National Institute of Dental and Craniofacial Research
Division of Intramural Research

Interactions with the Scientific Community

2000

National Institute of Dental
and Craniofacial Research

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For Administrative Use Only

National Institute of Dental and Craniofacial Research

Craniofacial Developmental Biology and Regeneration Branch

Craniofacial Developmental Biology and Regeneration Branch

1. Invited Talks

Kenneth M. Yamada, M.D., Ph.D.

Keystone Symposium on Joint Regulation of Signaling Pathways by Integrins and Growth Factors, "Assembly and Regulation of Signaling Complexes." Breckenridge, CO.

Gordon Conference on Signal Transduction by Engineered Extracellular Matrices, "Integrin Signaling Complexes and Matrix Assembly." Tilton, NH.

Gordon Conference on Signaling by Adhesion Receptors, "PTEN and Integrins in Cell Migration and Apoptosis." Newport, RI.

University of Washington Engineered Biomaterials Scientific Symposium 2000: Matricellular Proteins in Biology and Engineered Biomaterials, "Integrin Signaling and Matrix Assembly Complexes." Seattle, WA.

Distinguished Lecture, University of Virginia Department of Cell Biology, "Integrin Signaling, Matrix Assembly, and Cell Migration." Charlottesville, VA.

Lombardi Cancer Center, Georgetown University Medical Center, "PTEN and Integrin Signaling." Washington, DC.

National Cancer Institute, Laboratory of Molecular Biology, "Cellular Dynamics in Making and Responding to 3-D Matrix." Bethesda, MD.

Hynda K. Kleinman, Ph.D.

Common Frontiers in Cancer Research, "Laminin Peptides and Metastasis." Bethesda, MD.

ECM Conference, "Role of Basement Membrane in Salivary Gland Cell Differentiation." Nagoya, Japan.

Angiogenesis Workshop, "Role of Laminin Peptides in Angiogenesis." FDA, Laurel, MD.

Experimental Biology 2000 Meeting, "Role of Laminin in Tumor Cell Migration and Metastasis." San Diego, CA.

Conference on Advances in Immunology & Allerology, "Thymosin Beta4 and Wound Healing." Eilat, Israel.

Biomineralization Gordon Conference, "Osteonectin and Bone Metastasis." New London, NH.

Metastasis Research Society Meeting, "Role of Laminin Peptides in Metastasis." London, UK.

XIV International Congress of Eye Research, "Microarrays and Cell Differentiation." Santa Fe, NM.

NIH Research Day Symposium on Angiogenesis, "Thymosin Beta4 and Angiogenesis and Wound Healing." Bethesda, MD.

Bone Metastasis Workshop, NCI, "Osteonectin and Bone Metastasis." Bethesda, MD.

University of Pennsylvania, "Role of Basement Membrane in Angiogenesis and Metastasis." Philadelphia, PA.

BioQual, Inc., "Role of Estrogen in Angiogenesis." Rockville, MD.

NCI, Division of Therapeutics, "Laminin and Metastasis." Frederick, MD.
Gordon Conference on Biomineralization, "Osteonectin in Metastasis to Bone." New London, NH.

Yoshihiko Yamada, Ph.D.

Rush-Presbyterian-St. Luke's Medical Center, Department of Biochemistry, "Gene Regulation During Cartilage Development." Chicago, IL.
Gordon Conference on Proteoglycans, "Role of Perlecan in Cartilage Development and Disease." Andover, NH.
International Symposium on Genetics and Molecular Biology of Craniofacial Development, "Identification of Novels Genes Important for Craniofacial Development." Seoul, Korea.

Matthew Hoffman, B.D.S., Ph.D.

16th International Conference on Oral Biology. Saliva in Health and Disease. "Gene Expression Profiles of Developing Mouse Salivary Glands." Chantilly, VA.

Jennifer Elisseeff, Ph.D.

American Society for Anaplastology seminar and panel discussion, "Cartilage Tissue Engineering." Washington, DC.
Knowledge Foundation Conference on Tissue and Genetic Engineering in Arthritic Diseases, "Cartilage Tissue Engineering." Boston, MA.

2. Sessions Chaired at Professional Meetings

Kenneth M. Yamada, M.D., Ph.D.

Keystone Symposium on Joint Regulation of Signaling Pathways by Integrins and Growth Factors, session on "Integrins and Growth Factor Receptors." Breckenridge, CO.
Gordon Conference on Signaling by Adhesion Receptors, session on "Protein Tyrosine Phosphatases." Newport, RI.
University of Washington Engineered Biomaterials Scientific Symposium 2000, session on "Adhesive Receptor Signaling." Seattle, WA.

Hynda K. Kleinman, Ph.D.

Metastasis Research Society, London, UK.
Angiogenesis Workshop, FDA, Laurel, MD.

3. Symposia, Meetings, or Conferences Organized

4. Consultant for Universities or Industry

Hynda K. Kleinman, Ph.D.

Board member, NASA, Microgravity Working Group.

Yoshihiko Yamada, Ph.D.
External Advisory Committee for R01, MD Anderson Cancer Center, Houston, TX.

5. Elected Offices

Kenneth M. Yamada, M.D., Ph.D.
Council, International Society for Matrix Biology

Hynda K. Kleinman, Ph.D.
Board, Metastasis Research Society

Yoshihiko Yamada, Ph.D.
Council, Japanese Society of Connective Tissues

6. Editorial Responsibilities Other than Reviewing Manuscripts

Kenneth M. Yamada, M.D., Ph.D.
Editor, *The Journal of Cell Biology*
Editor, *Journal of Cellular Physiology*
Associate Editor, *Matrix Biology*
Editorial Board, *Journal of Cell Science*
Editorial Board, *Journal of Craniofacial Genetics and Developmental Biology*
Editorial Board, *Molecular Membrane Biology*
Editorial Board, *Cell Adhesion and Communication*
Editorial Board, *Cell Structure and Function*
Editorial Board, *Current Protocols in Cell Biology*

Hynda K. Kleinman, Ph.D.
Editorial Board, *The Journal of Cell Biology*
Editorial Board, *Journal of the National Cancer Institute*
Editorial Board, *The Catalyst*
Editorial Board, *International J Biochemistry & Cell Biology*
Editorial Board, *Cancer Research*
Editorial Board, *FASEB J*
Editorial Board, *Angiogenesis*
Editorial Board, *The Endothelium*
Editorial Board, *Clinical Cancer Research*

Yoshihiko Yamada, Ph.D.
Editorial Board, *Journal of Biological Chemistry*
Associate Editor, *Matrix Biology*

7. Professional or Governmental Advisory Capacity

Kenneth M. Yamada, M.D., Ph.D.

NSF-NIH Scholars-in-Residence advisory committee
NIH Senior Biomedical Research Service Policy Board
NIH Committee on Scientific Conduct and Ethics, and Ethics Action Subcommittee
NIH Postdoctoral Fellow Awards Committee
NIH ad hoc Committee on Summer Training

Hynda K. Kleinman, Ph.D.

Reviewer, Material Command for the Army Grants on Prostate Cancer
Evaluator and Advisor, HHMI Summer Scholars Program, NIH
Evaluator, NIDCR Summer Dental Scholars Program
Chair, NEI Search Committee for Chief, Lab of Retinal Cell and Molecular Biology
Member, NASA International Space Life Sciences Flight and Peer Review Panel grant review
Member, American Society for Cell Biology, Abstract Programming Committee for annual meeting
Member, Program Committee for annual meeting, American Association for Cancer Research
Reviewer, Human Frontiers Science Program
Evaluator, Association for Women in Science Schectman (undergraduate) Award
Member, Tenure and Promotion Committee, NIDCR

Yoshihiko Yamada, Ph.D.

Chair, NIDCR Postdoctoral Award Committee
Member, NIAAA Tenure Track Investigator Search Committee

8. Appeared as an Invited Expert

Kenneth M. Yamada, M.D., Ph.D.

Interviewed for article in *Molecular Medicine Today* on the use of fibronectin peptides for wound repair.

Hynda K. Kleinman, Ph.D.

Modern Drug Discovery-interviewed and quoted in article on prostate cancer highlighting our recent publication in cancer research on bone metastasis.

9. Professional Publications with Outside Co-authors

Kenneth M. Yamada, M.D., Ph.D.

Katz, B.-Z., [1]Zamir, E., [1]Bershadsky, A., [1]Kam, Z., Yamada, K.M., and [1]Geiger, B. Physical state of the extracellular matrix regulates the structure and molecular composition of cell-matrix adhesions. *Mol. Biol. Cell* 11:1047-1060, 2000. ([1]Department of Molecular Cell Biology, The Weizmann Institute of Science, Rehovot, Israel).

Aframian, D.J., Cukierman, E., [1]Nikolovski, J., [2]Mooney, D.J., Yamada, K.M., and Baum, B.J. The growth and morphological behavior of salivary epithelial cells on matrix protein-coated biodegradable substrata. *Tissue Engineering* 6:209-216, 2000. ([1]Biomedical Engineering, University of Michigan, [2]Biologic and Materials Sciences and Chemical Engineering, Dental and Engineering Schools, University of Michigan, Ann Arbor, MI).

Pankov, R., Cukierman, E., Katz, B.-Z., Matsumoto, K., [1]Lin, D.C., [1]Lin, S., Hahn, C., and Yamada, K.M. Integrin dynamics and matrix assembly: Tensin-dependent translocation of Δ_5E_1 integrins promotes early fibronectin fibrillogenesis. *J. Cell Biol.* 148:1075-1090, 2000. ([1]Department of Developmental and Cell Biology, University of California at Irvine, Irvine, CA).

[1]Zamir, E., [1]Katz, M., [1]Posan, Y., [1]Erez, N., Yamada, K.M., [2]Katz, B.-Z., [3]Lin, S., [3]Lin, D.C., [1]Bershadsky, A., [1]Kam, Z., and [1]Geiger, B. Dynamics and segregation of cell-matrix adhesions in cultured fibroblasts. *Nature Cell Biol.* 2:191-196, 2000. ([1]Department of Molecular Cell Biology, The Weizmann Institute of Science, Rehovot, Israel, [2]The Hematology Institute, Tel-Aviv Medical Center, Tel-Aviv, Israel, [3]Department of Developmental and Cell Biology, University of California at Irvine, Irvine, CA).

[1]Tamura, M., [2]Yanagihara, N., [1]Tanaka, H., [1]Osajima, A., [3]Hirano, T., [4]Higashi, K., Yamada, K.M., [1]Nakashima, Y., and [4]Hirano, H. Activation of DNA synthesis and AP-1 by profilin, an actin-binding protein, via binding to a cell surface receptor in cultured rat mesangial cells. *J. Am. Soc. Nephrol.* 11:1620-1630, 2000. ([1]Second Department of Internal Medicine and [2]Department of Pharmacology, School of Medicine; [3]Department of Environmental Oncology, Institute of Industrial Ecology; and [4]Department of Biochemistry, School of Medicine, University of Occupational and Environmental Health, Kitakyushu, Japan).

[1]Katz, B.-Z., Zohar, M., Teramoto, H., Matsumoto, K., Gutkind, J.S., [2]Lin, D.C., [2]Lin, S., and Yamada, K.M. Tensin can induce JNK and p38 activation. *Biochem. Biophys. Res. Commun.* 272:717-720, 2000. ([1]The Hematology Institute, Tel-Aviv Medical Center, Tel-Aviv, Israel, [2]Department of Developmental and Cell Biology, University of California at Irvine, Irvine, CA).

[1]Dhawan, S., [2]Boykins, R.A., and Yamada, K.M. A novel HIV-Tat multiple-peptide conjugate system: Potential candidate for AIDS vaccine. In: XIII International AIDS Conference, Bologna, Italy: Monduzzi Editore, pp. 235-240, 2000. ([1]Laboratory of Parasitic Biology and Biochemistry, and [2]Laboratory of Molecular Virology, Center for Biologics Evaluation and Research, FDA, Bethesda, MD).

[1]Danen, E.H.J., [1]Sonneveld, P., [1]Sonnenberg, A., and Yamada, K.M. Dual stimulation of Ras/mitogen-activated protein kinase and RhoA by cell adhesion to fibronectin supports growth factor–stimulated cell cycle progression. *J. Cell Biol.* 151:1413-1422, 2000. ([1]Division of Cell Biology, The Netherlands Cancer Institute, Amsterdam, The Netherlands).

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Aframian, D.J., Zeng, C., Goldsmith, C.M., [1]Nikolovski, J., Cukierman, E., Yamada, K.M., [1]Mooney, D.J., Birkedal-Hansen, H., and Baum, B.J. Using HSV-thymidine kinase for safety in an allogeneic salivary graft cell line. *Tissue Engineering* In press, 2001. ([1]Department of Biomedical Engineering, Dental and Engineering Schools, University of Michigan, Ann Arbor, MI).

Hynda K. Kleinman, Ph.D.

[1]Cid, M.C., [1]Esparza, J., [2]Schnaper, H.W., [1]Juan, M., [1]Yague, J., [3]Grant, D.S., [1]Urbano-Marquez, A., [4]Hoffman, G.S., and Kleinman, H.K. Estradiol increases endothelial cell attachment to extracellular matrix proteins via an increase in integrin expression. *Angiogenesis* 3:271-280, 2000. ([1]Hospital Clinic I Provincial, Barcelona, Spain, [2]Department of Pediatrics, Northwestern University School of Medicine, Chicago, IL, [3]Cardeza Foundation, Jefferson Medical College, Philadelphia, PA, [4]Cleveland Clinic, Cleveland, OH).

[1]Sang, Q.X.A., [1]Jia, M.C., [1]Schwartz, M.A., [2]Jaye, M.C., Kleinman, H.K., [1]Ghaffari, M.A., and [1]Luo, Y.L. New thiol and sulfodimine matrix metalloproteinase inhibitors and their effect on human microvascular endothelial cell growth. *Biochem. Biophys. Res. Commun.* 274:780-786, 2000. ([1]Department of Chemistry and Institute of Molecular Biophysics, Florida State University, Tallahassee, FL, [2]Rhone-Poulenc Rorer, Collegeville, PA).

Nomizu, M., Kuratomi, Y., Song, S.Y., [1]Miyoshi, K., [1]Otaka, A., Kleinman, H.K., and Yamada, Y. Cell adhesive sequences in mouse laminin beta-1 chain. *Archiv. Biochem. Biophys.* 378:311-320, 2000. ([1]Faculty of Pharmaceutical Sciences, Kyoto University, Kyoto, Japan).

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Yoshihiko Yamada, Ph.D.

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by M. Kondo. Osaka: Protein Research Foundation. In press, 2001. (Osaka University).

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Nomizu, M., Kuratomi, Y., Ponce, M.L., Song, S.Y., [1]Miyoshi, M., [1]Otaka, A., Powell, S.K., Hoffman, M.P., Kleinman, H.K., and Yamada, Y. Cell adhesive sequences in mouse laminin E1 chain. *Arch. Biochem. Biophys.* 378:311-320, 2000. ([1]Kyoto University).

[1]Sekiya, I., [1]Tsuji, K., [1]Koopman, P., Watanabe, H., Yamada, Y., [1]Shinomiya, Y., [1]Nifuji, A., and [1]Noda, M. SOX9 enhances aggrecan gene promoter/enhancer activity and is upregulated by retinoic acid in a cartilage-derived cell line, TC6. *J. Biol. Chem.* 275:10738-10744, 2000. ([1]Tokyo Medical and Dental University).

Tanaka, K., [1]Matsumoto, Y., [1]Nakatani, F., [1]Iwamoto, Y., and Yamada, Y. A zinc-finger transcription factor, ΔA-CRYBP, is a negative regulator of chondrocyte-specific enhancer of the Δ1(II) collagen gene. *Mol. Cell. Biol.* 20:4428-4435, 2000. ([1]Kyushu University).

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Powell, S.K., Rao, J., Roque, E., [1]Nomizu, M., [2]Kuratomi, Y., Yamada, Y., and Kleinman, H.K. Neural cell response to multiple novel sites on laminin-1. *J. Neurosci. Res.* In press, 2001. ([1]Hokkaido University, [2]Kyushu University).

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[1]Sekiya, I., [1]Koopman, P., [1]Tsuji, K., Mertin, S., Harley, V., Yamada, Y., [1]Shinomiya, K., [1]Nifuji, A., and [1]Noda, M. Transcriptional suppression of SOX9 expression by retinoic acid in chondrocytes. *J. Cell. Biochem.* 275:10738-10744, 2000. ([1]Tokyo Medical and Dental University).

[1]Yoneda, M., [1]Zhao, M., [1]Zhuo, L., Watanabe, H., Yamada, Y., [1]Huang, L., [1]Nagasawa, S., [1]Nishimura, H., [1]Shinomura, T., [1]Isogai, Z., and [1]Kimata, K. Role of inter-Δ-trypsin inhibitor and hyaluronan-binding proteoglycans in hyaluronan-rich matrix formation. In *New Frontiers: Redefining Hyaluronan.* Edited by G. Abantagelo and P.H. Weigel. Elsevier Science, pp. 21-30, 2000. ([1]Aichi Medical University).

Nomizu, M., Kuratomi, Y., Otaka, A., Kleinman, H.K., Yamada, Y., and [1]Nishino, N. Identification of biologically active peptides in laminin-1. In *Peptide Science*. Edited by N. Fuji. The Japanese Peptide Society, pp.21-24, 2000. ([1]Hokkaido University).

Caterina, J., Shi, J., [1]Sun, X., [1]Qian, Q., Yamada, S., [1]Kiu, Y., Krakora, S., Bartlett, J.D., Yamada, Y., [1]Engler, J.A., Birkedal-Hansen, H., and [1]Simmem, J.P. Cloning, characterization, and expression analysis of mouse enamelysin. *J. Dent. Res.* In press, 2001. ([1]University of Texas, San Antonio).

[1]MacDougall, M., [1]Simmons, D., [1]Gu, T.T., Forsman-Semb, K., [1]Märdh, K., [1]Mesbah, M., [1]Forest, N., [2]Krebsbach, P.H., Yamada, Y., and [1]Bardai, A. Cloning, characterization, and immunolocalization of human ameloblastin (Ambn). *Eur. J. Oral. Sci.* 108:303-310, 2000. ([1]University of Texas, San Antonio, [2]University of Michigan).

Matthew Hoffman, B.D.S., Ph.D.

Hoffman, M.P., Engbring, J.A., Nielsen, P.K., Vargas, J., Steinberg, Z., Karmand, A.J., [1]Nomizu, M., Yamada, Y., and Kleinman, H.K. Cell type-specific differences in glycosaminoglycans modulate the biological activity of a heparin-binding peptide (RKRLQVQLSIRT) from the G domain of the laminin Δ1 chain. *J. Biol. Chem.* In press, 2001. ([1]Hokkaido University, Japan).

Jung, D.W., Hecht, D., Ho, S.W., [1]O'Connell, B.C., Kleinman, H.K., and Hoffman, M.P. PKC and MAP kinase signaling pathways regulate the amylase promoter activity in a human salivary cell line. *J. Cell. Physiol.* 185:215-225, 2000. ([1]Trinity College, Ireland).

