreline community. For consideration, please send a current resume with a brief description of research interests in confidence to: Jerry K. Larson, PhD, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

POSITIONS OPEN

The Section of Pediatric Neurology at the University of Michigan in Ann Arbor has a position available at the **ASSISTANT/ASSOCIATE RESEARCH SCIENTIST** level (research faculty track). A Ph.D. in cell biology or related field, two or more years of post-doctoral training with experience in culture of differentiated cells is required. Laboratory currently involved in tissue culture of capillary endothelial cells derived from brain. Studies related to the production of a transcellular permeability barrier and factors involved in the maintenance of differentiated properties are presently of particular interest. Future work may be directed towards investigating potential interaction between brain endothelial cells and glial cells. Successful applicant will be expected to develop an independent research program within this framework. Teaching is not required but joint appointment with the appropriate basic science department may be arranged. Contact: **Gary Goldstein, M.D., Section of Pediatric Neurology, University of Michigan Hospitals, Ann Arbor, Michigan 48109; telephone: 313-763-6645. A nondiscriminatory, Affirmative Action Employer.**

ASSOCIATE DIRECTOR, Geriatric Research, Education and Clinical Center (GRECC), American Lake Veterans Administration Medical Center, Tacoma, Washington, to direct American Lake component of combined Seattle/American Lake VA GRECC. Attractive opportunity to develop clinical, research, and teaching programs in geriatric medicine, psychiatry, and health services research. Current research programs related to neurobiology of aging and dementia, metabolic bone disease, and health services research. Full-time academic appointment in appropriate department at University of Washington School of Medicine and/or School of Public Health. Academic rank, salary, and terms negotiable. Reply to: **Murray A. Raskind, M.D., GRECC (182B), Seattle VA Medical Center, 1660 South Columbian Way, Seattle, Wash. 98108. An Equal Opportunity Employer.**

BIOCHEMIST—Multiyear, renewable contract position available for Ph.D., D.O. or M.D. to perform **BIOCHEMICAL RESEARCH**, seek outside support, and teach part of medical biochemistry course to medical students. New modern laboratories are available for qualified person with track record and publications. Salary, length of renewable contract, and academic rank commensurate with qualifications. Interested candidates should send curriculum vitae and all supportive evidence (current grant support and grant track record and teaching experience) to: **SEARCH COMMITTEE, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, New York 11568.**

BIOCHEMIST—SABBATICAL LEAVE REPLACEMENT

The Chemistry Department of Colby College invites applications for an unexpected opening for a 1-year visiting professorship in biochemistry for the 1985-1986 academic year. The position commences 1 September 1985. The candidate should have a Ph.D. in biochemistry, an interest in teaching, and research interests appropriate for undergraduates. The successful applicant will teach two semesters of biochemistry with laboratory, a one-semester nonmajors course, and a one-semester course in an area of current biochemical interest. Curriculum vitae, transcripts, statement of research interests, and three letters of reference should be sent to: **Professor Wayne L. Smith, Chair, Department of Chemistry, Colby College, Waterville, Maine 04901.** The closing date for completed applications is 20 May 1985. There will be interviews at the Miami ACS meeting. *Colby College is an Equal Opportunity/Affirmative Action Employer.*

TEMPORARY POSITION (BOTANY)—The Department of Botany at Butler University has a 1-year replacement position (full time) available for fall 1985. Ph.D. required. Teaching load includes two sections of general biology for nonmajors and an advanced course in the botanical sciences each semester (mycology and phycology preferred but negotiable). Applicants should submit curriculum vitae, containing a list of publications, the names and addresses of three references, and a cover letter outlining teaching interests, to: **Dr. Michael Maloney, Chairman, Search Committee, Department of Zoology, Butler University, Indianapolis, Ind. 46208.** Deadline for applications is 17 May 1985. *Butler University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSOCIATE PROFESSOR/PROFESSOR IN SEAFOOD SCIENCE

A tenure-track faculty appointment in Food Science is available within the Seafood Science and Technology Program at the University of Maryland Center for Environmental and Estuarine Studies (UM-CESS), Horn Point Laboratories, in Cambridge, Maryland. Applicants should possess a Ph.D. or equivalent experience, and have demonstrated abilities in seafood technology research, food engineering, and related extension/advisory services. Successful candidates will be expected to develop a funded research program in their area of specialization, and to participate in providing extension and advisory services to the Maryland seafood industry. The appointment will be made after 1 July 1985. Rank and salary are negotiable. Senior applicants will also be considered for a leadership role in the Seafood Science Program.

The closing date for applications is 3 June 1985. Letters of application, accompanied by recent curriculum vitae and the names of four references, should be sent to:

**Dr. Dennis L. Taylor, Head
Horn Point Laboratories
P.O. Box 775
Cambridge, Md. 21613**

The University of Maryland is an Equal Opportunity Employer.

BIOCHEMISTS, PHYSIOLOGISTS, PHARMACOLOGISTS

Needed to write educational material for use with computer-assisted instructional software. Newly formed software development house looking for quality teachers to help provide material with a nursing/medical school orientation. Advance and percentage of sales. Please contact:

**SUNTEXT CORPORATION
4076 Germaider Way
Irvine, Calif. 92715**

BIOLOGIST. Assistant professor, fall 1985. Tenure-track position with teaching responsibilities in introductory biology and human genetics for pre-nursing and pre-physical therapy majors. Background in molecular or cellular biology desirable. Ph.D. required; college teaching experience desirable. Send letters of application, curriculum vitae and names of three references, including addresses and telephone numbers, to: **Dr. John Shontz, Chairperson, Department of Biology, Grand Valley State College, Allendale, Mich. 49401.** Applications will be accepted until the position is filled.

CHAIRMAN DEPARTMENT OF ANATOMY

Applications are invited for the position of **professor and chairperson**, Department of Anatomy, University of South Carolina (USC) School of Medicine, Columbia, South Carolina. Candidates should have a Ph.D., M.D., or both, a commitment to excellence in medical education, and an established research program with a history of extramural funding and administrative experience. Applications, including curriculum vitae, a statement of career goals, and names of three references, should be sent by 17 June 1985 to: **Dr. O'Neill Barrett, Jr., Chairman, Anatomy Search Committee, Department of Medicine, USC School of Medicine, c/o Richland Memorial Hospital, ACC Number 2, Columbia, S.C. 29208.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN MARINE AND ESTUARINE SCIENCES

The University of Maryland Center for Environmental and Estuarine Studies (UMCEES), Horn Point Laboratories, located on Chesapeake Bay, is seeking to fill a postdoctoral position in any one of a broad spectrum of disciplines. These include coastal geology; invertebrate behavior, development, ecology, and physiology; nutrient cycling and productivity of phytoplankton, zooplankton, and vascular plant communities; physical oceanography; seafood technology. The position is available from 1 October 1985, for 1 year with possible renewal for a maximum of 2 years. Send résumé and three letters of reference by 31 May 1985 to: **Dr. Victor S. Kennedy, Chairman, Postdoctoral Search Committee, Horn Point Laboratories, P.O. Box 775, Cambridge, Md. 21613.** *The University of Maryland is an Equal Opportunity Employer.*

HOFFMANN-LA ROCHE

Cellular Immunologist

Hoffmann-LaRoche, an established leader in the development and manufacture of pharmaceuticals, has an exceptional career opportunity for a PhD as a Senior Scientist in cellular immunology.

Working as part of a team involved in the development of immunomodulatory agents to be used clinically in the treatment of immune-related diseases, you will be responsible for the direction and performance of *in vivo* and *in vitro* studies utilizing current technology in both humoral and cell-mediated immunology.

Your curriculum vitae should include substantial research achievement, including 3-5 years of postdoctoral work, and publication in prestigious journals. Experience with animal disease models would be helpful.

Roche offers an outstanding compensation package, including an attractive bonus, and a highly professional environment conducive to growth and achievement. Please send resume with current salary information to: Eleanor M. Malone, Professional Employment and Staffing Specialist



**HOFFMANN-
LA ROCHE INC.**
Nutley, NJ 07110

*Products that matter
from people who care*

An Equal Opportunity Employer

IMMUNOCHEMIST Modesto, California

Shell Development Company is currently seeking an outstanding PhD level scientist with a strong background and interest in immunochemistry. To qualify, you should possess significant skills and a record of achievement in applying immunochemical methods of analysis to small molecules. Should also have an interest in applying those skills to analytical research in agronomic, chemical and oil businesses. Good communication skills and the ability and desire to lead scientists of other disciplines is essential.

Our current staff includes a strong team of innovative scientists with a record of technical accomplishment and commercial success in agrochemicals research. Shell Development Company's location in Modesto, California (near the San Francisco Bay area and the Sierra Nevada Mountains) offers an outstanding research environment, attractive salaries and benefits, along with a reasonable cost of living.

If interested, please send your resume, in confidence to: **Manager, Employee Relations, Shell Development Company, Biological Sciences Research Center, P.O. Box 4248, Modesto, California 95352.**

Applicants should be a U.S. Citizen or have a permanent resident visa.

An Equal Opportunity Employer M/F.



POSITIONS OPEN

CELLULAR OR MOLECULAR IMMUNOLOGIST

We invite applications for a tenure-track faculty position in the area of cellular or molecular immunology. The successful candidate will be expected to participate in our teaching programs and to develop a strong, independent research program. Research experiences applying cellular or molecular approaches to immunological problems (for example, cell-cell recognition, regulation of immune responses, immunoglobulin gene expression, genetic approaches in histocompatibility studies) are preferred. Rank and salary are negotiable. Send curriculum vitae, a summary of research plans, and names of three references to: **Dr. David Njus, Department of Biological Sciences, Wayne State University (WSU), Detroit, Mich. 48202.** *WSU is an Equal Opportunity/Affirmative Action Employer.*

CELL AND MOLECULAR BIOLOGY GROUP DEPARTMENT OF BIOLOGY WEST VIRGINIA UNIVERSITY (WVU)

Applications are invited for a tenure-track position at the ASSISTANT PROFESSOR level, available 15 August 1985. Special consideration will be given to candidates who are studying the regulation of cell growth and/or development and who are using contemporary molecular techniques. The successful applicant will be expected to participate enthusiastically and effectively in teaching undergraduate and graduate students, and to establish a strong, independent research program. Please submit curriculum vitae, a brief description of current and future research interests, and the names and telephone numbers of three individuals who are willing to provide letters of evaluation to: **Dr. Richard P. Sutter, P.O. Box 6057, Biology Department, West Virginia University, Morgantown, W.Va. 26506.** Application deadline: 15 May 1985, or until position is filled. *WVU is an Equal Opportunity Employer.*

CHAIRPERSON, DEPARTMENT OF CHEMISTRY—The University of Delaware is seeking a chairperson to provide leadership for the Department of Chemistry. The department consists of approximately 30 faculty in the areas of analytical, bio, inorganic, organic, and physical chemistry. A doctorate and demonstrated, internationally recognized scholarly achievement are required. The person selected will be expected to enhance the research and teaching activities of the department and to continue to develop its level of excellence. Nominations and applications with a current résumé and the names of three references should be sent by 1 June 1985 to: **Professor Stanley I. Sandler, Chairman, Department of Chemical Engineering, UNIVERSITY OF DELAWARE, Newark, Del. 19716.** *The University of Delaware is an Equal Opportunity Employer that encourages applications from all qualified individuals, including members of minority groups and women.*

EXECUTIVE DIRECTOR, for new, major Science and Technology Museum in Atlanta, Georgia. The successful candidate will have proven leadership ability, at least 5 years of administrative management experience, and the ability to be an articulate and effective community spokesperson. Salary and benefits are competitive with major science museums. Please send résumé to: **Science and Technology Museum of Atlanta, Inc., 395 Piedmont Avenue, N.E., Atlanta, Ga. 30308.**

