whelmingly American or based at the Smithsonian—one notable exception being S. Ia. Serov, who provides an engrossing survey of Siberian supernaturalism.

The emphasis in most of these essays is unrelentingly comparative: North Pacific Rim maritime economies and technology (J.-L. Rousselot, Fitzhugh and Crowell); inland herding, hunting, trapping, and fishing (J. W. VanStone); a typology of economies in Siberia and Alaska (I. I. Krupnik, Fitzhugh); dwelling types throughout the area (Crowell). Each essay provides considerable cross-cultural ethnographic detail. If there are similarities between regions, an essay on trade-and war-by E. S. Burch, Ir., makes clear why: the existence of annual international, indeed intercontinental, trade fairs, which were fueled by European trade goods from the west and east and became magnets for cultural exchange.

Complementing these essays on technology, economy, dwellings, and trade are others that more directly relate to the cultural interpretation of artifacts: a fine essay on the style, function, and meaning of clothing (V. Chaussonnet), which was a major medium of expression throughout the region-(many of the visually most exciting pieces in the exhibit are clothing); the aforementioned discussion of Siberian shamanism, cosmology, and death; a consideration of Yupik spiritual life, meaningfully informed by contemporary ethnography, wholly relevant to the interpretation of Yupik art (A. Fienup-Riordan); an exploration of potlatch ceremonialism (F. de Laguna); and an essay on the structural and formal features of Tlingit and Pacific Eskimo material culture (B. Holm). These essays are strong. They tend to limit-de Laguna's and Fienup-Riordan's especially-the contextualization of material culture to a single "nation" or to a group of related people, or, as in Holm's, to compare rigorously within a limited set of contiguous but unlike ethnic groups (for example, Tlingit, Chugach).

Elsewhere, the thrust is to compare broadly and deeply. Nowhere is this more evident than in Fitzhugh's "Comparative art of the North Pacific Rim." Fitzhugh's comments here are presaged in his and Arutiunov's earlier essay, "Prehistory of Siberia and the Bering Sea," in which iconographic connections between Scytho-Siberian, Shang, Eastern Chou, Old Bering Sea, and Northwest Coast are postulated. Fitzhugh also explores some connections between expressive culture and strategies of adaptation, postulating different art styles and themes for pastoralists and hunter-fishers. The second hypothesis will probably be more openly regarded as productive than the search for deep structures-the distance between 14thcentury B.C. Shang and A.D. 19th-century Northwest Coast is great and complicated by numerous specific historical circumstances—but even Fitzhugh considers his analysis "preliminary" (p. 294).

I cannot close this review without mentioning the design of the catalogue: with its striking photographs of over 450 artifacts, almost all in color, placed so that they overlap other images, and in the juxtaposition of text, artifacts, maps, and drawings, the design is a stunning success—the few errors do not bear mention—and should set the standard for ethnographic catalogues for some time to come.

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Books Reviewed in *Science* 20 May 1988 through 12 May 1989

Academic Scientists and the Pharmaceutical Industry; J. P. Swann, 12 Aug. 1988, 852

- The Acid Rain Controversy, J. L. Regens and R. W. Rycroft, 14 April 1989, 234
- Adolescent Mothers in Later Life, F. F. Furstenberg, Jr. et al., 20 May 1988, 1060
- Advances in Lectin Research, vol. 1, H. Franz et al., Eds., 28 Oct. 1988, 604
- Africanized Honey Bees and Bee Mites, G. R. Needham et al., Eds., 24 March 1989, 1618
- The Age of Lamarck, P. Corsi, 13 Jan. 1989, 243 The AIDS Bureaucracy, S. Panem, 20 May 1988, 1055
- Aldo Leopold, C. Meine, 2 Sept. 1988, 1237
- Algae as Experimental Systems, A. W. Coleman et al., Eds., 5 May 1989, 592
- Alvarez, L. W. Alvarez, 20 May 1988, 1065
- America the Vulnerable, J. D. Douglass, Jr., and N. C. Livingstone, 27 Jan. 1989, 552
- The American Census, M. J. Anderson, 21 Oct. 1988, 448
- The American Development of Biology, R. Rainger et
- al., Eds., 2 Dec. 1988, 1314 American Medical Schools and the Practice of Medicine,
- W. G. Rothstein, 20 May 1988, 1054 Ancient Chalcatzingo, D. C. Grove, Ed., 1 July
- 1988, 103
- Anti-Idiotypes, Receptors, and Molecular Mimicry, D. S. Linthicum and N. R. Farid, Eds., 12 Aug. 1988, 852
- Appraising the Ring, L. M. Lederman and C. Quigg, compilers, 16 Dec. 1988, 1586
- The Art of Geology, E. M. Moores and F. M. Wahl, Eds., 10 Feb. 1989, 826
- Artifacts in Biological Electron Microscopy, R. F. E. Crang and K. L. Klomparens, Eds., 14 Oct. 1988, 309
- The Atlantic Continental Margin: U.S., R. E. Sheridan and J. A. Grow, 23 September 1988, 1693 Australian Science in the Making, R. W. Home, Ed.,
- 7 Oct. 1988, 118 Axis and Circumference, S. A. Wainwright, 1 July
- 1988, 105 The Bacteriophages, R. Calendar, Ed., 2 Dec. 1988,
- 1317 Beamtimes and Lifetimes, S. Traweek, 24 Feb. 1989, 1085
- The Behavior of the Earth, C. Allègre, 9 Dec. 1988, 1451
- Between Quantum and Cosmos, W. H. Zurek et al., Eds., 28 Oct. 1988, 603
- Beyond Monopoly, T. C. Halliday, 20 May 1988, 1055
- A Bicentenary History of the Linnean Society of London, A. T. Gage and W. T. Stearn, 9 Sept. 1988, 1369

Biodiversity, E. O. Wilson, Ed., F. M. Peter, Assoc. Ed., 27 Jan. 1898, 553

- The Bioinorganic Chemistry of Nickel, J. R. Lancaster, Jr., Ed., 5 May 1989, 591
- Biology and the Mechanics of the Wave-Swept Environment, M. W. Denny, 10 Mar. 1989, 1374
- Biotechnology and Materials Science, M. L. Good et al., Eds., 6 Jan. 1989, 102
- Campus Life, H. L. Horowitz, 17 June 1988, 1677
- Caring by the Hour, K. B. Sacks, 8 July 1988, 232
- Caring for the Disabled Elderly, A. M. Rivlin et al., 31 March 1989, 1738
- Cauldrons in the Cosmos, C. E. Rolfs and W. S. Rodney, 2 Sept. 1988, 1238
- Charles Darwin's Notebooks, 1836–1844, P. H. Barrett et al., Eds., 15 July 1988, 363
- Charles Richard Drew, C. E. Wynes, 2 Dec. 1988, 1315
- Chemistry of Nucleosides and Nucleotides, vol. 1, L. B. Townsend, Ed., 28 Oct. 1988, 604
- Chemistry of the Natural Atmosphere, P. Warneck,-7 Oct. 1988, 121
- The Child's Construction of Economics, A. E. Berti and A. S. Bombi, 21 Oct. 1988, 450
- China Builds the Bomb, J. W. Lewis and X. Litai, 23 September 1988, 1691
- Chromatin, K. E. van Holde, 3 March 1989, 1220 Classical Probability in the Enlightenment, L. Daston, 13 Jan. 1989, 242
- Clouds of Secrecy, L. A. Cole, 27 Jan. 1989, 552 The Cold Light of Dawn, R. A. Jarrell, 16 Dec.
- 1988, 1583 Cold War on Campus, L. S. Lewis, 19 Aug. 1988,
- 289 289
- The Community Ecology of Sea Otters, G. R. Van Blaricom and J. A. Estes, Eds., 17 Feb. 1989, 954
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- Concepts of Ecosystem Ecology, L. R. Pomeroy and J. J. Alberts, Eds., 10 Feb. 1989, 825
- Connections and Symbols, S. Pinker and J. Mehler, Eds., 2 Dec. 1988, 1316
- Contaminated Communities, M. R. Edelstein, 28 April 1989, 478
- Continental Flood Basalts, J. D. Macdougall, Ed., 12 May 1989, 721
- Continental Shelves, H. Postma and J. J. Zijlstra, Eds., 10 Feb. 1989, 824
- Coping with Uncertainty in Food Supply, I. de Garine and G. A. Harrison, Eds., 17 Feb. 1989, 953
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- Cult Archaeology and Creationism, F. B. Harrold and R. A. Eve, Eds., 20 May 1988, 1048
- Cultural Models in Language and Thought, D. Holland and N. Quinn, Eds., 20 May 1988, 1080 Darwin's Forgotten Defenders, D. N. Livingstone,
- 20 May 1988, 1049 Desert Sediments, L. E. Frostick and I. Reid, Eds.,
- 8 July 1988, 233 Developmental Toxicology, J. A. McLachlan et al., Eds., 1 July 1988, 104
- Diagenesis of Sedimentary Sequences, J. D. Marshall,
- Ed., 2 Dec. 1988, 1317 The Diffusion of Medical Innovation, M. L. Fennell and R. B. Warnecke, 31 March 1989, 1740
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- Dynamical Evolution of Globular Clusters, L. Spitzer, Jr., 23 Sept. 1988, 1693
- Dynamics of Proteins and Nucleic Acids, J. A. McCammon and S. C. Harvey, 8 July 1988, 234
- The Early History of the Ancient Near East, 9000-
- 2000 B.C., H. J. Nissen, 21 April 1989, 370 The Earth's Fragile Systems, T. Kristensen and J. P. Paludan, Eds., 16 Sept. 1988, 1519
- Ecology of Tropical Oceans, A. R. Longhurst and D. Pauly, 18 Nov. 1988, 1065
- Ed School, G. J. Clifford and J. W. Guthrie, 14 Oct. 1988, 306
- Einstein in Spain, T. F. Glick, 27 May 1988, 1209 Einstein Simplified, S. Harris, 7 April 1989, 90
- Endocrinology of Selected Invertebrate Types, H. Laufer and R. G. H. Downer, Eds., 17 June 1988, 1680
- Environmental Biology of Agaves and Cacti, P. S. Nobel, 11 Nov. 1988, 948
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- Evaporites and Hydrocarbons, B. C. Schreiber, Ed., 12 May 1989, 721
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- The Evolution of Complexity by Means of Natural Selection, J. T. Bonner, 6 Jan. 1989, 103
- The Evolution of Human Hunting, M. H. Nitecki and D. V. Nitecki, Eds., 13 Jan. 1989, 241
- The Evolution of Individuality, L. W. Buss, 20 May 1988, 1073
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- Explosion Pipes, V. A. Milashev, 28 April 1989, 479
- Eye on the Sky, D. E. Osterbrock et al., 3 March 1989, 1221
- Fasting Girls, J. J. Brumberg, 20 May 1988, 1061
- Fidia Research Foundation Neuroscience Award Lectures, vol. 2, A. G. Gilman et al., 2 Sept. 1988, 1238
- First Births in America, R. B. Rindfuss et al., 14 Oct. 1988, 305
- First the Seed, J. R. Kloppenburg, Jr., 20 Jan. 1989, 412
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868

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- Foundry Processes, S. Katz and C. F. Landefeld, Eds., 30 Sept. 1988, 1840
- Frogfishes of the World, T. W. Pietsch and D. B. Grobecker, 20 May 1988, 1075
- From Clocks to Chaos, L. Glass and M. C. Mackey, 3 Feb. 1989, 675
- From Protest to Policy, P. Solo, 20 Jan. 1989, 413
- Galactic and Extragalactic Radio Astronomy, G. L. Verschuur and K. I. Kellermann, Eds., 18 Nov. 1988, 1065
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- Gene Wars, C. Piller and K. R. Yamamoto, 27 Jan. 1989, 552
- Genetics, Paleontology, and Macroevolution, J. Levinton, 22 July 1988, 476
- Geology of the Henry Mountains, Utah, as Recorded in the Notebooks of G. K. Gilbert, 1875-76, C. B. Hunt, 12 Aug. 1988, 856
- Geomorphology and Hydrology of Karst Terrains, W. B. White, 24 March 1989, 1618
- Georges Bank, R. H. Backus, Ed., 20 May 1988, 1070
- Gray's Monitor Lizard, W. Auffenberg, 9 Sept. 1988, 1368
- Great American Bridges and Dams, D. C. Jackson, 12 Aug. 1988, 856
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- Hidden Aspects of Women's Work, C. Bose et al., Eds., 27 May 1988, 1208
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- Ideas and Information, A. Penzias, 7 April 1989, 90
- In Praise of Imperfection, R. Levi-Montalcini, 9 Sept. 1988, 1366
- In Quest of Panacea, S. P. K. Gupta with E. L. Milford, 20 May 1988, 1066
- Industry and Ideology, P. Hayes, 20 May 1988, 1052
- Innovation and the Arms Race, M. Evangelista, 26 Aug. 1988, 1106
- Innovation and the Rise of the Tunnelling Industry, G. West, 29 July 1988, 604
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- Interindividual Behavioral Variability in Social Insects, R. L. Jeanne, Ed., 7 Oct. 1988, 121

The International Atomic Energy Agency and World Nuclear Order, L. Scheinman, 15 July 1988, 363 Introduction to the Study of Meiofauna, R. P. Higgins

- and H. Thiel, Eds., 10 Mar. 1989, 1376 Invisible Frontiers, S. S. Hall, 28 Oct. 1988, 602
- Issues in Contemporary Retirement, R. Ricardo-Campbell and E. P. Lazear, Eds., 16 Sept. 1988, 1516
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- Mapping Our Genes, Office of Technology Assessment, 16 Sept. 1988, 1518
- Maternal Employment and Children's Development, A. E. Gottfried and A. W. Gottfried, 6 Jan. 1989, 99
- Memory Traces in the Brain, D. L. Alkon, 20 May 1988, 1079
- Milestones in Immunology, D. J. Bibel, 11 Nov. 1988, 949
- Minds at War, S. Kull, 7 April 1989, 89
- Murderous Science, B. Müller-Hill, 5 Aug. 1988, 730
- Mutation, Developmental Selection, and Plant Evolution, E. J. Klekowski, Jr., 3 Feb. 1989, 676
- NaCl Transport in Epithelia, R. Greger, Ed., 14 Oct. 1988, 308
- The Natural History of Nautilus, P. D. Ward, 20 May 1988, 1074
- Natural Obsessions, N. Angier, 28 Oct. 1988, 602
- Nature in Its Greatest Extent, R. MacLeod and P. F. Rehbock, Eds., 7 Oct. 1988, 119
- Nautilus, W. Bruce Saunders and N. H. Landman, Eds., 20 May 1988, 1074
- The Nematode Caenorhabditis elegans, W. B. Wood et al., Eds., 14 April 1989, 235
- Neodymium Isotope Geochemistry, D. J. DePaolo, 16 Dec. 1988, 1585
- Neural Darwinism, G. M. Edelman, 24 June 1988, 1802
- Neurobiology of Neocortex, P. Rakic and W. Singer, Ed., 24 March 1989, 1617
- Neutral Models in Biology, M. H. Nitecki and A. Hoffman, Eds., 19 Aug. 1988, 990
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spehn and C. Paola, Eds., 30 Sept. 1988, 1839

Newton's Dream, M. S. Stayer, Ed., 7 April 1989,

The Non-Darwinian Revolution, P. J. Bowler, 23

North America and Adjacent Oceans During the Last Deglaciation, W. F. Ruddiman and H. E. Wright, Jr., Eds., 22 July 1988, 478

Nuclear Fear, S. R. Weart, 20 May 1988, 1051

Nucleus, R. Bothwell, 24 Feb. 1989, 1086

Nairn et al., Eds., 14 Oct. 1988, 308

Nuclear Non-Proliferation, J. Simpson, Ed., 19 Aug.