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Nielsen, P.K., Gho, Y.S., Hoffman, M.P., Watanabe, H., [1]Makino, M., [1]Nomizu, M., and Yamada, Y. Identification of a major heparin and cell binding site in the G4 module of the laminin Δ5 chain. *J. Biol. Chem.* 275(19):14517-14523, 2000. ([1]Hokkaido University, Japan).

Jennifer Elisseeff, Ph.D.

Elisseeff, J., [1]Langer, R., and Yamada, Y. Biomaterials for Tissue Engineering. In *Tissue Engineering and Biodegradable Equivalents: Scientific and Clinical Applications.* Edited by Lewandrowski, Wise, Trantolo, Gresser, Yaszemski, and Altobelli. Marcel Dekker, Inc. In press, 2002. ([1]Massachussetts Institute of Technology).

10. Other

Kenneth M. Yamada, M.D., Ph.D.

Project Officer, Contract No. N01-DE-92630 with Washington University, St. Louis, "Novel Human Oral and Craniofacial Genes"
Scientific Advisory Board, French-American Colloquium on the Cytoskeleton and Human Disease.
Sponsored two Japan Society for the Promotion of Science Fellows with a D.D.S./Ph.D. and an M.D./Ph.D.
Patent Application: E-208-99/0, "Peptides Comprising Functional Domains of the HIV Tat Protein," S. Dhawan, R.A. Boykins, and K.M. Yamada
Licensing agreement for anti-integrin monoclonal antibodies.
Material Transfer Agreements signed with the following institutions to provide them with gifts of clones, antibodies, and other unique research reagents:
Scripps Research Institute: 5 independent MTAs
University of California at San Francisco: 3 independent MTAs
Beth Israel Deaconess Medical Center, Harvard Medical School
University of Rochester Medical Center
Providence VA Medical Center
The Hepato-biliary Surgery Department of XiJing Hospital, FMMU, China
Labey Clinic, Department of Cell and Molecular Biology, Burlington, MA
Research Institute for Radiology, Biology, and Medicine, Hiroshima University, Japan
Ewha Womans University, Department of Biology, Seoul, Korea
The University of Texas at Austin, Section of Molecular Cell and Developmental Biology
Mayo Clinic Scottsdale
Osaka University, Institute for Protein Research, Japan
Secondary Military Medical University, College of Basic Medicine, Shanghai, China
Baylor College of Medicine
University of Maryland Cancer Center
Kyoto University, Graduate School of Agriculture, Japan
University of North Carolina at Chapel Hill, Department of Cell Biology and Anatomy
Oxford University, Department of Microbiology, UK
The Cleveland Clinic Foundation
Emory University, Department of Pathology and Laboratory Medicine
University of Colorado Health Sciences Center
Hokkaido University, Graduate School of Environmental Earth Science, Japan
University of North Carolina School of Medicine, Chapel Hill
Kimmel Cancer Institute
The Regents of the University of California, San Diego
New York Medical College
Laboratorio Nazionale, Consorzio Interuniversitario Biotecnologie, Italy
University of Wisconsin, Department of Medicine
State University of New York at Stony Brook, Department of Dermatology
University of Georgia, Department of Cellular Biology

Institute of Medical and Veterinary Science, Australia
University of Massachusetts Medical School, Department of Surgery
Xingqiao Hospital, China
American Red Cross, The Holland Laboratory
Université Pierre et Marie Curie, Lab. de Biologie Moléculaire et Cellulaire du Développment, France
Università di Firenze, Dipartimento di Medicina Interna, Italy
Columbia University
University of Helsinki, Department of Biosciences, Finland
Chiba University, School of Medicine, Department of Dermatology, Japan
People's Hospital, Beijing University, China
Laboratoire de Recherche en Ophtalmologie, Paris, France
University of Liverpool, School of Biological Sciences, UK
UCLA School of Medicine, Department of Physiology
Beijing University, School of Basic Medical Sciences, Department of Cell Biology, China
University of Manchester, UK
Heinrich Heine Universität, Institut für Humangenetik und Anthropologie, Düsseldorf, Germany
Medical College of Ohio, Department of Surgery
The First Affiliated Hospital of Harbin Medical University, Department of Neurosurgery
Vrije Universiteit, Department of Medical Oncology, Amsterdam, The Netherlands
University of Manitoba, Canada
University of Montreal, Department of Pathology and Cell Biology, Canada
University of British Columbia, Biotechnology Laboratory, Canada
Second Military Medical University, Institute of Eastern Hepatobiliary Surgery, China
University of Leeds, School of Biochemistry and Molecular Biology, UK
Weill Medical College of Cornell University
University of Louisville Medical School, Department of Anatomical Science and Neurobiology
University of Liverpool, School of Biological Sciences, UK
New York University School of Medicine
Hebei Medical University, Institute of Basic Science, Department of Biochemistry, China
University of Jyväskylä, Department of Biological and Environmental Science, Finland
Leiden University, Leiden/Amsterdam Center for Drug Research, The Netherlands
University of Manchester, UK
Georgetown University, Lombardi Cancer Center, Departments of Oncology and Cell Biology
Hebei Medical University, Department of Biochemistry, China
Gesellschaft fuer Biotechnologische Forschung, Braunschweig, Germany

Celltech Group, Berkshire, UK
Technische Universität, Institute of Physiology, Dresden, Germany
Tianjin Medical University General Hospital, Tianjin Neurological Institute, Department of Neurosurgery, China
Hospital for Sick Children, Toronto, Ontario, Canada
M.D. Anderson Cancer Center

Hynda K. Kleinman, Ph.D.

Patent Applications and Licenses:
Matrigel licensed to Sigma Chemical Co. and Becton Dickinson.
Thymosin beta4 licensed to RegenRX, Inc.
Thymosin beta4 patent application.
Thymosin alpha 1 patent approved.
Scientific Related Activities:
Finalist Judge, Intel Talent Search, Washington, DC
Adjunct Professor at Department of Anatomy and Cell Biology, Georgetown Medical School, Washington, DC
American Heart Association lecturer for high school students
Lectured at UHUHS on extracellular matrix for graduate course in Cell Biology
Lectured to students at Georgetown Day School on angiogenesis
Lectured to students at Robert E. Lee High School on angiogenesis
Lectured to pre-IRTAs at NIH
Presenter at Women's History Month Observance, NIH
Speaker, NIH National Student Leadership Conference, NIH
Speaker, Cornell Veterinary Students/NIH Leadership Program
Shared many reagents including antibodies, basement membrane components, peptides, etc. with researchers in the NIH community as requested.
Hired four diverse summer students into Section.
Hosted Maria Cid, Department of Medicine, Hospital Clinic, Barcelona, Spain, for mini-sabbatical.
Hosted Y. Yamazaki, National Institute of Bioscience and Human Technology, Tsukuba, Japan, for mini-sabbatical.
Hosted Alan Holmes, Royal Free Hospital, London, UK for mini-sabbatical.
Obtained NASA funding to study salivary gland cell differentiation in microgravity.
HHMI Medical Scholars Program, hosted medical student in lab for one year.
One pre-doc IRTA accepted and attended dental school
Shared Matrigel and expertise on angiogenesis assays with D.D.S./Ph.D. at Loyola in Chicago
Presenter, 36th annual ADA Dental Students Conference on Research
Participated in a grants power lunch for NIDCR fellows
Material Transfer Agreements signed with the following institutions to provide them with gifts of clones, antibodies, and other unique research reagents:
University of Central Florida, Orlando, FL
Academic Free Hospital, Brussels, Belgium

Georgetown University School of Medicine, Washington, DC (two different departments)
Henry Ford Hospital, Detroit, MI
Wayne State University, Detroit, MI
University of Maryland (two different labs)
Weizmann Institute of Science
St. Vincent's Institute of Medical Research, Fitzroy, Australia
Adelphi University, Garden City, NY
Repligen Corp., Needham, MA
Loyola University, Maywood, IL
University of Wisconsin, Madison, WI
Stanford University, Palo Alto, CA

Yoshihiko Yamada, Ph.D.

Material Transfer Agreements signed with the following institutions to provide them with gifts of clones, antibodies, and other unique research reagents:
The University of Chicago Medical Center
University of Minnesota Cancer Center
School of Biological Sciences, University of Manchester
Boston University School of Medicine
Children's Medical Research Institute, Australia
University of Alabama at Birmingham
Shriners Hospital at Portland
Wakayama Medical College, Japan
Baylor College of Medicine
University of Barcelona, Spain
Harvard Medical School
QBI Enterprises Ltd., Israel
Texas A&M University
Harbor-UCLA Medical Center
University of Erlangen-Nürnberg, Germany
Hiroshima University School of Dentistry, Japan
ZymoGenetics, Inc.
Massachusetts Institute of Technology
The Scripps Research Institute, Department of Cell Biology
WWU, Department of Physiological Chemistry, Germany
University of Montreal, Department of Pathology and Cell Biology
Co-Project Officer, Contract No. N01-DE-92630 "Novel Human Oral and Craniofacial Genes."
Sponsored a Visiting Fellow with D.D.S.
Sponsored a Japan Society for the Promotion of Science Fellow with D.D.S./Ph.D.

Matthew Hoffman, B.D.S., Ph.D.

Material Transfer Agreements signed with the following institutions to provide them with gifts of clones, antibodies, and other unique research reagents:

University of Sao Paulo, School of Dentistry, Brazil
University of Rochester, Center for Oral Biology Rochester, NY
University of Florida College of Dentistry, Department of Dental Biomaterials, Gainesville, FL

Craniofacial Epidemiology and Genetics Branch

Craniofacial Epidemiology and Genetics Branch

1. Invited Talks

Scott R. Diehl, Ph.D.

Understanding the Causes of Periodontal Disease by Genetic Approaches: New Markers, New Statistical Strategies and New Disease Definitions. Gordon Conference on Periodontal Diseases, Oxford, United Kingdom.
Insights from Genome Scans Versus Candidate Gene Polymorphisms for Understanding the Etiology of Teratogen-Induced Oral Clefts in Mouse and Man. March of Dimes Symposium "Genetic Susceptibility to Teratogenesis," Annual Meeting of the Teratology Society, Palm Beach, Florida.
SNP Associations with Complex Diseases: Cleft Lip and Palate, Oral Cancer and Periodontal Diseases. Centre National de Genotypage, Evry, France.
Gene-Environment Interactions and Oral Cancer Susceptibility: A Tale of Two Countries. International Agency for Cancer Research, Lyon, France.
Single Nucleotide Polymorphisms (SNPs) in Alcohol Dehydrogenases and Risk of Oral Clefts in Humans: Different Effects of Maternal and Child Genotypes. Third International Meeting on Single Nucleotide Polymorphisms and Complex Genome Analysis, Taos, New Mexico.
SNP Associations with Complex Diseases: Cleft Lip and Palate, Oral Cancer and Periodontal Disease. Chairperson, Cambridge Healthtech Institute's Third Annual Conference on Human Genetic Variation, Philadelphia, Pennsylvania.
Gene by Gene by Environment Interactions in Susceptibility to Oral Cancer? University of Geneva, Switzerland.

Albert Kingman, Ph.D.

Disease Prevalence Biases produced by Partial Recording Protocols in Clinical Studies, Workshop on Periodontal Disease, Bethesda, MD.

2. Sessions Chaired

Albert Kingman, Ph.D.

Scientific Session on Statistics - Task Force on Design and Analysis, Newark, NJ.

3. Symposia, Meetings or Conferences Organized

4. Consultant for Universities or Industry

Scott R. Diehl, Ph.D.

Continuing Education in Periodontics, Naval Dental School, National Naval Dental Center, Bethesda. Lecture on "Genetic Aspects of Periodontal Disease."
Consultant/Project Director, Collaborative Research Study on the Genetics of Early Onset Periodontitis, Virginia Commonwealth University, Clinical Research Center for Periodontal Diseases, Richmond, VA.

Albert Kingman, Ph.D.
Member, research faculty, Department of Periodontics, Temple University

5. Elected Office

Albert Kingman, Ph.D.
Board of Directors, Task Force on Design & Analysis, Inc.

6. Editorial Responsibilities Other Than Reviewing Manuscripts

Albert Kingman, Ph.D.
Member, Editorial Advisory Board, Community Dentistry & Oral Epidemiology

7. Professional or Government Advisory Capacity

Scott R. Diehl, Ph.D.
NIDCR Representative to the National Bioethics Advisory Commission.
NIDCR Division of Intramural Research: Tenure and Promotion, Administrative Oversight, Technology Transfer, Space and Renovation, and Student Life Committee, Discretionary Fund Utilization Work Group.
NIH Intramural Sequencing Center (NISC) Scientific Review Committee.

Albert Kingman, Ph.D.

Statistical Advisor, Council on Scientific Affairs, American Dental Association
Statistical Advisor, Community Dental Health, Journal of the British Dental Association for the study of Community Dentistry and the European Association of Dental Public Health

8. Appeared as an Expert

9. Professional Publications With Outside Co-Authors

Scott R. Diehl, Ph.D.
[1]Wyszynski, D.F., [1]Diehl, S.R. Infant C677T mutation in MTHFR, maternal periconceptual vitamin use, and risk of nonsyndromic cleft lip. Am. J. Med. Genet. 92:79-80, 2000. ([1]Division of Intramural Research, NIDCR, NIH, Bethesda, MD.)
[1]Michalowicz, B., [2]Diehl, S.R., [3]Gunsolley, J., [4]Sparks, B., [4]Brooks, C., [4]Koertge, T., [4]Califano, J., [4]Burmeister, J., [4]Schenkein, H. Evidence of a substantial genetic basis for risk of adult periodontitis. J. Periodontology 71: 1699-1707, 2000. ([1]Department of Preventive Sciences, University of Minnesota School of Dentistry, Minneapolis, MN, [2]Division of Intramural Research, NIDCR, NIH, Bethesda, MD, [3]Department of Periodontics, University of Maryland School of Dentistry, Baltimore, MD, [4]Clinical Research Center for Periodontal

Diseases, School of Dentistry, Virginia Commonwealth University, Richmond, VA.)

[1]Zavras, A.I., [1]Douglass, C.W., [1]Joshipura, K., [2]Wu, T., [3]Laskaris, G., [4,5]Petridou, E., [6]Dokianakis, G., [7]Segas, J., [6]Lefantzi, D., [4]Nomikos, P., [2]Wang, Y.F., [2]Diehl, S.R. Smoking and alcohol in the etiology of oral cancer: gender-specific risk profiles in the south or Greece. Oral Oncology 37: 28-35, 2001. ([1]Department of Oral Health Policy & Epidemiology, Harvard School of Dental Medicine, Boston, MA, [2]Craniofacial Epidemiology and Genetics Branch, National Institute of Dental and Craniofacial Research, Bethesda, MD, [3]Oral Medicine Department, A. Sygros Hospital, University of Athens Medical School, Athens, Greece, [4]Department of Hygiene and Epidemiology, Athens University Medical School, Athens, Greece, [5]Department of Epidemiology, Harvard School of Public Health, Boston, MA, [6]ENT Clinic, Red Cross Hospital of Athens, Athens, Greece, [7]Department of Ear, Nose & Throat, Athens University Medical School and Hippokrateion Hospital, Athens Greece.)

[1]Wyszynski, D.F., [1]Diehl, S.R. The mother-only method (MOM) to detect maternal gene-environment interactions. Pediatric and Perinatal Epidemiology (in press), 2000. ([1]Division of Intramural Research, NIDCR, NIH, Bethesda, MD.)

[1]Seltzer, Z., [2]Wu, T., [2]Max, M., [2]Diehl, S.R. Mapping a gene for neuropathic pain-related behavior following peripheral neurectomy in the mouse. Pain (in press). ([1]Hebrew University at Ein Karem, Jerusalem, Israel, [2]Division of Intramural Research, NIDCR, NIH, Bethesda, MD.)

Albert Kingman, Ph.D.

[1]Streckfus C, [1]Bigler L, [1]Dellinger T, [1]Dai X, [2]Kingman A, [1]Thigpen JT. The presence of soluble c-erbB-2 in saliva and serum among women with breast carcinoma: a preliminary study. **Clin Cancer Res** 2000; 6: 2363-2370.

[1]Shugart YY, [2]Hemminki K, [2]Vaittinen P, [3]Kingman A, [2]O'Connell J, [2]Dong C. A genetic study of Hodgkin's Lymphoma: an estimate of heritability and anticipation using the Familial Cancer Database in Sweden. **Hum Genet** 2000; 106: 553-556.

10. Other Activities

Scott R. Diehl, Ph.D.

Research Collaborations:

A. Periodontal Disease

Dr. Jasim Albandar, University of Bergen, Norway.

Dr. John Blangero, SW Foundation Biomedical Research, San Antonio, TX.

Dr. David Duffy, Queensland Institute of Medical Research,

Australia.
Dr. Jack Gunsolley, U. of Maryland, Baltimore College of Dental Surgery.
Dr. Nestor J. Lopez, Universidad De Chile, Santiago.
Dr. Bryan Michalowicz, University of Minnesota School of Dentistry, Minneapolis.
Dr. Glenn Miller, National Naval Dental School, Bethesda, MD.
Dr. Harvey Schenkein, Virginia Commonwealth University, Richmond.
Dr. Lior Shapira, Hebrew University, Israel.

B. Craniofacial

Dr. Soraya Beiraghi, University of Nebraska Medical Center, Omaha.
Dr. John Blangero, SW Foundation Biomedical Research, San Antonio, TX.
Dr. Mark Boguski, National Center for Biotechnology Information, NIH.
Dr. Robert Erickson, University of Arizona Health Sciences Center, Tucson.
Dr. Ross E. Long, Jr., Lancaster Cleft Palate Clinic, Lancaster, PA.
Dr. Mohammad Mazzaheri, Lancaster Cleft Palate Clinic, Lancaster, PA.
Dr. Andrea L. Storm, University of Arizona Health Sciences Center, Tucson.
Dr. Kim Uhrich, University of North Carolina Craniofacial Center.
Dr. Michal Witt, Institute of Human Genetics, Poznan, Poland.
Dr. Peter Witt, Washington U. School of Medicine, St. Louis, MO.

C. Head and Neck Cancer

Dr. Mary Carrington, National Cancer Institute.
Dr. Chien-Jen Chen, National Taiwan University, Taipei, Taiwan.
Dr. Alisa Goldstein, National Cancer Institute.
Dr. Richard Hayes, National Cancer Institute.
Dr. Rolando Herrero, International Agency for Research on Cancer, Lyon, France.
Dr. Silvia Franceschi, International Agency for Research on Cancer, Lyon, France.
Dr. Allan Hildesheim, National Cancer Institute.
Dr. Thanos Zavras, Harvard School of Dental Medicine, Boston.

D. Pain

Dr. Ze'ev Seltzer, Hebrew University, Jerusalem.