The Department of Health Science, Wichita State University, invites applications for a **FACULTY POSITION IN HUMAN PHYSIOLOGY**. Teaching activity is comprehensive in areas of clinical physiology and pathophysiology for undergraduate and graduate students in allied health and nursing. Candidates must have an earned doctorate in an appropriate field and show evidence of research competence in human physiology (exercise physiology is particularly desirable). Teaching credentials required and experience in teaching human physiology at either the graduate or undergraduate level desired. This is a 12-month faculty position, eligible for tenure review. Preferred starting date: August 1985. Letters of application or nomination, curriculum vitae, and names and addresses of four persons able to provide current references should be sent to: **Dr. Stephen Gladhart, Search Committee Chairperson, College of Health Professions, Health Science Department, Wichita State University, Wichita, Kansas 67208.** Deadline for receipt of application: 10 June 1985. *Wichita State University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

DIRECTOR, TOXICOLOGICAL SCIENCES PROGRAM

The University of Maryland is seeking the director of a new university-wide Graduate Program in Toxicology leading to the M.S. and Ph.D. degrees. The program will be fully integrated and coordinated among the university campuses at Baltimore (UMAB), Baltimore County (UMBC), College Park (UMCP), Eastern Shore (UMES), and the Center for Environmental and Estuarine Studies, with core courses being offered in the Department of Chemistry at UMBC. The director will be expected to develop and administer the new program and maintain an active personal research program. Applicants should hold a doctorate degree and ideally be qualified for the rank of professor (with tenure). A distinguished record of research and education in the toxicological sciences, preferably related to environmental or genetic toxicology, is required. Applicants should submit a résumé and three letters of reference by 13 May 1985 to the chairman of the Search Committee: **Dr. William J. Kinnard, Jr., Dean, University of Maryland, School of Pharmacy, 20 North Pine Street, Baltimore, Md. 21201.**

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

DIRECTOR, CENTER FOR THE ANALYSIS AND SYNTHESIS OF MACROMOLECULES. The director will head a core laboratory containing state of the art instrumentation for gas-phase protein sequencing, peptide and oligonucleotide synthesis, amino acid analysis, and HPLC. The director will supervise technical staff and provide analytical and synthetic capabilities and technical expertise to investigators in the life sciences at Stony Brook. Qualifications include a Ph.D. in biochemistry or chemistry or a related field preferably with training in protein sequencing or peptide and oligonucleotide synthesis. This position carries a faculty appointment at a level commensurate with experience. Inquiries should be directed to: **Dr. David Williams, Department of Pharmacological Sciences, Health Sciences Center, State University of New York (SUNY), Stony Brook, Stony Brook, New York 11794.** *SUNY, Stony Brook, is an Equal Opportunity/Affirmative Action Employer and Educator.* AK Number 31-85.

ECOLOGIST with training in behavioral ecology and population sampling. Full-time research on dynamics and habitat selection of Southern tree squirrels. U.S. Forest Service, Clemson, S.C. GS-408-11. Starts at \$26,381. Apply by 31 May to: **Announcement Number 400-5-0059-SE, U.S. Department of Agriculture-ARS-SEU, Room 409, Building 003, BARC-West, Beltsville, Md. 20705.** Information: Telephone: 803-656-3284. *Equal Opportunity Employer.*

Tenure-track position with emphases in **ETHOLOGY AND EVOLUTION**. We have an opening for an ASSISTANT PROFESSOR who will teach introductory biology, ethology, and evolution at the undergraduate level. In addition, the incumbent will teach ethology at the graduate level and develop a research program commensurate with his/her background and training. Candidates must hold a Ph.D. and those with experience and/or postdoctoral experience will be given priority. By 20 May 1985, applicants should submit curriculum vitae, undergraduate and graduate transcripts, and a statement of research interests, and arrange for three letters of recommendation to be sent to: **Dr. B. J. Mathis, Chairman, Department of Biology, Bradley University, Peoria, Ill. 61625.** *Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGIST

A research position is available beginning 1 July 1985 for a Ph.D. or D.V.M. with at least 2 years of relevant experience to study the biology and molecular aspects of genetic variation in influenza viruses. Appointment level will be commensurate with training and experience. Experience in small and large animal studies and biological aspects of virus pathogenesis is highly desirable. The applicant should also have experience in monoclonal antibody preparation, DNA sequence analysis, and DNA recombinant methodologies. The successful applicant will be a member of a research group studying the molecular and biological aspects of genetic variation in influenza viruses. Please send curriculum vitae and the names of three references to: **Dr. Robert G. Webster, Department of Virology and Molecular Biology, St. Jude Children's Research Hospital, P.O. Box 318, Memphis, Tennessee 38101.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

FACULTY POSITION: BIOLOGICAL CHEMISTRY

The Department of Chemistry, University of California, Santa Barbara (UCSB), has an opening for a faculty member in the area of biological chemistry. The position will be available in the 1985-1986 academic year. All appointment levels considered. Excellence in research, the Ph.D. degree, postdoctoral experience, and a commitment to teaching in the biochemical areas are required. The area of specialization within the field of modern biochemistry is unrestricted. Send résumé, brief description of proposed research not to exceed five pages, and names of three references to: **Search Committee, Department of Chemistry, University of California, Santa Barbara, Calif. 93106,** by 31 May 1985. *An Equal Opportunity/Affirmative Action Employer.*

A full-time **FACULTY POSITION** is available in the Department of Neurology, Baylor College of Medicine, Houston, Texas. The candidate must have a strong research background and a commitment to teaching and patient care. The position is primarily for our VA Neurology Service, and the candidate must be able to develop a strong independent VA research program in collaboration with medical school faculty. Salary is based on a full-time VA appointment. Academic rank is based on qualifications. Send curriculum vitae and letters of recommendation to: **Stanley H. Appel, M.D., Chairman, Department of Neurology, Baylor College of Medicine, One Baylor Plaza, Houston, Texas 77030,** or **Y. Harati, M.D., Chief, Neurology Service, VA Medical Center, Houston, Texas 77030.**

FACULTY POSITION IN AUDITORY NEUROPHYSIOLOGY

The Section of Otolaryngology, Department of Surgery, Yale University School of Medicine, invites applications for a nontenured faculty position for teaching and research. Applicant must have a comprehensive knowledge of and previous experience in the field of electrophysiology of the auditory system, physiology of the vestibular system, behavioral techniques, mathematical data analysis, computer support, and basic biochemistry. A Ph.D. in neurophysiology and at least 3 years of postdoctoral experience are required. Candidates should exhibit evidence of an independent research program related to dysfunction of the auditory system and must be interested in and have the ability to interact productively with M.D.'s and other allied health professionals involved in clinical research. A principal responsibility includes teaching medical students and otolaryngology residents in fields of auditory and vestibular physiology and providing laboratory training for them. Candidates should submit curriculum vitae, list of publications, and names of three references to: **C. T. Sasaki, M.D., Chief, Section of Otolaryngology, Department of Surgery, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn. 06510.** Deadline for applications is 27 May 1985.

Yale University is an Affirmative Action/Equal Opportunity Employer.

HISTOLOGY/EMBRYOLOGY FACULTY

The Division of Basic Sciences, Ohio College of Podiatric Medicine, invites applications for a faculty position teaching histology/embryology. Rank open, dependent on qualifications. A Ph.D., D.P.M., M.D., or other professional degree is required. Research is strongly encouraged.

Send résumé, a brief outline of research proposal, and two letters of recommendation by 15 May 1985 to:

**Dr. R. N. Iyer
Director of Basic Sciences
Ohio College of Podiatric Medicine
10515 Carnegie Avenue
Cleveland, Ohio 44106**

VIROLOGIST

A research position is available beginning 1 July 1985 for a Ph.D. with at least 2 years of postdoctoral experience in work with a group of investigators studying the molecular biological aspects of genetic variation in influenza viruses. Appointment level will be commensurate with training and experience. Please send curriculum vitae and the names of three references to: **Dr. Robert G. Webster, Department of Virology and Molecular Biology, St. Jude Children's Research Hospital, P.O. Box 318, Memphis, Tennessee 38101.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

MICROBIOLOGIST

ASSISTANT PROFESSOR, anticipated tenure track; virologist preferred, but applicants in other areas of molecular microbiology considered. The appointee will be expected to establish a productive research program and attract extramural funding. Responsibilities include supervising M.S. and Ph.D. candidates and teaching a course in introductory microbiology and a graduate course in speciality area. Postdoctoral experience preferred. Send curriculum vitae, statement of research plans, and names and telephone numbers of four references to: **Dr. Brian J. Wilkinson, Department of Biological Sciences, Illinois State University, Normal, Ill. 61761**. Evaluation of applications will begin by 24 May. *An Equal Opportunity/Affirmative Action University.*

MOLECULAR BIOLOGIST/ COMPUTER PROGRAMMER

DNASTAR is seeking an individual with experience in both molecular biology and computer programming. Must have a working knowledge of C and must be well organized.

Interested individuals should send a résumé to: **DNASTAR, Inc., 1801 University Avenue, Madison, Wis. 53705.**



PHYSIOLOGY, FACULTY. A tenure-track position for an established investigator in cellular physiology or biophysics. Researchers in endocrinology, the study of neurons, muscle, renal, or white blood cells are especially invited to apply. Applications, including curriculum vitae, a brief statement of research interests, and the names of three possible references should be mailed by 15 May 1985 to: **Dr. Robert B. Gunn, Chairman, Department of Physiology, Emory University School of Medicine, Atlanta, Ga. 30322**. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

NEUROANATOMY POSTDOCTORAL POSITION.

Available both immediately and for July 1985. Position supported by an NINCDS Training Grant. Various aspects of the nervous system, peripheral and central, are being studied by the faculty involved. For further information, write to: **Dr. Alan Peters, Chairman and Professor, Department of Anatomy, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118**. *Equal Opportunity Employer, M/F.*

NEUROBIOLOGY

Assistant/Associate Professor—The Department of Anatomy and Cell Biology is developing a thrust in cellular/molecular neurobiology. We seek an individual using cellular and molecular probes to study CNS structure. Research on the organization, development, and plasticity of chemical sensory systems is becoming a focal point for individuals within and outside the department. The department has excellent resources in electron microscopy, image analysis, neurophysiology, and molecular genetics. The successful candidate will eventually take part in one of the basic medical courses taught in the department. Applicants should send their curriculum vitae, a brief statement of research goals, and the names of four persons willing to write letters of recommendation to: **Neurobiology Search Committee, Department of Anatomy and Cell Biology—ML 521, University of Cincinnati College of Medicine, Cincinnati, Ohio 45267.**

PHYSIOLOGIST—Multiyear, renewable contract position available for Ph.D., D.O., or M.D. to perform **PHYSIOLOGY RESEARCH**, seek outside support and teach part of medical physiology course to medical students. New modern laboratories are available for qualified person with track record and publications. Salary, length of renewable contract, and academic rank commensurate with qualifications. Interested candidates should send curriculum vitae and all supportive evidence (current grant support and grant track record and teaching experience) to: **Search Committee, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, New York 11568.**

POSITIONS OPEN

PHARMACOLOGY

The University of Arizona College of Medicine anticipates the availability of up to three tenure-track assistant or possibly associate professor positions on 1 July 1985 in the Department of Pharmacology. Applications for these positions will be accepted until 22 May 1985. Research interests in peptide, behavioral, or cardiovascular pharmacology will receive special attention, but all areas will be considered. Successful applicants will have the Ph.D. degree in pharmacology or a related discipline, formal postdoctoral training, evidence of ability to carry out productive, independent research, and will be qualified to participate in educational programs of the department. Send curriculum vitae and names of three references to: **Thomas F. Burks, Ph.D., Head, Department of Pharmacology, University of Arizona, College of Medicine, Tucson, Arizona 85724**. *Equal Opportunity/Affirmative Action Employer.*

Ph.D. to develop and apply new optical probes and laser techniques in materials research problems. At least 5 years of relevant optical experience; \$55,000 per year; 40 hours per week. Job located in the Bowie, Maryland, area. Send résumé to: **Maryland Department of Employment and Training, 1123 North Eutaw Street, Baltimore, Md. 21201**. Refer to Job Order Number 5033877.