Nuts and Bolts of the Past, D. F. Hawke, 12 May

The Ocean Basins and Margins, vol. 7B, A. E. M.

Ontogeny and Systematics, C. J. Humphries, Ed., 19

Optical Effects Associated with Small Particles, P. W.

Ordered to Care, S. M. Reverby, 22 July 1988,

The Other Nomads, A. Rao, Ed., 17 Feb. 1989,

Oxidases and Related Redox Systems, T. E. King et

SCIENCE, VOL. 244

Pacific Visions, M. L. Smith, 5 Aug. 1988, 731

Otto Folin, S. Meites, 12 May 1989, 719

al., Eds., 25 Nov. 1988, 1185

Barber and P. K. Chang, Eds., 28 Oct. 1988,

Oasis in Space, P. Cloud, 20 May 1988, 1072

91

Dec. 1988, 1710

1988, 988

1989, 720

604

476

953

Aug. 1988, 991

- Paleokarst, N. P. James and P. W. Choquette, Eds., 20 May 1988, 1071
- The Past Three Million Years, N. J. Shackleton et al., Eds., 11 Nov. 1988, 948
- Peregrine Falcon Populations, T. J. Cade et al., Eds., 14 April 1989, 233
- Perinatal Development, N. A. Krasnegor et al., Eds., 3 June 1988, 1351
- Pheromone Biochemistry, G. D. Prestwich and G. J. Blomquist, Eds., 14 Oct. 1988, 308
- The Physical Properties of Liquid Metals, T. Ida and R. I. L. Guthrie, 30 Sept. 1988, 1840
- Physics at Surfaces, A. Zangwill, 30 Sept. 1988, 1839
- Physics of Massive Neutrinos, F. Boehm and P. Vogel, 26 Aug. 1988, 1108
- The Physics of Time Reversal, R. C. Sachs, 20 May 1988, 1068
- Phytolith Analysis, D. R. Piperno, 23 September 1988, 1694
- Piaget's Construction of the Child's Reality, S. Sugarman, 5 Aug. 1988, 733
- Plant-Animal Interactions, W. G. Abrahamson, Ed., 16 Dec. 1988, 1585
- Plant Migration, J. D. Sauer, 23 September 1988, 1694
- Plant Reproductive Ecology, J. L. Doust and L. L. Doust, Eds., 13 Jan. 1989, 244
- Plant Strategies and the Dynamics and Structure of Plant Communities, D. Tilman, 12 Aug. 1988, 853
- Portraits of Viruses, F. Fenner and A. Gibbs, Eds., 21 Oct. 1988, 451
- Population Ecology of Individuals, A. Lomnicki, 22 July 1988, 478
- Primate Social Systems, R. I. M. Dunbar, 29 July 1988, 605
- Primate Societies, B. B. Smuts et al., Eds., 20 May 1988, 1076
- Principles of Plasma Diagnostics, I. H. Hutchinson, 5 Aug. 1988, 732
- Private Acts, Social Consequences, R. Bayer, 31 March 1989, 1739
- Proceedings of a Workshop on Optical Surveys for Quasars, P. S. Osmer et al., Eds., 5 May 1989, 590
- Proceedings of the Second International Conference on Quantitative Genetics, B. S. Weir et al., Eds., 9 Dec. 1988, 1449
- Progress and Opportunities in Southern Hemisphere

- Optical Astronomy, V. M. Blanco and M. M. Phillips, Eds., 28 April 1989, 479
- Psychology in Twentieth-Century Thought and Society, M. G. Ash and W. R. Woodward, Eds., 30 Sept. 1988, 1837
- Quantum Field Theory and Quantum Statistics, I. A. Batalin et al., Eds., 12 Aug. 1988, 855
- The Question of the Commons, B. J. McKay and J. M. Acheson, Eds., 20 May 1988, 1082
- Race Hygiene and National Efficiency, S. F. Weiss, 20 May 1988, 1053
- Racial Hygiene, R. Proctor, 4 Nov. 1988, 785
- Radon and Its Decay Products in Indoor Air, W. W. Nazaroff and A. V. Nero, Eds., 19 Aug. 1988, 990
- The Reality Club, J. Brockman, Ed., 21 Oct. 1988, 451
- Recent Advances in Thin-Layer Chromatography, F. A. A. Dallas et al., Eds., 21 Oct. 1988, 451
- Reforming the Law, G. B. Melton, Ed., 20 Jan. 1989, 414
- Remembering Reconsidered, U. Ncisser and E. Winograd, Eds., 10 Mar. 1989, 1375
- Reminiscences About a Great Physicist, B. N. Kursunoglu and E. P. Wigner, Eds., 2 Sept. 1988, 1239
- Reproductive Success, T. H. Clutton-Brock, Ed., 17 March 1989, 1496
- Reptile Egg-Shells, H. H. Schleich and W. Kästle, 10 Mar. 1989, 1376
- Return to Aztlan, D. S. Massey et al., 20 May 1988, 1059
- Reviews in Modern Astronomy, vol. 1, G. Klare, Ed., 28 April 1989, 479
- The Rise of Experimentation in American Psychology, J. G. Morawski, Ed., 20 Jan. 1989, 414
- The Roots of Modern Biochemistry, H. Kleinkauf et al., Eds., 11 Nov. 1988, 946
- Ruth Benedict, L. M. Caffrey, 21 April 1989, 369 Science and Technology Advice to the President, Con-
- gress, and Judiciary, W. T. Golden, Ed., 10 June 1988, 1552
- Science as a Process, D. L. Hull, 25 Nov. 1988, 1182
- Science in Ireland, 1800–1930, J. R. Nudds et al., Eds., 10 Feb. 1989, 826
- Science Off the Pedestal, D. E. Chubin and E. W. Chu, 7 April 1989, 90

Seabed Pockmarks and Seepages, M. Hovland and A. G. Judd, 5 May 1989, 590

- Sea-Level Changes, M. J. Tooley and I. Shennan, Eds., 9 Sept. 1988, 1366
- Seventy-Five Years in Ecology, J. Sheail, 4 Nov. 1988, 784
- Sex Determination in Mouse and Man, A. McLaren and M. A. Ferguson-Smith, Eds., 5 May 1989, 592
- Sexual Selection, J. W. Bradbury and M. B. Andersson, Eds., 16 Dec. 1988, 1583
- Simple Curiosity, L. F. Laporte, Ed., 20 May 1988, 1067
- Social Control of the Drinking Driver, M. D. Laurence et al., Eds., 29 July 1988, 603
- Sociology and Scientism, R. C. Bannister, 24 June 1988, 1803
- The Sources of Innovation, E. von Hippel, 17 March 1989, 1497
- Stone Tool Use at Cerros, S. M. Lewenstein, 20 May 1988, 1083
- A Stranger in Her Native Land, J. Mark, 10 Feb. 1989, 823
- Structural and Magnetic Phase Transitions in Minerals, S. Ghose et al., Eds., 28 April 1989, 478
- Studies of Mascarene Island Birds, A. W. Diamond, Ed., 20 May 1988, 1076
- Supernova Remnants and the Interstellar Medium, R. S. Roger and T. L. Landecker, Eds., 1 July 1988, 105
- Superstrings, P. C. W. Davies and J. Brown, Eds., 16 Dec. 1988, 1584
- Survey Research in the United States, J. M. Converse, 20 May 1988, 1057
- Surveying Social Life, H. J. O'Gorman, Ed., 25 Nov. 1988, 1184
- Symmetries, Asymmetries, and the World of Particles, T. D. Lee, 5 Aug. 1988, 732
- Technological Innovation in China, D. F. Simon and D. Rehn, 21 April 1989, 369
- Technology and Politics, M. E. Kraft and N. J. Vig, Eds., 16 Sept. 1988, 1519
- Technology and Women's Voices, C. Kramarae, Ed., 18 Nov. 1988, 1064
- Tectonic Evolution of the Himalayas and Tibet, R. M. Shackleton et al., Eds., 3 March 1989, 1221
- Temperature Biology of Animals, A. R. Cossins and K. Bowler, 26 Aug. 1988, 1108
- Thermal History of Sedimentary Basins, N. L. Naeser and T. H. McCulloh, Eds., 24 March 1989, 1619
- Thinking About Science, E. P. Fischer and C.



"Insomnia Squad." Thomas Edison and associates having a midnight lunch while working on a problem, 1917. [From American Genesis, reviewed on p. 830]

Lipson, 23 Dec. 1988, 1711

- Thirty Years Since Parity Nonconservation, R. Novick, Ed., 5 Aug. 1988, 732 Three Decades of Daedalus, 9 Sept. 1988, 1369
- Three Decades of Daedalus, 9 Sept. 1988, 1369 Three Hundred Years of Gravitation, S. W. Hawking and W. Israel, Eds., 20 May 1988, 1069
- Topobiology, G. M. Edelman, 10 Mar. 1989, 1373 Toward a New Philosophy of Biology, E. Mayr, 24
- June 1988, 1801 Transposition, A. J. Kingsman et al., 23 Dec. 1988,
- 1712 Tributes to Paul Dirac, J. G. Taylor, Ed., 2 Sept.
- 1988, 1239 Ubiquitin, M. Rechsteiner, Ed., 4 Nov. 1988, 787 Ultrasound, K. S. Suslick, Ed., 17 March 1989,
- 1499 Uneasy Careers and Intimate Lives, P. G. Abir-am
- and D. Outram, Eds., 21 Oct. 1988, 448 U.S. Coast Survey vs. Naval Hydrologic Office, 6
- Jan. 1989, 102
- U.S.-Soviet Security Cooperation, A. L. George et al., Eds., 16 Sept. 1988, 1517
- Vectors of Death, A. F. Ramenofsky, 20 May 1988, 1084
- Vegetation of Inland Waters, J. J. Symoens, Ed., 14 April 1989, 235
- Virulence Mechanisms of Bacterial Pathogens, J. A. Roth, Ed., 3 June 1988, 1352
- The Walnut Street Prison Workshop, J. L. Cotter et al., 20 May 1988, 1085
- The War of Invention, G. Hartcup, 24 Feb. 1989, 1087

War Stars, H. B. Franklin, 6 Jan. 1989, 101 What Mad Pursuit, F. Crick, 3 March 1989, 1219 Without the Bomb, M. Reiss, 19 Aug. 1988, 988 The Woman Question in Classical Sociological Theory, T. R. Kandal, 10 Feb. 1989, 823

Women Anthropologists, U. Gacs et al., Eds., 8 July 1988, 233

Women, Work, and Technology, B. D. Wright et al., Eds., 20 May 1988, 1063

Workers, Managers, and Technological Change, D. B. Cornfield, 20 May 1988, 1061



"As the sun sets behind the San Bernardino mountains...Caltech students signal good-bye to...readers and friends." [From Astrophysics of the Sun, reviewed on p. 850]

Population Harvesting

Demographic Models of Fish, Forest, and Animal Resources

Wayne M. Getz and Robert G. Haight

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SCIENCE, VOL. 244

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ASSOCIATE PROFESSOR OF PHYSIOLOGY—NONTENURE TRACK

The University of Tennessee, Memphis, Department of Physiology and Biophysics, will have a nontenure-track faculty position available 1 September 1989. As-signment will be to the research laboratory of **Dr**. Leonard R. Johnson, Thomas A. Gerwin Professor of Physiology at the University of Tennessee. Requirements are (i) Ph.D. with cell culture background; (ii) history of publications; and (iii) experience in polyamines in cell culture in the gastrointestinal tract. Applicants should send curriculum vitae, copies of three representative publications and the names of three references to: Dr. Leonard R. Johnson, Thomas A. Gerwin Professor of Physiology and Chairman, Department of Physiology and Biophysics, University of Tennessee, 894 Union Avenue, Memphis, TN 38163. An Equal Opportuni-ty/Affirmative Action Employer. Minorities and women are encouraged to apply.

ASSOCIATE OR FULL PROFESSOR, MOLEC-ULAR GENETICIST. Applications are invited for a tenure-track position in the Graduate Genetics Program, The Gorge Washington University. Applicants with demonstrated productivity in any area of molecular genetics will be considered, but preference will be given to those in the areas of immunology or molecular genetics of development. The position requires establishing a vigorous research program, directing graduate research, and teaching graduate courses in the faculty member's area of expertise. Salary and rank are commen surate with qualifications and experience. The Graduate Genetics Program is interdisciplinary, and the position will include a joint appointment with an appropriate department. The position is available January, June, or August 1990. Send curriculum vitae, statements of research and teaching interests, and the names and tele phone numbers of three references by 1 August 1989 to: Dr. Stefan O. Schiff, Graduate Genetics Program, The George Washington University, Lisner Hall 320, Washington, D.C. 20052. The George Washington Uni-versity is an Equal Opportunity/Affirmative Action Employer.