Mentorship – Postdoctoral Fellows/Visiting Scientists:

1998 - present	Mohammad Khoshnevisan, D.M.D., DPHent
1997 - present	Cui-e Sun, M.D.
1999 -present	Tianxia Wu, Ph.D.
1999 –2000	Robert Steighner, Ph.D.

Albert Kingman, Ph.D.

Serve on a Chartered Committee of the American Statistical Association
Member of the Task Force on Design & Analysis
Statistical Consultant to the American Dental Association
Training in statistical genetics, NHGRI, Bayview, Baltimore, MD
Statistical consultant on multi-site clinical study on salivary c-cerbB2 and breast cancer - PI Dr. Charles Streckfus, University of Mississippi, Jackson, MS (study coordinating center)
Research collaborations
Dr. A.F. Wilson, NHGRI, Baltimore, MD
Dr. JE Bailey-Wilson, NHGRI, Baltimore, MD
Dr. Elizabeth Pugh, CIDR/Johns Hopkins, Baltimore, MD.
Dr. Lynn Goldin, NCI, Bethesda, MD
Dr. Joel Michalek, USAF, Brooks Air Force Base, TX
Dr. James Albers, University of Michigan Medical School, Ann Arbor, MI
Dr. Joseph Arezzo, Albert Einstein College of Medicine, NY
Dr. Stuart Zimmerman, M.D. Anderson Cancer Center, Houston, TX
Dr. Charles Streckfus, University of Mississippi, , Jackson, MS.
Dr. Froydis Langmark, Director, Norwegian Cancer Registry, Oslo, Norway
Dr. Kari Hemminke, Karolinska Institute, Stockholm, Sweden
Dr. Yin Shugart, Johns Hopkins University, Baltimore, MD.
Dr. C. Justice, NHGRI, Baltimore, MD
Dr. G. Papanicolaou, NHGRI, Baltimore, MD
Dr. M. Roy-Gagnon, Laval U, Quebec.
Dr. T. Rams, Chairman, Periodontics, Temple University
Dr. J. Albandar, Temple University – Invited Periodontology 2000 paper

Craniofacial and Skeletal Diseases Branch

Craniofacial and Skeletal Diseases Branch

1. Invited Talks

Pamela Gehron Robey, Ph.D.

Gordon Research Conference on Fibronectin, Integrins, and Related Molecules, "Integrins, Growth Factors, MAP Kinase, and Gene Expression." Ventura, CA.
Israeli Pediatric Orthopedic Society, "Cell and Molecular Biology of Marrow Stroma." En Gezez, Israel.
Israeli Pediatric Orthopedic Society, "Tissue Engineering of the Musculoskeletal System." En Gezez, Israel.
Boden 2000 - The Human Skeleton, "The physiological significance of bone matrix proteins." Clare, Australia.
Boden 2000 - The Human Skeleton, "The biology of bone marrow stroma." Clare, Australia.
American College of Oral and Maxillofacial Surgeons, "Bone Marrow Stroma and Tissue Regeneration." Washington, D.C.
Hospital for Special Surgery of the Cornell Medical School Scholar's Lecture Series, "Bone marrow stroma in health and in disease." New York, New York
FAES Graduate School, "Bone marrow stromal stem cells." Bethesda, MD.
International Conference on Endocrinology, "The biology of bone marrow stroma." Sydney, Australia.
Gerber Adult Series – Science and Technology, "Stem Cells." Rockville, MD.

Marian Young, Ph.D.

Department of Biochemistry, School of Dental Medicine, University of Pennsylvania, February 2000.
National Institute of Health, Bring Your Child To Work Day Lecture and Hands on Presentation: "How Do You Make Bones and Teeth", April 2000.
John D. Termine Research Day, Honorary Symposium Lecture, Eli Lilly, June 2000.
Endocrinology Society Meeting, Symposium "Insights into Skeletal Metabolism from Transgenic Models", Toronto, CA, June 2000.
2nd Annual Joseph L. Johnson, "Bone Growth and Development Series", Department of Physiology and Biophysics, Howard University College of Medicine, Washington, DC, December 2000.

Sergei Kuznetsov, Ph.D.

Seventh Russian National Congress "Man and Medicine", "The Abnormal Colony Forming Efficiency of Human Bone Marrow Stromal Cells in Pathologies Affecting Bone Marrow Stromal Function", Moscow, Russia, April 2000.
Twenty-Second Annual Meeting of the American Society for Bone and Mineral Research, "The Lethal Nature of Activating GNAS1 Mutations in the Postnatal Organism: Selective Age-Dependent Loss of Mutated Osteoprogenitor Cells in Fibrous Dysplasia", Toronto, Canada, September 2000.

Michael Collins, M.D.

Department of Experimental Medicine Seminar, University of Rome, "The McCune-Albright Syndrome: Clarification of the Clinical Spectrum", La Sapienza, Italy, December 2000.
Annual Meeting of the Endocrine Society, Symposium on Gs Alpha Diseases, "Clinical Manifestations of Activating Gsa Mutations", Toronto, Canada, June 2000.

2. Sessions Chaired at Professional Meetings

Marian Young, Ph.D.

Chair Session, International Association of Dental Research, Washington, DC, April 2000.
Gordon Research Conference on Proteoglycans, Henniker, NH, July 2000.

3. Symposia, Meetings or Conferences Organized

Pamela Gehron Robey, Ph.D.

Endocrine Society Meeting, Toronto, Canada.
Sub-Section Chair of Program Committee, American Society for Bone and Mineral Research, Toronto, Canada.
Co-Chair, Workshop on Aging and the Human Skeleton, American Society for Bone and Mineral Research, Toronto, Canada.

Marian Young, Ph.D.

Organizing Committee, 1St International Workshop on the Genetics of Bone Disease, Davos, Switzerland, March 2001.
Organizing Committee Member, 1St Joint Meeting of the International Bone and Mineral Society and the European Calcified Tissue Society, June 2001.

4. Consultant for Universities or Industry

Pamela Gehron Robey

Member, External Advisory Board, University of Arkansas Medical Center, Metabolic Diseases Program.

5. Elected Offices

Marian Young, Ph.D.

Council Member, American Society of Bone and Mineral Research.

6. Editorial Responsibilities Other than Reviewing Manuscript

Pamela Gehron Robey, Ph.D.

Editor, *Journal of Cellular Physiology*
Editorial Board, *Journal of Bone and Mineral Research*

Editorial Board, *Endocrionology*
Editorial Board, *Bone*
Editorial Board, *Calcified Tissue Internation*
Perspective Series Editor, Stem Cell Biology, *Journal of Clinical Investigation*

Marian Young, Ph.D.
Editorial Board, *Calcified Tissue International*

Larry Fisher, Ph.D.
Editorial Board, *Journal of Bone and Mineral Research*
Editorial Board, *Journal of Dental Research*

7. Professional or Governmental Advisory Capacity

Pamela Gehron Robey, Ph.D.
Member, CME Committee, NIH.
Member, Bone Erosion Prevention Advisory Group, NIAMS/NIH
Ad Hoc Reviewer, Oral Biology and Medicine II Study Section, NIH.
Member, Stem Cell Biology: Potential and Promise, NIAMS/NIA/NIH Advisory Group.
Preceptor, Howard Hughes Medical Research Institute Scholars Program

8. Appeared as an Invited Expert

Pamela Gehron Robey, Ph.D.
Science News, interviewed, quoted in an article on gene transfer and bone regeneration.

Michael Collins, M.D.
Magic Foundation Annual Meeting, "Studies in Fibrous Dysplasia at the NIH", Chicago, IL.

9. Professional Publications with Outside Co-authors

Pamela Gehron Robey, Ph.D.
[1]Bianco P., Gehron Robey, P. Marrow stromal stem cells. *J. Clin. Invest.* 105:1663-1668, 2000. ([1]Dipartimento di Medicina Sperimentale e Patologia, Universita' "La Sapienza," Rome, Italy)
[1]Bianco, P., [2]Riminucci, M., Majolagbe, A., Kuznetsov, S.A., Collins, M.T., Mankani, M.H., [2]Corsi, A., [3]Bone, H.G., [4]Wientroub, S., Spiegel, A.M.,Fisher, L.W., Gehron Robey, P. Mutations of the GNAS1 gene, stromal cell dysfunction, and osteomalacic changes in non-McCune-Albright fibrous dysplasia of bone. *J. Bone Min. Res.* 15:120-128, 2000. ([1]Dipartimento di Medicina Sperimentale e Patologia, Universita' "La Sapienza," Rome, Italy; [2]Dipartimento di Medicina Sperimentale, Universita' dell'Aquila, L'Aquila, Italy; [3]Michigan Bone and Mineral

Clinic, St. John's Medical Center, Detroit, MI; [4]Department of Pediatric Orthopedics, Dana Children's Hospital, Tel Aviv Medical Center, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel.)

[1]Fedarko, N.S., Fohr, B., Gehron Robey, P., Young, M.F., Fisher, L.W. Factor H binding to bone sialoprotein and osteopontin enables tumor cell evasion of complement-mediated attack. *J. Biol. Chem.* 275:16666-16672, 2000. ([1]Geriatric Research Center, Johns Hopkins University, Baltimore, MD)

[1]Grzesik, W.J., [1]Cheng, H., [1]Oh, J.S., Kuznetsov, S.A., Mankani, M.H., [1]Uzawa, K., Gehron Robey, P., [1]Yamauchi, M. Cementum-forming cells are phenotypically distinct from bone forming cells. *J. Bone Miner. Res.* 15:52-59, 2000. ([1]Dental Research Center, Department of Periodontics, School of Dentistry, University of North Carolina at Chapel Hill, Chapel Hill, NC)

[1]Satomura, K., [2]Krebsbach, P. [3]Bianco, P. and Gehron Robey, P.: Osteogenic imprinting upstream of marrow stromal cell differentiation. *J. Cell. Biochem.* 78:391-403, 2000. ([1]Tokushima Dental University, Tokushima, Japan, [2]Department of Oral Medicine/Pathology/Surgery,University of Michigan, School of Dentistry, Ann Arbor, MI; [3]Dipartimento di Medicina Sperimentale e Patologia, Universita' "La Sapienza," Rome, Italy)

[1]Fedarko, N.S., Robey, P.G. Bone Matrix. In: Canalis E ed, *Skeletal Growth Factors*. San Diego, CA, Academic Press, 17-30, 2000. ([1]Geriatric Research Center, Johns Hopkins University, Baltimore, MD)

[1]Shur, I., Kuznetsov, S., DeRubeis, A.R., Robey, P.G., [1]Benayahu, D. Differential gene expression by human bone marrow stroma cloned cells. International Conference on the Chemistry and Biology of Mineralized Tissues: *Proceedings of the Sixth International Conference*, Vittel France, Academy of Orthopaedic Surgeons.

Marian Young, Ph.D.

[1]Kim, J-E, [1]Kim, E-H, [1]Han, E-H, [1]Park, R-W, [1]Park, I-H, [1]Jun, S-H, [1]Kim, J-C, Young, MF, and [1]Kim, I-S. TGF-B Inducible Cell Adhesion Molecule, B-g-h3 is Down Regulated in Melorheostosis. *J. Cell Biochem.* 77:169-178, 2000. ([1]Kyung Pook National University, Korea)

[1]Bellahcene, A, [1]K. Bonjean, M. Young, L.W. Fisher and [1]V. Castronovo Bone Sialoprotein Is Expressed by Human Endothelial Cells and Promotes Angiogenesis, *Circulation Res.* 86:885-89, 2000. ([1]University of Liege, Belgium)

[1]Fedarko, N.S., Fohr, B., Robey, P.G., Young, M.F., and Fisher, L.F. Factor H Binding to Bone Sialoprotein and Osteopontin Enables Tumor Cell Evasion From Complement-Mediated Attack, *J. Biol. Chem.* 275:16666-1672, 2000. ([1]Johns Hopkins, M.D.)

Larry Fisher, Ph.D.

[1]Schonherr, E., O'Connell, B.C., [1]Schittny, J., [2]Robenik, H., [1]Fastermann,

D., Fisher, L.W., [2]Plenz, G., [2]Vischer, P., Young, M.F., and [1]Kresse, H. Paracine or Virus-Mediated Induction of Decorin Expression By Endothelial Cells Contributes To Tube Formation and Prevention of Apoptosis in Collagen Lattices. *Eur. J. Cell Biol.* 78:44-55, 1999. ([1]University of Munster/Germany; [2]University of Berne, Berne, Switzerland)

[1]Riminucci, M., Fisher, L.W., Majolagbe, [1]A., Corsi, A., [2]Lala, R., [2]De Sanctus, C., Robey, P.G., and [1]Bianco, P. A Novel GNSA1 Mutation, R201G, in McCune-Albright Syndrome, *J. Bone Min. Res.* 14:1987-1989, 1999. ([1]Universita dell'Aquila, L'Aquila, Italy; [2]Ospedale Regina Margherita, Turin, Italy)

Fisher, L.W. Biglycan (BGN). In (Kreis, T. and Vale, R. eds.) Guidebook To the Extracellular Mattrix, Anchor, and Adhesion Proteins. *Oxford University Press, Oxford* 365-368, 1999.

Fisher, L.W. Bone Sialoprotein (BSP). In (Kreis, T and Vale, R. eds.) Guidebook To the Extracellular Mattrix, Anchor, and Adhesion Proteins. *Oxford University Press, Oxford* 368-372, 1999.

Fisher, L.W. Decorin (DCN). In (Kreis, T and Vale, R. eds.) Guidebook To the Extracellular Mattrix, Anchor, and Adhesion Proteins. *Oxford University Press, Oxford* 408-411, 1999.

Sergei Kuznetsov, Ph.D.

[1]Gresik, W.J., [1]Cheng, H., [1]Oh, J.S., Kuznetsov, S.A., Mankani, M.H., [1]Uzawa, K., Gehron Robey, P., and [1]Yamauchi, M. Cementum-Forming Cells Are Phenotypically Distinct From Bone-Forming Cells. *J. Bone Min. Res.* 15:52-59, 2000. ([1]Dental Research Center, Department of Periodontics, School of Dentistry, University of North Carolina at Chapel Hill, Chapel Hill, N.C.)

[1]Bianco, P., [1]Riminucci M., Majolagbe, A., Kuznetsov, S.A., Collins, M.T., Mankani, M.H., [1]Corsi, A., [2]Bone, H.G., [3]Wientroub, S., Spiegel, A.M., Fisher, L.W., Gehron Robey, P. Mutations of the GNAS1 Gene, Stromal Cell Dysfunction, and Osteomalacic Changes in Non-McCune-Albright Fibrous Dysplasia of Bone. *J. Bone Min. Res.* 15:120-128, 2000. ([1]Dipartimento di Medicina Sperimentale, Universita del 'Aquila, L'Aquila, Italy; [2]Michigan Bone and Mineral Clinic, St. John's Medical Center, Detroit, MI; [3]Department of Pediatric Orthopedics, Dana Children's Hospital, Tel Aviv Medical Center, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel.)

[1]Shur, I., Kuznetsov, S., DeRubeis, A.R., Gehron Robey, P., [1]Benayahu, D. Differential Gene Expression By Human Bone Marrow Stromal Cloned Cells. *Chem. and Biol. Min. Tiss.* Goldberg M., Boskey A., Robinson C. eds., American Academy of Orthopaedic Surgeons 69-74, 2000. ([1]Department of Cell Biology and Histology, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel.)

Michael Collins, M.D.

[1]Bianco, P., [2]Riminucci, M., Majolagbe, A., Kuznetsov, S.A., Collins, M.T., Mankani, M.H., [2]Corsi, A., [3]Bone, H.G., [4]Wientroub, S., Spiegel, A.M., Fisher, L.W., Robey, P.G. Mutations of the GNAS1 Gene, Stromal Cell Dysfunction, and Osteomalacic Changes in Non-McCune-Albright Fibrous Dysplasia of Bone. *J. Bone Min. Res.* 15:120-128, 2000. ([1]Dipartimento di Medicina Sperimentale e Patologia, Universita' "La Sapienza," Rome, Italy; [2]Dipartimento di Medicina Sperimentale, Universita' dell'Aquila, L'Aquila, Italy; [3]Michigan Bone and Mineral Clinic, St. John's Medical Center, Detroit, MI; [4]Department of Pediatric Orthopedics, Dana Children's Hospital, Tel Aviv Medical Center, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel.)

[1]Donnenberg, M.S., Collins, M.T., [1]Benitez, R.M., [1&2]Mackowiak, P.A. The Sound That Failed. *Am. J. Med.* 108 (6):475-480, 2000. ([1]University of Maryland, Balitmore, MD, [2] Baltimore VA Medical Center, Baltimore, MD)

Collins, M.T., [1]Remaley, A.T., [1]Csako, G., [2]Pucino, F., [3]Skarulis, M.C., [3]Balow, J.E., and [4]Sarlis, N.J. Increased Levothyroxine Requirements Presenting as 'Inappropriate' TSH Secretion Syndrome in a Patient with Nephrotic Syndrome. *J. Endo. Invest.*, 2000. ([1]Clinical Pathology Department; [2]Pharmacy Department, Clincal Center; [3]Division of Intramural Research; [4]Clinical Endocrinology; National Institutes of Health; Bethesda, MD)

10. Other

Pamela Gehron Robey, Ph.D.

Hosted Patrick McGee, Knight Fellow, March, 2000.
Invention Report:
Isolation and characterization of human dental pulp stem cells
Material Transfer Agreements signed with the following institutions to provide them with gifts of cells:
St. Francis Hospital, Hartford, CT.
Boston University, Boston, MA.
The Mayo Clinic, Rochester, MN

Marian Young, Ph.D.

Co-Investigator, Bi-National Israel-US Grant, with Dr. Dani Deutsch, Dental Department Hebrew University, Jerusalem, Israel, to examine the function and regulation of enamel matrix genes, 2000-2003.

Larry Fisher, Ph.D.

Patent:
NIH/DHHS reference number is E-173-98/0. It is also known as PCT/US00/09349; Assay for the detection of a variety of tumors in biological specimens.

Reagents:
Sent more than 300 reagents to more than 120 laboratories around the world.
Sent over 50 reagents (antisera and cDNA) to 22 dental and oral biology laboratories.
Summer Student Award Winner:
Sponsored a NIDCR Summer Student Award winner for summer research project.

Michael Collins, M.D.

Intramural Collaborations:
NIMH
95-M-0151 Associate Investigator, "Dehydroepiandrosterone treatment of mid-life-related mood disorder in men and women"
NIDCR
97-D-0123 Associate Investigator, "Dehydroepiandrosterone (DHEA) treatment of Sjogren's syndrome"

Gene Therapy and Therapeutics Branch

Gene Therapy and Therapeutics Branch

1. Invited Talks

Bruce J. Baum, D.M.D., Ph.D..