POSTDOCTORAL FELLOW IN BIOCHEMISTRY

The Department of Biochemistry at Rush Medical College has an opening for a postdoctoral fellow-instructor to continue existing studies on the biosynthesis of proteoglycans at different ages. The position will be offered for a 1 to 2-year duration. The applicant will join a group of scientists interested in the biochemistry of connective tissues. Applicants should have some experience of proteoglycan or glycoprotein biochemistry. If you are interested in being considered for this position, please contact: **Eugene J.-M. Thonar, Ph.D., Department of Biochemistry, Rush Medical College, 1753 West Congress Parkway, Chicago, Ill. 60612**. *Rush Medical College is an Equal Opportunity/Affirmative Action Employer.*

Independence and responsibility

... are important to employees at **Genetics Institute**. We apply the knowledge gained in modern biology to generate advances in human healthcare, agriculture and chemicals. Our achievements in these areas rank us among the top firms in the biotechnology industry and result in an exceptionally stimulating scientific environment.

We are currently expanding our research and development efforts and have openings in four areas. We offer an excellent compensation package.

Qualified candidates should forward their resumes in confidence to:

**Barbara Covell
Genetics Institute
87 CambridgePark Drive
Cambridge, MA 02140**

Molecular Biology

We have several openings available at all career levels (Ph.D./M.S./B.S.) for highly motivated, talented individuals with a strong research background in recombinant DNA technology. Additional expertise in one of the following areas would be desirable: tissue culture, cDNA cloning, DNA chemistry, bacterial, yeast or mammalian expression systems.

Protein Biochemistry

We seek highly motivated research associates (B.S. and/or M.S.) to work on purification and biochemical characterization of proteins produced through recombinant DNA technology. Experience with a wide variety of protein purification methods with an interest in large-scale protein fractionation is desirable.

Medical Microbiology

We currently have an opening for a Ph.D. with a strong background in medical microbiology and familiarity with a broad range of microorganisms. Clinical laboratory experience is essential. Nucleic acid molecular biology experience is highly desirable.

Protein Chemistry

We have positions available for talented research associates (B.S. and/or M.S.) to join in the characterization of proteins produced through recombinant DNA technology. The successful candidates will have a strong background in structural protein chemistry with two years' experience in the gas phase microsequencing of peptides and proteins combined with a thorough knowledge of peptide mapping techniques using state-of-the-art HPLC methodologies.

Genetics Institute

College of Agricultural and Environmental Sciences University of California, Davis

Inquiries are invited from qualified applicants for FACULTY POSITIONS (tenure-track) available in these areas:

Assistant professor/assistant geneticist for plant breeding. Ph.D. degree required in genetics or closely related field. Teaching plant science courses, advising students, and genetic/plant breeding research emphasizing the strawberry. Apply to: **Dr. N. Somer, Chair, Plant Genetics Search Committee, Department of Pomology**, by 1 August 1985. Position available 1 November 1985.

Assistant professor of nematology/assistant nematologist experienced in nematology, soil ecology, and soil microbiology. Apply to: **H. Ferris, Search Committee Chair, Division of Nematology**, by 1 June 1985. Position available 1 July 1985.

Assistant professor, human development, with specialty in biological bases of behavior or behavioral genetics. To teach in child/human development; research area in adolescent/adult development. Apply to: **R. H. Kraft, Chair, Search Committee, Department of Applied Behavioral Sciences**, by 31 July 1985. Position available 1 January 1986 (negotiable).

Assistant/associate professor, biochemistry or closely related field with extensive training in plant biochemistry and demonstrated capability in enzyme research. Apply to: **Professor W. M. Kliever, Department of Viticulture and Enology**, by 31 July 1985. Position available 15 September 1985.

Assistant professor/assistant geneticist related to crop molecular genetics. Apply to: **Molecular Genetics Search Committee, Department of Agronomy and Range Science**, by 31 August 1985. Position available 1 January 1986.

Assistant professor/assistant agronomist related to cereal genetics and breeding. Apply to: **Cereal Genetics Search Committee, Department of Agronomy and Range Science**, by 15 October 1985. Position available 1 January 1986.

Assistant professor/assistant agronomist related to food legume genetics and breeding. Apply to: **Food Legume Genetics Search Committee, Department of Agronomy and Range Science**, by 15 October 1985. Position available 1 January 1986.

These positions are to be filled at the assistant professor, 11-month salary level (unless other rank is indicated above). The positions have responsibilities for teaching, advising, and research (in the Agricultural Experiment Station). Candidates should have a Ph.D. in an appropriate field and teaching and research experience. Applicants should submit résumé, transcripts (if within 5 years of graduation), statement of research and teaching experience, list and reprints of publications, and the names and addresses of at least three persons familiar with the applicant's qualifications, to individual and department as noted for position: (Department Name), University of California, Davis, Calif. 95616. Please indicate the position in which you are interested. The completed application must be received by date indicated for each position. *In accordance with applicable state and federal laws and University policy, the University of California does not discriminate in any of its policies, procedures, or practices on the basis of race, color, national origin, religion, sex, sexual orientation, handicap, age, veterans status, medical condition (as defined in Section 12926 of the California Government Code), ancestry, or marital status; nor does the University discriminate on the basis of citizenship, within the limits imposed by law or University policy. In conformance with applicable law and University policy, the University of California is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL APPOINTMENT LIFE SCIENCES

The Pathology Group at Los Alamos National Laboratory is looking for a postdoctoral fellow to participate in a collaborative project with the Division of Viral Diseases, Center for Infectious Diseases at the Federal Center for Disease Control (CDC) in Atlanta, Georgia.

Responsibilities

- The research will last for approximately two years and include developing rapid and highly sensitive physical and biochemical methods for identifying human viruses and other microbiological agents.
- Opportunities also exist for basic studies using biophysical methods for probing the physical organization within the virion of the genomes of several groups of viruses.

Education

Requirements for this appointment include:

- Ph.D. in virology, microbiology, biochemistry or allied discipline;
- excellent academic credentials;
- a strong background and interest in physical methods.

Benefits

- Postdoctoral appointments pay \$27,900 to \$29,376 per annum.
- Appointees receive employee benefits, travel, and moving expenses to Atlanta will be included.

Candidates no more than three years past their Ph.D. are invited to apply. Please send your resume, bibliography, three letters of reference and undergraduate and graduate transcripts to:

Sandra Harding, DIV 85-BU
Personnel Administration Division
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

University
of California



An Affirmative Action/Equal
Opportunity Employer

POSITIONS OPEN

UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE

Candidates for faculty appointment are invited to apply for the following positions:

PHARMACOLOGY (Number 0044), **assistant professor**. Responsibilities include: teaching medical, dental, allied health, and graduate students, conducting independent, externally fundable research in one of the following areas: cardiovascular pharmacology, toxicology, or neuroendocrine pharmacology. Requirements: Ph.D. in pharmacology or the M.D. degree and 1 to 2 years of postdoctoral training and research experience. Deadline for applicants: 1 June 1985.

Curriculum vitae may be directed to: **The University of Oklahoma College of Medicine, P.O. Box 26901, Oklahoma City, Okla. 73190. PLEASE** identify the vacancy number of the position as indicated. *We are an Equal Opportunity Employer.*

PHYSICIAN-SCIENTIST—A position is available at the level of assistant or associate professor for an individual who is Board-certified in internal medicine. Applicants should have extensive experience treating patients with occupational and environmental illness, mainly of toxicological origin. Applicants should also have an established record of obtaining extramural funds for research. The successful applicant will be provided with access to a clinic in environmental medicine, a private office and a newly renovated laboratory adjacent to the Division of Clinical Pharmacology. Salary and fringe benefits are highly competitive. Interested persons should submit a letter of inquiry that provides curriculum vitae, a bibliography, the names of three references, and a statement of salary expectations. These materials should be mailed to: **Dr. Lance L. Simpson, Director of Environmental Medicine and Toxicology, Jefferson Medical College, 1020 Locust Street, Philadelphia, Pa. 19107. An Equal Opportunity Employer.**

POSTDOCTORAL ASSISTANT in ophthalmic research available for applicants with expertise in recombinant DNA technology and/or biochemistry of extracellular components. Projects include studies on the metabolism of extracellular matrix during embryonic development of cornea and wound-healing of injured corneas. Send curriculum vitae and two letters of reference to: **Dr. W. W.-Y. Kao, Director of Ophthalmic Research, Department of Ophthalmology, University of Cincinnati College of Medicine, Cincinnati, Ohio 45267-0527. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL ASSOCIATE: Ph.D. Clinical psychologist to study immediate and long-term consequences of anesthetics and surgical procedures on the post-op cognitive functioning and psychosocial adjustment of cardiovascular surgery patients. Familiarity with neuropsychological and cognitive testing, the cardiovascular system and knowledge of the anesthetic relationship, and non-invasive measures of the cardiovascular system are required. Previous experience in this research area is desirable. Send curriculum vitae, summary of research experience, and names of three references to: **Dr. John Tinker, Department of Anesthesia, University of Iowa, Iowa City, Iowa 52242. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available to study chemotaxis and bactericidal activity of macrophages. Experiments use cytophotometry and computerized image analysis techniques. Experience in these areas of research or related fields of immunology or biophysics desirable. Submit curriculum vitae and three references to: **Dr. Elliot Goldstein, Department of Medicine, University of California, Davis School of Medicine, Davis, California 95616. The University of California is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS available immediately and 1 July 1985 to study molecular details of replication and gene expression in plant viruses and to construct plant gene vectors. Recent Ph.D. and experience in molecular biology and recombinant DNA desirable. Send curriculum vitae and three letters of reference promptly to: **Dr. Paul Ahlquist, Biophysics Laboratory, University of Wisconsin, Madison, Wis. 53706. An Equal Opportunity Employer.**

SCIENTIFIC LITERATURE ANALYSTS

TWO POSITIONS AVAILABLE

Doctorate degree in the Biological and/or Medical Sciences or Chemistry or similar.

The MOST IMPORTANT qualification is a PROVEN, OUTSTANDING ABILITY to critically and perceptively ANALYZE published SCIENTIFIC STUDIES, data, meeting presentations and related, in great depth and expeditiously on a peer review or better level.

Maximum intellectual integrity, high intelligence, and open-mindedness essential. Broad scientific background preferred, possibly including chronic diseases, i.e. cancers and/or cardiovascular and/or chronic respiratory, etc. Fast reading comprehension essential. Good writing skills are important, as well as ability to explain complex scientific matters on an intelligent layman's level. Ability to fully understand some foreign language (German, etc.) scientific literature desirable but not necessary. Prefer recent postgraduate with some industrial or academic or editorial or similar experience.

An additional position requiring a B.S. or Master's degree is also available having a thrust similar to what is specified above.

The positions are with a law firm in New York City.