DIRECTOR CLINICAL RESEARCH CENTER MEDICAL RESEARCH INSTITUTE OF DELAWARE (MRID)

The Medical Research Institute of Delaware seeks a clinical research scientist/administrator for an exciting career opportunity involving the development and direc-tion of its Clinical Research Center (CRC). Contributing members to the Institute include the Du Pont Company, ICI Americas Inc., the Jefferson Medical College, the Medical Center of Delaware, and the University of Delaware. The CRC will focus initially on clinical phar macology studies in normal human volunteers and will be involved with studies with the faculty of the contributing institutions. The Director must have ability in research and administration and will interact with the medical, education, and health care communities, including state and national agencies. Candidates should have an M.D. degree, Board certification with eligibility for medical licensure in Delaware, and credentials warrant ing a faculty appointment at the Jefferson Medical College and the University of Delaware. Send letters of application, curriculum vitae, and three letters of refer-ence to: Peter Chodoff, M.D., M.P.H., Christiana Hospital, P.O. Box 6001, Newark, DE 19718. MRID is an Equal Opportunity Employer.

USDA-AGRICULTURAL RESEARCH SERVICE PLUM ISLAND ANIMAL DISEASE CENTER **MOLECULAR BIOLOGY LABORATORY GREENPORT, LONG ISLAND, NEW YORK**

RESEARCH ASSOCIATE—MOLECULAR BIOLOGY

A postdoctoral Research Associate appointment is available in a multidisciplinary group studying Foot-and-mouth disease (FMD) including basic viral molecular/biological properties and new molecular approaches to detection, characterization and control. The research group operates on a fully funded research program in laboratories providing the latest equipment including facilities for oligonucleotide and peptide synthesis. The research project involves a study to express FMDV capsid proteins in various expression systems and assay for their antigenicity in vitro and immunogenicity in animals. Experience in recombinant DNA technology is necessary and knowledge of protein expression systems is desirable. Appointments are for up to two years and are funded at \$28,852 (GS-11) to \$34,580 (GS-12) depending on qualifications. The successful candidate must be a U.S. citizen and have obtained a relevant PhD within the last three years. Applicants should send a curriculum vitae and the names and addresses of three references to: Dr. M. Grubman, USDA, ARS, NAA, Plum Island Animal Disease Center, P.O. Box 848, Greenport, N.Y. 11944. For information call (516) 323-2500 X320. Applications must be marked 9N017 and received by June 30, 1989

ARS IS AN EQUAL OPPORTUNITY EMPLOYER-WOMEN AND MINORITIES ARE ENCOURAGED TO APPLY-

FACULTY OF MEDICINE AND HEALTH SCIENCES UNITED ARAB EMIRATES UNIVERSITY

ASSISTANT/ **ASSOCIATE PROFESSOR/ PROFESSOR***

DEPARTMENT OF MEDICAL ANATOMY

The Faculty of Medicine and Health Sciences is now in its third year of operation having accepted its first class of medical students in September 1988 following two years of premedical study. The Faculty of Medicine utilizes two affiliated hospitals in Al Ain, Tawam Hospital and Al Ain Hospital, with a total of 1050 beds. Currently housed in temporary facilities, it is in the process of finalizing plans for the construction of a teaching and research facility of international stature to be completed in 1991. The language of instruction is English.

Candidates applying for these positions must have demonstrated interest in teaching and research. Emphasis is placed upon candidates with an interest and experience in a problem solving approach to medical education. In addition, candidates must possess a medical degree and/or PhD degree as appropriate to post or an equivalent higher professional degree from an accredited university or institution of higher learning. Preference will be given to candidates possessing a higher qualification.

Salary and liberal benefits are offered, commensurate with qualifications and level of responsibility. If you are seeking professional growth and an excellent work environment send detailed resume, copies of certificates and the names of three referees familiar with recent work history to:

The Dean Faculty of Medicine and Health Sciences **UAE University** PO Box 15551 Al Ain **United Arab Emirates**

*The rank of Professor does not carry Chairmanship with it. Applications should be received within one month following publication date. All positions will remain open until filled



GLAXO INSTITUTE FOR MOLECULAR BIOLOGY S.A.

The Geneva molecular biology research unit of one of the largest pharmaceutical companies in the world has a vacancy for

POSTDOCTORAL FELLOWSHIPS

The Glaxo Institute for Molecular Biology (GIMB) has a staff of approximately 130. Projects include viral therapeutics, neurobiochemistry and the regulation of cell proliferation and differentiation. We are part of the Glaxo group, Britain's largest pharmaceutical organization, which has an outstanding reputation for the quality of its research and products. GIMB is a leading group in applying genetic engineering to medical research.

Applications are invited for Research Fellowships in the following project areas:

- regulation of IgE synthesis
- molecular neurobiology
- cytokine signal transduction
- fungal molecular biology

Candidates should have appropriate experience in molecular or cell biology.

We offer excellent facilities and research opportunities together with an attractive salary and benefits package. Interdisciplinary and collaborative research is actively encouraged at GIMB.

If you are interested in this position, please send your curriculum vitae with a list of publications and the names of three references to : Rita Gloor, Personnel Manager, GLAXO IMB S.A., 46, route des Acacias, 1211 Geneva 24, Switzerland.



The University of Toledo Announces The Nippon Electric Glass Company, Inc. Endowed Chair in Silicate Science

The University of Toledo, a comprehensive, doctoral degree-granting research University, invites nominations and applications for a recently established endowed faculty position in silicate science. The University is seeking an internationally recognized research scholar with a demonstrated record of major levels of external support who will bring a well-recognized research program in an area broadly defined as silicate science and/or materials research. The holder of this faculty chair will be expected to interact strongly with University faculty who have related research programs in the Departments of Physics and Astronomy, Chemistry, Geology, and in the College of Engineering. In addition, this person will be encouraged to interact with industrial scientists and engineers in the fields of glass, ceramics, composites and silicate-related materials.

The successful candidate will qualify for a tenured professorship in an appropriate academic department and become a member of the Eitel Institute for Silicates and Ceramics Research. The Eitel Institute functions within a larger Materials Science Research Center, which also includes a recently established Thin-Films Research Institute and Coal Characterization Laboratory.

Čonsideration of qualified and interested candidates will begin immediately. Nominations, applications and inquiries should be directed to:

Dr. William A. Kneller, Director Wilhelm Eitel Institute The University of Toledo Toledo, Ohio 43606

The University of Toledo is an Affirmative Action and Equal Opportunity Employer.

BIOLOGIST: Cornell College, a private liberal arts college located in Mount Vernon, Iowa, seeks candidates to fill a 1-year position in its Biology Department. The successful applicant may be considered as a tenure-track candidate for 1990 to 1991. Courses to be taught include genetics, developmental biology, and introductory biology. Send curriculum vitae and three letters of reference to:

Paul Christiansen, Chair Department of Biology Cornell College Mt. Vernon, IA 52314

Formal consideration of applications will begin 1 July 1989.

Cornell College is an Equal Opportunity/Affirmative Action Employer and actively seeks applications from women and minority candidates.

CELLULAR BIOLOGIST. The David M. Clark Center, Arkansas Children's Hospital invites applications for a tenured-track assistant professorship beginning fall 1989. Applicants should have a Ph.D. and 2 years of postdoctoral training. The appointee will join investigators focusing on pediatric cardiac and lung disease. The individual would establish independent research and participate in collaborative projects involving pulmonary vascular or myocardial cells. Prior experience with these tissues is desirable but not a requirement. Opportunities for teaching and joint appointments exist with the basic science divisions of the University of Arkansas for Medical Sciences. Send curriculum vitae, statement of research interest, and names of three references to: A. Francine Tryka, M.D., The David M. Clark Cardiovascular Center, 800 Marshall, Little Rock, AR 72202.

DIRECTOR PHARMACOTHERAPEUTIC DEVELOPMENT

The Alcohol, Drug Abuse, and Mental Health Admin-istration (ADAMHA), through its National Institute on Drug Abuse (NIDA), has established a program to develop new pharmacotherapeutic approaches for the treatment of mental and addictive disorders with an initial focus on drug abuse. The immediate goals of the program are to develop new medications that can: (i) serve as replacement therapies for abused drugs, (ii) reduce craving for abused drugs, (iii) block the psychoac tive effects of abused drugs, (iv) treat the acute toxicities associated with drug abuse, and (v) be used to effectively treat the pregnant drug abuser. In addition, new conceptual approaches to the treatment of drug abuse are being encouraged. The program will involve a full range of drug development activities from computer aided drug design of new compounds to the conduct of clinical trials. Funding allocated for fiscal year 1989 is approximately \$13 million. It is expected that major collaborative relationships will be established between this pro-gram, NIDA's Clinical Research Centers, and private industry. The Director of the program will supervise a staff of eight to ten scientists with additional growth anticipated. Applications are encouraged from individuals whose background, training, and experience involve the following areas: (i) M.D. or Ph.D. in a biological science, (ii) knowledge of Federal drug development procedures and requirements, (iii) first-hand involvement in the successful development of an NDA, (iv) understanding of drug development activities in the private sector. The candidates should demonstrate a significant level of accomplishment in the area of their professional expertise. This position may be filled by individuals eligible for appointment under Federal civil service regulations, or by assignment of qualified officers of the Commissioned Corps of the U.S. Public Health Service or, by non-Federal individuals who may be hired Service or, by non-Federal individuals who may be hired on a special expert basis for 2 years with additional extensions possible for a total of up to 4 years. Annual salary may range between \$57,158 and \$74,303. Com-mensurate with experience, previous Federal employ-ment, and current salary, physicians may be eligible for an additional physician comparability allowance of \$8,000 to \$20,000 per annum. Applications and nomi-nations should be sent to: Dr. Marvin Snyder, Direc-tor, Division of Preclinical Research, National Insti-tute on Drug Abuse, 5600 Fishers Lane, Room 10A-31, Rockville, MD 20857. Applicants should include a copy of their curriculum vitae and the names of three references. references

The ADAMHA is an Equal Opportunity Employer.

POSITIONS OPEN

ENDOWED PROFESSORSHIP IN MOLECULAR BIOLOGY

A senior faculty position in the Department of Biochemistry and Molecular Biology has been created at The University of Oklahoma Health Sciences Center. The position is a funded endowed chair, the Ed W. Miller Chair in Molecular Biology, named after the former President of the Presbyterian Health Foundation. No specific field of molecular biology is required, but candidates should have an outstanding research program. The Department has recently undergone a major expansion and the holder of the Chair will play a pivotal role in the continued development of the Department. This Chair and several others which have been created in the College of Medicine will also play leading roles in an interdisciplinary Center of Excellence in Molecular Medicine. The University of Oklahoma is an Equal Opportunity/Afirmative Action Employer. Nominations should be sent to:

John R. Sokatch, Chairman Department of Biochemistry and Molecular Biology The University of Oklahoma Health Sciences Center P.O. Box 26901 Oklahoma City, OK 73190

EXPERIMENTAL PLASMA PHYSICIST

The UCI Plasma Physics Group anticipates openings in the postdoctoral and/or assistant research physicist levels. Appointees will participate in experiments related to intense ion beams, beam/plasma interaction and high density Z-pinches. Applicants should have strong background in pulsed experiments at the Ph.D. level. Send résumé, bibliography, and names of three references to: Dr. Amnon Fisher, Department of Physics, University of California, Irvine, CA 92717. An Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS, BONE CELL BIOLOGY

The University of Texas Health Science Center, San Antonio, invites applications for two faculty positions at the assistant or associate professor level to join an active bone cell biology group interested in the biosynthesis of factors which influence mineralized tissues. Applicants with training and expertise in protein chemistry, molecular biology, or cell biology will be considered. The departments involved are the Department of Medicine and the Department of Periodontics. Ph.D., D.D.S., or M.D. degree and postdoctoral experience are required. Facilities available to the applicant include completely equipped core molecular structure facility for state-ofthe-art protein microsequencing, peptide synthesis, and oligonucleotide synthesis. The candidate will be expected to collaborate with other investigators interested in cell biology of bone and the periodontium, but also to pursue an individual program of research. The applicant will also be expected to participate in the training of postdoctoral fellows and graduate students. This program is supported by program grants from the NIH. Submit curriculum vitae and brief description of research interests to: Dr. Gregory R. Mundy, Professor and Head, Division of Endocrinology and Metabolism, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284–7877.

The University of Texas Health Science Center is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS IN X-RAY CRYSTALLOGRAPHY

The Department of Biological Chemistry and Molecular Pharmacology at Harvard Medical School and the Dana-Farber Cancer Institute are seeking applications to fill two positions at the assistant professor level to be located at the Dana-Farber Cancer Institute. Applicants should be interested in using crystallographic methods to solve problems in structural biology and biochemistry and should have an appropriate combination of related graduate and postdoctoral level research experience. Interested applicants should send an outline of future research plans, curriculum vitae, bibliography and the names of three to four references to: Professor Christopher Walsh, Chairman, Biological Chemistry and Molecular Pharmacology, Search Committee, Harvard Medical School, 240 Longwood Avenue, Room Cl-213, Boston, MA 02115. Women and minorities are encouraged to apply. Harvard University and Dana-Farber Cancer Institute are Equal Opportunity Employers.

POSITIONS OPEN

FACULTY FOR ECOLOGICAL FIELD COURSES SCHOOL FOR FIELD STUDIES (SFS)

SFS seeks full-time faculty and administrative/academic leaders at centers offering undergraduate courses in ecology and sustainable development. Unique fieldbased program in spectacular settings emphasizing conservation study and research.

Zimbabwe: Director to start new Center for sustainable development; curriculum-site development, faculty search.

Kenya (two): Director and large mammal and/or rangeland ecology expert for wildlife courses and research.

Caribbean (three): Director and senior faculty for coral reef, marine biology, cultural ecology program. Baja, Mexico (three): Director and senior faculty for

Baja, Mexico (three): Director and senior faculty for courses on whales, other marine mammals; marine biologist, marine mammalogist, and cultural ecologist. Director to develop new curriculum and center. Australia: Director of Center for Rainforest Studies in

Australia: Director of Center for Rainforest Studies in Queensland.

