Curriculum Vitae Luis M. Proenza

CURRENT POSITION:

President, The University of Akron

Buchtel Hall 114
The University of Akron
Akron, Ohio 44325-4702

(330) 972-7074 Fax: (330) 972-8652

E-Mail: proenza@uakron.edu

SUMMARY:

• CEO of public research university, with more than 40 years of progressive experience in higher education • Distinguished record of leadership in academic (undergraduate, graduate, medical and continuing education), research and service programs and in state and national programs—including gubernatorial and presidential appointments • Twenty-six years of central administrative experience at both the campus and system levels • Exceptional success in fund-raising and resource acquisition—with record levels of private giving and continuous grant and contract support including major federal contracts and a Research Career Development Award • Strong record of peer-reviewed publications and editor and co-editor of two books • Demonstrated ability in the planning, budgeting, and management of successful academic and scientific programs • Proven skills in interfacing university programs with the private sector and with state and federal economic development initiatives and other programs • International and multi-ethnic experience • Superb representational, communication, and negotiation skills •

EDUCATION:

- **Ph.D.** The University of Minnesota, Minneapolis, 1971; Neurobiology/Psychology
- M.A. The Ohio State University, Columbus, 1966; Psychology
- **B.A.** Emory University, Atlanta, 1965; Psychology

ACADEMIC ADMINISTRATIVE EMPLOYMENT:

President

The University of Akron 1999-present

Chief executive officer for the public research university for northern Ohio - with nearly 30,000 students and 5,000 faculty and staff, a branch campus, a higher education center, a consortium medical school and numerous other community-based locations.

Led the University in undertaking several major initiatives, including a \$500-million "New Landscape for Learning" campus enhancement program with 19 new buildings and 18 other major additions or renovations, a University Park Alliance project supported by Knight Foundation to revitalize a 50-block neighborhood and commercial area around the campus, a BioInnovation Institute in partnership with three area hospitals and a medical school, and program enhancements making Akron one of only 12 Carnegie Cluster Leaders in the U.S. and establishing the University as a national leader in IT and as one of the most "wired for wireless" universities in the country.

Grew the University from a \$270-million operation to an enterprise with over \$435 million in annual revenues. Also oversaw increases in private donations and research funding to all-time records and, in 2007, initiated a \$500-million comprehensive campaign that gained more than \$620 million in gifts and pledges by the end of 2009.

Positioned the University as a strategic business partner with government and corporate entities—as recognized by the 2008 Visionary Award, 2006 Northeast Ohio Regional Vision Award, 2005 Chief Executive Leadership Award from the Council for Advancement and Support of Education District V, 2001 Executive of the Year by the Sales and Marketing Executives of Akron and news media acknowledgement as a top executive in the region.

Vice President for Research and Dean of the Graduate School Purdue University

Purdue University 1994-1998

Executive officer for research and advanced study for the Purdue University five-campus system of higher education with 66,000 students and an annual budget of \$990 million. Provided overall leadership, coordination, and direction to graduate and research activities encompassing more than 8,500 graduate students in over 100 Master's and Ph.D. programs and a research volume totaling in excess of \$200 million.

Coordinated federal relations, internal grants and fellowship awards, research development and services, research integrity and compliance, state economic development, graduate minority recruiting, and interdisciplinary programs and institutes system wide.

Major initiatives included: a university-wide program in economic development, support services for science and engineering educational development, an aviation systems center, collaborative international

programs, strategic partnerships with industry, joint CQI (continuous quality improvement) management ventures with five vice-presidential areas, development of several interdisciplinary institutes and centers, a university-subsidized health insurance program for graduate students, and major enhancements of fellowship and assistantship stipends. Also served as Vice President for the Purdue Research Foundation with responsibility for research, scholarly programs, and technology transfer; coordinated interface with the Purdue Research Park and related economic development activities.

Vice President for Academic Affairs and Research

(Acting) University of Alaska, System-wide Administration 1992-1994

Chief academic officer for a statewide system of higher education encompassing three main campuses and eleven branch campuses distributed throughout the state of Alaska and with 33,000 students and an annual budget exceeding \$350 million. Responsibilities included planning, coordination, evaluation and resource allocation for all academic and research programs. Acted for the President in his absence, chaired Academic Policy Council, and coordinated federal relations.

Initiated a comprehensive strategic planning effort with the Board of Regents. Responsible for securing a \$25 million grant for the support of an Arctic Region Supercomputing Center and obtaining well over \$30 million in federal and private support for university programs.

Vice Chancellor for Research and Dean of the Graduate School University of Alaska Fairbanks

1987-1992

Provided overall leadership, coordination, and direction of a \$65 million research program. Represented the university before federal, state, and private funding agencies. Initiated, developed, and budgeted for programs designed to stimulate scholarly work and sponsored research.

Major achievements include substantially enhanced linkages to the community and private sector, expanded graduate programs, a more than doubled level of federal support, and initiation of programs contributing to the university's competitive advantage in Arctic and circumpolar issues (including a five-year, \$20 million Polar Ice Coring Office contract, and a Center for Global Change and Arctic System Research).

University Liaison for Science and Technology Policy

The University of Georgia 1986-1987

Served as University's representative in Washington on matters of science and technology policy. Provided liaison with federal agencies, the Congress, and higher education associations. Secured Washington counsel for the University and developed successful agenda for University's Federal Relations Program.

Assistant to the President

Office of the President, The University of Georgia 1984-1986

Member of President's Executive Council, immediate personal staff, and Academic Advisory Council, with principal oversight for the University's Program in Biological Resources and Biotechnology, including strategic planning, budget development, interdisciplinary coordination and relationship to the private sector.