University of Michigan, "Re-engineering salivary gland function"
Hebrew University, Jerusalem, Israel, The Jack Lewin-Epstein Memorial Lecture. "Applications of gene transfer for oral surgery"
Tel-Aviv University, Israel, "The impact of biology on dental education"
International Conference on Oral Biology, "Prospects for re-engineering salivary glands"
University of Connecticut, "Current status of gene transfer to salivary glands"
Spanish Society of Oral Medicine, Seville, "Transferring genes to salivary glands"
University of Southern California, Problems and prospects for clinical gene transfer to salivary glands"

Indu S. Ambudkar, Ph.D.

Department of Pediatrics, School of Medicine, University of Texas, Health Science Center at San Antonio, Texas.
Ca^{2+} interest group: Department of Biochemistry and Molecular Biology, University of Maryland, School of Medicine, Baltimore.
Department of Molecular and Cell Biology, Boston University School of Dental Medicine, Boston.
Department of Psychiatry, West Roxbury Veterans Affairs Medical Center and Harvard Medical School, Massachusetts.
Department of Molecular Pharmacology and Toxicology, School of Pharmacy, University of Southern California, Los Angeles.
Department of Anesthesiology and Pharmacology, UCLA.
Department of Pharmacology and Toxicology, University of Graz, Austria.
Department of Pharmacology, University of Vienna, Austria.

R. James Turner, Ph.D.

International Symposium on Exocrine Glands, "Membrane topology and function of the secretory Na^+-K^+-$2Cl^-$ cotransporter (NKCC1)", Seoul, Korea
National Institute for Physiological Sciences (Seiriken), International Conference on Coupling Mechanisms of Fluid Secretion and Exocytosis, "Are yeast a good expression system for mammalian transport proteins", Okazaki, Japan.

Jay Chiorini, Ph.D.

Craniofacial and Skeletal Diseases Branch, NIDCR January 12
American Society of Gene Therapy, Denver CO. May 28-June 3
Craniofacial Developmental Biology and Regeneration Branch, NIDCR November 15
VIIIth parvovirus workshop Quebec Canada June 28-July 2

Stanely Pillemer, M.D.

University of Toronto, invited speaker at Toronto Western Hospital and at Sunnybrook Medical Center: "New Treatments for Sjögren's Syndrome: Challenges and Opportunities"
Invited speaker: Philadelphia Chapter, Sjogren's Syndrome Foundation: "Finding New Treatments for Sjögren's Syndrome," held in Philadelphia, Pennsylvania, April 2000.
Invited speaker for three presentations at Swedish Rheumatology Society: 1) "The Rheumatology Trainee in Different Countries and Cultures;" 2) "Diagnosing and Treating Sjögren's Syndrome," and 3) "Advances in the Understanding and Treatment of Fibromyalgia," Halmstad, Sweden, May 2000.
Invited speaker, University of Bergen "New Treatments for Sjögren's Syndrome: Challenges and Opportunities," Bergen, Norway.

2. Sessions Chaired at Professional Meetings

Stanley Pillemer, M.D.

Invited to moderate session and facilitate breakout groups. Sjögren's Syndrome Outcome Measures Consensus Conference, European Rheumatology Research Conference held at Oxford University, United Kingdom, March 2000.
Invited Moderator, Annual Scientific Meeting American College of Rheumatology, Philadelphia, PA: "TNF Blockade in Diseases other than RA," November 2, 2000.

3. Symposia, Meetings or Conferences Organized

Bruce J. Baum, D.M.D., Ph.D.

Co-organizer of symposium to be held at IADR meeting in Makuhari, Chiba, Japan in June, 2001

Stanley Pillemer, M.D.

Organizer; speaker: "Sjögren's Syndrome: Treating the Whole Patient," Natcher Conference Center, NIH, Bethesda, MD, September 23.
Enhancing Clinical Research In Sjögren's Syndrome: Critical Issues, Pooks Hill Marriott,Bethesda, MD, September 25 and 26, 2000

4. Consultant for Universities or Industry

Bruce J. Baum, D.M.D., Ph.D.

Member, Board of Overseers, Tufts University School of Dental Medicine,Boston, MA
Member, Scientific Advisory Board, Genteric, Inc., Alameda, CA
Visiting Professor, Tokyo Dental College, Chiba, Japan
Consultant, Columbia University (University review of School of Dental and Oral Surgery), New York, NY

5. Elected offices

6. Editorial Responsibilities Other than Reviewing Manuscripts

Bruce J. Baum, D.M.D., Ph.D.
Associate Editor, European Journal of Dental Education
Editorial Board, Oral Surgery, Oral Medicine and Oral Pathology
Editorial Board, Journal of Dental Research
Editor for the Americas, Oral Diseases

R. James Turner, Ph.D.
Editorial Board, American Journal of Physiology: Gastrointestinal Physiology

7. Professional or Governmental Advisory Group

Bruce J. Baum, D.M.D., Ph.D.
Member, NIH Senior Biomedical Research Service Policy Board
Member, Board of Tutors, NIH Clinical Research Training Program
Member, Admissions Committee, NIH-Duke Master of Health Sciences in Clinical Research Program
Member, Research Panel, Future of Dentistry Committee, American Dental Association
Chair, Section 5.3 (Research), planning for "DentEdEvolves", European Unionconference on dental education to be held in March, 2001

Stanley Pillemer, M.D.
Spenshult Hospital, Halmstad, Sweden; consultation on rheumatic disease research projects (Unpaid).

8. Appeared as Invited Expert

9. Professional Publications with Outside Co-authors

Bruce J. Baum, D.M.D., Ph.D.
Ghezzi, E.M.[1], Wagner-Lange, L.A. [1], Schork, A. [1], Metter, J. [2], Baum, B.J., Streckfus, C.F. [3], and Ship, J.A. [1] Longitudinal influence of age, menopause, hormone replacement therapy, and other medications on parotid flow rates in healthy women. J. Gerontol. 55: M34-M42, 2000. (University of Michigan[1], National Institute on Aging[2], University of Mississippi[3])
Wang, S., Baum, B.J., Yamano, S., Mankani, M.H., Sun, D., Jonsson, M., Davis, C., Graham, F.L. [1], Gauldie, J. [1] and Atkinson, J.C. Adenoviral-mediated gene transfer to mouse salivary glands. J. Dent. Res. 79: 701-708, 2000. (McMaster University, Hamilton, Ontario, Canada[1])
Aframian, D., Cukierman, E., Nikolovski, J[1]., Mooney, D.J. [1], Yamada, K.M. and Baum, B.J. The growth and morphological behavior of salivary epithelial

cells on matrix protein-coated biodegradable substrata. Tissue Engineering 6: 209-216, 2000. (University of Michigan[1])

Hoque, A.T.M.S., Sedelnikova, O.A. [1], Luu, A.N. [1], Swaim, W.D., Panyutin, I.G. [1] and Baum, B.J. Use of polyethylenimine-adenovirus complexes to examine triplex formation in intact cells. Antisense & Nucleic Acid Drug Develop. 10:229-241, 2000. (Nuclear Medicine Department, Clinical Center[1])

Baccaglini, L., Hoque, A.T.M.S., Wellner, R.B., Goldsmith, C.M., Redman, R.S. [1], Sankar, V., Kingman, A., Barnhart, K.M. [2], Wheeler, C.J. [2] and Baum, B.J. Cationic liposome-mediated gene transfer to rat salivary epithelial cells in vitro and in vivo. J. Gene Med. 3:82-90, 2001. (VAMC Washington, DC[1], Vical, Inc, San Diego, CA[2])

Indu S. Ambudkar, Ph.D.

Liu, X., Wang, W., Lockwich, T., Singh, B.B., Wellner, R., Jadloweic, J., O' Connell, B., Zhu, X., and Ambudkar, I.S. Trp1, a candidate for the store-operated Ca^{2+} influx mechanism in salivary gland cells. J. Biol. Chem., 275, 3403-3413, (2000).

R. James Turner, Ph.D.

[1,2]Evans, R.L., [1]Park, K., Turner, R.J., [2]Watson, G.E., [1]Nguyen, H.V., [1]Dennett, M., [3]Hand, A.R., [4]Flagella, M., [4]Shull, G.E., [1,2]Melvin, J.E. Severe impairment of salivation in $Na^+/K^+/2Cl^-$ cotransporter (NKCC1)-deficient mice. J. Biol. Chem. 275:26720-26726, 2000.
([1]Center for Oral Biology, University of Rochester Medical Center, Rochester, NY, [2]Eastman Department of Dentistry, University of Rochester Medical Center, Rochester, NY, [3]Department of Pediatric Dentistry, University of Connecticut, Farmington, CT, [4]Department of Molecular Genetics, Biochemistry & Microbiology, University of Cincinnati College of Medicine, Cincinnati, OH)

[1]Tanimura, A., [1]Tojyo, Y. and Turner, R.J. Evidence that type I, II and III inositol 1,4,5-trisphosphate receptors can occur as integral plasma membrane proteins. J. Biol. Chem. 275:27488-27493, 2000. ([1]Department of Dental Pharmacology, Health Sciences University of Hokkaido, Hokkaido, Japan)

10. Other

Bruce J. Baum, D.M.D., Ph.D.

Recipient of the 2000 Norton Ross Award for Excellence in Clinical Research from American Dental Association

Oral Infection and Immunity Branch

Oral Infection and Immunity Branch

1. Invited Talks

Paul Kolenbrander, Ph.D.

University of Medicine and Dentistry, New Jersey Dental School, "Oral Bacterial Community Structure on Saliva-Coated Surfaces.
Wake Forest University School of Medicine, Winston-Salem, NC, "Spatial Organization of Oral Biofilm Communities."
Israel Division of IADR, Natanya, Israel, "Coaggregation and Coadhesion of Oral Biofilms".
NIDCR Clinical Research Fellow Training Program, Bethesda, MD.
Biofilms 2000 International Symposium, Big Sky, MT
Annual meeting of the Society for General Microbiology/Main Symposium: "Community and Cooperation in Biofilms", Exeter, United Kingdom, "Coaggregation and Coadhesion of Oral Biofilms"

Stephen Leppla, Ph.D.

"Exploiting Unique Features of the Anthrax Toxin Proteins for Design of Cell Type Specific Therapeutic Agents", Department of Microbiology and Immunology, University of Maryland, Baltimore MD.
"Anthrax Toxin Structure-function Analysis as a Guide to Design of Vaccines and Therapeutics", Division of Biologics, CBER, FDA
"Anthrax Toxin Structure-function Analysis as a Guide to Design of Vaccines and Therapeutics", Veterinary Microbiology Department, Montana State University, Bozeman, MT

Nancy McCartney-Francis, Ph.D.

Society for Leukocyte Biology, "Enhanced Toll-like Receptor (TLR4) Expression in TGF-beta 1 Null Mice", Cambridge, MA

Niki Moutsopoulos, D.D.S

Society for Leukocyte Biology, Presidential Award, "Permissive Factors of HIV Infection in Tonsil Lymphoid Cells", Cambridge MA
University of Maryland Dental School, "Peridontal Disease and Systemic Health", Undergraduate Dental School, Senior Class
University of Maryland Dental School, "Immunology of HIV Infection", Postgraduate Dental Program Lecture

Abner Notkins, M.D.

Board of Trustees, Paul Ehrlich Foundation, "The National Institutes of Health: The Government and Scientific Entrepreneurship", Frankfurt, Germany

Robert Palmer Jr., Ph.D.

The Microbiology Faculty, Humboldt University, Berlin, Germany

Oral Biology Departmental Seminar, SUNY, Buffalo, NY
New Zealand Chapter, IADR, Annual Meeting, Wellington, New Zealand
Microscopy Society of American Annual Meeting, Philadelphia, PA
Microbiology Faculty, University of Duisburg, Duisburg, Germany

Nicholas J.P. Ryba, Ph.D.

Department of Anatomy & Neurobiology, Colorado State University.
Department of Cellular & Structural Biology, University of Colorado School of Medicine Monell Chemical Senses Center, Philadelphia, PA
Neurosciences Formal Seminar, University of California

Reuben P. Siraganian, M.D., Ph.D.

"Signal Transduction from in Mast Cells", OPCB, NIDCR
"Protein Tyrosine Kinases in Mast Cell Signaling." LAR, NIAID
"Protein Tyrosine Kinases and Phosphates in Mast Cell Signaling." NCI, Frederick
"Protein tyrosine Kinases and Phosphates in Mast Cell Signaling," Boehringer Ingelheim Co, Danbury, Ct.

Sharon M. Wahl, Ph.D.

"TGF-E, Macrophages and Wound Healing" Symposium on Tissue Repair and Wound Healing: Therapeutic Opportunities, Smithkline Beecham, King of Prussia, PA
"SLPI-an endogenous antimicrobial agent", Microbicides 2000 Conference, Alexandria, VA
"New Approaches to Old Wounds", American College of Oral and Maxillofacial Surgeons 21st Annual Scientific Meeting, Washington, D.C.
Visiting Professor and Lecture, "TGF-E and Tissue Repair: to Heal or Not to Heal", Department of Surgery, University of Wisconsin, Madison, WI
"TGF-E and Lymphocyte Apoptosis", Department of Immunology, University of Wisconsin, Madison, WI
"TGF-E in the Life and Death Decisions of T Lymphocytes", Society of Leukocyte Biology Guest Symposium, American Association of Immunologists Annual Meeting, Seattle, WA

2. Sessions Chaired at Professional Meetings

Abner Notkins, M.D.

25th Anniversary of the Discovery of Islet Cell Antibodies, Venice, Italy

Robert J. Palmer, Jr., Ph.D.

Co-chair, Microbiology and Immunology oral presentation session, International Association for Dental Research Annual Meeting

Sharon M. Wahl, Ph.D.

Co-chair, Cytokines in Tolerance, Autoimmunity and Inflammation; NIH Cytokine Interest Group Symposium, NIH, Bethesda, MD
Co-chair, Session on Biochemical and Cellular Aspects of Tissue Repair and Remodeling. Tissue Repair and Wound healing: Therapeutic Opportunities. Smithkline Beecham, King of Prussia, PA
Symposium Chair, "Macrophages", Society of Leukocyte Biology Annual Meeting, Cambridge, MA

3. Symposia, Meetings or Conferences Organized

Paul Kolenbrander, Ph.D.

Planning colloquium "Microbial Communities: Advantages of Multicellular Cooperation" for The American Academy of Microbiology.

Robert J. Palmer, Jr., Ph.D.

Co-organizer of the ASM-sponsored Biofilms 2000 meeting, Big Sky, MT
Conducted one-day Microscopy Workshop, Biofilms 2000, Big Sky, MT
Organizer and faculty member, two-day Biofilms Workshop held in conjunction with the ASM annual meeting, Los Angeles, CA
Conducted Biofilm Workshop at Otago University, Dunedin, New Zealand

Reuben P. Siraganian, M.D., Ph.D.

Program Committee, Fourth International Workshop on Signal Transduction in the Activation and Development of Mast Cells and Basophils, Rehovoth, Israel

Sharon M. Wahl, Ph.D.

Co-chair, Cytokines in Tolerance, Autoimmunity and Inflammation; NIH Cytokine Interest Group Symposium, NIH, Bethesda, Maryland

4. Consultant for Universities or Industry

John O. Cisar, Ph.D.

R01 DE11102-06: Molecular Analysis of Actinomyces fimbriae
P.I.: Dr. Stephen Mattingly, Department of Microbiology, University of Texas Health Science Center at San Antonio
U01 DE 13971-01: The Whole Genome Sequence of Actinomyces naeslundii;
P.I.: Dr. Timothy Read, The Institute for Genomic Research, Rockville, MD
Dental Research Division, Unilever Research Port Sunlight Laboratory, London, England

Abner Notkins, M.D.

Bio-Technology General Corporation, New York City, NY

Robert J. Palmer, Jr., Ph.D.

Consulted by telephone on confocal microscopy purchase for University of Tennessee-Knoxville
Consulted by telephone on confocal microscopy purchase for Montana State University
Consulting visit at Ciba Vision Corporation, Duluth, GA

John Thompson, Ph.D.

Biochemistry Department, Brandeis University: Purification and large scale preparation of E-cystathionase for X-ray crystallographic analysis
Chemistry Department, University of York, U.K.: Provision of maltose 6-phosphate hydrolase, cellobiose 6-phosphate hydrolase and sucrose 6-phosphate hydrolases for x-ray crystallographic analysis and structure determination
Biology Department, University of Rochester: Synthesis and supply of chromogenic phosphorylated disaccharide analogs
Organic Chemistry Department, University of Darmstadt, Germany: Provision and synthesis of sucrose phosphate isomers for 1H and 13C NMR spectroscopy.
Biology Department, Johns Hopkins University, Baltimore, MD: Provision of glycoslhydrolases and chromogenic sugar analogs for enzymatic analyses.

Sharon M. Wahl, Ph.D.

Targeted Genetics, Inc., Seattle, WA; Gene Therapy
Adjunct Professor, Department of Molecular Microbiology and Immunology, Johns Hopkins University, Baltimore, MD
Adjunct Professor, Department of Periodontics, University of Maryland Dental School, Baltimore, MD

5. Elected Offices

Sharon M. Wahl, Ph.D.

Board of Directors, Foundation for Advanced Education in the Sciences (FAES)
President, Society for Leukocyte Biology
Secretary, FAES Executive Board

6. Editorial Responsibilities Other Than Reviewing Manuscripts

Robert J. Palmer Jr., Ph.D

Editorial Board: *Journal of Microbiological Methods*

Nicholas Ryba, Ph.D.

Editorial Board, *Biochemical Journal*

Reuben P. Siraganian, M.D., Ph.D.

Editorial Advisor Committee, *International Allergology*

Sharon M. Wahl, Ph.D.

Editorial Board, *Cytokine and Growth Factor Reviews*
Editorial Board, *Wound Repair and Regeneration*
Board of Editors, *American Journal of Pathology*
Advisory Editor, *Journal of Experimental Medicine*
Editorial Board, *Cytokine and Growth Factor Reviews*
Editor, *Microbes and Infection* Special Volume on "TGF-E in the Evolution and Resolution of Inflammatory Processes"
Co-Editor, *Progress in Inflammation*, Special Volume on 'TGF-E and Related Cytokines" Birkhauser Press

7. Professional or Governmental Advisory Capacity

Paul Kolenbrander, Ph.D.

Member, NIDCR Institutional Review Board
Invited expert for workshop on "Dental Unit Waterlines" sponsored by the NIDCR, American Dental Association, and the Organization for Safety & Asepsis Procedures

Stephen Leppla, Ph.D.

Member, NIAID Working Group on Anthrax Vaccines
Member, ad hoc NIAID Review Panel for proposals received in reply to RFA entitled "Preparedness against illegitimate use of bacterial pathogens"
Member, ad hoc Recombinant Toxin Working Group, advisory to the Office of Biotechnology Activities, NIH (formerly, the "RAC" committee)

Abner Notkins, M.D.

Scientific Advisory Council, March of Dimes
Board of Directors, The Paul Ehrlich Foundation, Frankfurt, Germany
NIH Alumni Association
Board of Governors, New York University Alumni Medical Association
Association of American Physicians (AAP
Fellow, American Association for the Advancement of Science

Nicholas Ryba, Ph.D.