To apply send résumé, detailed letter, and four references (with telephone): Center Search, SFS 16 Broadway, Beverly, MA 01915.

FACULTY POSITION IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

Excellent facilities, good support and good research environment available for established or highly promising researcher. Level of appointment commensurate with qualifications. Preference given to candidate who can enhance existing group of researchers on hormone action, in areas such as molecular structure/function relationships (NMR, x-ray crystallography) or study of peptide hormones. By 31 August 1989, send curriculum vitae, bibliography, and have three references write to: Dr. John T. Penniston, Department of Biochemistry and Molecular Biology, Mayo Medical School, Rochester, MN 55905. Mayo is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS THE WAKSMAN INSTITUTE RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY MOLECULAR AND DEVELOPMENTAL BIOLOGY

Applications are invited for two tenure-track faculty positions at the Waksman Institute with joint appointment in the Department of Molecular Biology and Biochemistry. The rapidly expanding research-oriented environment of Rutgers University includes the adjacent Center for Advanced Biotechnology and Medicine and the Robert Wood Johnson Medical School. Successful applicants will be expected to conduct vigorous independent research programs, and to participate in instructional activities. Preference will be given to candidates whose research programs concern the developmental biology and molecular genetics of *Drosophila*, yeast, or filamentous fungi. Recently renovated laboratory space and generous start-up funds are available. Candidates should send biographical sketch with list of rubilizations. description of crearch intersets and name

Candidates should send biographical sketch with list of publications, description of research interests, and names of three references to: Dr. Joachim Messing, Director, The Waksman Institute, Rutgers, The State University of New Jersey, P.O. Box 759, Piscataway, NJ 08855–0759. Rutgers University is an Equal Opportunity/Affirmative Action Employer.

IMMUNOLOGIST/VIROLOGIST—Applications are invited for an assistant professor in the Division of Comparative Pathology. We are seeking an individual with a Ph.D. degree in either virology and/or immunology to participate in programs investigating the pathogenesis of laboratory animal diseases and to develop an independent research program. Salary commensurate with experience. Interested individuals should send a letter stating career goals, curriculum vitae, and the names of three references to: Dr. Norman Altman, University of Miami School of Medicine, Department of Pathology, P.O. Box 016960 (R-46), Miami, FL 33101.



FACULTY OF MEDICINE AND HEALTH SCIENCES UNITED ARAB EMIRATES UNIVERSITY

The Faculty of Medicine and Health Sciences is now in its third year of operation having accepted its first class of medical students in September 1988 following two years of premedical study. The Faculty of Medicine utilizes two affiliated hospitals in Al Ain, Tawam Hospital and Al Ain Hospital, with a total of 1050 beds. Currently housed in temporary facilities, it is in the process of finalizing plans for the construction of a teaching and research facility of international stature to be completed in 1991. The language of instruction is English.

The Faculty of Medicine invites applications for Faculty positions at the Assistant, Associate and Professorial levels. Professorial rank does not include Chairmanship responsibility. Candidates for these positons must have demonstrated interest in teaching, research and, where appropriate, patient care. Emphasis is placed upon candidates with an interest and experience in a problem solving approach to medical education. In addition, candidates must possess a medical degree and/or PhD degree as appropriate to post or an equivalent higher professional degree from an accredited university or institution of higher learning: or any higher professional certificate such as membership or fellowship of one of the Royal Colleges of the UK, Ireland, Canada, Australia and New Zealand (MRCP, FRCS, MRC Path, MRC Psych, FFARCS, MRCOG, FRCR) or the certificate of the American Board or the Arab Board for Medical Specializations

Faculty positions are available in the following departments:

Human Anatomy	Microbiology
Biochemistry	Obstetrics and
Biophysics	Paediatrics
Community Medicine	Pathology
(including medical anthro-	Pharmacology
pology and sociology)	Physiology
Emergency and Critical Care	Psychiatry and
Family Medicine	Sciences
Internal Medicine	Radiology
Islamic Medicine	Surgery
Medical Education	

Obstetrics and Gynaecology Paediatrics Pathology Pharmacology Physiology Psychiatry and Behavioural Sciences Radiology Surgery

Individuals wishing to obtain additional information should send a curriculum vitae including a list of publications, copies of certificates and three current referees to:

> Dr. Joel H Lanphear PhD Associate Dean Faculty of Medicine and Health Sciences UAE University PO Box 15551 Al Ain Abu Dhabi United Arab Emirates Fax No: 971 3 638247

Applications should be received within one month following publication date. All positions will remain open until filled.

Postdoctoral Fellow Openings

The Monsanto Company, Corporate Research and Development Staff, located in suburban St. Louis, is seeking to fill the following postdoctoral positions.

Biochemistry

Receptor Biochemist: Investigate the cell biology, biochemistry and molecular biology of growth hormone receptor and its mechanism of signal transduction. The position focuses on studies examining structure/function relationships of the receptor, its turnover and internalization, and regulation. Experience in polypeptide growth factor receptors including expression and purification is preferred.

Molecular Neurobiology

Molecular Biologist/Electrophysiologist: Characterize excitatory amino acid receptors and their mode of signal transduction through the use of molecular biology, electrophysiology and/or protein biochemistry. Major emphasis will center on identification of ligand binding sites and coupling to effector systems such as ion channels. Experience in molecular biology, electrophysiology and/or protein biochemistry is highly desired.

Molecular Biologist/Biochemist: Study the signal transduction mechanism mediated by nerve growth factor and its receptor. Recombinant DNA techniques will be utilized to address the major focus of the project being elucidation of the mode of action of NGF. Background in the area of neuroscience and familiarity with tissue culture techniques are desirable.

Molecular Endocrinology

Molecular Biologist/Biochemist: Study the cellular and molecular biology of ligands, binding proteins, and receptors involved in the regulation of growth. Major emphasis will be on the regulation of expression of genes in the growth hormone/insulin-like growth factor pathway. Position will involve interactions with scientists in Monsanto operating companies and at Washington University. Experience in molecular biology and/or protein chemistry is desired.

Cell Biology

Cell Biologist/Molecular Biologist: Participate in basic research on regulatory factors and mechanisms responsible for tumor cell progression. Experience with cell culture techniques highly desirable.

Candidates are required to have a Ph.D. and a strong background in molecular or cell biology and biochemistry. We consider postdoctoral studies to be of major importance in a scientist's career and encourage publication of findings in leading journals and a full interaction with the scientific community. Our postdoctoral appointments are normally for a period of two years.

We offer excellent compensation and benefits as well as an attractive relocation policy. Please send your C.V. and the names of three references to: MONSANTO COMPANY; BB5B-KG; 700 Chesterfield Village Parkway; St. Louis, MO 63198. Equal Opportunity Employer M/F/H/V.

Careers for people with ideas



Staff Researcher Drug Metabolism

Syntex, an international healthcare company with a reputation for quality pharmaceutical products, is looking for a PhD Scientist to work in Bioanalytical and Metabolic Research.

The successful candidate will direct the design and implementation of metabolic pre-clinical studies in support of IND and NDA submissions to the FDA.

A PhD in one of the chemical or biological sciences, 2-5 years' experience performing drug metabolism studies and excellent communication skills are required.

Drug Metabolism also has an opening for a BS/MS scientist with 3-5 years' experience in enzyme kinetic studies using microsomes.

Syntex offers an excellent compensation and relocation package. For immediate consideration, please send your resume and salary history to Syntex, Professional Employment, Dept. KH, 3401 Hillview Avenue, Palo Alto, CA 94034. We are an equal opportunity employer.



VETERINARY PATHOLOGIST

Baxter Healthcare Corporation is currently seeking a Veterinary Anatomical Pathologist.

Responsibilities include: performing of necropsies, microscopic examination of tissues from a variety of laboratory animal species from toxicological studies, interpretation of organ weight, clinical pathology and anatomic data. Requires a DVM or VMD in veterinary pathology. The candidate should be a Diplomate of the American College of Veterinary Pathologists or eligible to take the ACVP examination. Individuals with prior industrial experience in toxicologic pathology, immuno-cytochemistry, electron microscopy or computerized morphometry are preferred.

Baxter employees enjoy a competitive salary and comprehensive benefits. For confidential consideration, please forward your resume with salary history to: **Pam Miller**, **Human Resources Director (WG1-1N)**, **Baxter Healthcare Corporation**, **Route 120 & Wilson Road**, **Round Lake**, **IL 60073.** Equal Opportunity Employer.



Ph.D.—RESEARCH Scientist Cardiovascular Hemodynamics

Wyeth-Ayerst Research, a subsidiary of Fortune 100 American Home Products Corporation, is searching for a Ph.D. Pharmacologist with 3-5 years post-doctoral experience in the assessment of hemodynamics and regional blood flows in rodent models. This individual will complement ongoing research efforts in antihypertensive and vascular disease drug discovery programs. Knowledge of and experience in the use of the Doppler system for measurement of blood flow will be a distinct advantage.

The successful candidate will be responsible for maintaining an active program in the assessment of drug action on the cardiovascular system and will be expected to develop his/her own special area of interest. Proven ability in oral and written communication is necessary.

Wyeth-Ayerst offers an excellent salary and benefits package plus opportunity for advancement along with an ultra-modern research facility. Interested candidates should send CV and salary history to:

Personnel Manager, Dept. 2774-GO



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THE FELS INSTITUTE FOR CANCER RESEARCH AND MOLECULAR BIOLOGY **POSITIONS AVAILABLE** FACULTY-POSTDOCTORAL-**GRADUATE STUDENTS**

MOLECULAR BIOLOGISTS-Tenure track positions. All areas of molecular biology and genetics are of interest. Some preference will be given to developmen-tal molecular biology and research on transgenic ani-mals. Send curriculum vitae, a brief statement of research plans and request that three letters of recom mendation be sent to the address below.

PROTEIN CHEMISTS—Tenure track positions. Send curriculum vitae, a brief statement of research plans and request that three letters of recommendation be sent to the address below.

sent to the address below. **POSTDOCTORAL POSITIONS**—Postdoctoral positions are available in the areas of molecular biology and genetics, gene mapping, cell biology, biochemistry or carcinogenesis. Stipends are competitive and an en-larging faculty creates a unique training opportunity. Send curriculum vitae, a brief statement of training interests and request that three letters of recommenda-tion be sent to the address below.

GRADUATE STUDENTS-A new program is starting at GRADUATE STUDENTS—A new program is starting at the Fels Institute for Cancer Research and Molecular Biology with a new Department of Molecular Biology and Genetics in the planning stages. Areas of study include molecular biology and genetics, gene mop-ping, cell biology, biochemistry and carcinogenesis. Active programs include oncogenes, genetic alter-ations in cancer formation, gene mapping, genes in growth control, DNA repair mechanisms, receptors and cellular transduction systems. Send curriculum vitae, a short statement on training interests, if known, and request that three letters of recommendation be sent to the address below. Entrants for the fall of 1989 will be considered.

Send information requested above to: Dr. Gerald Litwack, Deputy Director The Fels Institute for Cancer Research and Molecular Biology Temple University School of Medicine 3420 North Broad Street Philadelphia, PA 19140 An Equal Opportunity Employer

Public Health Service Alcohol, Drug Abuse and Mental Health Administration National Institute of Mental Health

Postdoctoral Fellowship in Neuroscience/Immunology

NIMH offers a postdoctoral position to investigate the neurochemical and neuropathologic consequences of infections of the brain and systemic tissues. Opportunities will be provided to employ a wide range of analytical techniques, including GC/MS, HPLC, enzyme assays and immunohistochemistry of rodent, non-human primate and human tissues. Experience in biochemistry and immunology is highly desirable. The program invites applications for an IRTA (\$20,000 - \$23,000) or Visiting Fellow (\$20,000 - \$23,000) position. IRTA candidates may be resident aliens or U.S. citizens; Visiting Fellows are non-resident aliens. Eligibility for both appointments requires no more than three years of relevant postgraduate experience. IRTA candidates and Visiting Fellows are appointed for one year with possible renewals for two additional years. Send curriculum vitae, a brief description of research experience and names of three referees to:

Dr. Sanford P. Markey Section on Analytical Biochemistry Laboratory of Clinical Science NIMH

Building 10, Room 3D40 9000 Rockville Pike Bethesda, MD 20892

AL WON

Or call (301) 496-2151 for further information.

NIMH IS AN EQUAL OPPORTUNITY EMPLOYER

CHAIRMAN, MEDICAL SCIENCES DIVISION

Nominations and applications are invited for the position of Chairman of the Medical Sciences Division of Oak Ridge Associated Universities. ORAU is a private, not-for-profit consortium of 49 colleges and universities and a management and operating contractor of the U.S. Department of Energy. Its mission is to carry out research and development in medical sciences, science/engineering education, productivity management and training, and energy/environment systems.

The Chairman provides scientific and managerial leadership to strengthen, build and conduct Division programs that address critical medical and health issues associated with energy. The Chairman's responsibilities include providing broad scientific and managerial leadership, developing a strong staff, allocating resources, and representing the Division to federal agencies, universities, and other organizations.

The Division's interdisciplinary staff of about 125 investigates the medical benefits and costs to the human body from natural and synthetic substances, primarily those from energy and energy-related technologies. It carries out basic preclinical research; develops beneficial applications to human health from science and technology; develops techniques to avoid moderate, or reverse negative health impacts; analyzes the health risks and outcomes from applications of technologies; and provides information systems and mangement expertise to deal with health-related impacts.

Qualifications for the position include a doctorate in medicine and/or health science; an established record of excellence in research and/or research leadership; the ability to build a strong organization and staff, and to work effectively within and outside ORAU. Excellent writing and presentation skills and leadership qualities reflected in vision, innovation, and organization are required.

Applications should include a letter of interest, a vita, a list of publications, and the names and addresses of at least three references. The Search Committee will continue its review until the position is filled. The appointee will assume the full responsibilities of Chairman in early 1990. A transition period preceding the retirement of the incumbent is planned.