Additional activities and initiatives included: Development of Federal Relations Program and liaison with Congressional delegation and federal agencies; President's ambassador without portfolio in matters relating to life sciences; Leadership development in matters pertaining to research; Management of intellectual properties and university/industry relationships; Inter-institutional cooperative ventures and interface with major foundations; including a cooperative summer program with the Marine Biological Laboratory, Woods Hole, MA, in cell and molecular biology of plants.

Fellow in Academic Administration

American Council on Education 1983-1984

Competitively selected to participate in a training program in academic administration consisting of a year-long internship experience with President Fred C. Davison at The University of Georgia, three one-week seminars, multiple shorter seminars, and visits to host universities.

Provided in-depth exposure to major university administrative functions, with particular emphasis on academic affairs, student services, research, business, finance, physical plant, and auxiliary operations. Included full participation in all meetings of Deans, Vice Presidents, and President's immediate staff. Assisted President in planning, budgeting, and initial implementation of new Program in Biological Resources and Biotechnology. ACE seminars provided broad background in all facets of academic administration, including current issues in higher education.

Study Director

Committee on Vision, National Academy of Sciences 1977-1979

Revitalized and served as chief operating officer for one of the Academy's most respected and long-standing committees. Responsible for all of the committee's programs, initiatives, and working-groups; maintaining funding through a network of federal agency sponsors; maintaining a responsive group of scientific advisors, organizing conferences, symposia, and workshops; and preparing reports through the National Research Council.

Coordinator

Faculty of Neurobiology, Division of Biological Sciences, The University of Georgia 1975-1987

Initiated and served as coordinator for an interdisciplinary program of studies in neurobiology. Established curricula and interdisciplinary undergraduate major in neurobiology. Organized local Chapter of the Society for Neuroscience, and a seminar series. Represented University to the Society for Neuroscience.

Director

Vision Research Laboratory, The University of Georgia 1971-1987

Established laboratory and served as scientific director for a program of research continuously supported by the National Eye Institute, and supervised a team of postdoctoral and pre-doctoral researchers.

OTHER LEADERSHIP/ADMINISTRATIVE EXPERIENCE:

Presidential Appointment

President's Council of Advisors on Science and Technology (PCAST) 2001-2008

Appointed by President George W. Bush to the highest-level policy advisory group on science and technology in the nation, which counsels the President on matters of science and technology and assists the Office of Science and Technology and the National Science and Technology Council in securing private-sector involvement in their activities.

Co-chaired committee on Public-Private Partnerships and served on panels on U.S. Research and Development Investments, Energy Efficiency and Advanced Manufacturing, Information Technology, Personalized Medicine, Technology Transfer, Alternative Energy, and Nanotechnology.

Presidential Appointment

Vice-Chairman and Commissioner United States Arctic Research Commission 1992-1996

Appointed by President George H. W. Bush to the seven-member U.S. Arctic Research Commission, and elected Vice-Chairman. The commission is charged, by the Arctic Research and Policy Act of 1984 (P.L. 98-373 and 101-609), with coordinating U.S. programs in the Arctic.

Gubernatorial Appointment

Third Frontier Advisory Board Office of the Governor, State of Ohio 2003-2008

Appointed by Ohio Governor Bob Taft to provide advice and guidance to the Third Frontier Project, a \$1.6-billion initiative to create new high-paying jobs, recruit world-class research and entrepreneurial talent to Ohio and support applied research to help companies move new products to market.

Gubernatorial Appointment

Advisor to the Governor for Science and Technology Policy Office of the Governor, State of Alaska 1991-1994

Served as advisor to Governor Walter J. Hickel of Alaska on matters of Science and Technology Policy. Assisted and represented the Governor in federal-state relationships, in the coordination of agency-university-private sector activities, and in the formulation of the state's overall policy for economic development.

President

Arctic Research Consortium of the United States (ARCUS) 1988-1990; Past President, 1991-1992

Spearheaded the formation of a nationwide consortium of research universities and institutes. Provided leadership for the primary mission of advancing and strengthening Arctic research.

Principal initiatives included international linkages, technology transfer, logistical support, and enhancement of the national funding base for Arctic research. A "University Without Walls" educational program was launched, and the consortium served as coordinator for an Arctic Systems Science program at the federal level.

Deputy Director

Joint Russian-American Scientific Center, "ARKTIKA," in Magadan, a Research Center of the University of Alaska and the Far Eastern Branch, Russian Academy of Sciences 1990-1994

Provided university-wide coordination for a Russian-American research center established jointly with the Far Eastern Branch of the Russian Academy of Sciences.

Executive Management Committee

American Polar Services (AMCORPS) 1989-1994

Structured AMCORPS, a public/private joint venture, to provide science, logistical, and general support services to government agencies operating in Arctic and Antarctic regions.

SPECIAL MANAGEMENT TRAINING:

Participant

Management Action Programs, Seattle, Washington 1993

Special training for management executives designed to improve individual performance as a professional manager, enhance personal effectiveness in management, and to assist individuals in increasing their productivity and contribution within their area of responsibility to the organization.

Participant

Values and Ethics Seminar, Center for International Leadership, New York, New York 1986

Special interactive seminar offered in conjunction with the American Council on Education's Center for Leadership Development and modeled after the Aspen Seminars. It is designed to assist participants in becoming a broader and more conscious member of organizational entities and society at large. The sessions focus on human values, the conflict between principles and expediency, and tension related to the decision-making process.

Participant

The Executive Program, College of Business Administration, The University of Georgia and Washington, D.C. 1984

Earned a Certificate of Completion from The Executive Program, a comprehensive and advanced training program designed for corporate executives. The program included communication and human performance, competitive strategy and competitive advantage, finance, executive decision-making, negotiation, corporate social responsibility and the legal environment, and executive relations with the federal government, international trade policies, business and the press, and current trends in national and foreign affairs.