Please send detailed curriculum vitae including college(s), and positions held since graduation, professional references (no contacts will be made without applicant's consent), etc. to:

BOX 91, SCIENCE

CIBA-GEIGY is a major pharmaceutical company with an active interest and engagement in the field of Biotechnology. The company has a position available for a

MOLECULAR BIOLOGIST

to join the Molecular Genetics group within the Biotechnology department.

We are seeking a molecular biologist who is interested to work with mammalian host/vector systems. The successful applicant should have postdoctoral experience with molecular cloning techniques and mammalian tissue cultures and will be expected to lead a laboratory unit developing new mammalian host/vector systems. Apart from a strong interest in basic research the applicant should also feel motivated to actively contribute to the development of potential pharmaceuticals. A working knowledge of German is desirable but not essential.

Applications giving personal data, qualifications and experience should be sent to: Dr. U. Spaeti, Personnel Department, CIBA-GEIGY Ltd., P.O. Box CH-4002 Basel, Switzerland.

CIBA-GEIGY

Faculty Positions Department of Applied Biological Sciences

MIT is seeking applicants for tenure-track faculty positions in Applied Biological Sciences. Candidates should have doctoral training in basic biological or chemical sciences together with postdoctoral experience that provides evidence of potential for independent research. Research interests should involve applications of biological sciences at molecular and cellular levels to biotechnology or pharmacology. Areas of particular interest include molecular genetics of industrial microorganisms; physical biochemistry of protein structure-function relationships; and surface-interfacial phenomena in biological systems. Appointees will be expected to contribute to the development of undergraduate and graduate educational programs.

Applicants should send curriculum vitae, brief description of research interests and names of references to:
**Gerald N. Wogan, Head, Department of Applied Biological Sciences,
Massachusetts Institute of Technology,
Room 16-333, Cambridge, MA 02139.**

MIT is an equal opportunity/
affirmative action employer.

MIT

Molecular Genetics Research Opportunity



An equal opportunity employer

The Molecular Genetics Department of Pfizer Central Research has an immediate opening for a Research Assistant to be part of a multi-disciplinary research team.

Typical duties include the construction of microbial and mammalian cell strains using *in vitro* recombinant DNA techniques. You will analyze protein and nucleic acid molecules using electrophoretic, chromatographic and immunological techniques. Additional duties will include growing mammalian cells in tissue culture and studying the role of growth regulatory factors/oncogenes on cell proliferation and transformation.

Qualified applicants should have a MS/BS in Biology with laboratory experience in R.DNA with a basic knowledge of *in vitro* R.DNA techniques. Familiarity with the use of viral vectors, chemical and other methods for transfecting mammalian cells and experience in the oncogene research area are desirable.

The position offers a stimulating professional environment in an attractive Southeastern Connecticut shore area, complemented by a competitive salary/benefits package and relocation assistance. Forward your resume, description of research and references to: Charles P. Norris, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

POSITIONS OPEN

POSTDOCTORAL FELLOW

A full-time position at the Ph.D. level is available in the Pharmacology Department. The areas of research include isolation and purification of P-450 membrane proteins from untreated animals, liver microsomes, examination of the chemistry and kinetics of these proteins, and determination of their interaction with other membrane proteins. Applicants should have a strong background in biochemistry, thermodynamics, and experience in membrane hemoprotein purification, stopped flow spectrophotometry, and protein chemistry. Two to 3 years of postdoctoral experience required and an appropriate record of productivity as documented by publications in one or more of the above areas. Salary approximately \$18,000 to \$20,000 per year, commensurate with experience and qualifications. Please submit résumés to:

Department of Pharmacology
University of Connecticut Health Center
Farmington, Conn. 06032

An Affirmative Action/Equal
Opportunity Employer, M/F/H

POSTDOCTORAL POSITIONS AVAILABLE IN COAGULATION RESEARCH

Protein Biochemistry: Isolation and characterization of previously undescribed human plasma coagulation inhibitors.

Cell Biology: Synthesis, intracellular storage, and plasma membrane insertion of human tissue factor apoprotein.

Recombinant DNA Technology: Isolation of cDNA's and delineation of gene structures of the proteins mentioned above and other coagulation proteins.

Ph.D. and M.D. candidates accepted. Work will be performed in a new, 1100 sq. ft.-laboratory with access to all appropriate equipment and facilities. Salaries from \$17,500, depending upon experience. Curriculum vitae, one letter of reference, and names of two additional references should be sent to: Drs. G. Broze and J. Miletich, Division of Hematology/Oncology, Box 14109, Washington University School of Medicine, St. Louis, Mo. 63178.

POSTDOCTORAL POSITION Department of Biology Indiana University-Bloomington

The Department of Biology announces a teaching-research postdoctoral position available 1 July 1985 (one year, one year renewable). The successful applicant will be expected to teach a one-semester undergraduate course, with the remaining time devoted to research. Preference will be given to applicants whose research interests overlap those of the faculty. Current areas of research activity include physiological, population, community ecology and evolutionary biology of both plants and animals; behavior; paleoecology, paleobiology, and population genetics. The position will be awarded on a competitive basis. Preliminary contact with an appropriate faculty member is suggested. Applicants should submit a description of research interests and arrange for three letters of recommendation to be sent to: Dr. Walter Konezka, Department of Biology, Indiana University, Bloomington, Ind. 47405. Candidates whose applications are received prior to 15 May 1985 will be assured of consideration. *Applications from women and minorities are especially welcome. Indiana University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS in metabolic regulation available as part of a training program involving laboratories in the Departments of Pharmacology and Biochemistry, University of Washington. Areas of research emphasis include hormone receptors, transmembrane signalling, protein phosphorylation, cyclic nucleotides, Ca^{2+} (CaM)-dependent processes, and phosphatidylinositol metabolism. Applicants contact: Dr. Edwin Krebs, Program Director, Howard Hughes Medical Institute SL-15, University of Washington, Seattle, Wash. 98195.

POSTDOCTORAL POSITION. Studies of the biochemistry and genetics of antibiotic production by *Streptomyces*. Characterization of mutants; plasmid isolations; in vitro DNA manipulations; gene cloning; enzyme isolation. Background in rDNA work and protein purification required with Ph.D. in microbiology, genetics, or biochemistry. Available 1 October 1985, for a period of 1 or 2 years. Send résumé and two letters of recommendation to: Professor C. R. Hutchinson, School of Pharmacy, University of Wisconsin, Madison, Wis. 53706; telephone: 608-262-7582.

POSITIONS OPEN

POSTDOCTORAL POSITION—The Dana-Farber Cancer Institute is seeking to fill one research position at the postdoctoral level to examine the cell biology and pharmacology of immunotoxin action. A strong background in the study of receptor mediated endocytosis by biochemical and biophysical methods desired. An early start date is preferable. Joint appointment will be held in an appropriate department at Harvard Medical School. Appointment is annual and dependent upon grant support. Send résumé, copies of representative publications, and names of three references to: Dr. Vic Raso, DANA-FARBER CANCER INSTITUTE, 44 Binney Street, Boston, Mass. 02115. An Affirmative Action/Equal Opportunity Employer.

A **POSTDOCTORAL POSITION** is available for a recent Ph.D. or Pharm.D. graduate interested in development of resistance to anticancer agents. Research will involve developing and characterizing human preclinical models in vivo, and examination of the effects of metabolic modulators on reversal of drug resistance. A successful candidate should have a strong background in pharmacology and biochemistry. Send curriculum vitae and three letters of reference to: Peter Houghton, Ph.D., Associate Member, Division of Biochemical and Clinical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, Tenn. 38101. An Equal Opportunity Employer.

POSTDOCTORAL POSITION IN NEUROBIOLOGY

Full-time position for postdoctoral person available through a 3-year research grant to investigate neurophysiological consequences of rearing kittens with artificially induced strabismus. Applicants should have a strong background in neuroanatomy or electrophysiology. Salary: \$15,000. Send curriculum vitae and names and addresses of three references to: Dr. Yuzo Chino, Electrophysiology Laboratory, Illinois College of Optometry, 3241 South Michigan Avenue, Chicago, Illinois 60616. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL

Postdoctoral position available immediately in an Oncology Research Laboratory with interest in studying steroid receptors in malignant tissues. Prefer candidate with experience in biochemistry or molecular biology, as well as cell culture, and evidence of productivity in original research. Two to 3 years of experience required. Please send curriculum vitae to: Larry Nathanson, M.D., Nassau Hospital, 259 First Street, Mineola, New York 11501.

Equal Opportunity Employer, M/F/H

TWO POSTDOCTORAL POSITIONS are available immediately in the areas of applications of inductively coupled plasma/mass spectrometry (ICP/MS) and thermal ionization/mass spectrometry (TIMS) to precise measurement of isotope ratios and biological materials. Candidates should have strong background in analytical chemistry of trace elements, methods of inorganic chemistry, and experience with isotope ratio mass spectrometry or a closely related field. Candidate should be strongly research oriented with special interest in biomedical applications. Interested persons should write to: Dr. Morteza Janghorbani, Stable Isotope Laboratory, Boston University School of Medicine M1008, 85 East Newton Street, Boston, Mass. 02118, or telephone: 617-247-5770.

An Equal Opportunity Employer, M/F

POSTDOCTORAL RESEARCH ASSOCIATE. Department of Electrical Engineering. To model, design, and test robust adaptive algorithms for vibration isolation and shape control of large flexible space structures. Candidates must have expertise in adaptive control theory and, in particular, stability and instability mechanisms in adaptive systems. Prior knowledge of model analysis and control using reduction of distributed parameter systems is also required as is a prior knowledge of mini/micro computers-programming, operating systems, including UNIX and VMS and computer simulation of adaptive control algorithms. Ph.D. in electrical engineering is required. Full-time position with annual salary of \$24,000. Interested applicants should submit their résumés to: Professor K. S. Narendra, Yale University, Department of Electrical Engineering, 507 Becton, 15 Prospect Street, New Haven, Conn. 06520. Yale University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

A **POSTDOCTORAL POSITION** is available immediately in the area of selenium metabolism. The focus of the studies is application of stable isotope tracers to the dynamics of selenium metabolism in human subjects. An important component of the studies relates to measurement of selenium metabolites in human urine using HPLC/MS techniques. Candidates should have strong background in HPLC, suitable experience/knowledge related to metabolism, and strong analytical chemistry techniques. Experience with mass spectrometry as related to stable isotope measurements is an asset. Interested persons should write to: Dr. Morteza Janghorbani, Stable Isotope Laboratory, Boston University School of Medicine, M1008, 85 East Newton Street, Boston, Mass. 02118, or telephone 617-247-5770.

An Equal Opportunity Employer, M/F

POSTDOCTORAL POSITIONS In Vivo NMR

Henry Ford Hospital, a 1000-bed teaching health-care facility, has immediate opportunities available in its expanding Neurology Department. Two postdoctoral positions are available immediately to conduct research in the applications of in vivo NMR in clinical and animal systems. Projects include studies of cerebral metabolism and stroke, cancer treatment and management, cardiac metabolism and others. A Ph.D. or M.D. is required and the applicants should have a background in NMR spectroscopy or imaging and/or biochemistry. Instrumentation includes a 2T whole body imaging/spectrometer system and planned acquisition of 4.7 T 30 cm bore spectrometer system.

As well as professional development, we offer a salary commensurate with qualifications and excellent benefits package.

Interested applicants should send current curriculum vitae and the names of three references to:

Dr. Michael B. Smith, Head
NMR Research Facility
Department of Neurology
2799 West Grand Boulevard
Detroit, Michigan 48202

Henry Ford Hospital is an Equal Opportunity Employer, M/F/H.