Applications, nominations, and inquiries should be sent to:



Jon M. Veigel, President **Oak Ridge Associated** Universities P.O. Box 117 Oak Ridge, TN 37831-0117

An Equal Opportunity Employer

AQUATIC PROJECT COORDINATORS (\$36,670 - \$46,182)

The NYC Department of Environmental Protection is seeking highly energetic and skilled individuals to serve as coordinators in aquatic and marine geology. The candidate must be able to provide expert counsel to top-level managers on specific aquatic issues, and/or supervise preliminary geological studies and investigations. These studies require expertise in fresh and tidal wetland functions and coastal processes with some training as a bio-statistician.

QUALIFICATIONS

wIork

All candidates must have a baccalaureate degree from a college recognized by the University of the State of New York with a major in a specific appropriate field of scientific specialization, and one of the following:

1. Six years of experience in the specialized field; or

2. A satisfactory equivalent combination of education and experience. A Master's degree issued upon completion of an accredited course of study will be accepted as equivalent to one year's experience. A PhD or Doctorate of Science degree obtained after not less than three years of graduate study in the scientific field indicated by the title will be accepted as equivalent to three years of experience.

All interested candidates should send their resumes and salary histories to.

Zoe Ann Campbell, Deputy Director of Personnel

Department of **Environmental Protection** 346 Broadway, Room 831 New York, NY 10013

EOE M/F

NYC residency required within 90 days of appointment.

IMMUNOHEMATOLOGIST-Scientist with experience in the study of the molecular aspects of T-suppressor cell-mediated immune regulation in autoim-mune disease of both humans and the analogous murine models. Extensive expertise in the study of immunologic suppressor mechanisms as they relate to neoplastic and autoimmune disease. Will publish in academic journals with national or international circulation. Ph.D. with specialty in immunology. Two years of postdoctoral training in serologic techniques relating to detection of suppression factors, serum-free culture techniques and ion-exchange chromatography. Training in protein chemistry, in immunological techniques, in fusion (hy-bridoma) technology, in tissue culture, and in animal handling are required. Salary: \$50,000 per year. Job location and interview: La Jolla, California. Send this ad and a résumé to: Job #CM3795, P.O. Box 9560, Sacramento, CA 95823-0560 not later than 3 June 1989.

INSECT NEUROBIOLOGIST. Full-time tenuretrack appointment at the rank of assistant professor. We seek candidates having research interests in areas such as: integrative functions of the insect CNS, neuroendocrine mechanisms, neurogenetics, neurodevelopment, neuron physiology and pharmacology. Appointee will teach an undergraduate course in general insect physiology and conduct graduate seminars. Applicants should have a Ph.D. and should demonstrate outstanding potential for research and teaching. Applications should include the following: (i) Curriculum vitae, academic transcripts and evidence of teaching skills and experience; (ii) bibliography and selected reprints or manuscripts; (iii) statement of research objectives and approaches proposed; (iv) names and addresses of at least three people who can provide recommendations. Submit all materials by 1 August 1989 to: D. L. Wood, Chairman, Department of Entomological Sciences, 201 Wellman Hall, University of California, Berkeley, CA 94720. The University of California is an Equal Opportunity/Affirmative Action Employer.

INSTRUCTOR/ASSISTANT PROFESSOR MOLECULAR BIOLOGY: XENOBIOTIC METABOLISM VANDERBILT UNIVERSITY

The Center for Clinical Pharmacology, Departments of Medicine and Pharmacology, Vanderbilt University, has a tenure-track opening at the instructor or assistant professor level for an individual with training and re-search interest in molecular biology, especially as applied to the regulation of xenobiotic metabolism.

The Center seeks an individual to complement existing research activities within the Departments as well as in the Center for Molecular Toxicology. Applicants should possess a background or training in molecular biology; an M.D. and/or Ph.D. in pharmacology, toxicology, biochemistry, or a related discipline; and demonstrated excellence in research. The appointee will be expected to establish and support an active independent research program that utilizes modern molecular and cellular approaches, as well as to effectively collaborate with other faculty in these areas.

Applications, including curriculum vitae, a letter stating research interests, and names of three references should be sent to: G. R. Wilkinson, Department of Pharmacology, Vanderbilt University, Nashville, TN 37232-6602.

Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.

COLUMBIA UNIVERSITY DEPARTMENT OF ANATOMY AND CELL BIOLOGY

JUNIOR FACULTY MEMBER to participate in 5-HT receptor subtypes. Experience with one or more of the following is desirable: molecular biology, EM, immunocytochemistry and ligand binding techniques for the study of receptors. Send curriculum vitae, statement of research goals, and names of three professional refer-ences to: Michael D. Gershon, Department of Anatomy and Cell Biology, College of Physicians and Surgeons of Columbia University, 630 West 168th Street, New York, NY 10032. Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

MAURY W. BRONSTEIN **PROFESSOR OF PHYSIOLOGY**

An endowed tenure-track professorship in cardiovas cular physiology or other closely related areas is available in the Department of Physiology and Biophysics at The in the Department of Physiology and Biophysics at The University of Tennessee, Memphis. Candidates should have a Ph.D. or M.D. degree, an excellent history of research funding, a well-funded research program, and a strong research background in cellular aspects of cardio-vascular physiology or other related areas. The Maury W. Bronstein Professor will be expected to contribute signif-icantly to the development of the cardiovascular research programs within the department and the University programs within the department and the University. Demonstrated ability to engage in teaching activities of the department are expected. Funding for this position will be through an endowed professorship. Nominations and applications are invited. Applicants should send curriculum vitae, copies of three representative publica tions and the names of three references to: Dr. Leonard R. Johnson, Thomas A. Gerwin Professor of Physiology and Chairman, Department of Physiology and Biophysics, University of Tennessee, 894 Union Ave-nue, Memphis, TN 38163. An Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.

MEDICAL PHYSIOLOGIST MEDICAL PHISIOLOGIST INDIANA UNIVERSITY SCHOOL OF MEDICINE MUNCIE CENTER FOR MEDICAL EDUCATION AT BALL STATE UNIVERSITY MUNCIE, INDIANA

Applications are being invited for a Ball State Univer sity tenure-track position in the area of medical physiolo-gy. The successful applicant will participate in team gy. The successful applicant will participate in team teaching medical physiology to first-year medical stu-dents and be expected to develop an active research program supported by outside funding. Minimum quali-fications: Earned doctorate; experience in university level setting; postdoctoral experience with proven research capability and publications. Preferred qualifications: Proven teaching ability; at least 2 years of postdoctoral research with publications and presentations at profes-sional meetings. Salary will be commensurate with expe-rience. Review of applications will begin 30 June 1989 and continue until the position is filled. Send curriculum vitae, graduate school transcripts, a brief summary of research experience and interests, and names of three or research experience and interests, and names of three or more references to: Dr. Douglas A. Triplett, Director, Muncie Center for Medical Education, Ball State University, Muncie, IN 47306. Ball State University Practices Equal Opportunity in Educa-

tion and Employment.

MICROBIOLOGIST

The search to fill a tenure-track ENDOWED AS-SISTANT PROFESSORSHIP OF BIOLOGICAL SCIENCES has been reopened. Preference will be given to individuals whose research interests and experience involve molecular biology. The successful candidate will be expected to develop a research program that will merit extramural funding and teach both undergraduate and predoctoral graduate students. Submit curriculum vitae, description of research plans, and the names of three references by 1 July 1989 to: Chairman, Microbiologist Search Committee, Department of Biological Sci-ences, Southern Methodist University, Dallas, TX 75275. SMU is an Equal Opportunity/Affirmative Action/ Title IX Employer.

FOUR POSTDOCTORAL FELLOW positions are open in the Department of Physiology and Cell Biology of the University of Texas Medical School at Houston for qualified individuals interested in pursuing research in the cellular and molecular biology of membrane transport processes. Interested parties should for-ward curriculum vitae and bibliography to:

Dr. Stanley G. Schultz Professor and Chairman Department of Physiology and Cell Biology University of Texas Medical School P.O. Box 20708 Houston, TX 77225

The University of Texas is an Equal Opportunity Employ-Women and minorities are encouraged to apply.

POSITIONS OPEN

MOLECULAR BIOLOGIST/ MICROBIOLOGIST

The Department of Agriculture, Agricultural Research Service is seeking a molecular biologist/microbiologist to conduct research on calicivirus. The position is located at the National Animal Disease Center, Ames, Iowa, and is a permanent, full-time appointment. Primary responsi-bilities are to characterize the viral genome in regard to bilities are to characterize the viral genome in regard to coding sequences for immunogenic proteins and host predilection. A Ph.D. degree is desirable. U.S. eitizenship is required. Salary is commensurate with experience (\$28,852 to \$44,957). For information on the research program and/or position, contact: Dr. W. L. Mengeling at 515-239-8254. For information on application pro-cedures/forms, contact: Janie Carr at 301-344-2756. Applications in response to this ad should be marked "9N020." Applications must be received no later than 2 June 1989. Mail applications to: Janie Carr, USDA-ARS, Personnel Division, Personnel Operations Branch, Building 419, BARC-East, Beltsville, MD 20705. Equal Opportunity Employer. 20705. Equal Opportunity Employer.

POSTDOCTORAL ASSOCIATE IN MONTANE ECOLOGY DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY UNIVERSITY OF ARIZONA

This postdoctoral position involves participation in the design and implementation of a research program in montane ecology and population biology, with opportu-nities for independent research as well. We are seeking someone with extensive experience in field ecology. Experience in montane environments is desirable, but not required. Salary will be in the range of \$18,000 to \$22,000, and the position may continue for several years. The appointment will be made as soon as possible, but must be made by fall 1989. Applicants should submit curriculum vitae, reprints or preprints, and at least three letters of recommendation to: Dr. Russell Davis, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ 85721. Telephone: 602-621-1062 or 602-621-1588. Deadline for appli-

cations is 15 June 1989, or until the position is filled. The University of Arizona is an Equal Opportunity/Affir-mative Action Employer.

POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE GENE EXPRESSION/ TRANSCRIPTION FACTORS

The Laboratory of Molecular Endocrinology at the Massachusetts General Hospital seeks a postdoctoral fellow or research associate to work on the regulation of polypeptide hormone genes. Previous experience in mopolypeptide normone genes. Frevious experience in mo-lecular biology is required. The laboratory is focused on studies of the cis and trans factors that lend cAMP-mediated and cell-specific expression to polypeptide hor-mone genes. A microchemical facility for protein se-quencing-synthesis and DNA synthesis is available. Sala-ry and rank are commensurate with experience. Send unrighten vites and two latters of recommendation to: Ly and TAUK are commensurate with experience. Send curriculum vitae and two letters of recommendation to: J. Habener, Chief, Laboratory of Molecular Endocri-nology, Massachusetts General Hospital, Boston, MA 02114.

POSTDOCTORAL FELLOW to investigate expression of membrane proteins in normal and injured endothelium. Recent Ph.D. with good protein biochem-istry background. Salary from \$24,000. Curriculum vitae and two letters of reference (by 2 June 1989) to: C. N. Gillis, Ph.D., Department of Pharmacology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510. Yale is an Affirmative Action/ Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP available 1 July 1989 to study pathogenesis of human immunodefi-ciency infection by in situ hybridization techniques. Send Curriculum vitae and names and addresses of three refer-ences to: Ashley T. Haase, M.D., Professor and Head, Department of Microbiology, University of Minneso-ta Medical School, Box 196 UMHC, Minneapolis, MN 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

NEW ENGLAND BIOLABS EXPANSION

New England Biolabs, Inc., a pioneer and leader in biotechnology, located twenty miles north of Boston near the ocean has begun a major expansion of its research facilities. In addition to competitive salary, NEB offers a very generous fringe benefits package and profit sharing. Attendance at meetings, publication of research results and open communication with others are encouraged. The following positions are available immediately.

Staff Scientist:

Gene Cloning in Streptomyces — Ph.D. with a strong background in recombinant DNA techniques to work on projects involving cloning, over-production and mutagenesis of restriction-modification systems in Streptomyces.

Postdoctoral Positions:

1. Gene Cloning

The candidate should have training in biochemistry/enzymology, molecular biology, or microbiology. Projects involve the cloning, characterization and mutagenesis of restrictionmodification systems.

2. Molecular Parasitology

The parasitology group at New England Biolabs, Inc. is studying the major filarial diseases. Candidate should have experience in molecular biology and/or immunology. Projects will involve the cloning and characterization of filarial antigens.

Molecular Biologist:

Restriction endonuclease purification, requires B.S. or M.S. experience in protein purification. Strong background in molecular biology with emphasis on cloning techniques. Experience with HPLC would be helpful.

Candidates please submit curriculum vitae with three references to:

New England Biolabs, Inc. Human Resources 32 Tozer Road Beverly, MA 01915 NEW ENGLAND



FACULTY OF MEDICINE AND HEALTH SCIENCE UNITED ARAB EMIRATES UNIVERSITY

The Faculty of Medicine and Health Sciences is now in its third year of operation having accepted its first class of medical students in September 1988 following two years of premedical study. The Faculty of Medicine utilizes two affiliated hospitals in Al Ain, Tawam Hospital and Al Ain Hospital, with a total of 1050 beds. Currently housed in temporary facilities, it is in the process of finalizing plans for the construction of a teaching and research facility of international stature to be completed in 1991. The language of instruction is English.

Applications are invited from highly committed professionals wishing to hold leadership positions:

Professor and Chairman

Biochemistry Community Medicine Islamic Medicine Medical Education Obstetrics and Gynaecology Pathology Pharmacology Physiology Psychiatry and Behavioural Sciences Radiology

Candidates must possess a medical degree and/or PhD degree or an equivalent higher professional degree from an accredited university or institution of higher learning: or any higher professional certificate such as membership or fellowship of one of the Royal Colleges of the UK, Ireland, Canada, Australia and New Zealand (MRCP, FRCS, MRC Path, MRC Psych, FFARCS, MRCOG, FRCR) or the certificate of the American Board or the Arab Board for Medical Specializations.

Candidates for these positions must be able to demonstrate leadership experience in the development of teaching, research and, where appropriate, clinical service programmes.