ACADEMIC EMPLOYMENT HISTORY:

Professor of Biology (Tenured) Adjunct Professor of Education Adjunct Professor of Political Science The University of Akron 1999-present

Teaching includes guest lectures to advanced undergraduate/graduate students in several courses in biology, higher education administration, political science, and public administration and urban studies, as well as team teaching colloquia for undergraduate honors students.

Professor of Biological Sciences (Tenured)

Purdue University 1994-1998

Taught the visual system sections of a neural systems course to advanced undergraduate/graduate students, receiving exceptionally positive evaluations.

Professor of Biology (Tenured)

University of Alaska Fairbanks 1987-1994

Teaching at the University of Alaska Fairbanks included guest lectures in several biology courses. Continued oversight of research program on the physiology of the vertebrate retina at The University of Georgia through 1991 with continuous National Eye Institute support.

Professor of Zoology (Tenured)

Department of Zoology, The University of Georgia 1984-1987

Basic research on the physiology of the vertebrate retina with an emphasis on neuro-glial dynamics, ionic flux, and mechanisms related to the generation of the electroretinogram. Supported continuously by research grants and Research Career Development Award from the National Eye Institute. Teaching included sole responsibility for upper division course in neurobiology, select graduate seminars, and undergraduate offerings in physiology, sensory physiology, and physiological psychology. Received recognition for exceptional teaching in both student and peer evaluations.

Associate Professor of Zoology (Tenured)

The University of Georgia 1978-1984

Assistant Professor

Department of Psychology, The University of Georgia 1971-1978

Research Fellow

Neuropsychology Laboratory, Department of Neurology, University of Minnesota Medical School 1968-1971

Research Scientist

Marine Biological Laboratory, Woods Hole, Massachusetts Summer 1982

Consulting Research Associate

Department of Neurology and Physiology, College of Medicine, University of Utah July-August 1972

Visiting Assistant Professor

Neurosensory Laboratory, Department of Physiology, State University of New York at Buffalo June-July 1972

Assistant Professor

Department of Psychology, Universities of the Americas, Mexico, D.F., Mexico 1967-1968

AREAS OF SPECIAL TEACHING INTEREST

- Neurobiology
- Sensory Physiology
- Retinal Physiology
- Cellular Neurophysiology
- Behavioral Neurobiology
- Higher Education organization, national issues, comparative assessment
- Political Science organizational representation, science and technology policy

Excellence in teaching recognized in student and peer evaluations (available upon request).

PROFESSIONAL RECOGNITION: RESEARCH GRANTS AND HONORS

RESEARCH GRANTS (as Principal Investigator):

- 1. Awarded a \$20-million grant from The John S. and James L. Knight Foundation in support of a collaborative effort with three Akron hospitals and a consortium medical school to pioneer the next generation of life-saving biomaterials and medical technologies by launching the BioInnovation Institute in Akron (2008)
- 2. Awarded a \$10-million Knight Foundation grant to capitalize on the success of the University Park Alliance and expand its goals to include catalyzing potential new economic development investment opportunities of \$500 million to \$1.5 billion by creating a new community ubiquitously infused with life-long learning, health, wellness and recreation opportunities (2006)
- 3. Awarded a \$2.5-million Knight Foundation grant for support of a University Park Alliance to launch a community revitalization project in a 40-block neighborhood immediately surrounding the campus of The University of Akron (2001)
- 4. Awarded a \$200,000 planning grant from Knight Foundation for a University Park Alliance neighborhood revitalization program (2000)
- 5. Awarded a \$238,930 U.S. Department of Education Patricia Robert Harris grant for support of masters programs (1995-96)
- 6. Awarded a \$540,000 Alfred P. Sloan Foundation grant for the support of a Minority Doctorates Program (1995-98)
- 7. Awarded a \$25-million U.S. Army Corps of Engineers grant for the establishment and support of the Arctic Region Supercomputing Center (1992-97)

- 8. Awarded a \$20-million National Science Foundation Contract to manage the Polar Ice Coring Office (PICO), which provides technical and logistical support to scientific field parties in Greenland and Antarctica (1988-93)
- 9. Awarded NIH Biomedical Research Support Grants for the University of Alaska (1989-90; 1990-91; 1991-92)
- 10. Awarded a \$120,000 grant from the State of Alaska for proposal development in support of the U.S. Antarctic Program (1989)
- 11. Recipient, Research Career Development Award from the National Eye Institute (1976-83)
- 12. Awarded a \$359,914 research grant from the National Eye Institute (1986-91)
- 13. Awarded a \$275,862 research grant from the National Eye Institute (1981-86)
- 14. Awarded a \$158,776 research grant from the National Eye Institute (1976-81)
- 15. Awarded a \$87,978 research grant from the National Eye Institute (1973-1976)
- 16. Received several smaller awards for research work beginning in 1968

HONORS:

- <u>Visionary Award</u>, Smart Business, September 2008
- The Power 100, (#18, most recent), Inside Business, 2004-2010
- <u>Northeast Ohio Regional Vision Award</u>, Northeast Ohio Regional Leadership Taskforce, May 2006
- <u>2005 Chief Executive Leadership Award</u>, Council for Advancement and Support of Education, District V
- President's Council of Advisors on Science and Technology (PCAST), appointed by the President, 2001
- Council on Foreign Relations, elected to membership 2002
- The Power Pack -- The 50 most influential people in Northeast Ohio (#27), Crain's Cleveland Business, April 2003
- Who's Who in Technology '03 <u>People to know and watch in the region's technology community</u>, *Crain's Cleveland Business*, June 2003
- Honored by The Newcomen Society, Cleveland, Ohio, October 2003
- <u>Sales and Marketing Executive of the Year</u>, Sales and Marketing Executives of Akron, 2001
- Commissioner Emeritus and Resolution of Appreciation, <u>U.S. Arctic</u> Research Commission, 1997
- Phi Beta Delta, Honor Society for International Scholars, 1997
- Honorary Member, Golden Key National Honor Society, 1994
- Honorary Member, ODK, 2001
- Honorary Member, Mortar Board, 2002
- Resolution of Appreciation, <u>University of Alaska Board of Regents</u>, 1994
- Certificate of Appreciation, <u>Alaska Department of Environmental</u> Conservation, 1994
- Commendation, Alaska State Legislature, 1992
- U.S. Arctic Research Commission, appointed by the President, 1992
- National Biotechnology Policy Board, appointed by the Secretary, 1990
- Listed in Who's Who in America, 2003, 2006
- Listed in <u>International Who's Who</u>, 1995
- Listed in Who's Who in Frontier Science and Technology (First Edition)