POSTDOCTORAL POSITION available 1 June 1985 to study molecular mechanisms of hormonal and pharmacological regulation of myocardial Ca^{2+} channels. Research involves receptor characterization, protein phosphorylation, Ca^{2+} flux, and electrophysiological studies using cultured heart myocytes. Background in membrane biochemistry, cell biology, pharmacology or related area is essential with a commitment to training in biochemical disciplines. Salary negotiable. Send curriculum vitae and names of three references to: Dr. Terry Rogers, Department of Biochemistry, University of Maryland School of Medicine, 660 West Redwood Street, Baltimore, Md. 21201. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

Postdoctoral position available for cloning *P. aeruginosa* outer membrane protein genes and for related structure/function studies. Experience in molecular biology desirable. Support for up to 3 years; possibility to start immediately. Please send résumé, including names of three referees, to: Dr. R. E. W. Hancock, Department of Microbiology, THE UNIVERSITY OF BRITISH COLUMBIA, Number 300—6174 University Boulevard, Vancouver, British Columbia, Canada V6T 1W5.

POSTDOCTORAL RESEARCH ASSOCIATE

Biochemistry Ph.D. to work in tumor biology laboratory on biochemical aspects of tumor metastasis. NIH funded research. Technical facility and experience with electrophoresis are essential. Up to two years of relevant postdoctoral experience an advantage. Opportunities for collaboration in molecular immunology and molecular genetics are excellent. Nearby outdoor recreational opportunities are outstanding (Yellowstone National Park is 90 miles away). Salary competitive and commensurate with experience. Please send curriculum vitae and three letters of reference to: Dr. Jean Starkey, Microbiology Department, Lewis Hall, Montana State University (MSU), Bozeman, Mont. 59717. MSU is an Equal Opportunity/Affirmative Action Employer.

Vous partagez notre passion de la découverte

**Rejoignez notre centre de recherche
pharmaceutique du secteur privé.**

Nous recrutons des

PHARMACOLOGUES

Docteur 3ème cycle ou équivalent
expérimentés dans l'un des domaines suivants :

■■■■■■■■■■ POUR NOTRE EQUIPE DE RECHERCHE CANCEROLOGIE

IMMUNOPHARMACOLOGIE

Mise en place et gestion de protocoles expérimentaux destinés à la mise en évidence du bénéfice immuno-stimulant de composés pharmacologiques. La spécialisation d'un certificat d'Immunologie serait appréciée.

TESTS IN VIVO

Développement, organisation et exploitation de protocoles d'expérimentation de greffes tumorales. Une expérience dans ce domaine est souhaitée.

CYTOFLUORIMETRIE


Responsabilité des moyens logistiques et participation à toutes les expériences utilisant cette technique. Une formation de Biophysicien et l'expérience du trieur de cellules est indispensable.

■■■■■■■■■■ POUR NOTRE EQUIPE DE RECHERCHE PNEUMOLOGIE

Physiologie ou pharmacologie respiratoire, circulation pulmonaire, exploration fonctionnelle et pathologie expérimentale.

Merci d'adresser lettre man. + C.V. + photo sous réf.304S à
PUBLIVAL, 27 route des Gardes, 92190 MEUDON (FRANCE)
qui transmettra.

Biotechnology



Repligen Corporation, a rapidly growing biotechnology company involved in the development of a variety of innovative peptide and protein products by recombinant DNA and conventional biochemical techniques, seeks qualified candidates for the following positions:

Principal Investigators: Qualified individuals will have a Ph.D. or M.D. degree, with at least 5 years' post-doctoral experience in either protein chemistry or molecular biology. Successful candidates will possess an exceptional record of achievement and have proven program management skills.

Research Scientists: Qualified individuals will possess a Ph.D. degree, with post-doctoral experience in either protein chemistry or molecular biology. Successful candidates will have proven records of research achievement and the motivation which will allow them to take advantage of the growth opportunities available at Repligen.

Research Assistants: M.S./B.S. level positions with at least two years' laboratory experience in the areas of protein chemistry or molecular biology. For highly motivated candidates these positions offer the opportunity to expand his or her technical expertise into virtually all areas of research technology.

Repligen offers a competitive salary, excellent benefits, and equity participation. Submit cover letter, resume, and references to: Personnel Manager, Repligen Corporation, 101 Binney Street, Cambridge, MA 02142

RepliGen

Research Scientists

Triton Biosciences, Inc., a subsidiary of Shell Oil Company, is an emerging force in the development of cancer diagnostics and therapeutics. Our company is built upon a strong base of research expertise, solid support and responsive management. Excellent opportunities exist for innovative PhD scientists with 2-4 years of post doctoral work or industrial equivalent in the following areas:

Recombinant DNA

Requires extensive experience in genomic and cDNA library construction and the screening of such libraries with DNA probes. Knowledge of constructing eucaryotic/procaryotic expression vector systems with emphasis on the characterization of recombinant DNA gene products in such systems is essential.

Immunology

Direct experience in the isolation and characterization of cells of the immune system and characterization of immune system protein growth factors in addition to familiarity with cell fusion protocols, ELISA and RIA assays is required. Experience with recombinant DNA technology and commercial diagnostic applications is highly desirable.

Cell Biology

Significant experience in the growth and characterization of tissue culture cell lines, establishing in vivo bioassay systems and subcellular fractionation is required. Knowledge of immunofluorescent assay development, FACS and histology is desired.

Protein Purification and Characterization

Requires a strong research chemist with experience in protein/peptide purifications. Extensive experience with isolation techniques such as HPLC, column chromatography, and electrophoresis is essential. This position also offers opportunities for scientists with related background in biochemistry, enzymology, or sequence analysis.

Triton is located in the San Francisco Bay area, offers competitive salaries and company benefits including relocation assistance. For prompt consideration, please forward your C.V. with salary requirements and the names of three references to Employee Relations, Box 100S, 1151 Harbor Bay Parkway, Alameda, California 94501.



Triton Biosciences, Inc.

All candidates must have U.S. citizenship or permanent resident VISA status. An Equal Opportunity Employer

POSITIONS OPEN

POSTDOCTORAL POSITION available 1 July 1985 for electrophysiological studies in cornea and ciliary epithelium. Experience in transport physiology and microelectrode studies needed. Salary: \$16,000 to \$18,000 per year, depending on experience. Apply with curriculum vitae and names of three references to: **Dr. Keith Green, Department of Ophthalmology, Medical College of Georgia, Augusta, Georgia 30912. An Equal Opportunity/Affirmative Action Employer. J 2749.**

POSTDOCTORAL POSITION available to study rain splash dispersal of a fungal pathogen of strawberries. Conduct field and laboratory studies. A Ph.D. in plant pathology or related biology field with background in micrometeorology or applied physics is required. Salary is \$20,000 per year. Submit curriculum vitae, transcripts, and three letters of recommendation by 15 July to: **L. V. Madden, Department of Plant Pathology, Ohio State University, OARDC, Wooster, Ohio 44691.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available 1 May 1985 to study the control of gene expression of purine metabolism in *Escherichia coli* and other organisms. Recent Ph.D.'s who wish to receive training in molecular biology are encouraged to apply. Send curriculum vitae and names of references to: **Dr. John M. Smith, Department of Biochemistry, Louisiana State University School of Medicine, Shreveport, La. 71130; telephone: 318-674-5160. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL TRAINING (M.D. or Ph.D.) for 2 to 3 years in basic vision research. Preceptors: Bernard Becker, Joel Brown, Ronald Burde, Adolph Cohen, Nigel Daw, Robert Miller, Alan Pearlman. NIH supported stipends. July 1985. See any preceptor at ARVO. Details: **A. I. Cohen, Ophthalmology, Box 8096, Washington University Medical School, 660 South Euclid Avenue, St. Louis, Mo. 63110. An Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION available May 1985 for research on **microbial cellulose gene structure and expression**. Preference given to applicants with experience in microbiology, transposon mutagenesis, recombinant DNA technology. Well equipped new laboratory and excellent opportunity to interact with a versatile research team in a nationally recognized department. Please send résumé, brief summary of research experience, and list of three references to: **Dr. R. Malcolm Brown, Jr., Department of Botany, The University of Texas, Austin, Texas 78713-7640. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE position available to study broad area of platelet and vascular phospholipid and arachidonic acid metabolism in the Hemostasis Unit of Brigham and Women's Hospital and Harvard Medical School. Ph.D. and strong background in lipid biochemistry required. Flexible starting date. Initial appointment for 2 years, with possibility for faculty appointment. Résumé with three references to: **Andrew Schafer, M.D., Hematology Division, Brigham and Women's Hospital, 75 Francis Street, Boston, Mass. 02115. Equal Opportunity Employer.**

NATIONAL SCIENCE FOUNDATION (NSF)

NSF, Division of Astronomical Sciences, is seeking qualified applicants for the position of **PROGRAM DIRECTOR** for the Galactic Astronomy and the Solar Systems Astronomy Programs. The position will be filled on either a permanent, rotator, or temporary basis. The per annum salary for the permanent or temporary position will be at the GG-GH 15 level, \$52,262 to \$67,940. Normally, the rotator candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF's Circular Number 167, Rotator Program. The salary range for the rotator position is \$45,000 to \$70,000 (currently limited by statute to \$68,700). Applicants should have a Ph.D. in astronomy or astrophysics or equivalent experience. In addition, 6 to 8 years of successful scientific research experience beyond the Ph.D. and a record of productive research in observational or theoretical galactic and/or solar astronomy is required. The program director is responsible for the review, recommendation, and processing of proposals for grants in the above areas of astronomy research. For information on how to apply, telephone: **Catherine Handle, 202-357-7840**. Hearing impaired individuals should telephone: **202-357-7492**. For technical information, telephone: **Dr. Morris L. Aizenman, Head, Astronomy Research, 202-357-7643**. NSF is an Equal Opportunity Employer.

PROTEIN CHEMIST—A position is available at the level of research assistant professor for an individual skilled at protein sequencing work. The successful applicant will interact with a group of investigators who are working on protein toxins (for example, microbial toxins and snake venoms). The mission of the group is: (i) to determine structure-function relationships, (ii) to localize active and antigenic sites, and (iii) to synthesize atoxic polypeptides that mimic the antigenicity of native toxins. The new member of the group will be responsible for all aspects of protein chemistry, and will have primary access to an amino acid analyzer, a peptide sequencer, and a peptide synthesizer. The laboratory facilities, salary, and fringe benefits are highly competitive. Interested persons should submit a letter of inquiry that provides curriculum vitae, a bibliography, the names of three references, and a statement of salary expectations. These materials should be mailed to: **Dr. Lance L. Simpson, Professor of Medicine and Pharmacology, Jefferson Medical College, 1020 Locust Street, Philadelphia, Pa. 19107. An Equal Opportunity Employer.**

RESEARCH ASSISTANT(S)

Applications are invited for two research assistant positions. First position requires experience in protein purification, enzymology, and atomic absorption spectroscopy. Second position requires familiarity with radioenzymatic assay, muscle physiography, and care of small rodents. Master's degree in natural sciences preferred for each position. Forty-hour work week. Salary: \$16,000 to \$18,000 per annum. Send résumé with two references by 15 May 1985 to: **Dr. Munir A. Rahmani, Director, MBRS Program, Bethune-Cookman College, Daytona Beach, Fla. 32015; telephone: 904-255-1401, extension 284/314. An Equal Opportunity/Affirmative Action Employer.**

SCIENTISTS/CHEMISTS

PPG Industries, Chemicals Group, has positions available at its Barberton, Ohio Research Center due to new business expansions and continuing growth in existing businesses for those scientists/chemists who possess the appropriate educational background and proven leadership skills in the following research areas:

PLANT METABOLISM SCIENTIST

Opening for a PhD in Weed Science, Agronomy or Biochemistry with research experience in the conduct of pesticide metabolism studies in plants including uptake, translocation and mode of action studies. This individual will be part of an interdisciplinary research group responsible for conducting the plant metabolism studies required for E.P.A. registration of new agricultural chemicals. Research projects will also be carried out to investigate the interaction of herbicides with crops and plants. Applicant must have experience in the use of radiochemical analytical techniques and must possess excellent interpersonal and communication skills.