Persons interested in additional information should send a curriculum vitae including a list of publications, copies of certificates and the names of three current referees to:

Dr. Bashir Hamad Dean Faculty of Medicine and Health Sciences UAE University PO Box 15551 Al Ain Abu Dhabi United Arab Emirates

Fax No: 971 3 638247

Applications should be received within one month following publication date. All positions will remain open until filled.

RESEARCH SCIENTISTS Radiation Oncology Dept.

Research positions available for studies in vascular biology & cancer research. Qualified applicants should possess a Ph.D. in Biological Sciences. Experience in biochemical/molecular biological/tissue culture/ microscopy-imaging methods is highly desirable.

Send CV's to: Susan Miller Radiation Oncology Dept.

Medical Center New Hyde Park, NY 11042

Long Island Jewish

an equal opportunity employer



PIONEER HI-BRED INTERNATIONAL, INC. Plant Breeding Division

Pioneer Hi-Bred International, Inc. — a worldwide leader in the supply of genetically improved agricultural products — is seeking a manager for the company's European biotechnology program.

The successful applicant will be expected to lead an independent research effort in the area of crop improvement with particular emphasis on transformation systems.

This is a permanent position that will be located at the University of Leiden, Netherlands, for the first two years. The research program will collaborate with ongoing research activities in transformation, expression, and gene isolation being conducted at the company's Biotechnology Research Department near Des Moines, Iowa.

In addition, the manager will be expected to interact with the European operations of Pioneer Hi-Bred to develop a strategy for implementing appropriate research programs in biotechnology.

Candidates should have a Ph.D. or equivalent with a minimum of three years' experience in Plant Cellular or Molecular Biology or related field. Excellent communications skills are essential.

Applicants should submit a CV and the names of three references to Mary Baker, Pioneer Hi-Bred International, Inc., Department of Biotechnology Research, 7300 Northwest 62nd Avenue, Johnston, Iowa 50131.

Pioneer Hi-Bred International, Inc. is an Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF ROCHESTER ASSISTANT OR ASSOCIATE PROFESSOR IN NEUROBIOLOGY AND ANATOMY

Applications are invited from individuals with experience in primatology and behavioral studies on learning, memory and motor performance in mammals. Applicants must hold a Ph.D. or equivalent degree. This position involves participation with other faculty in multidisciplinary studies examining development, plasticity, regeneration, and recovery of function in the injured CNS. Participation in one of the department's educational programs is expected. Applications, including curriculum vita, up to five representative reprints, and the names of three references should be submitted to: Professor Don M. Gash, Primate Transplantation Program, Department of Neurobiology and Anatomy, University of Rochester School of Medicine, Box 603, Rochester, New York 14642.

Affirmative Action/Equal Opportunity Employer

ONCOGEN

ONCOGEN, a division of Bristol-Myers and a leader in Biotechnology, performs research dedicated to pursuing novel approaches to the development of therapeutic products in the area of Immunology, Infectious Diseases and Cancer.

BIOCHEMIST

We wish to expand our research efforts utilizing monoclonal antibody-enzyme conjugates for the activation of anticancer drug derivatives. We seek candidates with experience in Enzymology and Protein Chemistry.

Qualifications: Ph.D. with postdoctoral experience. Please reference ad #023.

SCIENTIST

A position is available immediately for a Scientist in the Growth Regulators group involving isolation and characterization of novel biological response modifiers, investigation of mechanism of action in growth and differentiation modulating molecules, and designing growth and metastasis modulating synthetic peptides and non-peptide molecules.

Qualifications: Ph.D. in Biochemistry, Cell Biology, Molecular Biology or related field with at least two years' experience in growth regulation and differentiation. Please reference ad #025.

POSTDOCTORAL POSITIONS

Assignments available in Growth Regulators, Biochemistry, Cell Biology, Molecular Biology and Immunology.

ONCOGEN offers a creative work environment, competitive salaries and an excellent benefit package. Qualified applicants please submit resume to: D. Stephens, ONCOGEN, 3005 First Avenue, Seattle, WA 98121. EOE/AAP. The leader in revolutionary technology of DNA fingerprinting, ICI Diagnostics, is expanding its Central Technical Services (CTS) group to provide international support for its Cellmark Diagnostics business. CTS will develop new methods for DNA analysis in Forensics and Paternity, do late-stage development of new technologies/tests and provide technical support for all aspects of the service business.

CTS GROUP LEADER

PhD in Genetics/Molecular Biology with laboratorybased supervisory experience involving substantial use of molecular biological methods, preferably in R&D. Ability to use scientific skills to solve practical problems in a commercial environment is essential.

CTS SCIENTIST

BS or MS in Genetics/Molecular Biology with 2-5 years experience of employment in molecular biology laboratory, preferably in a commercial environment.

Salary commensurate with experience and ability. Excellent benefits package, location and growth potential. Send resume with salary history to: **Director of Personnel**

CELLMARK DIAGNOSTICS

P.O. Box 1000 Germantown, MD 20874

Equal Opportunity Employer

Emery Chemicals, a group within Henkel Corporation, one of the world's leading specialty chemical manufacturers has the following openings:

Emery Group

Henkel

The Biotechnology Group at Emery is responsible for developing this new area of technology for the production of specialty chemicals. The team charged with carrying out this research is comprised of individuals with a wide diversity of backgrounds and interests. There currently are two openings for Senior Research positions on this team. These individuals will be expected to both initiate research projects and use their expertise to support the projects of the other team members. Previous research experience with commercial product development will be viewed positively.

ORGANIC CHEMIST (Dept. E-2)

The candidate must have a Ph.D. in Organic Chemistry with postdoctoral or industrial experience preferred. Experience in isolation, characterization, identification and synthesis of organic structures is necessary. This would require a working knowledge of a wide range of the following techniques: chromatography, spectroscopy and synthetic methods. Additional experience in natural products, biochemistry and fermentation technology would be considered positive. Good written and oral communication skills are necessary.

MOLECULAR BIOLOGIST (Dept. E-7)

The candidate must have a Ph.D. in Molecular Biology or other closely related field. Experience with the manipulation of fungal and yeast genetics is necessary and a wide range of technical skills is expected. Industrial experience, particularly with development of organisms for the production of bulk or specialty chemicals is preferred. Good written and oral communication skills are necessary.

The Analytical Research Group is responsible for the development of state-of-the-art technology for the analysis of a wide range of organic chemical products, primarily oleochemicals. This group operates and maintains a facility with a comprehensive array of analytical instrumentation, including high-field NMR, high-resolution GC-MS and GC-FT/IR.

SEPARATIONS SPECIALIST (MS, Ph.D.) (Dept. E-11)

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We are looking for a person with experience in the separation of complex organic mixtures (primarily oleochemical). HPLC, TLC, preparative scale chromatography, ion exchange and GPC skills are required. This is a "hands-on" job, so the individual should have good mechanical aptitude and experience with computerized data handling. Experience in industrial analytical method development would be a plus. Good written and oral communication skills are necessary.

The Aroma Chemicals Group is involved in all aspects of delivering new aroma chemicals into the hands of perfumers. This includes the design, analysis, and commercialization of new unique materials to be used in the fragrance industry.

LAB TECHNICIAN (Dept. E-10)

The Aroma Chemicals Group at Emery has an immediate need for a Lab Technician. To qualify for this position, you should have an Associate's Degree in Chemistry or Chemical Technology plus two years of industrial chemical lab experience. It would be considered an asset, but not required, to have worked in a synthetic organic lab. Good written and oral communication skills are necessary.



Emery Group

Interested candidates should send resume including salary history and current requirements to: Placement Manager, Dept. (please include Dept. listed after appropriate job title).

HENKEL CORPORATION Emery Group 11501 Northlake Drive Cincinnati, OH 45249

An Equal Opportunity Employer

DEPARTMENT OF BIOLOGY McGILL UNIVERSITY POSTDOCTORAL FELLOWSHIPS

Stipends commensurate with experience. Faculty members and their research interests are

Howard Bussey: molecular biology of the yeast cell surface; targeting and function of processing proteases in the secretory pathway; analysis of genes involved in cell wall glucan synthesis.

Ronald Chase and Gerald Pollack: morphological plasticity of identified neurons of invertebrates. Rajinder Dhindsa: molecular biology of freezing tolerance of plants.

Jacob Kalff, Robert Peters and Joseph Rasmussen: comparative limnology; aquatic ecology; contaminants;

William Morgan: protein-DNA interactions in tran-scriptional regulation of mammalian heat shock genes.

ogy of ion channels in plant cell membranes. Hugh Tyson: biosynthesis of flax isoperoxidases; clon-

ing/sequencing their genes from flax genotrophs.

Curriculum vitae and names of three references should be forwarded to the faculty member(s) one is interested in working with. Address: Department of Biology, McGill University, 1205 Dr. Penfield Avenue, Mon-treal, Quebec, Canada H3A 1B1.

POSTDOCTORAL POSITIONS

are available to study Ca2+- and cAMP-mediated signaltransduction mechanisms involved in the regulation of ion transport in epithelial tissues. Successful applicants ion transport in epithelial tissues. Successful applicants will join a multidisciplinary research program applying electrophysiological, biochemical, and molecular tech-niques to identify the regulatory reactions responsible for impaired chloride and sodium transport in cystic fibrosis. Individuals with an M.D. or Ph.D. in physiology, bio-chemistry, cell biology or a related discipline are invited to submit their curriculum vitae to: Dr. R. A. Frizzell, Department of Physiology and Biophysics, University of Alabama at Birmingham, Birmingham, AL 35294. UAB is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately for a recent Ph.D. in biochemistry with experience in molecular biology and immunochemical techniques. Projects involve studies on biochemical and functional interactions between the cAMP and Ca signaling systems in the iris smooth muscle. Salary is negotiable. Please send curriculum vitae and names and addresses of three references to: Dr. Ata Abdel-Latif, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, GA 30912-2100. Equal Opportunity Employer/ Affirmative Action Program.

BIOSEM (Groupe LIMAGRAIN) Molecular and Cellular Laboratory located on the University campus of Clermont-Ferrand (France) POSTDOCTORAL POSI-TION. Available immediately. Duration: 2 years. Application invited for a postdoctoral fellowship in plant molecular biology. Applicants must also have strong experience in plant tissue culture. Send curriculum vitae and references as soon as possible to: Groupe LIMA-GRAIN, Département du Personnel, BP 1, Chappes, 63720 ENNEZAT (France).

POSTDOCTORAL POSITION: Starting 1 July 1989, or later, for a recent Ph.D. or M.D. to participate in studies of the mechanism of insulin action in diabetes-prone humans. Expertise in oligonucleotide probe de-sign, cDNA library construction and screening, DNA sequencing, restriction mapping, and subcloning is es-sential. Send curriculum vitae and names, addresses, and telephone numbers of three references to: Dr. C. Bogar dus, National Institutes of Health, 4212 North 16 Street, Room 541, Phoenix, AZ 85016.

POSTDOCTORAL POSITION available immediately to study cross-talk between second messenger systems and nicotinic acetylcholine receptor signal transduction. Ph.D. in biochemistry or cell biology preferred. Send curriculum vitae to: Drs. Adrienne Gordon or Daria Mochly-Rosen, University of California, San Francisco General Hospital, Building 1, Room 101, San Francisco, CA 94110. Telephone: 415-476-2858. The University of California is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study the biochemistry of protein isoprenylation. This is a newly discovered post-translational modification that occurs in human cells. The candidate should have experience in the isolation of proteins and prefera-bly some synthetic organic skills. Send curriculum vitae and two references to either: **Dr. Michael H. Gelb or** Dr. John A. Glomset, Department of Biochemistry, University of Washington, Seattle, WA 98195.

POSTDOCTORAL POSITION, REGULA-TORY TOXICOLOGY. Scientist to participate in the design and evaluation of studies examining the safety of exogeneous materials, including pesticide residues and endogeneous substances in foods. Applicants with training in toxicology and analytical chemistry should send a résumé to: Dr. H. B. Chin, National Food Processors Association, 6363 Clark Avenue, Dublin, CA 94568. Two-year appointment with possible extension

POSTDOCTORAL POSITIONS-SCRAPIE PRION PROTEIN GENE EXPRESSION AND STRUCTURE—Interdisciplinary training in the expression of cloned prion protein (PrP) genes in eukary-otic cells and post-translational modifications of the scrapie and cellular PrP's. Construction of recombinant PrP[^] genes and their expression in cultured cells and transgenic rodents provide an unusual opportunity to merge molecular biology and neurodegenerative disease research. Structural studies on PrP CHO and glycolipids using HPLC, GC/MS, LSIMS and tandem mass spectrometry. Crystallization and x-ray structure of PrP's planned. Candidates with molecular biology, protein planned. Candidates with molecular biology, protein purification, genetics, physical biochemistry, organic chemistry, enzymology, mass spectrometry, CHO or protein structure are encouraged to apply. Must be U.S. citizen or hold a permanent residence visa for NIH training stipends (\$17,000-\$30,000). Send curriculum vitae, copies of papers, and three letters of recommendation to: Stanley Prusiner, University of California, San Francisco, San Francisco, CA 94143–0518. An Afirmative Action/Equal Opportunity Employer.



Ottawa Civic Hospital

The Ottawa Civic Hospital is a 922-bed tertiary health care facility, dedicated to the provision of quality patient care in an atmosphere of academic and research excellence. The Loeb Institute for Medical Research is a

research centre of the Ottawa Civic Hospital with integrated thematic research foci in reproductive biology, endocrinology and neurobiology. A position is now available for a:

IVF Scientist

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The candidate is expected to conduct an independent peerreview funded research program as well as to participate in and be responsible for the activities of an ongoing human IVF-ET program. The person should possess a doctorate degree and post-graduate training in biomedical/biophysical sciences. Experience in the area of embryology, gamete biology, immunology, molecular biology, cryopreservation or with transgenic animals will be an asset. The candidate will be eligible for a faculty appointment in the Department of Obstetrics and Gynaecology and cross-appointment in an appropriate basic science department at the University of Ottawa. Rank and salary commensurate with qualifications.