- Listed in American Men and Women of Science (17th Edition)
- Listed in Who's Who in Society, 1986
- Elected to Membership (Fellow), The Explorers Club, New York, 1992
- Elected to Membership, Cosmos Club, Washington, D.C., 1986
- Creative Research Medal, The University of Georgia, 1984
- <u>Special Awards</u> in recognition of significant contributions to the research program of The University of Georgia, 1980, 1983
- Recipient, Richard M. Griffith Memorial Award, <u>Southern Society for Philosophy and Psychology</u>, 1976
- <u>United States Public Health Fellow</u>, The Ohio State University, 1965-1966

PUBLISHED BOOKS , ARTICLES, ABSTRACTS, EDITORIALS and WHITE PAPERS, and PUBLISHED SPEECHES

PUBLISHED BOOKS

- 1. Proenza, L. M., Enoch, J. M., and Jampolski, A. (Eds.), <u>Clinical Applications of Visual Psychophysics</u>, Cambridge University Press, 1981.
- 2. Dowling, J. E., Proenza, L. M., and Atwell, C. (Eds.), <u>Nutrition</u>, <u>Pharmacology</u>, and <u>Vision</u>; in Retina, 2: 231-375, 1982.

PUBLISHED ARTICLES

- 1. Proenza, L. M., and Strickland, Bonnie R., A study of prejudice in Negro and white college students. <u>Journal of Social Psychology</u>, 67: 273-281, 1965.
- 2. Proenza, L. M., Farina, A., MacEachen, B., and Gillman, M., Cross-cultural differences of attitudes towards the mentally ill. <u>Proceedings</u> of the XI Interamerican Congress of Psychology, Mexico City, 1968.
- 3. Proenza, L. M., A new method for the study of aggression and its experimental support. <u>Proceedings</u> of the First National Congress of Psychology, Xalapa, Veracruz, Mexico, 1967.
- 4. Mosher, D. L., and Proenza, L. M., Intensity of attack, displacement, and verbal aggression. <u>Psychonomic Science</u>, <u>12</u>: 359-360, 1968.
- 5. Nuñez, R., Hathaway, S. R., Proenza, L. M., and Lichtszajn, J. L., The personality characteristics of various socioeconomic and vocational groups in Mexico: a research development program intended for sequential and cross-cultural study. <u>Proceedings</u> of the XII Interamerican Congress of Psychology, Montevideo, 1969.
- 6. Proenza, L. M., Proximal negative response of mudpuppy (Necturus maculosus) retina. <u>Doctoral Dissertation</u>, University of Minnesota, 1971.
- 7. Proenza, L. M. and Burkhardt, D. A., Proximal negative response and retinal sensitivity in the mudpuppy (Necturus maculosus). <u>J.</u> Neurophysiol., 36: 502-518, 1973.
- 8. Proenza, L. M. and Morton, R. E., Overlapping advance control systems for microelectrode positioning. <u>Electroencephal. & Clin. Neurophysiol.</u>, 37: 659-662, 1974.
- 9. Proenza, L. M. and Morton, R. E., A device for beveling find Micropipettes. Physiology and Behavior, 14: 511-513, 1975.
- 10. Karwoski, C. J. and Proenza, L. M., Hyperpolarizing on/off responses in mudpuppy retina. Vision Research, 17: 152-153, 1977.