Ad hoc Member, DRG Study Section, IFCN-4
Ad hoc Reviewer, NIDCD Program Project Grants
Grant reviewer for NSF
Grant reviewer for Human Frontier Science Program Organization, Strausbourg, France

Reuben P. Siraganian, M.D., Ph.D.

Ad hoc reviewer for Israel Research Council, Israel
Ad hoc reviewer for the Wellcome Trust, UK
Ad hoc member of Promotion and Tenure Committee for NIAMS
Ad hoc member of Tenure Track Search Committee for NIAID

Member of tenure-track search committee for NIAID

Sharon M. Wahl, Ph.D.
Howard Hughes Medical Institute Program Committee
Scientific and Medical Advisory Committee, Canadian Arthritis Network
Advisory Council, Meharry Medical College, Regional Research Centers for Minority Oral Health
Fellow, American Association for the Advancement of Science
Board of Directors, Foundation for Advanced Education in the Sciences
Office of AIDS Research (OAR) Etiology and Pathogenesis Coordinating Committee, NIH
Member, Appointed by NIH Director, Stetten Museum of Medical Research Advisory Committee

8. Appeared as an Invited Expert

Robert J. Palmer Jr., Ph.D.
Invited panelist, NIDCR – sponsored Workshop on Biofilms in Dental Water Lines (Bethesda, MD)

Nicholas J.P. Ryba, Ph.D.
Interviewed for news coverage of identification of a putative umami taste receptor by the Suddeutsche Zeitung and NPR
Interviewed for various articles on the identification of bitter taste receptors

Sharon M. Wahl, Ph.D.
Interviewed by Reuters, etc., for news coverage on SLPI as a therapeutic for aberrant wound healing

9. Professional Publications with Outside Co-authors

John O. Cisar, Ph.D.
Cisar, JO, Xu, DQ, Thompson, J., Swaim, W., Hu, L., [1]Kopecko, D.J.: An alternative interpretation of nanobacteria-induced biomineralized. *Proc. Natl. Acad. Sci., USA*, 97:11511-5, 2000. ([1]FDA, Bethesda, MD)
De-Qi, Xu, Cisar, J.O., [1]Ambulos, N., [1]Burr, D. H. and [1]Kopecko, D., J.: Genetic and functional studies of the Shiegella sonnei *rfb/rfc* gene cluster: Essential genes for expression in live vaccine vector strains, bimodal expression of form I O-antigen, proposed biopathway and evolutionary considerations. *Proceedings of the 36th Joint Conference on Cholera and Other Bacterial Enteric Infections*. Pp. 131-136, Osaka, Japan, January 17-19, 2001. ([1]FDA, Bethesda, MD)

Paul Kolenbrander, Ph.D.
Aspiras, M.D., Kazmerzak, K.M., Kolenbrander, P.I., McNab, [1]R, Hardegen, N. and. Jenkinson,[2]H. F.: Expression of green fluorescent protein (GFP) in

Streptococcus gordonii DL1 and its use as a species-specific marker in coadhesion with Streptococcus oralis 34 in saliva-conditioned biofilms in vitro: *Appl. Environ. Microbiol.* 66:4074-4083, 2000. ([1]Eastman Dental Institute, London, UK;[2]University of Bristol, Bristol, UK)

Weiss, E.I., B. Shanizki, M. Dotan, N. Ganeshkumar, P.E. Kolenbrander, and Z. Metzger. Attachment of F. nucleatum PK1594 to mammaliam cells and its coaggregation with periopathogenic bacteria are mediated by the same galactose-binding adhesin. *Oral Microbiol. Immunol.* 15:371-377, 2000. ([1]Tel Aviv University, Tel Aviv, Israel; [2]Forsyth Institute, Boston, MA)

Abner Notkins, M.D.

[1]Hawa, M.,[2] Fava., D. [1]Medici, F., Deng., J.-Y., Notkins, A.L.,[1]Demattia, G., [1]Leslie, D.G.: Antibodies to IA-2 and GAD65 in Type I and Type 2 Diabetes. *Diabetes Care* 23:228-233, 2000 ([1]Department of Diabetes and Metabolism, St. Bartholomew's Hospital, London, U.K.,[2] *Clinica Medica* I, La Sapienza University, Rome, Italy)

[1]Champion, J.M.,[1] Kean, R.B., [2] Rupprecht, C.E., Notkins, A.L., [1]Koprowski, J., [1]Dietzchold, B., and [1]Hooper, D.C.: The development of monoclonal human rabies-virus neutralizing antibodies as a substitute for pooled human immunoglobulin in the prophylatic treatment of rabies virus exposure. *J. Immunol. Meth.*, 235:81-90, 2000. ([1]Center for Neurovirology, Department of Microbiology and Immunology, Thomas Jefferson University, Philadelphia, PA; [2]Rabies Section, Centers for Disease Control and Prevention, Atlanta, Georgia)

Robert J. Palmer, Jr., Ph.D.

Palmer, R.J., Jr., Wu, R , Gordon, S. Bloomquist, [1]C. G. , Liljemark, [1]W.F. , Kilian, [2]M. and Kolenbrander, P.E.: 2001. Retrieval of biofilms from the oral cavity, p. 393-403. In R.J. Doyle (ed.), Microbial growth in biofilms, part B, *Methods in Enzymology*. Vol 337, Academic Press, Inc., San Diego, CA ([1]University of Minnesota, Minneapolis, MN; [2]University of Aarhus, Aarhus, Denmark)

Nicholas Ryba, Ph.D.

Adler, E., Hoon, M.A., Mueller, K.L[1]., Chandrashekar, J.[1], Ryba, N.J.P. and Zuker, C.S.[1]: A novel family of mammalian taste receptors. *Cell* 100:693-702, 2000. ([1]Howard Hughes Medical Institute and Departments of Biology and Neurosciences, University of California at San Diego, LaJolla, California.)

Chandrashekar, J.[1]., Mueller, K.L[1] Hoon, M.A, Adler, E., Feng, L.[2], Guo, W., Zuker, C.S.[1] and Ryba, N.J.P. 2000 T2Rs function as bitter taste receptors. *Cell* 100:703-711, 2000. ([1]Howard Hughes Medical Institute and Departments of Biology and Neurosciences, University of California at San Diego, La Jolla, CA and [2]Aurora Biosciences Inc., LaJolla, CA).

Reuben P. Siraganian, M.D., Ph.D.

[1]Arudchandran, R., [2]Brown, M.J., [1]Pierce, M.J., [1]Song, J.S., Zhang, J., Siraganian, R.P., [3]Blank, U. and [1]Rivera, J.: The Src homology 2 domain of Vav is required for its compartmentation to the plasma membrane and activation of c-Jun NH2-terminal kinase 1. *Journal of Experimental Medicine* 191:47-59, 2000. ([1]National Institute of Arthritis and Musculoskeletal and Skin Diseases, NIH, [2]National Cancer Institute, [3]Institut Pasteur, Paris, France)

[1]Kawakami Y., [1]Kitaura J., [1]Hartman S.E.,[2]Lowell C.A., Siraganian R.P. and [1]Kawakami T.: Regulation of protein kinase C EI by two protein-tyrosine kinases, Btk and Syk. *Proceedings of the National Academy of Sciences of USA* 97:7423-7428, 2000. ([1]La Jolla Institute of Allergy and Immunology, La Jolla, CA, [2]University of California, San Francisco, CA)

[1]Field, K.A., [2]Apgar, J.R., [1]Hong-Geller, E., Siraganian, R.P., [1]Baird, B., and [1]Holowka, D.: Mutant RBL mast cells defective in FcHRI signaling and lipid raft biosynthesis are reconstituted by activated Rho-family GTPases. *Molecular Biology of the Cell* 11:3661-3673, 2000. ([1]Cornell University, Ithaca NY, [2]Scripps Research Institute, La Jolla, CA)

Zhang, J., [1]Billingsley, M. L., [1]Kincaid, R. L. and Siraganian, R.P.: Phosphorylation of Syk activation loop tyrosines is essential for Syk function: An in vivo study using a specific anti-Syk activation loop phosphotyrosine antibody. *Journal of Biological Chemistry* 275:35442-35447, 2000. ([1]Pennsylvania State University School of Medicine, Hershey, PA)

Thompson, John, Ph.D.

Thompson, J., Robrish, S.A., [1]Immel, S.., [1]Lichtenthaler, F.W., [1]Hall, B.G. Glucosylhydrolases from Families 4 and 32 participate in metabolism of sucrose and its five linkage-isomeric Δ-D-glucosyl-D-fructoses by Klebsiella pneumoniae. *J. Biol. Chem.* (submitted) ([1]Darmstadt Univ, Germany)

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Sharon M. Wahl, Ph.D.

Hale-Donze, H., [1]Jackson, R and Wahl, S.M. Quantification of transforming growth factor E isoforms. In: *Current Protocols in Immunology* (Kruisbeck, A.M., Margulies, D.H.., Shevach, E.M. and Strobell, W., eds)

Greene Publishing Associates and Wiley Interscience, Philadelphia, 2000. ([1]University of Alabama, School of Medicine, Birmingham, AL)

[1]Smith, P.D. and Wahl, S.M. Immunobiology of mucosal HIV-1 infection. In: *Mucosal Immunology*, Second Edition (Chapter 60). (Ogra, P., Mestecky, J., Lamm, M., Strober, W., McGhee, J., and Bienenstock, J., eds). Academic Press, in press. ([1]University of Alabama, School of Medicine, Birmingham, AL)

Wahl, S.M., McCartney-Francies, N., Frazier-Jessen, M., [1]Feldman, G and [2]McCarthy, J.B. Integrins, inflammation, and intervention. *J. Vas Surg.*, in press, ([1]Food and Drug Administration, Bethesda, MD, [2]University of Minnesota, Minneapolis, MN)

[1]Breit, S.N. and Wahl, S.M. (Editors. TGF-E and related cytokines in inflammation. *Prog. Inflam. Res.* in press. ([1]Center for Immunology, Sydney, Australia)

[1]Breit, S.N. and Wahl, S.M.: TGF-E superfamily members: structure and function. *Prog. Inflam. Res.* in press, ([1]Center for Immunology, Sydney, Australia)

Wahl, S.M., Wild, T., Hale-Donze, H., Moutsopoulos, N. and [1]Orenstein, J.M. 2000. Permissive factors for HIV-1 infection of macrophages. *J. Leuk Biol.* 68(3):303-10. ([1]George Washington University, Washington, D.C.)

[1]Scamurra, R.W., [1]Miller, D.J., [1]Dahl, L., [1]Abrahamsen, M., [1]Kapur, V., Wahl, S.M.,[1] Milner, E.C.B. and [1]Janoff, E.N. 2000. Impact of HIV-1 infection on V_H3 gene repertoire of naïve human B cells. *J. Immunol.* 164(10)5482-91. ([1]University of Minnesota, Minneapolis, MN)

[1]Skaleric U., Manthey, CM, Megenhagen, SE., [1]Gaspric., Wahl, S. 2000. Superoxide release and superoxide dismutase expression by human gingival fibroblasts. *Eur J. Oral Science. 108(2):130-5.* ([1]Ljubljana, Slovenia)

[1]Smith, P.D. and Wahl, S.M.: Macrophage effector function. *Clinical Immunology*, 2nd Edition (Rich, R.R., Fleisher, T.A., Botzin, B., Shearer, W.T. and Schroeder, H.W., Jr. eds). in press, 2000. ([1]University of Alabama School of Medicine, Birmingham, AL)

10. Other

John O. Cisar, Ph.D.

Dr. Allen Bush, Department of Chemistry and Physics, University of Maryland, Baltimore County, Project: Structural studies of streptococcal receptor polysaccharides.

Dr. Steven R. Gill, The Institute for Genomic Research, Rockville, MD., Genomic studies of Strepococcus gordonii

Dr. Dennis J. Kopecko, Laboratory of Enteric and Sexually Transmitted Diseases, CBER, FDA, Bethesda, MD.

Cisar, JO, Xu, DQ, Thompson, J. Swaim, W., Hu, L.,

Dr. Kai P. Leung, Principal Investigator, US Army Dental Research Detachment, Great Lakes, Illinois, Molecular characterization of Actinomyces naeslundii type 1 fimbriae
Dr. Francis Wang, Polymers Division, NIST, Gaithersburg, MD
Inhibition of oral biolfilm formation
Dr. Stefan Ruhl, Department of Periodontology, University of Regensburg, Germany; Leukosialin and leukocyte common antigen:polymorphonuclear leukocyte and HL-60 cell receptors for streptococcal and actrinomyces adhesions (manuscript submitted)
Dr. Yukihiro Takahashi, Department of Microbiology, Nippon Dental University, Tokyo, Japan; Molecular analysis of Streptococcus gordonii Hs antigen

Paul Kolenbrander, Ph.D.

Mentor of Victoria Green, high school student at Madeira School, McLean, VA
NIDCR EEO Special Achievement Award
Participant at 36th Annual ADA Dental Students Conference on Research

Stephen Leppla, Ph.D.

Solving the structure of LF and lF-PA63 complex: collaboration with Robert Liddington, Burnham Institute, LaJolla, CA
Role of LF in alteration of signal transduction pathways: collaboration with G Van de Woude and Nick Duesbery, Van Andel Institute
Use of LF fusions to deliver epitopes to stimulate CTL for HIV
HIV: collaboration with Jay Berzofsky (NCI)
Hepatitis C: collaboration with T. Akatsuka (Japan) and Steve Feinstone (FDA)
Testing PA as a protein carrier for polysaccharide conjugate vaccines:
Collaboration with Rachael Schneerson and John Robbins (NICHD)
Mutagenesis of PA and study of cellular uptake of toxins components:
collaboration with Yogendra Singh (Centre for Biochemicals, Delhi, India)
Conditional knockouts to find genes involved in toxin action:
Collaboration with Stanley Cohen (Stanford University)
Retroviral insertional mutagenesis for identification of toxin receptors:
collaboration with Eric Holland and Harold Varmus, NCI
Supplied furin-deficient CHO cell lines to:
Dr. Ashley Hayes, Hoffman-La Roche AG
Dr. Lars Saegaard Nielsen, Novo Nordisk
Dr. Claus Pietrzik, USCD
Dr. Jae Jung, New England Primate Center
Supplied genetically marked CHO cells to:
Dr. Olaf Schneewind, Department of Microbiology & Molecular Genteics, UCLA
Supplied anthrax toxin component proteins and/or antisera to:
Dr. Darryl Rideout, Structural Bioinformatics, San Diego, CA
Dr. Jay Thakar, AFRRI, Bethesda, MD
Dr. Brenda D. Spangler, Montana State U., Bozeman, MT
Dr. James D. Stockand, Depty of Physiology, University of Texas, San Antonio, TX

Dr. Joanne M. Volosky, Cellomics, Inc., Pittsburgh, PA
Dr. R. J. Collier, Harvard University, Boston, MA
Dr. Conrad Quinn, CAMR, Porton Down, UK
Dr. George Georgiou, Univ. of Texas, Austin, Texas
Dr. Bruce Meade, FDA
Dr. Nina Marano, CDC, Atlanta, Georgia
Dr. Arthur M. Friedlander, USAMRIID, Frederick, Maryland
Dr. Vidadi Yusibov, University of Pennsylvania, Philadelphia, PA
Dr. Darrell Galloway, Ohio State University, Columbus, Ohio
Dr. Sukjoon Park, BioPort Corp, Lansing, MI
Supplied plasmids encoding Bacillus anthracis toxin components to;
Dr. Conrad Quinn, CAMR, Porton Down, UK
Dr. Darrell Galloway, Ohio State University, Columbus, Ohio
Dr. Arthur M. Friedlander, USAMRIID, Frederick, MD
Supplied Bacillus anthracis strains to:
Dr. Michael Schmitt, FDA

Abner Notkins, M.D.

Adjunct Professor of Pathology, Uniformed Services University of Health Sciences, Bethesda, MD
US. Patent (application #08/246.489) entitled "Novel Human Insulinoma-Associated cDNA": To be awarded in 2001

Robert J. Palmer, Ph.D.

Mentoring, Ph.D. committee of Joao Xavier (University of Lisbon, Portugal)
Summer dental student mentor: Kamran Raja (through NIDCR Office of Education)
Summer dental hygiene student mentor: Erin Bergman, Jennifer Spencer (through NIDCR clinic)
Supervised Divya Mittal (NIDCR clinical staff) over a four-month introduction to laboratory research
Supervised Nick Jacobovics (University of Bristol postdoctoral student) during biofilm work conducted here.

Reuben P. Siraganian, M.D., Ph.D.

Analysis of molecules involved in receptor mediated signaling. Penn State University of Medicine (N01-DE-62614).
Antibodies, plasmids or cell lines were provided to the following:
Dr. Andrew C.B. Cato, Eggenstein-Leopoldshafen, Germany
Dr. Stefan Stamm, Max Planck, Germany
Dr. Se-Ying Kam, Stanford University, Palo Alto, CA
Dr. Toshiaki Kawakami, La Jolla Institute of Allergy & Immunology, San Diego, CA
Dr. James Hunt, Kings College, London, United Kingdom
Dr. Ara Hovanessian, Institute Pasteur, Paris, France
Dr. Jeff Jessberger, Basel Institute for Immunology, Switzerland

Dr. Teresa Bellon, Hospital de la Princesa, Madrid, Spain
Dr. Michael Hubre, Max Planck, Freiburg, Germany
Dr. Christias Bonnerot, Institute Curie, Paris, France
Dr. Paul Naccache, CRRI, Quebec, Canada
Dr. Yasunori Kanaho, Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan
Dr. Angela Santoni, University La Sapienza, Rome, Italy
Dr. Sanford Shattil, Scripts Research Institute, LaJolla, CA
Dr. Melvin L. Billingsley, Pennsylvania State University School of Medicine, Hershey, PA
Drs. Barbara Baird, and David Holowka, Cornell University, Ithaca, NY
Dr. Celia M. Jamur, The Federal University of Parana, Curtiba, Brazil
Dr. Toshiaki Kawakami, La Jolla Institute of Allergy and Immunology, La Jolla, CA
Dr. Gerry Krystal, Terry Fox Lab, Vancouver, British Columbia, Canada

John Thompson, Ph.D.

Dr. Stefan Immel, Department of Organic Chemistry, University of Darmstadt, Germany: Molecular modeling and stereochemical structure of linkage – isomeric Δ-D-fructoses.
Dr. Junichi Sekiguchi, Faculty of Science and Technology, Shinshu University, Japan: Molecular biology and regulation of the mal-operon in Bacillus subtilis.
Drs. Gideon J. Davies and Annabelle Varrot, Chemistry Department, University of York, UK; X-ray crystallographic analysis and determination of the three-dimensional structure of Family 4 Glycosylhydrolases.
Dr. Dennis J. Kopecko, Laboratory of Enteric and Sexually Transmitted Diseases, CBER, FDA, Bethesda, Maryland: Investigation of putative nanobacteria in the oral cavity.
Professor Frieder W. Lichtenthaler, Department of Organic Chemistry, Darmstadt University, Germany: Chemical synthesis and application of sucrose analogs as potential inhibitors of growth of oral bacteria.