Curriculum vitae and a letter of application should be sent by August 16, 1989 to: Dr. Ben Tsang, Director, Reproductive Biology Unit, Department of Obstetrics and Gynaecology, Loeb Institute for Medical Research, Ottawa Civic Hospital, 1053 Carling Avenue, Ottawa, Ontario, Canada K1Y 4E9. Fax # (613) 725-2902/Tel # (613) 7610-4081





We have an immediate need for a Research Biologist to become part of our innovative tumor biology group. This position provides an opportunity to do fundamental research on the biochemical and cell biological basis of tumor metastases with an ultimate goal to identify novel antimetastatic agents. The applicant should have a Ph.D. in biological sciences with 1-2 years of post doctoral ex-perience in tumor metastasis research. The ability of the applicant to work independently as demonstrated by publication records and to work well as part of a group is essential

Merrell Dow Research Institute is located in suburban Cincinnati. We offer excellent compensation, comprehensive benefits and relocation assistance. If you are interested in fundamental research and would like to work for a rapidly growing research institute, please send your curriculum vitae with names of three references to:

Merrell Dow

Personnel Services Manager Refer to Job Code SPS

MERRELL DOW RESEARCH INSTITUTE 2110 East Galbraith Road Cincinnati, OH 45215 Equal Opportunity Employer M/F/H/V

Resources

ere, a dedicated team is researching exciting new drug and drug delivery systems that promise solutions to a wide range of medical problems, from the common cold to brain cancer. Our renowned team of researchers is supported by collaborative agreements with major universities and by consulting scientists that include three Nobel Laureates (Chemistry and Medicine). Nova hasn't forgotten its human resources either. We've declared 1989 "the year of the people" by committing ourselves to increasing their potential through training and development the maintenance of scientific standards and regular and consistent recognition of our exceptional employees.

Immunologist

We are looking for a mature, professional researcher, wellgrounded in cellular and humeral immune responses, to assess potential therapeutic agents in whole animal model of autoimmune diseases and screen agents in vitro. The ideal candidate should possess 2-4 years' postdoctoral research experience, either in an academic laboratory dealing with immune response in whole animals, or with an industrial taboratory dealing with the assessment of potential therapeutic agents in rodent models of rheumatoid arthritis and related autoimmune diseases.

Nova provides a competitive salary and benefits package including relocation. For immediate consideration, ple send your CV and letter of application to: Personnel-RA/LS; Nova Pharmaceutical Corp., 6200 Freeport Centre, Baltimore, MD 21224-2788. We are an Equal Opportunity Employer offering a smoke-free work environment.



POSTDOCTORAL POSITION available immediately in molecular/radiation biology to study the mechanisms of radiation and heat effect on gene expressions in melanoma and breast tumor cells. Experience in molecular biology and in identification of growth factors highly desirable. Send curriculum vitae, copies of representative publications, and names of three references, to: Dr. P. S. Lin, Department of Radiation Oncology, Medical College of Virginia, MCV Station Box 58, Richmond, VA 23298–0058. VCU/MCV is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITION IN BIO-CHEMICAL PHARMACOLOGY for recent Ph.D. interested in the biochemical modulation of anticancer drug activity. Research in the use of nucleoside transport inhibitors to increase the selectivity of antimetabolites against human tumors growing in culture or as xenografts in mice. [J. Biol. Chem. 263, 19419 (1989)] Salary \$22,000 to \$25,000. Send curriculum vitae and names of four referees to: Judith A. Belt, Ph.D., Department of Biochemical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, P.O. Box 318, Memphis, TN 38101. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS

In molecular biology, Cornell University Medical Center, New York. To study the regulation of renin-angiotensin gene expression and to study restriction fragment length polymorphism in hypertension. Recent M.D. or Ph.D., either with experience in techniques of molecular biology (molecular cloning, DNA sequencing, site specific mutagenesis, cell transfection) or willing to learn these techniques. Salary \$20,000 to \$30,000 per year. Send curriculum vitae and names of three references to: Dr. Ashok Kumar, Cardiovascular Center, Cornell University Medical Center, 525 East 68 Street, New York, NY 10021.

POSTDOCTORAL POSITIONS available immediately to study the molecular biology of autoimmunity. Research projects involve genetic regulation, gene cloning, HPLC, receptor antagonists and basic cellular immunology. Applicants should have a background in molecular biology and immunology. Send curriculum vitae and the names of three references to: Bruce Richardson, M.D., Ph.D., Department of Internal Medicine, University of Michigan, R4550 Kresge I, Box 0531, Ann Arbor, MI 48109–0531.

POSTDOCTORAL RESEARCH ASSOCIATE position is available starting 1 July 1989 for a person with background in biochemical, cellular and/or molecular biology to work on Na⁺, K⁺-ATPase regulation in the cardiovascular system. Previous experience in the area of Na⁺, K⁺-ATPase is desirable but not essential. Starting date is flexible. Send curriculum vitae with names and telephone numbers of three references to: Dr. E. Songu-Mize, Department of Pharmacology, The University of Tennessee, Memphis, The Health Science Center, Memphis, TN 38163. Telephone: 901-528-6000. The University of Tennessee is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE POPULATION ECOLOGY/ CONSERVATION BIOLOGY

Two-year postdoctoral position available to conduct research on population dynamics and population viability of the endangered red-cockaded woodpecker. The investigator will analyze long-term data of woodpecker fecundity, survivorship, and genetic variation to develop population viability assessments involving modeling population viability assessments involving modeling population persistence in relation to demographic, environmental and genetic variability. The ideal candidate will have demonstrated research capability in population modeling and the skills and inclination to communicate effectively with faculty and students in diverse departments as well as conservation managers. Starting salary is \$28,852 and applicants must be available no later than 1 October 1989. Applications will be accepted until 1 July 1989. USDA Forest Service is an Equal Opportunity Employer. Women and minorities are encouraged to apply. Send curriculum vitae and the names of three references to: M. R. Lennartz, USDA Forest Service, Department of Forestry, Clemson University, Clemson, SC 29634–1003.

POSITIONS OPEN

TWO POSTDOCTORAL POSITIONS

Opportunities exist for Ph.D. graduates with experience in plant molecular biology and transformation techniques or enzymology to join a mission-oriented research program with Vipont Research Laboratories (Canada) Inc. The project goals relate to the modification of plant secondary metabolite biosynthesis. One position involves the isolation and purification of pathway enzymes and gene isolation and the other focuses on the development of transformation techniques and selection protocols. Experience in plant cell culture and in vitro techniques is desirable. Send curriculum vitae and the addresses and telephone numbers of three references to: Dr. Kenneth Giles, Vipont Research Laboratories, c/o Plant Biotechnology Institute, 110 Gymnasium Road, Saskatoon, Saskatchewan, Canada S7N 0W9.

POSTDOCTORAL/RESEARCH ASSOCIATE: Position available to study the structure and function of the human immunodeficiency virus (HIV) genome, with emphasis on the mechanism of fusion and effects of HIV infection on cellular gene expression. Applicants should have a Ph.D. or equivalent and a strong background in virology and molecular biology. Experience in membrane biology is helpful. Send curriculum vitae and three letters of reference to: Dr. D. J. Volsky, Molecular Virology Laboratory, St. Luke's/Roosevelt Hospital Center and College of Physicians and Surgeons, Columbia University, 432 West 58th Street, New York, NY 10019.

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE, Ph.D. or M.D., (nontenure-track) in cancer biology to conduct research on oncogene expression and growth factors in breast cancer. Available immediately. Contact: Dr. David Kiang, Box 168 UMHC, University of Minnesota, Minneapolis, MN 55455 by 31 July 1989, or call: 612-624-6982. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

RESEARCH POLYMER SCIENTIST for Pennsylvania-based polymer manufacturer. To initiate and conduct research, characterization, synthesis, and modification of liquid and solid materials for polymer development and improvement of analytical techniques used in polymer product production; develop formulas, processes, techniques and methods for solution of technical problems as they relate to product production and performance; analyze structures and components of polymers to determine their chemical and physical properties utilizing spectroscopy techniques such as high field solid state Cross Polarization/Magic Angle Spinning (CP/ MAS), nuclear magnetic resonance (NMR), two-dimen-sional NMR, and Fourier-transform infrared spectroscopy (FTIR); thermal analysis techniques such as thermal gravi metric analysis (TGA), thermal mechanical analysis (TMA), and differential scanning calorimetry (DSC); me-chanical and dynamic mechanical techniques such as stressstrain, impact strength measurements, dynamic mechanical thermal analysis (DMTA) and highly sensitive rheological measurement (using the rheometer); and the morphology study techniques such as scanning electron microscopy (SEM); conduct research on fiber-reinforced thermoset and thermoplastic composites, rubbers, polyurethane, and ceramics, and interaction of these materials with other materials; perform research using high field nuclear mag-netic resonance spectroscopy imaging and in the character-

The resonance spectroscopy integrated in the characterization of solid polymer samples. Requires Ph.D. in polymer physics with a thesis in the general field of polymer structure and molecular dynamics using solid state NMR and the rheometer and 3 years of experience as a graduate/research assistant performing research of polymers for applied and original projects; developing and utilizing techniques for use of instruments involved in research, maintaining instruments and modifying instruments; drafting reports; utilizing high field solid state CP/MAS, NMR, two-dimensional NMR, FTIR, DSC, DMTA, and highly sensitive rheological measurement using the rheometer. Forty hours per week. Monday to Friday, 8:00 a.m. to 4:30 p.m. Salary of \$36,000 per year. Qualified applicants immediately send résumé to: John DeVine, Job Service, 135 Franklin Avenue, Scranton, PA 18503. Refer to Job Order No. PA3877111.

POSITIONS OPEN

PRESIDENT THE ROCKEFELLER UNIVERSITY

Applications are invited for the position of President, The Rockefeller University. An individual of international renown and outstanding scientific accomplishment is sought. Extensive management and administrative experience is preferred. Applications and inquiries should be addressed to: The Search Committee, The Rockefeller University, 1230 York Avenue, New York, NY 10021.

The Rockefeller University is an Equal Opportunity/Affirmative Action Employer and does not discriminate in any of its employment policies or practices on the basis of race, color, religion, sex, national origin, handicap or status as a veteran.

PROFESSOR OF PHYSIOLOGY

A tenure-track position at the rank of professor is available in the Department of Physiology and Biophysics at The University of Tennessee, Memphis. Candidates should have a Ph.D. or M.D. degree, a well-funded research program, and a strong research interest in developmental physiology related to the gastrointestinal tract. Demonstrated ability to engage in teaching activities of the department are expected. Applicants should send curriculum vitae, copies of three representative publications and the names of three references to: Dr. Leonard R. Johnson, Thomas A. Gerwin Professor of Physiology and Chairman, Department of Physiology and Biophysics, University of Tennessee, 894 Union Avenue, Memphis, TN 38163. An Equal Opportunity/ Affirmative Action Employer. Minorities and women are encouraged to apply.

RESEARCH ASSISTANT PROFESSOR, MO-LECULAR PHARMACOLOGY RESEARCH, 40 hours, \$25,000 per year. Will conduct research on the central nervous system, using biochemical and advanced electrophysiological techniques to unveil the mechanism of action of agents which may be useful in the treatment of Alzheimer's disease or dementia. Studies will also involve determining the mechanism of action of organophosphorus and insecticidal agents, and development of prophylactic and therapeutic approaches. Ph.D. degree in biochemistry with specialization in pharmacologia clat techniques with specific interest and experience in the field of cholinergic pharmacology including the nicotinic acetylcholine receptor. Also expertise and experience in behavioral studies on animals (behavioral pharmacology) required. In addition, knowledge and experience in electrophysiological techniques are required. Job location: Baltimore, Maryland. Send résumé to: Maryland D.E.E.D., 1100 North Eutaw Street, Room 212, Baltimore, MD 21201. Job order no. 7078272. Must provide evidence of legal right to be employed in the United States. Afirmative Action/Equal Opportunity Employer.

RESEARCH ASSOCIATE. Position available to investigate the uptake of organic cations by mitochondria and the resulting inhibition of electron transport. Ph.D. required and familiarity with mitochondrial preparations and physical organic chemistry and/or biophysics desirable. Position open immediately. \$18,000 per year. Send curriculum vitae and names and addresses of references to: Dr. B. C. Pressman, Department of Pharmacology R189, University of Miami School of Medicine, P.O. Box 016189, Miami, FL 33101. Deadline: 15 June 1989. Equal Opportunity/Affirmative Action Employer.

Need one RESEARCH ASSOCIATE to perform studies on maternal drug abuse and neurochemical development of offspring. Contact: Dr. Theodore A. Slotkin, Department of Pharmacology, Box 3813, Duke University Medical Center, Durham, NC 27710. Duke University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE: Position available immediately for pharmacologist/biochemist/Ph.D. to study the interaction of exercise and physostigmine on AChE, lactate and pyruvate in blood and tissues. Background in enzyme kinetics and pharmacokinetics desired. Excellent research facilities. Send curriculum vitae by 9 June 1989 to: Dr. Satu M. Somani, Department of Pharmacology, Southern Illinois University School of Medicine, P.O. Box 19230, Springfield, IL 62794–9230. Equal Opportunity Employer/Affirmative Action Employer.

SCIENCE, VOL. 244

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SENIOR BIOCHEMIST Biochemical Regulation Dept.

To join our effort in developing novel approaches to identify mechanisms of and agents useful for treatment of atherosclerosis. A Ph.D. or equivalent in biochemistry or a related field with at least 2 years postdoctoral experience in atherosclerosis-related research and a strong record of research productivity are required. In addition, experience in molecular biology would be desirable. The primary responsibilities will be to design, supervise and actively conduct research involved in lowering plasma cholesterol and/or reducing atherosclerotic plaque formation.

BIOLOGIST

Biochemical Endocrinology Dept.

This position is for a research biologist with a BS/MS or equivalent in the Biological Sciences. The candidate should have some experience in handling small mammals (rats and mice), radioimmunoassays, and metabolic assays in isolated cells.

Merck Sharp and Dohme Research Laboratories is located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. For consideration, send your resume with the names of three references to Dan Hoffman, Merck & Co., Inc. PO. Box 2000, Rahway, New Jersey 07065.