- 11. Miller, R. F., Dacheux, R., and Proenza, L. M., Müller cell depolarization evoked by antidromic optic nerve stimulation. <u>Brain Research</u>, <u>121</u>: 162-165, 1977.
- 12. Karwoski, C. J. and Proenza, L. M., Relationship between Müller cell responses, a local transretinal potential, and potassium flux. <u>J. Neurophysiol.</u>, <u>40</u>: 244-259, 1977.
- 13. Proenza, L. M. and Karwoski, C. J., Viability of the mudpuppy eyecup preparation. <u>Inves. Ophthalmol. & Visual Sci.</u>, <u>16</u>: 684-685, 1977.
- 14. Karwoski, C. J. and Proenza, L. M., A comparison of the proximal negative response and ganglion cell discharges to sinusoidal flicker. Brain Research, 142: 42-52, 1978.
- 15. Karwoski, C. J. and Proenza, L. M., Light-evoked changes in extracellular potassium concentration in mudpuppy retina. <u>Brain Research</u>, <u>142</u>: 515-530, 1978.
- 16. Karwoski, C. J., Criswell, M. H., and Proenza, L. M., Laminar separation of light-evoked K⁺-flux and field potentials in frog retina. <u>Inves. Ophthalmol. & Visual Sci.</u>, <u>17</u>: 678-682, 1978.
- 17. Proenza, L. M., Contribution Re: Electrophysiology of retinal Müller (Glial) cells. In G. G. Somjen and S. Varon, <u>Neuron-Glial Interactions</u>. Neurosciences Research Program Bulletin, 17: No. 1, February 1979.
- 18. Karwoski, C. J., Criswell, M. H., and Proenza, L. M., Species differences in the intraretinal electroretinogram within the leopard frog complex. Vision Research, 19: 339-341, 1979.
- 19. Karwoski, C. J. and Proenza, L. M., Neurons, potassium, and glia in proximal retina of Necturus. <u>J. General Physiology</u>, <u>75</u>: 141-162, 1980.
- 20. Karwoski, C. J. and Proenza, L. M., Transient adaptive and sensitizing effects in the retinal of Necturus. <u>J. General Physiology</u>, <u>76</u>: 479-497, 1980
- 21. Wolbarsht, M. L., et al. (including L. M. Proenza), Report of workshop on Ocular-Safety and Eye Care. <u>Inves. Ophthalmol. & Vis. Sci.</u>, <u>19</u>: 1124, 1980.
- 22. Proenza, L. M. (co-editor), Report of Working Group No. 39, Committee on Vision, National Academy of Sciences, National Research Council. <u>Adv. Ophthalmol.</u>, <u>41</u>: 103-118, 1980.
- 23. Karwoski, C. J. and Proenza, L. M., Spatiotemporal variables in the relationship of neuronal activity to potassium and glial responses. In E. Kafka-Lutzow (Ed.). <u>Information Processing in the Retina, Vision Research</u>, 21: 1713-1718, 1981.
- 24. Proenza, L. M., A portable dual-beam photostimulator. <u>Beh. Res. Meth. & Instr.</u>, 14: 405-408, 1982.
- 25. Shimazaki, H., Karwoski, C. J., and Proenza, L. M., Time-dependent effects of aspartate on mudpuppy retina. <u>Vision Research</u>, <u>24</u>: 587-595, 1984.
- 26. Fowlkes, D. H., Karwoski, C. J., and Proenza, L. M., Endogenous circadian rhythm in electroretinogram of free-moving lizards, Investigative Ophthalmology and Visual Science, 25: 121-124, 1984.
- 27. Karwoski, C. J., Newman, E. A., and Proenza, L. M., Light-evoked increases in extracellular K⁺ in the plexiform layers of amphibian retinas. J. Gen Physiol., 86: 189-213, 1985.
- 28. Karwoski, C. J. Frambach, D. A., and Proenza, L. M., Laminar profile of resistivity in frog retina. <u>Journal of Neurophysiology</u>, <u>54</u>: 1607-1619, 1985.

- 29. Karwoski, C. J., Proenza, L. M., and Frambach, D. M., Determination of resistivity and transcellular current flow in frog retina. <u>Annals, N.Y. Acad. Sci.</u>, 481: 365-368, 1986.
- 30. Karwoski, C. J. and Proenza, L. M., Sources and sinks of light-evoked potassium flux in the vertebrate retina. <u>Canadian J. of Physiology and Pharmacology</u>, 65: 1009-1017, 1987.
- 31. Proenza, L. M., The age of the Arctic, ARCUS Actions, Vol. 1, No. 1, 1989.
- 32. Proenza, L. M., <u>et. al.</u>, Shallow and deep ice coring devices developed by the Polar Ice Coring Office (CP-90-02). <u>Proceedings</u>, <u>POLARTECH</u>, Copenhagen, 1990.
- 33. Proenza, L. M., et. al., Facilities plan and protocol for the support of the National Science Foundation- sponsored Greenland Ice Sheet Project Two: Deep Ice Core Drilling Effort (CP-90-03). Proceedings, POLARTECH, Copenhagen, 1990.
- 34. Proenza, L. M., New technologies in the future of academic arctic research, in J. J. Kelly, <u>et al.</u>, (Eds), <u>New Technological Developments in Support of Arctic Research</u>, 1990.
- 35. Proenza, L. M., Research as an Industry, Proceedings of Interior Resource Conference '90, <u>To the Future</u>, Alaska Support Industry Alliance, 1990.
- 36. Proenza, L. M., University Research: An Economic Development Engine for Alaska, <u>Alaska Journal of Commerce</u>, January 20, 1992.

PUBISHED ABSTRACTS (generally refereed, published in citable format, and not appearing in abstracting periodicals; i.e., not an abstract of published material)

- 1. Proenza, L. M., Retinal sensitivity in the mudpuppy (Necturus maculosus). Society for Neuroscience, 2: 166, 1972.
- 2. Proenza, L. M., Mudpuppy retina: Proximal negative response and visual sensitivity. Bull. Ga. Acad. Sci., 30: 94, 1972.
- 3. Proenza, L. M., Laterally conducted signal and interactions occurring at light offset in the proximal retina of Necturus. <u>Society for Neuroscience</u>, <u>4</u>: 382, 1974.
- 4. Proenza, L. M., Transient sensitization in proximal retina of Necturus. <u>J. Opt. Soc. Am.</u>, <u>64</u>: 1403, 1974.
- 5. Proenza, L. M. and Freeman, J. A., Contributions of extracellular currents, resistivity, and $[K^+]_0$ flux to retinal potentials. <u>Association for Research in Vision and Ophthalmology</u>, 75: 76, 1975.
- 6. Proenza, L. M. and Freeman, J. A., Light-evoked extracellular potentials of the Necturus retina: Current source density analysis of the electroretinographic b-wave and the proximal negative response. Neurosci. Abstr., 1: 104, 1975.
- 7. Karwoski, C. J. and Proenza, L. M., Relationship of glial and extracellular potentials to K⁺-flux in mudpuppy retina. <u>Association for Research in Vision and Ophtalmology</u>, 76: 29, 1976.
- 8. Karwoski, C. J. and Proenza, L. M., Light-induced potassium flux and its relationship to glial and extracellular slow potentials in the retina of Necturus. Neurosci. Abstr., 2: 1079, 1976.
- 9. Karwoski, C. J. and Proenza, L. M., Laminar separation of on and off components of the proximal negative response and K⁺-flux in frog retina. Soc. Neurosci, Abstr., 3: 565, 1977.
- 10. Karwoski, C. J., Cirswell, M. H., and Proenza, L. M., Laminar distribution of light-evoked responses in proximal retina of lower vertebrates.