RESIDUE ANALYTICAL CHEMIST

Opening for an MS or PhD in Analytical Chemistry or Pesticide Chemistry with research experience (University or 1 to 4 years industrial) in pesticide residue analysis. This individual will be responsible for development and adaptation of procedures to analyze for residues of pesticides and metabolites in agricultural commodities and other samples required for pesticide registration. Must have strong background in HPLC and GC analysis with experience desirable with computer data systems, quality assurance methods and instrument maintenance and repair.

PESTICIDE ENVIRONMENTAL FATE SCIENTIST

MS or PhD in Organic, Analytical-Organic or Biochemistry to conduct studies needed to determine the environmental fate of pesticides including hydrolysis, soil metabolism, photolysis, leaching, absorption-desorption and volatility. Candidate must have experience in chromatographic methods (HPLC and TLC) and radiochemical analytical techniques. Strong background in physical organic chemistry is desirable.

For immediate consideration, please send your resume with salary requirements to:

John L. Putzier
Manager Professional Employment
and EEO Programs



PPG Industries
One PPG Place
Pittsburgh, PA 15272

An Equal Opportunity Employer M/F

International Conference: "Mechanisms of DNA Damage and Repair. Implications for Carcinogenesis and Risk Assessment."

June 2-7, 1985

National Bureau of Standards
Gaithersburg, MD 20899

Organizing Committee

Chairman: M.G. Simic
Co-Chairmen: L. Grossman, Johns Hopkins Univ.; A.D. Upton, New York Univ. Medical Center
and: D. Johnson, NBS; C. Reimann, NBS; S.A. Miller, FDA; D.G. Longfellow, NCI; J.M. Brown, Stanford U.; E. Clementi, IBM;
P.A. Cerutti, Swiss Cancer Inst.; G. Scholes, U. Newcastle

INTRODUCTION: S.A. Miller, FDA; D.P. Rall, NIEHS; R.A. Adamson, NCI

SECTION I: MECHANISMS OF DNA DAMAGE, G. Scholes

Session 1: Kinetics and Mechanisms of Free Radical Damage to DNA, D. Schulte-Frohlinde, J. Block, M.G. Simic, B.D. Michael
Session 2: DNA Binding Agents, J.W. Lown, J.B. LePecq, I.H. Goldberg, R.E. Dickerson, S. Neidle
Session 3: DNA Damage by Drugs and Chemicals, K.W. Kohn, D.B. Ludlum, G.N. Wogan, L. Hurley, P.A. Cerutti
Session 4: DNA Damage in Cells, J.F. Ward, J.T. Lett, R.E. Meyn, Jr., K.E. Erixon, P.E. Bryant
Poster Symposium: DNA and Protein Crosslinks

SECTION II: DNA REPAIR AND CONSEQUENCES, L. Grossman

Session 5: Repair of Bulky Adducts in DNA, L. Grossman, D. Mount, R. Grafstron, P. Modrich, E. Friedberg
Session 6: Repair of Alkylation and Oxidation Damage in DNA, T. Lindahl, L. Samson, L. Loeb, B. Weiss
Session 7: Correlations Between DNA Damage, Mutagenesis and Carcinogenesis, F. Hutchinson, M. Radman, M. Barbacid, M. Cole

SECTION III: RISK ASSESSMENT, A.D. Upton

Session 8: Measurement of Exposure to Genotoxic Compounds, S.R. Tannenbaum, F. Kadlubar, W. Thilly, H. Bartsch, J. Groopman
Session 9: Scientific Basis for Genotoxic Risk Assessment, P.N. Magee, R.L. Saul/B.N. Ames, R.M. Santella/F. Perera, P.C. Hanawalt, C.L. Denniston, R.H. Reitz/P.G. Watanabe
Session 10: Risk Assessment and Regulatory Decisions, B.D. Goldstein, J. Van Ryzin, R. Wilson, R.E. Albert
Session 11: Risk Assessment in Legal Decision Making for Food, W.G. Flamm

POSTER SESSION

INFORMATION

Mrs. Kathy C. Stang
National Bureau of Standards
A353 Physics Building
Gaithersburg, MD 20899
(301) 921-2255

or

Michael G. Simic
National Bureau of Standards
C216 Radiation Physics Bldg.
Gaithersburg, MD 20899
(301) 921-2201



RESEARCH and DEVELOPMENT POSITIONS

Difco Laboratories, a world leader in microbiology, is seeking quality scientists/inventors for their recently completed state-of-the-art Research and Development Center in Ann Arbor, Michigan. Acceptable candidates will make up product development teams engaged in internal and external (university and contract) development programs. Versatile, well-rounded individuals are sought with capabilities of product involvement from inception to the market place.

Positions in the following areas are available:

MICROBIAL PHYSIOLOGY/BIOCHEMISTRY Requires a thorough knowledge of microbial metabolism and biochemistry. Emphasis is on innovative detection of bacteria, bacterial components and bacterial products in body fluids.

VIROLOGY Molecular approaches will be used to develop antibody-oriented and nucleic acid probe assays for disease causing viruses. Emphasis will be on assay automation.

ANTIBIOTIC ASSAY DEVELOPMENT Objective is new and innovative ways to measure antibiotic sensitivity to disease causing bacteria. A good knowledge of antibiotic assays and chemistry is necessary.

PROBE TECHNOLOGY An individual is sought with current experience and knowledge (both successful and failed approaches) of nucleic acid probe technology for

disease causing organisms. Must be capable of organizing probe laboratory and working with outside groups.

HYBRIDOMA TECHNOLOGY Current experience in investigative and production scale hybridoma technology relating to disease causing organisms is required. Good knowledge and experience in polyclonal antibody production methods and immunochemistry is necessary.

BIOENGINEERING Versatile engineer with good fundamentals in chemical, mechanical, and electrical engineering is sought. Will work on internal projects relating to assay automation and monitor outside projects with engineering and manufacturing groups.

PLASTICS TECHNOLOGY Position for a person with current knowledge of injection and blow molding techniques to aid in device design and to monitor external projects requiring plastic components. Knowledge of coextrusion, film and barrier technology is necessary.

A curriculum vitae describing background, publications, notable accomplishments, and the names of three references should be submitted to:

Darlene Schafer
DIFCO LABORATORIES
Research and Development Center
1180 Ellsworth Rd.
Ann Arbor, Michigan 48104

Equal Employment Opportunity M / F

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE POSITION

A position is available immediately to work in a program of biochemical neuroanatomy (autoradiography, immunocytochemistry, and so forth) of the human brain in health and disease. Background required in CNS anatomy, receptor binding and/or neuropharmacology. Send complete curriculum vitae and three references to: **Dr. John Mann/Dr. Donald Reis, Payne Whitney Clinic, Cornell University Medical College, 1300 York Avenue, New York, N.Y. 10021.**

PROJECT ASSOCIATE/ASSISTANT SCIENTIST.

The Division of Plastic Surgery, Department of Surgery, University of Wisconsin Medical School, is recruiting a project associate/assistant scientist with prior small animal laboratory experience. Candidates should have a Ph.D. in immunology. Salary commensurate with experience. Apply to: **Venkat K. Rao, M.D., Assistant Professor, Division of Plastic Surgery, G5/352, Clinical Science Center, 600 Highland Avenue, Madison, Wis. 53792. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.**

The Cerebrovascular Research Center (CVRC) of the Department of Neurology, University of Pennsylvania School of Medicine, wishes to recruit a **RADIOCHEMIST** with experience in the synthesis of tracer molecules labeled with short-lived positron emitters. Preference will be given to individuals having a general background in synthetic organic chemistry with additional experience in radiotracer work. Academic rank, research assistant professor or research associate professor, will be commensurate with experience. For consideration, forward résumé or curriculum vitae plus a list of at least three references to: **Martin Reivich, M.D., Director, Cerebrovascular Research Center, University of Pennsylvania School of Medicine, Room 429, Johnson Pavilion/G2, 36th and Hamilton Walk, Philadelphia, Pa. 19104. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE OR POSTDOCTORAL FELLOW—Epithelial physiology; cellular regulation of tight junction formation. Experience in freeze fracture, electrophysiology, tissue culture, and protein (membrane) chemistry desired. Master's degree minimum. Address inquiries and curriculum vitae to: **Section Head, Renal Medicine, East Carolina University, School of Medicine, Greenville, N.C. 27834, by 19 May 1985. Equal Opportunity Employer through Affirmative Action.**

RESEARCH SCIENTIST POSITION. Senior postdoctoral fellow to join molecular virology research program. Current studies concern development of genetic methods to study regulation of immunity and assembly of enveloped phages. DNA cloning and sequencing, and virus isolation and characterization experience required. Knowledge of mycoplasma culture techniques highly desirable. Send curriculum vitae, and names and addresses of three references (before 24 May 1985) to: **Dr. Jack Maniloff, Department of Microbiology, University of Rochester, Medical Center, Rochester, N.Y. 14642. An Equal Opportunity/Affirmative Action Employer.**

UNIVERSITY OF MINNESOTA

Senior Scientist—Fisheries
Job Requisition Number 2934

The Natural Resources Research Institute, University of Minnesota, Duluth, is seeking a **SENIOR SCIENTIST** to conduct research on **FISHERIES** in northern Minnesota. Area of expertise may be in physiology, genetics, aquaculture, ecology, or population dynamics. Postdoctoral experience preferred. Minimum qualifications: Ph.D. in fisheries or a related science. Salary: \$2,375 to \$3,680 per month; position available 15 June 1985. To receive a standard University application form, write to the address below. Send completed application form along with a letter of application, résumé, and the names and addresses of three references, postmarked by 17 May 1985, to:

Dr. Robert J. Naiman
c/o Employment Information Office
281 Darland Administration Building
University of Minnesota, Duluth
Duluth, Minn. 55812

The University of Minnesota is an Equal Opportunity Employer and Educator.

POSITIONS OPEN

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW

New position available immediately to study cellular and molecular biology of malignant transformation of human cells in culture. Studies consider intermediate stages in transformation and selection processes in promotion. This position requires a Ph.D. or equivalent degree in experimental pathology, molecular biology, biochemistry, or a related biomedical discipline. Candidates preferred with experience or interest in techniques used in these studies including transfection, gene cloning and hybridization, cytofluorography, cell sorting, tissue culture, and cell transformation in vitro. Send curriculum vitae, a brief description of skills and interests, and three letters of reference to: **Dr. David G. Kaufman, Department of Pathology, University of North Carolina, Chapel Hill, N.C. 27514. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW

New position available immediately to study activation of chemical carcinogens and mutagenesis in human cells in culture. Studies focus on novel approaches to develop cells with broad metabolic activity and capacity for quantitative site-specific mutagenesis assessment. This position requires a Ph.D. or equivalent degree in experimental pathology, molecular biology, biochemistry or a related biomedical discipline. Candidates preferred with experience or interest in techniques used in these studies including cell culture, cell hybridization, mutagenesis, HPLC, cytofluorography, and cell sorting. Send curriculum vitae, a brief description of skills and interests, and three letters of reference to: **Dr. David G. Kaufman, Department of Pathology, University of North Carolina, Chapel Hill, N.C. 27514. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE

Our University-affiliated hospital seeks a **research associate** to join our expanding Division of Gastroenterology, 1 July. The successful candidate will have the Ph.D. in physiology or pharmacology, preferably with 2 years of postdoctoral research experience in studying motility of the G.I. tract using in vitro and in vivo techniques. The focus of research is to elucidate the mechanism of control of colonic myoelectric activity and contractility in various disease states.