Sharon M. Wahl, Ph.D.

FAES Graduate Course Lecturer, Immunology 522, Cell Biology
And Immunity in Inflammation: 'Chronic Inflammation"
FAES Graduate Course Lecturer, Immunology 504, Allergy and Clinical Immunology: Macrophages"
Project Officer: Role of Mononuclear Phagocytes in Opportunistic Infections of Oral Mucosa and Other Tissues in AIDS Patients. George Washington University (N01-DE-12585)
Project Officer: Oral and Intestinal Mucosal Response to HIV: Implications for Vaccine Development, University of Minnesota.VA Medical Center (N01-DE-42600)
Project Officer: Immunologic Factors in Saliva and Blood as Determinants of HIV-related Oral Disease, ViroMed Laboratories, Inc. (N01-DE-82625)

Project Officer: Detection of HIV-1 in the Oral Cavity of Women with HIV-1 Infection: Correlation with Clinical Status and Virologic and Immunologic Parameters. DATRI 009b Substudy of DATRI 009. A Clinical Trial of the Division of AIDS Treatment Research Initiative

Material Transfer Agreement-Cooperative Research and Development Award (MTA-CRADA) with Targeted Genetics Inc., Seattle, WA

Material Transfer Agreements (MTAs) with numerous investigators to provide TGF-E plasmid for gene transfer studies

Material Transfer Agreements (MTA) with numerous investigators to provide SLPI null mice.

Oral and Pharyngeal Cancer Branch

Oral and Pharyngeal Cancer Branch

1. Invited Talks

J. Silvio Gutkind, Ph.D.

University of Cincinnati Medical Center, "Signaling networks in cell growth control by G protein", Cincinnati, Ohio, 1/2000
University of San Diego, "Signaling networking cell growth control by G protein Receptors", San Diego, California, 2/2000
Harvard School of Dental Medicine, Department of Oral Medicine and Diagnostic Sciences, "Oral Cancer Comes of Age", Boston, Massachusetts
2/2000
Emory University School of Medicine, Department of Cell Biology, "Regulation of Signaling Networks by G Protein-Coupled Receptors", Atlanta, Georgia
3/2000
Mosbacher Kolloquium 2000, "Novel Signaling pathways link G protein-coupled receptors to the nucleus", Mosbach, Neckar Valley, Germany 4/2000
21st Annual Conference, American College of Oral and Maxillofacial Surgeons, "Molecular Basis of Oral Cancer-New Approaches", Washington, DC 4/2000
The Royal College of Surgeon's meeting on Oral Cancer "Molecular basis of cancer and the cancer genome project ", London, England, 10/2000
2000 Novel Molecular Targets for Cancer Therapy, "Signaling Opportunities for Cancer Therapy", Buenos Aires, Argentina 10/2000
GPCR Symposium 2000, "Signaling Networks linking GPCRs to the Nucleus", Boston, Massachusetts 10/2000
University of Virginia, Department of Cell Biology, "Regulation of Signaling Networks by G Protein-Coupled Receptors" Charlottesville, Virginia, 11/2000

Thomas Bugge, Ph.D.

University of Copenhagen, "The Finsen Laboratory "The uPAR-Associated Protein, UPARAP" Copenhagen, Demark, 7/2000
Entremed Inc, "Fibrinogen promotes metastasis & a novel uPAR- associated protein, Rockville, Maryland 12/2000.

Adrian Senderowicz, M.D.

National Cancer Center Research Institute, "Cyclin-dependent kinases as targets for cancer therapy". Tokyo, Japan 1/2000
Kyowa Hakko Kogyo Co.Ltd, "Preclinical development of UCN-01 and flavopiridol" Tokyo, Japan 1/2000
The International symposium on HMR 1275, Palace Hotel, "Preclinical and clinical development of flavopiridol" Tokyo, Japan 1/2000
Thomas Jefferson University, "Novel cyclin-dependent kinases for cancer Therapy". Philadelphia, Pennsylvania 2/2000

A new era in Oncology-Aventis Pharma Germany, Palais des Congres, "Flavopiridol: New perspectives in hematology and oncology". Strasburg, France 2/2000
Dept. of Pathology, Technical University of Munich "Preclinical and clinical development of the two novel cyclin-dependent kinase inhibitors, flavopiridol and UCN-01", Munich, Germany. 2/2000
Bristol Myers Squibb Global Headquarters "Preclinical and clinical development of the two novel cyclin-dependent kinase inhibitors, flavopiridol and UCN-01". New York, NY. 3/2000
European School of Oncology, "Novel agents in the treatment of Non-Hodgkin's lymphoma". Buenos Aires, Argentina. 4/2000
First European Spring Oncology Conference. "Flavopiridol, the first cyclin-dependent kinase inhibitor in human clinical trials". Marbella, Spain 4/2000
Holy Cross Hospital, "Novel agents for the treatment of advanced Head and Neck neoplasms". Silver Spring, Maryland 7/2000
Grand Rounds, National Cancer Institute, "Preclinical and clinical development of cdk inhibitors for the treatment of head and neck cancer". Mexico City, Mexico 7/2000
Grand Rounds, Department of Pathology, New York University, "Cyclin-dependent kinase modulators for cancer therapy". New York, New York 9/2000
ENT Grand Rounds, George Washington University: "Cyclin-dependent kinase modulators for the treatment of squamous head and neck cancer", Bethesda, Maryland 9/2000
2000 Novel Molecular Targets for Cancer Therapy, "Novel cyclin-dependent kinase inhibitors for cancer therapy". Buenos Aires, Argentina 10/2000
Novel Molecular Targets for Cancer Therapy, "Novel modalities and targets for the treatment of head and neck cancer", Buenos Aires, Argentina. 10/2000
HIV and AIDS Malignancy Branch, Division of Clinical Sciences, National Cancer Institute. " Flavopiridol: a novel antitumor cyclin-dependent kinase inhibitor that inhibits P-TEF-b and HIV replication", Bethesda, Maryland 10/2000
11th NCI-EORTC-AACR Symposium on New Drugs in Cancer Therapy. "Preclinical and clinical development of cyclin-dependent kinase modulators flavopiridol and UCN-01", Amsterdam, Netherlands. 11/2000
ECOG Group Meeting, Fall 2001, Head and Neck committee. "Development of cyclin-dependent kinase modulators in the treatment of Head and Neck Cancer ", Miami, Florida 11/2000
NIH Academy, "Cyclin-dependent kinase modulators: from the bench to the bedside", Bethesda, Maryland 12/2000

2. Sessions Chaired at Professional Meetings

J. Silvio Gutkind, Ph.D.
Mosbacher Kolloquium 2000, "Session on Rho-GTPases", Mosbach, Neckar Valley, Germany 4/2000

3. Symposia, Meetings, or Conferences Organized

Adrian Senderowicz, M.D.
2000 Novel Molecular Targets for Cancer Therapy, Buenos Aires, Argentina 10/5-6/2000

4. Consultant for Universities or Industry

J. Silvio Gutkind, Ph.D.
Janssen Research Foundation and R W Johnson, New York, New York

5. Elected Offices

6. Editorial Responsibilities Other than Reviewing Manuscripts

J. Silvio Gutkind, Ph.D.
Editorial Board, *The Journal of Biological Chemistry*
Editorial Board, *Oral Oncology*
Editor, *Humana Press*, Book on Signaling Networks and Cell Cycle Control
In preparation, *Academic Press*, Book on Head and Neck Carcinomas, Translational Approaches and Clinical Studies

Adrian Senderowicz, M.D.
Editorial Board, Clinical Cancer Research
Editorial Board, The Women's Review Oncology Review

7. Professional or Governmental Advisory Capacity

J. Silvio Gutkind, Ph.D.
Reviewer, Grant Program, DER, NCI
Reviewer, Welcome Trust Foundation
Reviewer, Italian Association for Scientific Research
Reviewer, German-Israeli Foundation for Scientific Research & Development
Reviewer, Swiss National Science Foundation
Reviewer, Medical Research Council of Canada
Reviewer, Dutch Cancer Society
Reviewer, National Science Foundation
Reviewer, The Israel Science Foundation
Reviewer, Italian Association for Cancer Research
Reviewer, European Institute of Oncology

8. Appeared as an Invited Expert

9. Professional Publications with Outside co-authors

[1]Chiang Y.J., [1]Kole H.K., [2]Brown K., [1]Naramura M., Fukuhara S., [1]Hu R.J., [1]Jang I.K., Gutkind J.S., [2]Shevach E. and [1]Gu H. Cbl-b regulates the CD28 dependence of T-cell activation. *Nature* 403:216-220, 2000 ([1]Laboratory of Immunology, NIAID, [2]NIAID, NIH)

[1]Shillitoe E.J., May M., Leethanakul C., Patel V., [2]Ensley J.F., [3]Strausberg R.L., and Gutkind J.S. Genome-wide analysis of oral cancer-Early results from the Cancer Genome Anatomy Project. *Oral Oncol.* 36:8-16, 2000 ([1]SUNY College of Medicine, Syracuse, New York, [2]Wayne State University School of Medicine, [3]Cancer Genomics Office, NCI)

[1]Majidi M., Gutkind J.S., and [1]Lichy J.H. Deletion of the COOH terminus converts the ST5 p70 Protein from an inhibitor of RAS signaling to an activator with transforming activity in NIH-3T3 Cells. *J. Biol. Chem.* 275:6560-6565, 2000 ([1]Department of Cellular Pathology, armed Forces Institute of Pathology, Washington, DC)

[1]Katz B.Z., Zohar M., Teramoto H., [1]Matsumoto K., Gutkind J.S., [2]Lin D.C., [2]Lin S., and [1]Yamada K.M. Tensin can induce JNK and p38 activation. *Biochem. Biophys. Res. Commun.* 272: 717-720, 2000 ([1]Craniofacial Developmental Biology and Regeneration Branch, NIH, [2]Department of Developmental and Cell Biology University of California at Irvine, Irvine, California)

[1]Pirone D.M., Fukuhara S., Gutkind J.S., [1]Burbelo P.D. SPECs, Small Binding Proteins for Cdc42. *J. Biol. Chem.* 275:22650-22656, 2000 ([1]Lombardi Cancer Center, Georgetown University Medical Center, Washington, DC)

Sanchez-Prieto R., [1]Rojas J.M., [2]Taya Y., and Gutkind J.S. A role for the $p38^{MAPK}$ pathway in the transcriptional activation of p53 upon genotoxic stress by chemotherapeutic agents. *Cancer Res.* 60: 2464-2472, 2000 ([1]Unidad de Biologia Celular, Madrid, Spain, [2]National Cancer Center Research Institute, Tokyo, Japan)

[1]Izevbige E.B.O., Gutkind J.S., and [1]Ray P. E. Angiotensin II and Fibroblast Growth Factor mitogenic signaling pathways in human mesangial cells. *Pediatr. Res.* 47: 614-621, 2000. ([1]Children's National Medical Center)

Leethanakul C., Patel V., [1]Gillespie J., [2]Shillitoe E., [3]Kellman R.M., [4]Ensley J.E., [5]Limwongse V., [1]Emmert-Buck M.R., [6]Krizman D.V., and Gutkind J.S. Gene expression profiles in squamous cell Carcinomas of the oral cavity: Use of Laser Capture Microdissection for the construction and analysis of stage-specific cDNA libraries. *Oral Oncology* 36:474-483, 2000 ([1]Pathogenetics Unit, NCI, [2]Department of Microbiology and Immunology, Syracuse, New York, [3]SUNY Upstate University, Syracuse, New York, [4]Wayne State University, Detroit, Michigan, [5]Chulalongkorn University, Bangkok, Thailand, [6]Cancer Genome Anatomy Project, NCI)

Leethanakul C., Patel V., [1]Gillespie J., Pallante M., [2]Ensley J.F., [3]Koontongkaew, S., [1]Liotta L.A., [1]Emmert-Buck M., and Gutkind J.S. Distinct pattern of expression of differentiation and growth-related genes in squamous cell carcinomas of the head and neck revealed by the use of laser capture microdissection and cDNA arrays. *Oncogene* 19:3220-3224, 2000

([1]Laboratory of Pathology, NCI, [2]Wayne Sate University, Detroit, Michigan, [3]Prince of Songkhla University, Songkhla, Thailand)

[1]Izevbigie E.B.O., Gutkind J.S., and [1]Ray P. Isoproterenol inhibits FGFb-induced growth of renal epithelial cells. *Ped. Nephrology*, 14: 726-734, 2000. ([1]Children's National Medical Center)

[1]Visconti R., [1]Gadina M., Chiariello M., [2]Chen E.H., [2]Stancato L.F., Gutkind J.S., and [2]O'Shea J.J. Importance of MKK6/p38 pathway for IL-12-induced STAT4 serine phosphorylation and transcriptional activity. *Blood*, 96:1844-1852, 2000 ([1]Lymphocyte Cell Biology Section, NIAMS, [2]Howard Hughes Medical Institute)

[1]Arozarena I., [1]Aaronson D.S., [1]Matallanas D., [1]Sanz V., [1]Ajenjo N., [2]Tenbaum S.P., Teramoto H., Ighishi T., [1]Zabala J.S., Gutkind J.S., and [1]Crespo P. The Rho Family GTPase Cdc42 Regulates the Activation of Ras/MAP Kinases by the Exchange Factor Ras-GRG., *J. Biol. Chem.* 275: 26441-26448, 2000 ([1]Universidad de Cantabria, Santander, Spain, [2]Instituto de Investigaciones Biomedicas, Madrid, Spain)

[1]Hyun T., [1]Yam A., Pece S., [1]Xie X., [2]Zhang J., [1]Miki T., Gutkind J.S., and [2]Li W. Loss of PTEN expression leading to high Akt activation in human multiple myelomas. *Blood* 96:3560-3568, 2000 ([1]Laboratory of Cellular and Molecular Biology, NCI, [2]Lombardi Cancer Center, Georgetown University Medical Center, Washington, DC)

[1]Du Villard J.A., [1]Wicker R., [2]Crespo P., [3]Russo D., [3]Filetti S., Gutkind J.S., [1]Sarasin A., and [1]Suarez H.G. Role of the cAMP and MAPK pathways in the transformation of mouse 3T3 fibroblasts by a TSHR gene constitutively activated by point mutation. *Oncogene* 19:4896-4905, 2000 ([1]Institut de Recherches sur le Cancer, Villejuif Cedex, France, [2]Departamento de Biologia Molecular, Santander, Spain, [3]Cattedra di Endocrinologia, Catanzaro, Italy)

[1]Sodhi A., Montaner S., Patel V., Zohar M., [2]Bais C., [2]Mesri E.A., and Gutkind J.S. The Kaposi's sarcoma associated Herpesvirus G protein-coupled receptor upregulates VEGF expression and secretion through MAPK and p38 pathways acting on HIF-1Δ. *Cancer Research*, 60:4873-4880, 2000 ([1]Howard Hughes Medical Institute Research Scholars Program, Bethesda, Maryland, [2]Cornell University Medical College, New York)

Patel V., [1]Ensley J.F., Gutkind J.S., and Yeudall W.A. Induction of apoptosis in head and neck squamous carcinoma cells by γ-irradiation and bleomycin is p53-independent. *Internatl. J. Cancer* 88:737-743, 2000 ([1]Wayne State University, Detroit, Michigan)

Myung Hee Park, Ph.D.

Lee, C.H., [1]Marekov, L.N., [1]Kim, S.Y., [2]Brahim, J.S., Park, M.H. and [1]Steinert, P.M. Small proline-rich protein 1 is a major component of cornified cell envelope of normal human oral keratinocytes FEBS Lett. 477, 268-272. 2000 ([1]Laboratory of Skin Biology, NIAMS, [2]Clinical Research Core, NIDCR)

Wolff, E.C., [1]Wolff, J. and Park, M.H.: Deoxyhypusine synthase generates and uses bound NADH in a transient hydride transfer mechanism. *J. Biol.*

Chem. 275, 9170-9177 2000 ([1]Laboratory of Biochemistry and genetics, NIDDK, NIH)

Frank Robey, Ph.D.

[1]Bellahcene A., [1]Bonjean, K., [2]Fohr, B., [2]Fedarko, N.S., Robey, F.A., [2]Young, M.F., [2]Fisher, L.W. and [1]Castronovo, V. Bone sialoprotein mediates human endothelial cell attachment and migration and promotes angiogenesis. *Circulation Res.* **86,** 885-891 2000 ([1]University of Liege, Liege, Belgium, [2]Craniofacial and Skeletal Diseases Branch, NIDCR, NIH)

Thomas Bugge, Ph.D.

[1]Lund, L.R., [1,2]Bjorn, S.F., [3]Sternlicht, M.D., [1]Nielsen, B.S., [1]Solberg, H., [1]Usher, P.A., [4]Osterby, R., [1]Christensen, I.J., [1]Stephens, R.W., Bugge, T.H., [1]Dano, K., [3]Werb, Z. Lactational competence and involution of the mouse mammary gland require plasminogen. *Development* 127, 4481-92 2000 ([1]Finsen Laboratory, Copenhagen, Denmark, [2]Department of Gynecology and Obstretrics, Herlev, Denmark, [3]Department of Anatomy San Francisco, California, [4]Electron Microscopy Laboratory, Aarhus, Denmark)

[1]List, K., [2]Jensen, O.N., Bugge, T.H., [1]Lund, L.R., [1]Ploug, M., [1]Danø, K., and [1]Behrendt, N. Plasminogen-independent initiation of the pro-uPA activation cascade *in vivo*. Activation of pro-urokinase by glandular kallikrein (mGK-6) in plasminogen-deficient mice. *Biochemistry,* **39**, 508-515. 2000 ([1]Finsen Laboratory, Denmark, [2]Odense University, Denmark)

[1]Drew, A. F., [1]Schiman, H. L., [1]Kombrinck, K. W., Bugge, T. H., [1]Degen, J. L., and [2]Kaufman, A. H. Persistent corneal haze after excimer laser photokeratectomy in plasminogen-deficient mice. *Invest. Ophthalmol. Vis. Sci.* **41**, 67-72.2000 ([1]Children's Hospital Research Foundation University of Cincinnati, [2]Cincinnati Eye Institute, Ohio)

[1]Wu, Y.P., [1]Siao, C.J, [1]Lu, W., [1]Sung, T.-C., [1]Frohman, M.A., [2]Milev, P., Bugge, T.H., [3]Degen, J.L, [1]Levine, J.M., [2]Margolis, R.U., and [1]Tsirka, S.E. The Tissue Plasminogen Activator (tPA)/Plasmin Extracellular Proteolytic System Regulates Seisure-induced Hippocampal Mossy Fiber Outgrowth through a Proteoglycan Substrate. *J. Cell Biol.,* 148, 1295-1304 2000 ([1]University Medical Center at Stony Brook, Stony Brook, New York, [2]Department of Pharmacology, New York University Medical Center, New York, [3]Children's Hospital Research Foundation, Cincinnati, Ohio)

[1]Goguen, J.D., Bugge, T.H., and [2]Degen, J.L. Role of the Pleiotropic Effects of Plasminogen Deficiency in Infection Experiments with Plasminogen-Deficient Mice. *Methods*, 21, 179-183. 2000 ([1]University of Massachusetts Medical School, [2]Children's Hospital Medical Center, Cincinnati, Ohio)

[1]Drew, A.F., [1]Tucker, H., [1]Kombrinck, K.W., [2]Simon, D. I., Bugge, T.H., and [1]Degen, J. L. Plasminogen is a critical determinant of vascular remodeling in mice. *Circulation Research.* 87, 133-139 2000 ([1]Children's Hospital

Research Foundation, Cincinnati, Ohio, [2]Brigham and Women's Hospital, Boston, Massachusetts)

Adrian Senderowicz, M.D.