- Association for Research in Vision and Ophthalmology, 78: 262, 1978 (April, 1978 supplement to Inves. Ophthalmol, & Visual Sci.).
- 11. Karwoski, C. J. and Proenza, L. M., Transient Response Enhancement in Mudpuppy Retina. <u>Soc. Neurosci. Abstr.</u>, <u>4</u>: 633, 1978.
- 12. Karwoski, C. J. and Proenza, L. M., Response decrement in mudpuppy retina. <u>Association for Research in Vision and Ophthalmology</u>, <u>79</u>: 180, 1979 (April 1979 Supplement to Inves. Ophthalmol, & Vis. Sci.).
- 13. Karwoski, C. J., Shimazaki, H., and Proenza, L. M., Relationship of neuronal to K-responses in mudpuppy retina. <u>Soc. Neurosci. Abstr., 5</u>: 791, 1979.
- 14. Shimazaki, H., Karwoski, C. J. and Proenza, L. M., Effects of aspartate on field potentials and K⁺ in mudpuppy retina. <u>Assoc. for Research in Vision and Ophthalmol.</u>, p. 39, 1980. (April 1980, supplement to <u>Inves, Ophthalmol</u>, & Visual Sci.).
- 15. Shimazaki, H., Karwoski, C. J. and Proenza, L. M., Aspartate-induced changes in field potentials and K+-flux in mudpuppy retina. <u>Recent Advances in Vision: Technical Digest</u>, No. ThA2. 1980. (Publication of the Optical Society of America).
- 16. Karwoski, C. J. and Proenza, L. M., Spatiotemporal variables in the relationship of neuronal activity to potassium and glial responses. In E. Kafka-Lutzow (Ed.). Information Processing in the Retina, Vienna, 1980.
- 17. Fowlkes, D. H., Karwoski, C. J. and Proenza, L. M., Circadian rhythm in the retina of the free-moving Anolis lizard. <u>Soc. Neurosci. Abstr.</u>, <u>7</u>: 45, 1981.
- 18. Shimazaki, H., Karwoski, C. J. and Proenza, L. M., Effects of aspartate on retinal resistance and light transmittance. <u>Soc. Neurosci. Abstr.</u>, <u>7</u>: 279, 1981.
- 19. Karwoski, C. J. and Proenza, L. M., Light-evoked K⁺ increases in amphibian retina. <u>ARVO Supplement to Inves. Ophthalmol. & Visual Sci.</u>, <u>22</u>: 281, 1982.
- 20. Fowlkes, D. H., Karwoski, C. J. and Proenza, L. M., ERG circadian rhythm in the free-moving lizard (Anolis Carolinensis). <u>ARVO Supplement to Inves. Ophthalmol. & Visual Sci.</u>, <u>22</u>: 281, 1982.
- 21. Karwoski, C. J., Nicholson, C. and Proenza, L. M., K⁺ sources in amphibian retina. <u>Soc. Neurosci. Abstr.</u>, <u>8</u>: 50, 1982.
- 22. Karwoski, C. J., Chappel, R. L., Proenza, L. M., Szamier, R. B., Taatjes, D. J., Mancini, V. and Ripps, H. Light-evoked field potentials and [K⁺]₀ in the skate retina: pharmacological studies on the cellular origins of the responses. <u>Bio. Bull.</u>, <u>163</u>: 385, 1982.
- 23. Shimazaki, H., Karwoski, C. J. and Proenza, L. M., Pharmacological modulation of Müller cells, [K⁺]_o, and the b-wave in mudpuppy retina. ARVO Supplement to Inves. Ophthalmol, & Visual Sci., 20: 220, 1983.
- 24. Proenza, L. M., Karwoski, C. J., and Nicholson, C., Resolution of K⁺ sources in amphibian retina. <u>Proceedings, International Union of Physiological Sciences</u>, p. 509, 1983.
- 25. Fowlkes, D. H., Karwoski, C. J., and Proenza, L. M., Circadian rhythm (CR) of electroretinogram (ERG) in all-cone retina of Anolis carolinensis. Proceedings, International Union of Physiological Sciences, p. 508, 1983.
- 26. Proenza, L. M., Neuro-glial dynamics and the ionic microenvironment of the vertebrate retina. <u>Abstracts, Australasian Winter Conference on Brain Research</u>, p. 25, 1983.

- 27. Fowlkes, D. H., Karwoski, C. J. and Proenza, L. M., Endogenous circadian rhythm in the ERG of the diurnal lizard Anolis carolinensis. <u>Soc. Nerurosci. Abstr.</u>, 9: 625, 1983.
- 28. Karwoski, C. J., Frambach, D. A., and Proenza, L. M., Radial Profile of Resistivity in Frog Retina. <u>Soc. Neurosci. Abstr.</u>, <u>10</u>: part I, p. 327, 1984.
- 29. Fowlkes, D. H., Karwoski, C. J. and Proenza, L. M., Effects of Unilateral and bilateral optic nerve transection (ONX) on the Anolis ERG circadian rhythm (CR). <u>ARVO Supplement to Inves. Ophthalmol. and Visual Sci.</u>, <u>26</u>: 112, 1985.