We are Nassau Hospital, a 533-bed, voluntary Long Island teaching hospital. We offer a professional work environment, a salary commensurate with experience, and a competitive benefits package. Interested candidates should submit curriculum vitae and two letters of reference together with salary requirements to:

Human Resources Department
Nassau Hospital
259 First Street
Mineola, Long Island, New York 11501
Equal Opportunity Employer, M/F/H

RESEARCH ASSOCIATE. Position available for 3 years to study protein structure and protein hydration in crystals by means of x-ray diffraction, energy minimization, and electrostatic potential calculations. Qualifications: Ph.D. with at least 3 years of research experience in x-ray crystallography; experience in energy minimization methods and neutron diffraction techniques desirable. Salary: \$18,000 to \$20,000 per annum. Apply to: **Professor Martin Sax, Department of Crystallography, University of Pittsburgh, Pittsburgh, Pa. 15260. An Equal Opportunity/Affirmative Action Employer.**

Ph.D. RESEARCH ASSOCIATE/ASSISTANT PROFESSOR position available to carry out connective tissue biochemistry of corneal diseases at the permanently endowed Ophthalmology Research Laboratories of the Cedars-Sinai Medical Center, a UCLA-affiliated hospital. Knowledge of extracellular matrix protein and/or proteoglycan biochemistry, tissue culture experience, supervisory capabilities, and writing skills are necessary. Salary range and benefits are competitive. Starting date after 1 July 1985. Send curriculum vitae to:

Christina Kennedy, Ph.D.
Ophthalmology Research Laboratories
Cedars-Sinai Medical Center
Halper Building, Room 116
8700 Beverly Boulevard
Los Angeles, Calif. 90048

POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR/RESEARCH ASSOCIATE

Available 1 September 1985 for research involving the mitochondrial respiratory chain. Projects include both the bioenergetics and biogenesis of the cytochrome *b-c₁* complex in active laboratory relocating to West Virginia School of Medicine in the fall. Experience with cell fractionation, purification of membrane proteins, and recombinant DNA techniques desirable. Salary depending on experience. Send curriculum vitae and names of three references to: **Dr. Diana S. Beattie, Department of Biochemistry, Mount Sinai School of Medicine, Fifth Avenue and 100th Street, New York, N.Y. 10029.**

West Virginia University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSISTANT PROFESSOR

Opening for research assistant professor to provide instruction to medical students and house officers in microbiology and microbial toxicology, and conduct laboratory research and instruction in microbial toxicology involving the development of pharmacologic and immunotherapeutic reagents against diarrheal diseases through laboratory animal modeling, including animal surgery and development in connection with experiments. Qualified applicants must have D.V.M. or equivalent degree and Ph.D. in veterinary microbiology, with demonstrated research background in microbial toxicology. Position is faculty appointment in Department of Internal Medicine, Infectious Diseases Division of University School of Medicine situated in St. Louis, Missouri. Starting salary: \$28,500 per year, plus university faculty benefit plan for 40-hour week. Send résumé, including details of research background, to:

Richard N. Greenberg, M.D.
Assistant Professor of Internal Medicine
St. Louis University Medical Center
1402 South Grand Avenue
St. Louis, Missouri 63104
An Equal Opportunity Employer

RESEARCH ASSOCIATE to perform experiments involving molecular cloning of eukaryotic genes. Know modern techniques in molecular genetics, including construction of recombinant DNA into other cells, analysis of the expression of foreign genes in cell cultures, and know the techniques involving in vitro modification of recombinant DNA molecules and analysis of the effects of such modification in the expression of the genes. Ph.D. degree in zoology required, with 2 years of postdoctoral training and 2 years of experience. Individual must know how to write good scientific papers, having a good publication record in the field as specified; 40 hours per week; \$18,000 annual salary. Contact: **Texas Employment Commission, Houston, Texas, or send résumé to: Texas Employment Commission, Houston, Texas, or send résumé to: Texas Employment Commission, Alien Labor Certification Unit, Austin, Texas 78778, Job Order Number 3941802. Ad paid for by an Equal Opportunity Employer.**

RESEARCH ASSOCIATE, POSTDOCTORAL—Chemist to conduct research in the area of redox polymer films on electrodes. To extensively use modern electrochemical techniques such as chronocoulometric, pulse voltammetric, rotating disk voltammetric, and spectroelectrochemical methods. Ph.D. in electrochemistry required. Must be knowledgeable in polymer and inorganic syntheses, modifications of polymers and polyelectrolytes with redox complexes, and physical properties of polymers. Must be proficient in redox reaction kinetics in redox polymer films. Salary: \$1270 per month. Apply at: **Texas Employment Commission, Austin, Texas, or send résumé to: Texas Employment Commission, TEC Building, Austin, Texas, 78778; Job Order Number 4273211. Ad paid by an Equal Opportunity Employer.**

University of Utah School of Medicine faculty position as **RESEARCH INSTRUCTOR OR ASSISTANT PROFESSOR**. Requires a Ph.D. or M.D. degree with master's in public health. Will be expected to supervise large case-control study (in progress), testing the relationship between diet and cancer. Involved in other epidemiologic research projects, including teaching, within the department. Submit curriculum vitae and two letters of reference to: **Dr. Joseph L. Lyon, Department of Family and Community Medicine, 50 North Medical Drive, Salt Lake City, Utah 84132, before 1 June 1985. Equal Opportunity Employer.**

MICROBIOLOGY RESEARCH

Wyeth Laboratories, a leading multinational pharmaceutical and nutritional products division of a Fortune 100 corporation, has a dynamic, rapidly expanding microbiology research program and requires several immediate additions to its staff. The positions listed below are based at Wyeth headquarters located on a 20-acre business campus in Radnor, PA, an attractive, convenient suburban community on Philadelphia's prestigious Main Line.

Immunologist/Virologist

Requires a scientist with a minimum of two years post-doctoral experience in cellular immunology and/or viral pathogenicity. Knowledge of recombinant DNA methodology and monoclonal antibody production highly desirable. Individual will develop animal models for investigation of the cellular and humoral immune responses to live, attenuated, recombinant viral vaccines or viral subunit vaccines. (Position -WD5005)

Postdoctoral Fellow

Scientist will develop vaccines and other biologicals using recombinant DNA methods. Knowledge of immunology, virology, and animal models of viral infection is essential. (Position -WD5019)

Candidates should respond immediately by forwarding a resume or CV and enclosing a list of references, salary history, salary requirement, and other pertinent information. Indicate position applied for by code number. Inquiries will be held in strict confidence. Reply to:

Wyeth Manager of Recruitment,
Wyeth Laboratories, Inc.
P.O. Box 8299, Philadelphia, PA 19101
Equal Opportunity Employer;
M/F/H/V responses encouraged



SCIENTIST

A position is currently available in our Cambridge facility for a scientist with expertise and skills in the specialty area of
IMMUNOLOGY

You will be part of a staff responsible for immunoassay development, antibody production and hybridoma work within the research and development group. In addition, you will contribute to immunological research (functional studies, animal models) on our Cambridge projects.

The successful candidate will possess a Ph.D. with postdoctoral experience in immunology. Skills in the areas of general immunochemistry, assay development and hybridoma production are required.

Biogen is an international biotechnology company engaged in the development of commercial products through the use of advanced biological science, particularly recombinant DNA and advanced mutational techniques. We offer a challenging scientific career with the opportunity to interact with talented colleagues in a stimulating environment.

Biogen offers an excellent compensation and benefits package.

Please forward your C.V. and the names of three references to: Ms. Nanci Pye, Manager of Human Resources, Dept. S-14, Biogen, 14 Cambridge Center, Cambridge, MA 02142. An equal opportunity employer.

BIOGEN

ASSOCIATE DIRECTOR

The Upjohn Company, recognized as a worldwide leader in pharmaceutical research, is seeking applicants for the position of Cardiac Associate Director in the Cardiovascular Diseases Research Unit within the Pharmaceutical Research and Development Division.

The successful candidate will lead an interdisciplinary team of scientists dedicated to the design and evaluation of novel therapeutic agents useful in treating the pathologic disorders that accompany ischemic cardiac disease. An initial responsibility will be to recruit additional doctoral scientific personnel to complement an established program in cardiac cellular electrophysiology, ion currents, and arrhythmogenesis. The Associate Director will interact with various members of the research community including senior management in the development of strategies for cardiac drug development and associated research activities. The successful candidate will have the opportunity to maintain a

personal research laboratory. Collaborative research with academic institutions or other appropriate sources will be encouraged.

In addition to a Ph.D. or the equivalent in the biological sciences, applicants must possess an outstanding publication record, have demonstrated research management potential and be well recognized as a contributor in this research field. Good leadership and communication skills, and the ability to relate to people at various organizational levels is essential.

Upjohn offers a stimulating research environment, opportunity for career growth, competitive salary and benefits, and relocation assistance. **For confidential consideration, please call outside Michigan toll-free 1-800-253-8600, Ext. 3-6767, or inside Michigan collect (616) 323-6767 to request an employment application be sent to you immediately.** Please refer to Ad Number 1375-J when calling.

Upjohn

A century of caring

An Equal Employment Opportunity Employer M/F

POSITIONS OPEN

RESEARCH PERSONNEL. Limited number of research assistant and associate positions are available from time to time in the Department of Biology to work on research projects in the areas of population biology; ecology; neurobiology; behavior; genetics; biochemistry; cell, development, and molecular biology. For information, or to submit résumé, please contact: **M. Guimond, Department of Biology, Princeton University, Princeton, New Jersey 08544.** *Princeton University is an Equal Opportunity/Affirmative Action Employer.*

SCIENTIST Analytical Chemistry

Genentech, Inc., a leader in the field of biotechnology, has an opening in the medicinal analytical chemistry group to work on the characterization of rDNA produced polypeptides. You will design and implement research on protein stability with special emphasis on chemical changes induced by oxidation or aging of proteins and the effect of these changes on biological activities. The successful candidate will have a relevant Ph.D. and at least 2 years of postdoctoral training (or industrial experience) in the areas of protein chemistry and chemical modification. Experience in enzymology would be desirable.

Genentech offers a competitive compensation and benefits package combined with the opportunity to make a significant contribution to our organization. For consideration, please send résumé to: **Human Resources, Department 1128, Genentech, Inc., 460 Point San Bruno Boulevard, South San Francisco, Calif. 94080.** *An Equal Opportunity Employer.*

SENIOR RESEARCH ASSOCIATE—Responsible for directing the daily operation of the Molecular Biology Core Laboratory with respect to DNA isolation, sizing, production of gene probes, gene analysis by Southern blotting, measurement of tissue in RNA, gene cloning and sequencing. Duties include supervision of apolipoprotein isoelectric focusing analysis and supervision of apolipoprotein immunoassays and establishing new immunoassays. Requirements include M.D. or Ph.D. in biochemistry or related field, and 2 years of experience in apolipoprotein isolation by ultracentrifugation and column chromatography; apolipoprotein analysis by isoelectric focusing; enzyme-linked immunoassay; preparation of gene probes; DNA isolation; Southern, Western, and Northern blotting; and gene cloning and sequencing. In-depth understanding of human lipoprotein metabolism and physiology. Salary: \$27,000 per year, 40 hours per week. Respond with résumé only to: **Job Order Number 5446, Division of Employment Security, Government Center, Boston, Mass. 02114.** *We are an Affirmative Action/Equal Opportunity Employer.*

The Environmental Program of the Indianapolis Center for Advanced Research (ICFAR), a nonprofit, nonadvocate program, is seeking a **SENIOR SCIENTIST** to assist in research, consultation, and training related to chemical risk in public policy. The successful candidate will have a Ph.D. in chemistry or natural science and 10 years of experience. Critical skills are the ability: (i) to analyze policy of a technical nature, and (ii) to communicate effectively. Send curriculum vitae to: **Dr. William Beranek, Jr., ICFAR, 611 North Capitol, Indianapolis, Ind. 46204.**

NJIT

Theoretical Chemist/ Biochemist (post-doctoral)

NJIT seeks person to perform molecular modeling studies of muscarinic acetylcholine receptor agonists/antagonists, and do receptor mapping. Available equipment includes Evans and Sutherland PS 330 color terminal, AED 767 color terminals, VAX 11/780 minicomputer and IBM 3033. Qualifications: Doctorate in chemistry or biochemistry, and experience in calculational methods or computer modeling. Position available immediately. AA/EO employer.