[1]Yiwei Li, Y, [1]Bhuiyan, M, Senderowicz, A.M. and [1]Sarkar, FH. Induction of Apoptosis and Inhibition of *c-erb*B-2 in Breast Cancer Cells by flavopiridol. Clin. Cancer Res 2000, 6: 223-229 ([1]Wayne State University)

[1]Wilson, WH, [1]Sabbaro, L, [1]Figg, W.D, [1]Mont, E., [1]Sausville, E.A, [1]Warren, K. E, [1]Balis, F, [1]Bauer, K, [1]Raffeld, M, Senderowicz, A.M., [1]Monks, A. Modulation of clinical drug resistance in a B-cell lymphoma patient by the protein kinase inhibitor 7-hydroxystaurosporine (UCN-01): presentation of a novel therapeutic paradigm. *Clin Cancer Res* 2000;6:415-21. ([1]National Cancer Institute, NIH)

[1]Messmann, R.A., [2]Vitetta, E.S., [2]Headlee, D, Senderowicz, A.M., [1]Figg, W.D., [2]Schindler, J., [1]Michiel, D.F, [1]Creekmore, S., [1]Steinberg, S.M., [1]Kohler, D., [1]Jaffe, E.S, [1]Stetler-Stevenson, M., [1]Chen, H., [2]Ghetie, V., [1]Sausville, E.A. A Phase I Study Of Combination Therapy With Immunotoxins IgG-HD37-dgA and IgG-RFB4-dgA (Combotox) In Patients With Refractory CD19(+), CD22(+) B-Cell Lymphoma. *Clin Cancer Res* 2000 Apr;6:1302-13. ([1]National Cancer Institute, [2]UT Southwestern Texas)

[1]Sandor V, Senderowicz AM, [1]Mertins S, [1]Sackett D, [1]Sausville E, Blagosklonny, MV, Bates SE. P21-dependent G(1) arrest with downregulation of cyclin D1 and upregulation of cyclin E by the histone deacetylase inhibitor FR901228. *Br J Cancer* 2000 Sep;83(6):817-825 ([1]National Cancer Institute)

Senderowicz, A.M. and [1]Sausville, E.A. Preclinical and clinical development of cyclin-dependent kinase inhibitors. *Journal of the National Cancer Institute* 2000, 92: 6-17 ([1]National Cancer Institute)

[1]Chao, S, [2]Fujinaga, K, [1]Marion, J, [1]Taube, R, [3]Sausville, E, Senderowicz, A.M, [2]Peterlin B., and [1]Price, D. Flavopiridol inhibits P-TEFb and blocks HIV replication. J Biol Chem. 2000 Sep 15;275(37):28345-28348 ([1]University of Iowa, [2]Howard Hughes Medical Institute, Departments of Medicine, Microbiology and Immunology, University of California at San Francisco; [3]National Cancer Institute)

[1]Sausville, E, [1]Johnson, J, [1]Alley, M, [1]Zaharevitz, D and Senderowicz, AM. Inhibition of cdks as a therapeutic modality. *Ann N Y Acad Sci.* 2000 Jun;910:207-21 (1National Cancer Institute)

[1]Li Y, 1Chinni SR, Senderowicz AM, 1Sarkar FH. Induction of growth inhibition and apoptosis in prostate cancer cells by flavopiridol. *Int J Oncol.* 2000 Oct;17(4):755-759. (1Wayne State University, Ann Harbor, Michigan)

[1]Leost, M, [2]Schultz, C, [2]Link, A, [3]Wu, Y, [3]Biernat, J, [3]Mandelkow, E, [4]Bibb, J, [4]Snyder, G, [4]Greengard, P, [5]Zaharevitz, D, [5]Gussio, R, Senderowicz, A.M., [5]Sausville, E.A, [2]Kunick, C and [1]Meijer, L. Paullones are potent inhibitors of glycogen sythase kinase-3 E- and cyclin-dependent kinase 5/p25 . Eur. J. Bioch. 2000 ;267(19):5983-94. 2000 ([1]CNRS, Cell Cycle Group, Bretagne France, [2]Unistitut fur Pharmazie, Universitat Hamburg,

Hamburg, Germany, [3]Max-Planck Unit for Structural Molecular Biology, Hamburg, Germany, [4]The Rockefeller University, New York, [5]Division of Cancer Treatment and Diagnosis, NCI

10. Other

Frank Robey, Ph.D.

Adjunct Associate Professor of Biochemistry and Molecular Biology, George Washington U. Medical School

Pain and Neurosensory Mechanisms Branch

Pain and Neurosensory Mechanisms Branch

1. Invited Talks

Mitchell Max, M.D.

Invited Speaker, 33rd Winter Conference on Brain Research, Symposium on New Mechanisms of Pain Processing, Breckenridge, Colorado, January, 2000.
Invited Speaker, Massachusetts General Hospital Department of Anesthesia, Boston, July, 2000.
Invited Plenary Speaker, Annual Meeting of the American Academy of Electrophysiological Medicine, Philadelphia, September, 2000.
Invited Speaker, NINDS Workshop on Research in HIV-Related Neuropathies, Rosslyn, Virginia, September, 2000.
Invited Speaker, Symposium on Combination Analgesic Treatments, American Pain Society Meeting, Atlanta, November, 2000.
Invited Plenary Speaker, Eastern Pain Society Meeting, New York, December 2000.
Visiting Professor, Center for Drug Evaluation and Research, Food and Drug Administration, Rockville, MD, December 2000.

M.A. Ruda, Ph.D.

Invited Lecture, Department of Psychology, Florida State University, Tallahassee, Florida, January 2000.
Grand Rounds, Department of Anesthesia, Scott & White Clinic and Hospital, Temple, Texas, April 2000.
Invited Lecture, Department of Pediatrics, Scott & White Clinic and Hospital, Temple, Texas, April 2000.
Invited Lecture, Fifth Annual Pediatric Pain Symposium, San Antonio, Texas, April 2000.
Society for Neuroscience, Grass Foundation Lecturer, University of Georgia, Athens, Georgia, October 2000.

Richard H. Gracely, Ph.D.

Invited Lecture: Vulvodynia: Peripheral Pain, Central Mechanism, The Eighth Annual Congress on Women's Health and Gender-based Medicine. Hilton Head Island, South Carolina, June 4, 2000.

Michael J. Iadarola, Ph.D.

Invited Speaker. "Pain and pain control new approaches at the spinal level", Novartis, London, United Kingdom, January, 2000.
Invited Speaker, "Molecular and integrative neurobiology of pain systems", DuPont Pharmaceuticals, Wilmington, Delaware, January, 2000.
Invited Speaker, "Molecular approaches to pain and pain control", "The Molecules of Pain: Molecular Approaches to Pain Research". Symposium in Madrid, Spain, February, 2000.

Invited Speaker. "New protein therapeutic and molecular approaches to pain control", "Pain mechanisms and analgesic trials in humans: clinical models and regulatory considerations", Analgesic Guidelines Workshop, American Society of Clinical Pharmacology and Therapeutics. Los Angeles CA, March, 2000.
Invited Speaker: "Molecular neurosurgery and gene therapy for pain" Symposium, "Commercialization Opportunities for Dental and Medical Markets" BIO2000, Boston MA, March, 2000.
Invited Speaker. "Molecular approaches to spinal cord plasticity and pain control", Millennium Pharmaceuticals, Boston MA, March, 2000.
Invited Speaker: "Molecular neurobiology and drug development", Sarnoff Corporation, Princeton NJ, April, 2000.
Invited Speaker. "Molecular cell deletion for chronic intractable pain". Center for Drug Evaluation and Research, Food and Drug Administration, Gaithersburg MD, April, 2000.
Invited Speaker. "Adenovirus and AAV as gene therapy agents for pain control". Spring Pain Research Conference 2000. Grand Cayman Island. May, 2000.
Invited speaker: "Molecular approaches to pain and pain control", Brain Research Institute, University of Florida, Gainesville FL, September, 2000.

Raymond A. Dionne, DDS, Ph.D.

American College of Oral and Maxillofacial Surgeons, April 17, 2000.
Washington Iranian Dental Club, December 7, 2000.
University of Maryland, October 11, 2000.

2. Sessions Chaired at Professional Meetings

Mitchell Max, M.D.

Chair and Discussant, Workshop on Measuring Evoked Pain in Postoperative Analgesic Trials, American Pain Society Meeting, Atlanta, November, 2000.

Richard H. Gracely, Ph.D.

Chronic Pain: Management Strategies and New Therapeutic Options. The Eighth Annual Congress on Women's health and Gender-based Medicine. Hilton Head Island, South Carolina, June 3-6, 2000.

3. Symposia, Meetings, or Conferences Organized

Michael J. Iadarola, Ph.D.

Symposium "The Molecules of Pain: Molecular Approaches to Pain Research". Invited Speaker, "Molecular approaches to pain and pain control", Madrid, Spain, February, 2000.
Workshop: "Pain mechanisms and analgesic trials in humans" clinical models and regulatory considerations", Invited Speaker. "New protein therapeutic and molecular approaches to pain control", Analgesic Guidelines Workshop, American Society of Clinical Pharmacology and Therapeutics. Los Angeles CA, March, 2000.

Symposium, "Commercialization Opportunities for Dental and Medical Markets" Invited Speaker: "Molecular neurosurgery and gene therapy for pain" BIO2000, Boston MA, March, 2000.

4. Consultant for Universities or Industries

Mitchell Max, M.D.

University of Maryland School of Dentistry. Faculty member on training grant in pain mechanisms and treatment (PI, Ronald Dubner).
Parke-Davis Pharmaceuticals. Consultant to program of an analgesic studied for the treatment of dental pain.
Scirex Corporation. Consultant to various programs studying analgesics for the treatment of dental pain.
Consultant to Johns Hopkins Departments of Anesthesiology and Neurosurgery on NINDS Program Project Award (funded) to compare the efficacy of opioids and tricyclic antidepressants in postherpetic neuralgia, and consultant on new grant application for studies in phantom limb pain.
Consultant to Johns Hopkins Departments of Anesthesiology, Neurosurgery and Physical Medicine on NICHD Program Project Award (funded) to carry out clinical trials of medications in phantom pain and spinal cord injury.
Consultant to Johns Hopkins Dept. of Psychiatry as a mentor on Dr. Jennifer Haythornthwaite's K24 award application.
Consultant to Dr. Robert Dworkin, University of Rochester, on NINDS clinical trial planning grant.
Zambon Laboratories
Scirex
Parke-Davis
Bayer
Zeneca
Amgen
Pfizer
SmithKline Beecham
Endo
Elan
Merck
Novartis
Praecis Pharmacueticals
Biotechnology General Inc.
Dov Pharmaceuticals
Myelos
Metaphore
Winston Labs
Pharmacia
GW Pharmaceuticals

Richard H. Gracely, Ph.D.

Consulted with Algos Pharmaceuticals, Novartis, Proctor and Gamble and Becton Dickenson on pain measurement and general analgesic development.

5. Elected Offices

6. Editorial Responsibilities Other than Reviewing Manuscript

Mitchell Max, M.D.

Editorial Board of Neurology, Pain, the Journal of Pain and Symptom Management, and Journal of Pain

Richard H. Gracely, Ph.D.

Associate Editor for the Journal Pain
Department Editor for American Pain Society Bulletin
Editorial Board, The Journal of Pain

7. Professional or Governmental Advisory Capacity

Richard H. Gracely, Ph.D.

Appointed as a Clinical Associate Professor, Department of Anesthesia, Georgetown University Medical Center, Georgetown University in 1992 to advise on scientific research in the Department.

Michael J. Iadarola, Ph.D.

NIDR Summer Dental Scholars Program, evaluated student applications.
NIDCR Representative to the Recombinant DNA Advisory Committee:
1) Protocol review: March 2000.
2) Serious Adverse Events Reporting Committee: December, 2000.

8. Appeared as an Invited Expert

9. Professional Publications with Outside Co-authors

Mitchell Max, M.D.

Max MB, Lynn J (Rand Corporation), eds. Interactive Textbook of Symptom Research. Bethesda: National Institute of Dental and Craniofacial Research: 2000 (URL: www.neri.org/symptom).

Max MB, Hagen NA (U. Calgary, Alberta, Canada). Do changes in brain sodium channels cause central pain? Neurology, 2000;54:544-545.

Gilron I, Max MB, Lee G, (CC Nursing) Booher SL (CC Nursing), Chappell A (Eli Lilly) DionneRA. Effects of the AMPA/kainate antagonist LY293558 on spontaneous and evoked postoperative pain. Clinical Pharmacology and Therapeutics, 2000;68:320-327.

Gilron I, Rowan J (CC Nursing), Parada S (CC Nursing), Smoller B, and Max MB. High dose dextromethorphan vs.placebo in facial neuralgias. Neurology 2000;55:964-971.

Gilron I, Booher SL (CC Nursing), Rowan J (CC Nursing), Max MB. Topiramate in trigeminal neuralgia: a randomized, placebo-controlled multiple crossover pilot study. Clin Neuropharmacol, 2001, in press.

Woolf CJ (Harvard U.) Max MB. Mechanism-based pain diagnosis: issues for analgesic drug development. Anesthesiology, 2001, in press.

Seltzer Z (Hebrew U., Israel), Wu T-X, Max MB, Diehl SR. A genetic locus on mouse chromosome - is implicated in chronic pain behavior. Pain, 2001, in press.

Seltzer Z (Hebrew U), Wu TX, Max M, Diehl SR. Genetic loci for neuropathic pain-related behavior (autotomy) in the AxB-BxA recombinant inbred mouse lines. III European Federation of IASP Chapters Congress, Nice, France, September, 2000.

Belfer I (all Hebrew U except Max, Diehl, Wu), Gershon E, Azaria M, Wu T-X, Shir Y, Vatine J-J, Zeltser R, Max M, Diehl SR, Seltzer Z. Correlation between epilepsy-related risk factors, personality traits, aura-like phenomena and phantom limb pain in human amputees. III European Federation of IASP Chapters Congress, Nice, France, September, 2000.

Gershon E (all Hebrew U except Max, Diehl, Wu), Vatine J-J, Shir Y, Wu T-X, Azaria M, Zeltser R, Belfer I, Max M, Diehl SR, Seltzer Z. Correlation between phantom limb pain and other phantom sensory phenomena in human amputees. III European Federation of IASP Chapters Congress, Nice, France, September, 2000.

Gilron I, Booher S (CC Nursing), Rowan J (CC Nursing), Max M. Topiramate in trigeminal neuralgia: a randomized, placebo-controlled, multiple crossover trial in three patients. American Pain Society, Atlanta, Georgia, November, 2000.

Raja SN (All Johns Hopkins U except Max), Haythornthwaite J, Pappagallo M, Clark M, Max M. Differential analgesic effects of opioids and tricyclic antidepressants in subgroups of patients with postherpetic neuralgia. American Pain Society, Phoenix, Arizona, April, 2001.

Richard H. Gracely, Ph.D.

Lembo A, Naliboff B, Matin K, Munakata J, Parker R, Gracely RH, Mayer EA. Irritable bowel syndrome patients show altered sensitivity to exogenous opioids. Pain, 87:137-147, 2000.

Kemler MA, Schouten HJA, Gracely RH. Diagnosing sensory abnormalities with either normal values from contralateral skin: Comparisoin of two approaches in Complex Regional Pain Syndrome I. Pain, 93:18-27, 2000.

Sternberg WF, Bokat C, Alboyadjian A, Gracely RH. Sex-dependent components of the analgesia produced by athletic competition. The Journal of Pain, 2:65-74, 2000.

Michael J. Iadarola, Ph.D.

Byers MR, Chudler EH, and Iadarola MJ: Chronic tooth pulp inflammation causes transient and persistent expression of Fos in dynorphin-rich regions of rat brain stem. Brain Res 861:191-207, 2000.

Benoliel R, Tanaka M, Caudle RM, and Iadarola MJ: Co-localization of NMDA receptors and substance P receptors in rat spinal cord. Neuroscience Letts. 291:61-64, 2000.

Coghill RC, Gilron I and Iadarola MJ: Hemispheric lateralization of somatosensory processing. J Neurophysiol (in press).

Olah Z, Szabo T, Hough C, Fields RD, Caudle RM, Karai L, Blumberg PM and Iadarola MJ: Real time dynamics of Ca^{++} cytotoxicity conferred by ligand-induced activation of the vanilloid receptor (VR1). J Biol Chem (in press), available on line).

Caudle RM, Mannes AJ, Benoliel R, Eliav E and Iadarola MJ: Intrathecally administered cholera toxin blocks allodynia and hyperalgesia in persistent pain models. J Pain (in press).

10. Other

Mitchell Max, M.D.

Senior investigator on collaborative study with Ortho McNeil to study topiramate in facial neuralgias and lumbar radiculopathy.

Associate investigator on collaborative study with Eli Lilly to study AMPA/kainate receptor antagonist in postoperative dental pain.

Christine Sang, Department of Anesthesia, Massachusetts General Hospital: Clinical Studies of Glutamate Antagonists.

Srinivasa Raja, Marco Pappagallo, James Campbell, Departments of Neurosurgery and Anesthesia, Johns Hopkins University: Clinical Trials in Postherpetic Neuralgia and Phantom Limb Pain.

Ze'ev Seltzer, Marshall Devor, Hebrew University, Jerusalem: Mouse and Human Studies of Genetic Contributions to Phantom Limb Pain.

Leonardo Cohen, NINDS, Effects of Magnetic Cortical Stimulation on Phantom Limb Pain.

M.A. Ruda, Ph.D.

Interviewed on topic of development of pain pathways by numerous news and science based organizations including The New York Times, The Washington Post, Associated Press, Newsday, ABC News, CBS News, BBC International, International newspapers including: The Independent in London and the Toronto Star; Web MD, Web RN, MedScape, Reuters Health.com, Healthscout.com, Anesthesiology News, New Scientist, Discover Magazine, The Dana Foundation, Infantelligence, and a live TV interview on Science Daily on the Discovery Channel.