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NATURAL Products Research

Sterling Research Group announces openings for

SENIOR Research Scientists

in the Natural Products Biology Department in Great Valley, PA and Rensselaer, NY

Committed To Scientific Excellence

BIOCHEMIST/MOLECULAR PHARMACOLOGIST:

Successful candidate will manage biochemical (enzyme or receptor binding) assays and data analysis for the evaluation and isolation of pharmacologically active natural products. Responsibilities will also include establishing HPLC with photodiode array, and other analytical and chromatographic methods to support profiling, scale-up, and evaluation of bioactive metabolites from crude mixtures.

This position requires a Ph.D. in Biochemistry, Molecular Pharmacology, or related field, with a strong analytical background, and at least two years postdoctoral experience. Basic microbiology background would be an asset. Experience in characterization of natural products, and interactions with enzyme or receptor targets would be preferred. (GV-68)

MICROBIAL PHYSIOLOGISTS:

Successful candidates will manage shake flask and fermentor culturing of diverse soil microorganisms for characterization and isolation of pharmacologically active secondary metabolites. Responsibilities will also include optimizing active metabolite production in computer controlled bench top fermentors, and establishing HPLC profiling methods, with photodiode array.

This position requires a Ph.D. in Microbiology, Biochemistry, or related field, with a strong background in soil microbiology, emphasizing microbial biosynthesis, metabolic regulation, and physiology, with at least two years postdoctoral research. Experience with batch and continuous culture systems and substrate utilization during secondary metabolism is essential. Familiarity with computerized fermentor systems, HPLC, and related analytical and chromatographic techniques is highly desired. (GV-69)

Sterling Drug Inc. offers competitive salaries and a comprehensive benefits program, along with outstanding career opportunities for personal and professional growth. For confidential consideration, please refer to position code number, and forward your resume, salary history/requirements, and the names of three references to:



Employee Relations STERLING RESEARCH GROUP A Division of Sterling Drug Inc. 9 Great Valley Parkway

Malvern, PA 19355 A Subsidiary of EASTMAN KODAK COMPANY Equal Opportunity Employer M/F/H/V



Merck & Co., Inc.

RESEARCH ASSOCIATE

A full-time nontenure-track research associate position is available at the University of Minnesota. This position involves the synthesis and characterization of immunotoxins. Required qualifications include a Ph.D. in chemistry, biochemistry, or microbiology with a minimum of 5 years of postdoctoral experience in biochemistry or a minimum of 3 years of postdoctoral research in the immunotoxin field. Preference may be given to candidates with strong background and published experience in chemical crosslinking, protein purification, HPLC, and various assays of immunotoxin quality. Interested persons should send curriculum vitae, representative reprints, and three letters of reference by 1 July 1989 to: Dr. Fatih M. Uckun, Chairman of Immunotoxin Search Committee, Department of Therapeutic Radiology, Box 356 UMHC, 420 Delaware Street SE, Minneapolis, MN 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

RESEARCH ASSOCIATE: Conduct research on the disposition and metabolic fate (in vitro and in vivo) of xenobiotics in fish and rats. Ph.D. in biochemical toxicology, pharmacology, or related field required; experience in pharmacokinetics and metabolite isolation by HPLC preferable. Position provides opportunity for developing program of candidate's interest. Submit résumé and names of three references to: Dr. H. Sikka, Director, Great Lakes Laboratory, State University of New York College at Buffalo, 1300 Elmwood Avenue, Buffalo, NY 14222. Telephone: 716-878-5422.

RESEARCH ASSOCIATE with graduate degree or experienced **RESEARCH ASSISTANT** with B.S. or A.B. and knowledge of cell culture techniques, biotting and other molecular biology procedures, and/or protein chemistry. Ongoing research program involves mechanisms of promotion of biosynthesis of inhibitors of hemostatic enzymes: including specific mRNA production by human cells, analysis of certain plasma proteins, using functional and analytical techniques including coagulation and enzymatic assays, and gel electrophoresis. Salary commensurate with qualifications; immediate opening. Children's Hospital Research Foundation (CHRF), Elland and Bethesda Avenues, Cincinnati, OH 45229 (Dr. V. H. Donaldson). Telephone: 513-559-4244. CHRF is an Equal Opportunity Employer.

RESEARCH ASSOCIATE, BRYOPHYTE PA-LEOECOLOGY. Reconstruction of peatland history using fossil bryophytes. Qualifications: Ph.D. in botany or ecology (specialty bryophytes). Three years of experience in paleoecology and bryophyte ecology. Five publications on bryophyte ecology and/or paleoecology. Salary: \$30,500 per year. Send names of three referees and résumé to: S. Springmeyer, No. 9-47, Minnesota Department of Jobs and Training, 390 North Robert Street, Room 124, St. Paul, MN 55101.

RESEARCH ASSOCIATE, BRYOPHYTE PA-LEOECOLOGY. Reconstruction of peatland history using fossil bryophytes. Qualifications: Ph.D in botany or ecology (specialty bryophytes). Three years of experience in paleoecology and bryophyte ecology. Five publications on bryophyte ecology and/or paleoecology. Send names of three referees and résumé to: E. Gorham, Department of Ecology, University of Minnesota, Minneapolis, MN 55455, by 30 June 1989. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

RESEARCH CHEMIST: Perform research in the design and synthesis of potential neuroprotective agents. Prepare synthetic target compounds via regio and stereospecific functionalization of appropriate heteroaromatic substrates using organometallic chemistry including use of alkyl and aryllithium reagents and palladium zero coupling reactions. Masters in organic chemistry Masters studies must include organometallic chemistry including use of alkyl and aryllithium reagents and palladium zero coupling reactions. Plus 1 year of experience in job offered or 1 year of experience as research chemist involved in organic synthesis required. Forty hours per week, \$32,500 per year. Send résumé to: Job Order #3049314, Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.

POSITIONS OPEN

RESEARCH PSYCHIATRIST. Position is available for conducting endocrine research in eating/affective disorders. Previous clinical/research training in the areas of endocrinology/psychiatry/eating disorders is essential. Candidates must have record of endocrine research, with publications in peer-reviewed journals; should be senior (first) author of at least one paper reporting original clinical endocrine research in human subjects. Salary range \$40,000 to \$45,000 annually, commensurate with experience. Send application and curriculum vitae to: Philip W. Gold, M.D., Chief, Clinical Neuroendocrinology Branch, National Institute of Mental Health, Building 10, Room 35231, 9000 Rockville Pike, Bethesda, MD 20892. An Equal Opportunity Employer M/F/H/V.

RESEARCH SCIENTIST to perform, direct, and analyze experiments utilizing the application of conformational analysis and advanced spectroscopic techtionships of certain novel heterocyclic ring systems, including oxocycles, leading to the rational design and synthesis of such compounds as potential therapeutic agents for the treatment of arteriosclerosis, congestive heart failure and asthma. Position requires Ph.D. in organic chemistry and 2 years of experience as a researcher/synthetic organic chemist. Previous experience must include 2 years of hands-on experience as researcher in asymmetric organic synthesis and application of organosilicon chemistry to Beta-lactam antibiotic synthesis including computer-assisted molecular modeling and high field nuclear magnetic resonance techniques to the conformational analysis of reactivity of medium ring oxocycles. Forty hours per week Monday to Friday. 8:30 a.m. to 4:30 p.m.; \$43,000 per year. Send résumés to: Linda Stewart, Rorer Central Research, 640 Allendale Road, King of Prussia, PA 19406. An Equal Opportunity Employer, M//F/H/V.

New multidisciplinary group in developmental biology as it relates to disease, focusing on growth factors and matrix receptors at The Children's Hospital, Harvard Medical School, Boston, Massachusetts. SENIOR LAB MANAGER—Responsible for main-

SENIOR LAB MANAGER—Responsible for maintaining the function of the group, collaborate with M.D./Ph.D. postdoctoral fellows and principal investigators. Five years of experience in cell or molecular biology. MOLECULAR GENETICIST—Familiar with rDNA

techniques, especially genomic organization in eukaryotes. Three years of experience.

Send résumés and references to: Merton Bernfield, M.D., Joint Program in Neonatology/Harvard Medical School, 75 Francis Street, Boston, MA 02115.

SYSTEMS ECOLOGIST. The Chesapeake Biological Laboratory seeks an individual to compliment our systems ecology group with interests in the analysis of coastal and estuarine ecosystems. The successful candidate must have demonstrated abilities to integrate multiple innovative analytical tools (e.g. remote sensing, diing, time series analysis) toward the goal of solving relevant ecological problems. The position is tenure-track at the assistant professor level. Send curriculum vitae, statement of research interests and names of five references by 30 June 1989 to: Dr. Walter R. Boynton, Chesapeake Biological Laboratory, P.O. Box 38, Solomons, MD 20688. The University of Maryland System is an Affirmative Action/Equal Opportunity Employer.

SYMPOSIUM

The National Institute of Environmental Health Sciences (NIEHS) and the ILSI Risk Science Institute (RSI) will co-sponsor a **SYMPOSIUM** entitled "Critical Target in Chemical Carcinogenesis" that will be held at NIEHS 10 to 14 September 1989. The purpose of the conference is to examine the current status of our understanding of the role of oncogenes, suppressor genes, and susceptibility genes in the multistep development of neoplasia. Seven sessions are planned: (i) Oncogenes, (ii) Tumor Suppressor Genes, (iii) Cooperativity Between Genes, (iv) Human Carcinogenesis, (v) Susceptibility Genes, (vi) Nonmutagenic Mechanisms in Carcinogenesis, and (vii) Implications for Risk Assessment. For further information, contact: Dr. Marshall Anderson or Dr. Carl Barrett, NIEHS, P.O. Box 12233, Research Triangle Park, NC 27709.

POSITIONS OPEN

SENIOR RESEARCH BIOCHEMIST-Development of new syntheses for production of beta, gamma, and positron emitting radiolabeled tracers and receptor probes, including synthesis and purification of optically ctive precursors, for use in in vitro receptor studies and PET and SPECT imaging studies in humans and ex-perimental animals. Conduct multi-step synthetic se-quences, such as asymmetric synthesis and microsynthe-sis and chromatographic separations, which include flash column chromatography, TLC and HPLC. Characteriza-tion of organic and inorganic compounds, using UV/Vis, IR, one- and two-dimensional FT-NMR and MS. Carry out up to 100 millicurie scale, multi-step, high specific activity synthesis of gamma and/or beta emitting radiola-beled tracers and receptor probes. Design, install, operate, and maintain automated and remotely operated equipment for radiotracer synthesis. Required are Ph.D. degree in organic chemistry and 1 year of experience in the synthesis of high specific activity radiotracers and precursors at postdoctoral or graduate level. Hours: 8:30 a.m. to 5:00 p.m.; 40-hour week; salary: \$3,633 per month. Send résumé to: Philadelphia Job Bank, 444 North 3rd Street, Philadelphia, PA 19123; Order No. 4237135. An Equal Opportunity/Affirmative Action Employer.

TRAINING PROGRAM

Position available for postdoctoral or graduate RE-SEARCH TRAINING in the molecular biology of hemoparasites. Program emphasizes identification, cloning and characterization of genes encoding parasite antigens for preparation of subunit vaccines. Send curriculum vitae and names, addresses, and telephone numbers of three current references to: Dr. John B. Dame, Department of Infectious Diseases, College of Veterinary Medicine, Box J-137, J. Hillis Miller Health Science Center, University of Florida, Gainesville, FL 32610–0137. The University of Florida is an Equal Employment Opportunity/Affirmative Action Employer.

FELLOWSHIPS

Institute for Biophysical Research on Macromolecular Assemblies (IBRMA), of The Johns Hopkins University, offers prestigious POSTDOCTORAL FELLOW-SHIPS to work with any of seventeen preceptors on a variety of structural and biophysical projects. Write for detailed brochure. IBRMA, The Johns Hopkins University, 102 Macaulay Hall, 3400 North Charles Street, Baltimore, MD 21218. Telephone 1:00 p.m. to 3:00 p.m. weekdays: 301-338-5197.



ANNOUNCES RESEARCH GRANTS AND FELLOWSHIPS

Basic Neurosciences	\$ 5,000 to \$25,000
Clinical Studies	\$ 5,000 to \$25,000
Postdoctoral Fellowship	\$15,000 to \$20,000
117 1	A

Write to: Tourette Syndrome Association, 42-408 Bell Boulevard, Bayside, NY 11361. Grant review cycle:

Letter of intent due: 15 July 1989

Final proposal due: 15 October 1989

Please Note: The Tourette Syndrome Association, Inc. does not provide any overhead or indirect costs.

MARKETPLACE



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TWENTY NEW WAYS WE'RE WORKING TO FIGHT HEART DISEASE.

This year Glaxo launched a \$10 million Cardiovascular Discovery Grants Program. The Discovery Program is designed to forge research partnerships with scientists whose ideas may point the way to discovery of innovative cardiovascular therapeutic agents. We are pleased to announce the Advisory Board's recommendations for the 1989 funding recipients.

> Dr. Joseph A. Beavo University of Washington

Dr. David E. Clapham and Dr. Ernest Peralta Mayo Clinic Harvard University

> Dr. Wolfgang H. Dillmann University of California, San Diego Medical Center

Dr. William John Elliott University of Chicago

Dr. Fredric S. Fay and Dr. Mitsuo Ikebe University of Massachusetts Medical School

Dr. Heidi Elizabeth Hamm University of Illinois at Chicago College of Medicine

Dr. Jackie D. Corbin

Vanderbilt University School of Medicine

Dr. Edwin K. Jackson Vanderbilt University School of Medicine

Dr. Michael Kahn and Dr. Michael E. Johnson University of Illinois at Chicago

Case-Western Reserve University

Dr. Alan J. Kinniburgh Roswell Park Memorial Institute

Dr. Joe M. McCord University of South Alabama College of Medicine Dr. Anthony R. Means Baylor College of Medicine

Dr. Walter L. Miller University of California at San Francisco

Dr. L. Bruce Pearce Boston University School of Medicine Dr. Bruce R. Pitt and Dr. Paul Davies University of Pittsburgh School of Medicine

Dr. David J. Riley UMDNJ - Robert Wood Johnson Medical School

University of Nevada School of Medicine

Dr. Michael R. Rosen Columbia University College of Physicians and Surgeons

Dr. John Sutko, Dr. Luc Ruest, and Dr. Koert Gerzon Indiana University School of Medicine

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