Send resume:

**Personnel Box TCP
NEW JERSEY INSTITUTE OF TECHNOLOGY
Newark, N.J. 07102**

POSITIONS OPEN

SENIOR SCIENTIST POSITION (biochemical pharmacology) in the New York State Psychiatric Institute, affiliated with the Department of Psychiatry, Columbia University. Applicant must have a Ph.D., extensive experience in biochemical assay procedure development, especially GC/MC techniques, and a demonstrated ability to generate funding for his/her research.

Applicant will be directly responsible for GC/MS (HP 5985-EI, CI, NCI) work in the Analytical Psychopharmacology Division of the department. Salary is competitive, \$40,000 to \$50,000 per year, commensurate with experience, and is hard money. Liberal benefits available.

A particularly stimulating academic environment for suitable candidate. Send curriculum vitae or inquiries to: **J. Borgovini, Director—Personnel, New York State Psychiatric Institute, 722 West 168 Street, New York, N.Y. 10032.** *Affirmative Action/Equal Employment Opportunity.*

PROGRAM

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain a Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Ph.D.—O.D. Program Director, Admissions Office, Room 19, The New England College of Optometry, 424 Beacon Street, Boston, Mass. 02115.**

COURSES

ELECTRON MICROSCOPY (TEM/SEM): Biological Applications. Designed for professional and laboratory personnel who desire practical hands-on training in basic techniques of TEM and SEM. Graduate credit and/or certificate awarded. Tuition: \$800. Date: 8 to 26 July 1985. For further information and registration form, contact: **Dr. Dan Scheirer, Department of Biology, Northeastern University, Boston, Mass. 02115; telephone: 617-437-2260.**

REQUEST FOR PROPOSALS

REQUEST FOR PROPOSALS

SARRMC, the Southern Appalachian Research-Resource Management Cooperative, in cooperation with the U.S. Department of Agriculture Forest Service Southeast and Northeast Forest Experiment Stations and the Environmental Protection Agency, is seeking proposals for research to determine the role of atmospheric deposition in forest decline. Specifically, research should be of an experimental nature, focusing on red spruce-Fraser/Balsam fir ecosystems. For submission details, send a self-addressed Manila envelope to: **Dr. Ann Bartuska, SARRMC Spruce-Fir Technical Coordinator, North Carolina State University Acid Deposition Program, 1509 Varsity Drive, Raleigh, N.C. 27606.** Deadline for requesting information is 10 May 1985.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS FOR RESEARCH TRAINING IN HYPERTENSION

Fellowships are available for postdoctoral training in hypertension to individuals with the M.D. or Ph.D. degree. This multidisciplinary training program provides opportunities for research in pharmacological, physiological, and biochemical approaches to cardiovascular, renal, neural, and endocrine mechanisms in hypertension.

This position is funded by a training grant from the National Institutes of Health. Applicants must, therefore, be citizens or permanent residents of the United States.

For further information contact:

**Dr. Leonard Share
University of Tennessee Center
for the Health Sciences
894 Union Avenue
Memphis, Tennessee 38163**

An Equal Opportunity/Affirmative Action Employer

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP—An innovative project area with a research group dealing with isolation and characterization of unique human secretory proteins having a variety of important biological functions, among which are included protein-lipid interactions. Candidates should have appropriate biochemistry, cell biology, and applied immunology experience at the Ph.D. level. Submit résumé and names of three references to: **G. I. Research Unit, Cleveland Clinic Foundation, 950 Euclid Avenue, Cleveland, Ohio 44106.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIPS AVAILABLE

Postdoctoral fellowships funded by NIMH with interdisciplinary training in psychiatry and neuroscience at The Johns Hopkins University School of Medicine. Research with individual faculty sponsors include: behavioral effects of drugs of abuse using a human programmed environment; mechanisms underlying lateralized behavioral response to brain injury in rats; physiological and peptidergic mechanisms in feeding. Please submit curriculum vitae to: **Robert G. Robinson, M.D., Johns Hopkins Hospital, Meyer 4-119, Baltimore, Md. 21205.**

POSTDOCTORAL RESEARCH FELLOWSHIPS

Three positions available 1 August 1985. Opportunity for qualified Ph.D. or M.D. to conduct full-time research in an innovative laboratory. Preference to candidates with research interests in physiology and chemistry of oxygen transport, fluoro-organic chemistry and artificial blood, or electroenzymatic sensors. U.S. or Canadian or permanent U.S. residents only. Ability to speak and write excellent English and to prepare grant applications. Fellows will be appointed for 1-year term starting 1 August 1985. Stipend of \$19,000 to \$23,000. Award may be renewed for up to 3 years. Application deadline: 15 May 1985. Send curriculum vitae and names and addresses of three references to:

**Dr. Leland C. Clark, Jr.
Children's Hospital Research Foundation
Eland and Bethesda Avenues
Cincinnati, Ohio 45229**

An Equal Opportunity/Affirmative Action position; women and minorities encouraged.

IMMUNODIAGNOSTICS

Becton Dickinson Postdoctoral Fellowship

Postdoctoral position available immediately to study, evaluate, and participate in the development of novel bio-analytical and diagnostic technologies. Recent Ph.D. in organic chemistry with good biochemical techniques, or recent Ph.D. in biochemistry with good knowledge in organic synthesis will be considered. Salary: \$23,000 per year and a relocation allowance. This assignment will be at the Becton Dickinson and Company Research Center in North Carolina's renowned Research Triangle Park. Send curriculum vitae, a description of your research interests, and the names of three references to: **Dr. Daniel B. Wagner, Becton Dickinson and Company Research Center, P.O. Box 12016, Research Triangle Park, North Carolina 27709.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOWSHIP in molecular parasitology available 1 May 1985, to study mitochondrial biogenesis in trypanosomes. Experience in recombinant DNA techniques desirable. Send curriculum vitae, three letters of reference, and short statement of research interests to: **Dr. Larry Simpson, Department of Biology and Molecular Biology Institute, University of California, Los Angeles, Calif. 90024.** *Equal Opportunity Employer.*

MARKETPLACE

FREE **Catalog**
of Computer
Science Books
write or call

THE MIT PRESS
28 Carleton Street, Cambridge, MA 02142
(617) 253-2884

Circle No. 138 on Readers' Service Card

Manufacturing/ Operations Manager

Clinical Diagnostics

Your experience and creativity are vital to this key position at Bio-Rad Laboratories, an internationally recognized leader in clinical diagnostics, separations chemistry and analytical instrumentation.

You will assume the responsibility for the manufacturing of all Clinical Products on a worldwide basis. We are seeking a professional manager with experience in our industry.

Please send your resume, including salary history, to the Director of Human Resources, Bio-Rad Laboratories, 2200 Wright Ave., Dept. S, Richmond, CA 94804. An equal opportunity employer.

BIO-RAD Bio-Rad Laboratories

POSTDOCTORAL POSITION IN BIOLOGICAL NMR

A position is available immediately for an NMR spectroscopist in a group of biochemists and spectroscopists interested in metabolic studies using sophisticated NMR techniques. A specific problem under consideration is the use of NMR to determine intracellular concentrations of metal ions in genetically modified cells. A person is sought with a strong background in NMR spectroscopy having a demonstrated interest in biological problems. The Stable Isotopes and Structural Chemistry Group (INC-4) has a strong program in metabolic studies using ^{13}C and ^{15}N labeled substances in conjunction with sophisticated NMR facilities. Collaborative arrangements for clinically related studies are available through the Center for Non-Invasive Diagnosis at the University of New Mexico Medical School in Albuquerque. INC-4 also maintains active, multi-disciplinary programs in physical, inorganic and bioinorganic chemistry. The successful candidate will thus have the opportunity to interact with researchers in a variety of disciplines. United States citizenship preferred. Starting salary range is \$27,900 to \$29,376. Interested candidates should send a copy of their resume to: Dr. James A. Fee, Division of Isotope and Nuclear Chemistry, INC-4 (MS C345), Los Alamos National Laboratory, Los Alamos, New Mexico 87545, or call Dr. Fee at (505) 667-5324.

To formally apply, please send your resume, bibliography, three letters of reference and graduate and undergraduate transcripts to:

Sandra E. Harding,
Personnel Administration Division,
DIV 85-BZ
Los Alamos National
Laboratory
Los Alamos, New Mexico
87545

University of California



An Affirmative Action/Equal Opportunity Employer

PH.D.s VIROLOGISTS-MOLECULAR BIOLOGISTS-BIOCHEMISTS

At the Merck Sharp & Dohme Research Laboratories, Doctoral Staff positions and Post-Doctoral positions are available as outlined below. Successful candidates will work in a group research effort, yet be required to perform independent research. For the Doctoral Staff positions, Post-Doctoral experience is highly preferred.

VIROLOGISTS-MOLECULAR BIOLOGISTS

Selected candidates will be working with several exciting basic research programs involving animal viruses. A substantial background in recombinant DNA technology and experience in molecular virology or protein biochemistry is required. If interested, please apply to Ad #1.

YEAST MOLECULAR BIOLOGISTS

Selected candidates will be involved in basic research studies with oncogenes and receptors in yeast. A substantial background in yeast molecular biology is required. If interested, please apply to Ad #2.

Merck Sharp & Dohme Research Laboratories is a renowned leader in pharmaceutical research. Our laboratories are located in an attractive, suburban location northwest of Philadelphia. We offer excellent salary and benefit programs as well as a fine research environment in which to work.

Interested candidates please send Curriculum Vitae indicating Ad #1 or Ad #2 to: **Jacques P. Kueny**,

MERCK SHARP & DOHME RESEARCH LABORATORIES

West Point, PA 19486

EEO/AA/VH/Employer



MERCK & CO., INC.

Reichert

Our "new" company name is well known in research labs throughout the world.

You have known our products by the names "American Optical" or "AO Scientific Instruments." Now we call ourselves "Reichert," the name that was long associated with our most sophisticated research microscopes.

Today we put our Reichert name on all our products... as a pledge of our commitment to maintain the level of excellence that you have come to expect.

This POLYVAR widefield photomicroscope, for example, offers ■ Extremely high optical quality ■ Consistent widefield image in both tube and camera ■ Robust mechanical design, and a ■ Fully universal photographic system.

These assets combine to put the Reichert POLYVAR in the highest category for quality.

In microscopes, microtomes, fiber optics, ophthalmic instruments, histopathology products, and analytical instruments, look to us for Reichert quality!

We've Changed
Our Name From
AO to Reichert

Reichert[®]

Reichert Scientific Instruments

Warner-Lambert Technologies, Inc.
Box 123, Buffalo, N.Y. 14240-0123

Circle No. 227 on Readers' Service Card