Richard H. Gracely, Ph.D.

Member of the International Association for the Study of Pain (IASP) committee developing a Core Curriculum on Pain for Psychologists.

Member of American Pain Society: Information Technology Committee.
Member of the American Pain Society Task Force on Basic Science

Michael J. Iadarola, Ph.D.

Gifts of antibodies for c-Fos (Dr. S. Nakanishi, Univ. Kyoto, Dr. Eric Nestler Univ. of Texas Southwestern Medical School, Dallas) CGRP (Dr. Frank Porreca, Univ. Arizona, Dr. Chris Flores, Univ. San Antonio, Dr. Mike Vasko, Univ. of Indiana) NMDA NR1 receptor subunits (Dr. Rob Caudle Univ. of Florida Gainesville) and over five others.
Students supervised: Steven T Conolley, Julie Goldberg, Mike Spink, Mike Oppedisano, Adam Snyder (all summer students or PreIRTAs).
Committees: Positron Emission Tomography Steering Committee (Clinical Center)
NIDCR Liason with NIH Office of Recombinant DNA Activities (RAC)
PNMB representative to NIDCR animal Care and Use Committee.
Collaborations: David Goldman, M.D. NIAAA, David Fitzgerald, Ph.D. National Cancer Institute.
Seminars sponsored 2000:
Armen Akopian, Univ. College, London, England
Robert Caudle, Univ. Florida, Gainesville
Chih-Cheng Chen, NIMH
Sidney Simon, Duke University
Siew Peng Ho, DuPont Pharmaceuticals, DE
Ada Silos Santiago, Millennium Pharmaceuticals, MA
Than Tam Quach, INSERM, Lyon France

Functional Genomics Unit

Functional Genomics Unit

1. Invited Talks:

   Ashok B. Kulkarni, Ph.D.
   Fabry mouse model: gene therapy approaches. National Institute of Neuroscience, Tokyo, Japan
   CDK5 functions in cortical development. National Cancer Center, Tokyo, Japan.

   Tamizchelvi Thyagarajan, Ph.D.
   Targeted expression of TGF-ß1 in teeth results in dysplastic dentin.,IADR, Washington, DC

2. Sessions Chaired at Professional Meetings

3. Symposia, Meetings or Conferences Organized

4. Consultant for Universities or Industry

5. Elected Offices

6. Editorial Responsibilities Other than Reviewing Manuscripts

7. Professional or Governmental Advisory Capacity
   Ashok Kulkarni, Ph.D.
   NIDCR representation in Trans-NIH Mouse Genetics Committee
   NIDCR representation in Trans-NIH Rat Repository Committee
   NIDCR representation in Trans-NIH Non-Mammalian Genome Committee
   NIDCR representation in Animal Research Advisory Committee
   NCRR, NIH Scientific and Technical Review Board on Biomedical and Behavioral Research Facilities.

8. Appeared as Invited Expert

9. Professional Publications with Outside Co-authors
   Taduru Sreenath, Ph.D.
   Sreenath, T., Cho, A., MacDougall*, M., Kulkarni, A. B. (1999). Spatial and temporal expression of dentin sialophosphoprotein gene (DSPP) is directed by 5.7 kb 5' flanking sequence. Int. J. Dev. Biol. 43: 509-516.*UTHSC, San Antonio, TX

   Ashok Kulkarni, Ph.D.
   Takenaka T., Murray G. J., Qin, G., Quirk, J. M., Ohshima, T., Qasba, P., Clark, K., Kulkarni, A. B., Brady, R. O., and Medin*, J. A. (2000). Long term enzyme correction and lipid reduction in multiple organs of primary and

secondary transplanted Fabry mice receiving transduced bone marrow cells. Proc. Natl. Acad. Sci., USA 97: 7515-7520. *University of Chicago

Abe* A., Gregory*, S., Lee*, L., Killen*, P.D., Brady#, R.O., Kulkarni,. B., and Shayman*, J. A. (2000). Reduction of globotriaosylceramide in fabry disease mice by substrate deprivation. Clin. Invest. 105: 1563-1571. * University of Michigan, #NINDS

Progozy*, T.I., Naidenko*, O., Qasba#, P., Elaut*, D., Broossay*, L., Khurana*, A. Natori%, T., Koezuka*, Y., Kulkarni, A.B., and Kronenberg*, M. (2001). Glycolipid antigen processing for presentation by CD1d molecules. Science 291:664-667. * La Jolla Institute of Allergy and Immunology, #NINDS, % Kirin Brewery

10. Other

Ashok B. Kulkarni, Ph.D.

Provided TGF-ß1, Cdk5, Fabry knockout mice and tissues to a number of researchers in the dental community in US, and Japan.

Immunopathology Section

Immunopathology Section

1. Invited Talks

2. Sessions Chaired at Professional Meetings

3. Symposia, Meetings or Conferences Organized

4. Consultant for Universities or Industry

5. Elected Offices

6. Editorial Responsibilities Other than Reviewing Manuscripts

7. Professional or Governmental Advisory Capacity

Larry M. Wahl, Ph.D.

Member of the Peer Review Committee on Cell Structure and Metastasis, American Cancer Society

8. Appeared as Invited Expert

9. Professional Publications with Outside Co-authors

Larry M. Wahl, Ph.D.

Hardegen, N.J., [1]Toro, L.A., [2]Muller, J., Wahl, L.M., [2]Hewlett, I.K.. [2]Dhawan, S. HIV-1 infects and alters immune function of a monocyte subset expressing low CD14 surface phenotype. Viral Immunol. 13: 19-26, 2000. ([1]EntreMed, Inc. Rockville, MD, [2]FDA, Bethesda, MD)

[1]Zanger, D., [1]Yang, B.K., Ardans, J., [1]Waclawiw, M.A., [2]Csako, G., Wahl, L.M., [1]Cannon III, R.O. Divergent effects of hormone therapy on serum markers of inflammation in postmenopausal women with coronary artery disease on appropriate medical management. J. Am. Coll. Cardiol. 36:1797-1802, 2000. ([1]NHLBI/NIH, Bethesda, MD, [2]Clinical Center/NIH, Bethesda, MD)

[1]Karp, C. L., [2]Grupe, A., [2]Schadt, E., [3]Ewart, S.L., [1]Keane-Moore, M., [1]Cuomo, P.J., [4]Köhl, J., Wahl, L., [1]Kuperman, D., [5]Germer, S., [2]Aud, D., [2]Peltz, G., [1]Wills-Karp, M., Identification of complement factor 5 (C5) as a susceptibility locus for experimental allergic asthma. Nature Immunol. 3:221-226, 2000. ([1]Johns Hopkins University, Baltimore, MD, [2]Roche BioScience, Palo Alto, CA, [3]Michigan State University, East Lansing, MI,[4]Medizinische Hoschschule Hannover, Hannover, Germany, [5]Roche Molecular Systems, Inc., Alameda, Ca)

[1]Vos, C. M. P., [1]Gartner, S., [2]Ranshohoff, R.M., [1]McArthur, J.C.,Wahl, L., [1]Sjulson, L., [1]Hunter, E., [1]Conant, K. Matrix metalloprotease-9 release from monocytes increases as afunction of differentiation: implications for neuroinflammation and neurodegeneration. J.Neuroimmunol. 109:221-227, 2000. ([1]Johns Hopkins University, Baltimore, MD, [2]Cleveland Clinic, Cleveland, OH.)

[1]Boykins, R. A., Ardans, J.A., Wahl, L.M., [2]Lal, R.B., Yamada, K.M., [1]Dhawan, S. Immunization with a novel HIV-1-Tat multiple-peptide conjugate induces effective immune response in mice. Peptides 21:1839-1847, 2000. ([1]FDA, Bethesda, MD, [2]Center for Disease Control and Prevention, Atlanta, Georgia)

10. Other

Larry M. Wahl, Ph.D.

Dr. Shlomo Wientroub, Department of Orthopedic Pediatrics, Sackler School of Medicine, Tel Aviv University,Tel Aviv, Israel, Project: Role ofraloxifene in the regulation of monocyte matrix metalloproteinases.

Matrix Metalloproteinase Unit

Matrix Metalloproteinase Unit

1. Invited Talks

Henning Birkedal-Hansen, D.D.S., Ph.D.

International Conference on the Biology and Pathology of the Extracellular Matrix, St. Louis, MO; "MT1-MMP: An Indispensable Factor in Collagen Catabolism," October, 2000, Invited Speaker

Karolinska Institute, Stockholm, Sweden; "MT1-MMP: An Indispensable Factor in Collagen Catabolism," October 2000, Invited Speaker

Medicine Meets Millennium, Hannover, Germany, "Oral Health in the Post-genomic Era." August, 2000; Invited Symposium Speaker

International Workshop on Oral Manifestations of AIDS, Skukuza, South Africa: Conference Summary and Closing Comments; July, 2000

Endocrine Society's Endo 2000Meeting, Toronto, Canada; "MT1-MMP: An Indispensable Factor in Collagen Catabolism," June 2000, Invited Symposium Speaker

Pfizer, Groton, CT "The MT1-MMP knockout mouse: Lessons Learned" May 2000, Invited Speaker

2. Sessions Chaired at Professional Meetings

3. Symposia, Meetings, or Conferences Organized.

Henning Birkedal-Hansen, D.D.S., Ph.D.

American College of Oral and Maxillofacial Surgeons Annual Conference, Washington D.C. April, 2000; Symposium Organizer

4. Consultant for Universities or Industry

5. Elected Offices

6. Editorial Responsibilities Other than Reviewing Manuscripts

7. Professional or Governmental Advisory Capacity

Henning Birkedal-Hansen, D.D.S., Ph.D.

Chair, NIH Director's Distinguished Lecture Series Subcommittee, 1999/2000

8. Appeared as an Invited Expert

9. Professional Publications with Outside co-authors

Henning Birkedal-Hansen, D.D.S., Ph.D.

Caterina, J. J., Shi, J., Sun, X., Qian, Q., Yamada, S., Liu, Y., Krakora, S., Bartlett, J.D., Yamada, Y., Engler, J.A., Birkedal-Hansen, H., and

Simmer, J.P.: Cloning, characterization and expression analysis of mouse enamelysin. *J. Dent. Res.* **79**: 1697-1703, 2000

Caterina, J. J., Shi, J., Kozak, C. A., Engler, J. A. and Birkedal-Hansen H.: Characterization, expression analysis and chromosomal mapping of mouse matrix metalloproteinase-19 (MMP-19), *Mol. Biol. Rep.*, 27: 73-79, 2000

Caterina, J. J., Yamada, S., Caterina, N.C. M., Longenecker, G., Holmback, Shi, J., Yermovsky, A. E., Engler, J.A., and Birkedal-Hansen, H.: Inactivating mutation of the mouse tissue inhibitor of metalloproteinnases-2 (TIMP-2) gene alters proMMP-2 activation. *J. Biol. Chem.* 275: 26416-26422, 2000

Liu, S. Netzel-Arnett, S. Birkedal-Hansen, H., Leppla, S. H.: Tumor cell selective cytotoxicity of matrix metalloproteinase-activated anthrax toxin, *Cancer Res.* 60: 6061-6067, 2000

Aframian, D.J., Zheng, C., Goldsmith, C. M., Nikolovski, J., Cukierman, E. Yamada, K. M., Mooney, D.J., Birkedal-Hansen, H., and Baum, B. J.: Tissue Engineering and Transplantation, in press

Shankavaram, U.T., Lai, W.-C., Netzel-Arnett, S., Mangan, P.R., Ardans, J.A., Caterina, N., Stetler-Stevenson, W. G., Birkedal-Hansen, H., and Wahl, L.: Monocyte membrane type 1-matrix metalloproteinase: prostaglandin-dependent regulation and role in MMP-2 activation. *J. Biol. Chem., In press*

Ruangpanit,, N., Chan, N., Holmbeck, K. Birkedal-Hansen, H., Polarek, J. Yang, C., Bateman, J. F., and Thompson, E. W.: MT1-MMP and collagen regulate MMP-2-activation. Gelatinase A (MMP-2) activation by skin fibroblasts: Dependence on MT1-MMP expression and fibrillar collagen form. *Matrix Biol. in press*

Birkedal-Hansen, H., Bodden, M. K., Caterina, N.C., Windsor, L. J., Netzel-Arnett, S., and and Engler, J. A. Overview of TIMP: Structure/Function Relationships. In*: Tissue Inhibitors of Metalloproteinases in Development and Disease.* Proceedings of the Inhibitors of Metalloproteinases Conference. (Hawkes, S. P., Edwards, D. R., and Khokha, R., Ed). Harwood Academic Publishers, 2000, pp.

London, J., and Birkedal-Hansen, H.: Opportunities in Dental, Oral, and Craniofacial Research. Compendium of Continuing Education in Dentistry **21:**760-766, 2000

10. Other

Molecular Structural Biology Unit

Molecular Structural Biology Unit

1. Invited Talks

Dennis A. Torchia, Ph.D.

PACIFICHEM 2000 Symposium, "NMR Studies of HIV Protease Dynamics, Structure and Function", Honolulu, HI.

Montana State University, Chemistry Dept. Research Symposium, "HIV-1 Protease, Dynamics and Function", Baton Rouge, LA.

Case Western Reserve Univ. Biochemistry Dept., Research Symposium, "Dynamics, Structure and Function of the HIV-1 Protease", Cleveland, OH

Rieko Ishima, Ph.D.

19th International Conf. On NMR in Biological Systems, "Structural Dynamics and Function of HIV-1 Protease, Florence, Italy.

Yun-Xing Wang, Ph.D.

19th International Conf. On NMR in Biological Systems, "Structure- Function Studies of the Anti-Viral Protein MAP-30, Florence, Italy.

2. Sessions Chaired at Professional Meetings

3. Symposia, Meetings or Conferences Organized

4. Consultant for Universities or Industry

5. Elected Offices

6. Editorial Responsibilities Other than Reviewing Manuscript

Dennis A. Torchia, Ph.D.

Editorial Board, *Proteins, Structure, Function Genetics.*

7. Professional or Governmental Advisory Capacity

Dennis A. Torchia Ph. D.

Member , advisory panel for Harvard/MIT National NMR Resource

8. Appeared as an Invited Expert

9. Professional Publications with Outside Co-authors

Dennis A. Torchia, Ph. D.

Wang, Y.-X., Jacob, J., Wingfield, P.T., Palmer, I., Stahl, S.J., Kaufman, J.D., Huang, P.L., Lee-Huang, P., Lee-Huang, S[1]., Torchia, D.A. Anti-HIV and Anti-Tumor Protein MAP30, a 30kDa Single Strand

Type-I RIP, Shares Similar Secondary Structure and E-Sheet Topology with the A Chain of Ricin, a Type II RIP. Protein Science, 2000, 9, 138-144. ([1]New York University, New York City)

Sayers, E., Gerstner, R.B., Draper, D. E.[1], Torchia, D. A., Structural pre-ordering in the N-terminal region of Ribosomal Protein S4 revealed by heteronuclear NMR spectroscopy, Biochemistry, 2000, 39, 13602-13613. ([1]Johns Hopkins University, Baltimore, MD)

Fisher, L.W., Torchia, D.A., Fohr, B, Young, M.F., Fedarko, N.S.[1] Flexible structures of SIBLING proteins, bone sialoprotein, and osteopontin, Biochem. Biophys. Res. Comm. 2000, 280, 460-465. ([1]Johns Hopkins University, Baltimore, MD)

Ishima, R., Louis, J.M[1]., Torchia, D.A. Characterization of two hydrophobic clusters in HIV-1 protease by NMR spin relaxation in solution, J. Mol. Biol., 2001, 305, 515-521. ([1]NIDDK, NIH, Bethesda, MD)

10. Other

Office of Education

Office of Education

1. Invited Talks

   Sharon Gordon, D.D.S., M.P.H.
   "Dental Student Research: Our Promise for the Future – Our Challenge for the New Millennium" – April, 2000
   "Emerging Research Training Opportunities for Tomorrow's Clinician Scientists" – April, 2000

2. Sessions Chaired at Professional Meetings

   Sharon Gordon, D.D.S., M.P.H.
   AADS/IADR Symposium "Expanding the Capacity for Training in Clinical Research: Partnering Academic, Industry and Federal Sectors" – April 5th, 2000

3. Symposia Meetings or Conferences Organized

   Sharon Gordon, D.D.S., M.P.H.
   AADS/IADR Symposium "Expanding the Capacity for Training in Clinical Research: Partnering Academic, Industry and Federal Sectors" – April 5th, 2000

4. Consultant for Universities or Industry

   Sharon Gordon, D.D.S., M.P.H.
   Member, Graduate Student Committee (Doctorate) March 1999 to present, Medical University of South Carolina

5. Elected Offices

   Sharon Gordon, D.D.S., M.P.H.
   International Association of Dental Research/
   American Association of Dental Research
   Pharmacology, Toxicology, Therapeutics Group
   Secretary/Treasurer, March 1999 to 2002
   American Association of Dental Research
   Washington DC Section
   Secretary/Treasurer, March 2000 to 2003

6. Editorial Responsibilities Other than Reviewing Manuscripts

7. Professional or Governmental Advisory Capacity

8. Appeared as an Invited Expert for "NIDCR Research Training Opportunities":

   Sharon Gordon, D.D.S., M.P.H.

January: Professional Development Conference, New Orleans, LA
March: National Dental Association, Washington, DC
Tufts University School of Dental Medicine, Bates Research Day, Boston, MA
April:ADA Dental Student Research Conference, Bethesda, MD
September: American Student Dental Association, Boston, MA
October: Ohio State University School of Dentistry, Columbus, OH
NYU School of Dentistry, NY, NY
SUNY-Stonybrook School of Dentistry, Ipslet, NY
University of Maryland, College Park, MD
ADEA Leadership Institute, Washington, DC
November: Marquette School of Dentistry, Milwaukee, WI

9. Professional Publications with Outside Co-authors

Sharon Gordon, D.D.S., M.P.H.

Federal Reports:

Sections pertaining to *Craniofacial Injuries* in Oral Health in America: A Report of the Surgeon General. U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health. NIH Publication No. 00-4713, 2000, pp 50-51, 72, 173, 176.

Sections pertaining to *Aphthous Ulcers* in Oral Health in America: A Report of the Surgeon General. U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health. NIH Publication No. 00-4713, 2000, pp 43-44, 71.

Book Chapters:

Palmer RJ, Wu R, Gordon SM, Bloomquist CG, Liljemark WF, Kilian M, Kolenbrander PE. Retrieval of biofilms from the oral cavity. In, Plaque Biofilms. Submitted to Methods in Enzymology, April 2000.

Journal Articles:

Dionne RA, Lepinski AM, Gordon SM, Jaber L, Brahim JS, Hargreaves KM. Analgesic effects of peripherally administered opioids in clinical models of acute and chronic inflammation.
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