EDITORIALS and WHITE PAPERS

- 1. "Relevance, Connectivity, and Productivity: Three Paths to Innovation in Higher Education," *Innovations: Technology, Governance, Globalization* M.I.T. Press Journal, June 2010
- 2. "Refreshingly ambitious! Luis Proenza has led The University of Akron for 10 years," Interview, *Akron Beacon Journal*, Akron, Ohio, June 4, 2009
- 3. "Proenza's vision helps reshape UA over a decade," Interview, Akron Beacon Journal, Akron, Ohio, May 31, 2009
- 4. "To Get Ahead, Ohio Must Think Metro," *Akron Beacon Journal*, Akron, Ohio, November 13, 2008
- 5. "Security and Prosperity in Issue 8," Akron Beacon Journal, Akron, Ohio, October 19, 2008
- 6. "Public University Education Remains a Great Value," Akron Beacon Journal, Akron, Ohio, October 12, 2008 (co-authored with Lester A. Lefton, president of Kent State University, and Lois Margaret Nora, president of the Northeastern Ohio Universities Colleges of Medicine and Pharmacy)
- 7. "Needed Science Jolt Awaits Funding," *The Columbus Dispatch*, June 21, 2008
- 8. "Regionalism Expands Economic Potential," *Crain's Cleveland Business*, March 10, 2008 (co-authored with Brad Whitehead, president of the Fund for Our Economic Future)
- 9. "Beyond Research Rankings," Inside Higher Education, May 17, 2007
- 10. "Universities Face a Transition Challenge," *The Columbus Dispatch*, February 11, 2006
- 11. "Invitation to Copenhagen: Engaging Locally in a Global Consensus," *Akron Beacon Journal*, April 11, 2004
- 12. "Regaining the vision of space exploration," Cleveland Plain Dealer, February 10, 2004
- 13. "Issue #1: Investing in Knowledge, the Engine of Prosperity," *Akron Beacon Journal*, Akron, Ohio, October 23, 2003
- 14. "Testimony Before Governor's Commission on Higher Education and the Economy," Columbus, Ohio, September 10, 2003
- 15. "Ohio's Engine of Strength Is Being Dismantled," *The Plain Dealer*, Cleveland, Ohio, May 16, 2003
- 16. "In the Public Interest: A White Paper on the Funding and Functions of Higher Education in Ohio," Prepared at the request of Representative James Hughes, Chairman of The House Committee on Higher Education, Ohio General Assembly, January 2003
- 17. "The New Research Economy: Creating Strategic Intent Among International Partners," OECD-CONACYT Conference, Puerto Vallarta, Mexico, December 2-3, 2002

- 18. "Issue 12: A Small But Important Step For Our Schools," *Akron Beacon Journal*, Akron, Ohio, November 3, 2002
- 19. "Restoring Ohio's Economic Muscle by Building on Its Strengths," *Akron Beacon Journal*, Akron, Ohio, September 10, 2002 (co-authored with Thomas A. Waltermire, chairman, president and chief executive officer of PolyOne Corporation and chairman of the Ohio Polymer Strategy Council; Deborah Wince-Smith, president of the Council on Competitiveness; and Samir G. Gibara, chairman and chief executive officer of Goodyear Tire & Rubber Company)
- 20. "Not a Risk, a Necessity," Craintech Web site, September 3, 2002
- 21. "Ohio's Economy Can Be Restored, But Only if We Build Upon Our Strengths," *Youngstown Vindicator*, Youngstown, Ohio, August 13, 2002
- 22. "Dream State: Wake Up To Campus Reality," *The Columbus Dispatch*, Columbus, Ohio, August 10, 2002
- 23. "Rankings Don't Tell the Whole Story," *The Plain Dealer*, Cleveland, Ohio. May 3, 2002
- 24. "The Proenza Push," Interview, Akron Beacon Journal, March 12, 2002
- 25. "Higher Ed Needs More Help," *Crain's Cleveland Business*, Cleveland, Ohio, March 4-10, 2002
- 26. "Needed: A Policy Framework For Public Higher Education in Ohio," *The Reporter*, Akron, Ohio, February 16, 2002
- 27. "After 30 Years of College-Funding Neglect, Some Hope," *Akron Beacon Journal*, Akron, Ohio, February 14, 2002
- 28. "Ohio Colleges Need Tuitions Fit for Each," *The Columbus Dispatch*, Columbus, Ohio, February 12, 2002
- 29. "Continuing the Dialogue," The Reporter, Akron, Ohio, January 12, 2002
- 30. "Higher Tuition, Lower Hope For the Economy," *The Plain Dealer*, Cleveland, Ohio, November 13, 2001 (co-authored with Dr. Michael Schwartz, president of Cleveland State University; Dr. Carol Cartwright, president of Kent State University; and Dr. David Sweet, president of Youngstown State University)
- 31. "Recalling the Magic of Knowledge," *Akron Beacon Journal*, Akron, Ohio, August 1, 2001
- 32. "University of Akron President Wants to Open Dialogue With Black Community," *The Reporter*, Akron, Ohio, June 23, 2001
- 33. "Technology Leadership," WCLV Radio, Cleveland, Ohio, Aired June 2001
- 34. "Workforce Development," WCLV Radio, Cleveland, Ohio, Aired June 2001
- 35. "Higher Education," WCLV Radio, Cleveland, Ohio, Aired June 2001
- 36. "Business Growth," WCLV Radio, Cleveland Ohio, Aired June 2001
- 37. "Higher Education's Strength is Diversity," *The Columbus Dispatch*, Columbus, Ohio, December 23, 2000
- 38. "Board of Regents Losing a Leader," *The Columbus Dispatch*, Columbus, Ohio, August 5, 2000 (co-authored with Dr. William Kirwan, president of The Ohio State University)
- 39. "Cost of Education? Can Ohio Afford the Price of Ignorance?" *Akron Beacon Journal*, Akron, Ohio, February 7, 2000
- 40. "Ohio Fails to Invest in a Surefire Money-Maker: Higher Education," *The Plain Dealer*, Cleveland, Ohio, January 28, 2000
- 41. "State Must View Higher Education as Investment," *The Columbus Dispatch*, Columbus, Ohio, January 25, 2000
- 42. "Research as an Engine for Ohio's Economic Development," *Northern Ohio Live*, Cleveland, Ohio, January 18, 2000

- 43. "Clusters and Collaborations in the New Research Economy: Creating Strategic Intent Among Universities," Merrill Research Conference, Valley Falls, Kansas, July 27, 1999
- 44. "Ohio Must Spend More on Research and Development," *The Plain Dealer*, Cleveland, Ohio, July 20, 1999
- 45. "Ohio's Legislators Must Act to Ensure its Economic Future," *The Columbus Dispatch*, Columbus, Ohio, July 6, 1999
- 46. "Boldly Go Where Ohio Has Not Gone Before," Akron Beacon Journal, Akron, Ohio, June 26, 1999
- 47. "A Gentleman and a Scholar," Interview, *Akron Beacon Journal*, Akron, Ohio, December 13, 1998

PUBLISHED SPEECHES

- "Relevance, Connectivity and Productivity: New Strategies for Success in Higher Education," Beijing Forum, Beijing, China, November 8, 2009
- "Universities and Their Regions: The Akron Model," National Academy of Sciences, Washington, D.C., June 3, 2009
- "The University as a Catalyst for Urban Revitalization," Wayne State University/Urban Land Institute Symposium, Detroit, Michigan, October 7, 2008
- "Capturing Your Competitive Future in a Global Economy," Henan University, China, September 30, 2008
- "Science, Technology, and Economics," Peking University, China, September 26, 2008
- "Challenges for the Future of Technology Transfer and Industrial/Academic Collaborative Research," American Chemical Society, Philadelphia, Pennsylvania, August 19, 2008
- "Innovating on Innovation: The Research, Industrial and Scientific Bases for Discovery to Innovation," National Academies Beckman Center, Irvine, California, July 27, 2008
- "Powering Economic Development: Challenges and Opportunities for the 21st Century University," University Economic Development Association Third Annual Summit on Higher Education and Economic Development, Portland, Oregon, November 5, 2007
- Testimony before Committee on Energy and Natural Resources, United States Senate Hearing on S. 2197, Protecting America's Competitive Edge through Energy Act of 2006, February 2006
- "Powering the Third Frontier," The Newcomen Society, Cleveland, Ohio, October 21, 2003
- "The New Research Economy: Creating Strategic Intent Among International Partners," OECD-CONACYT Conference, Puerto Vallarta, Mexico, 2002
- "The Role of Higher Education in Economic Development," *Executive Speeches Journal*, December 2002/January 2003; also excerpted in *The Executive Speaker*, September 2002 and October 2002 (Delivered to The City Club of Cleveland, July 24, 2002)
- "American Education: Why Not Our Own Marshall Plan?" *Vital Speeches of the Day*, June 15, 2002 (Delivered to The Akron Press Club, April 8, 2002)
- "The Melting Pot: Finding Solutions to Cultural Differences," Vital Speeches of the Day, March 1, 2002; The Executive Speaker, May 2002

- (Delivered at The University of Akron Fall 2001 Commencement, December 15, 2001)
- "Economic Development in the Knowledge Economy," *Vital Speeches of the Day*, May 15, 2001 (Delivered to The City Club of Cleveland, February 16, 2001)
- "Enabling the Common Good: Workforce and Technology Development," *Vital Speeches of the Day*, February 15, 2001 (Delivered to Leadership Ohio, July 22, 2000)
- "Clusters and Collaborations in the New Research Economy: Creating Strategic Intent Among Universities," Merrill Research Conference, Valley Falls, Kansas, 1999

INVITED PRESENTATIONS

More than 3,000 invited presentations to symposia, professional societies, and university and private groups in the United States and abroad.

PROFESSIONAL SERVICE EXPERIENCE

National:

- 1. President's Council of Advisors on Science and Technology (PCAST), 2001-2008
- 2. Council on Foreign Relations, 2002-present
- 3. Council on Competitiveness, 1999-present
 - Executive Committee, 2004-present
 - National Innovation Initiative Leadership Council
 - National Innovation Initiative Advisory Committee, 2004
 - Co-Chair, National Innovation Initiative, Innovation Environment and Infrastructure Working Group, 2004
 - National Steering Committee, Clusters of Innovation: The Regional Basis of U.S. Competitiveness, 1999-2001
- 4. The National Academies' Government-University-Industry Research Roundtable (GUIRR), 2009-present
- 5. National Institute of Standards and Technology (NIST) Technology Innovation Program (TIP) Advisory Board, 2009-present
- 6. U.S. Secretary of Energy Advisory Board, 2006
- 7. Science and Mathematics Education Task Force, reporting to the U.S. Secretary of Energy, Chair, 2004-2006
- 8. States Science and Technology Institute, Board of Trustees, 2004-present
- 9. National Leadership Council, the Digital Promise Project and the Digital Opportunity Investment Trust Act, 2004
- 10. World Innovation Foundation, 2006
- 11. National Inventors Hall of Fame, Board of Trustees, 1999-2005
- 12. Association of Public and Land-Grant Universities (APLU), formerly the National Association of State Universities and Land-Grant Colleges, 1983-present; Board of Directors member 2006-2009; Commission on the Urban Agenda, Executive Committee, 1999-present, chair 2006-2008; APLU/AAU Patent Reform Advisory Committee, APLU co-chair

- (with Yale University President Rick Levin as co-chair for the Association of American Universities), 2009-present
- 13. Coalition of Urban Serving Universities (USU), Board of Governors, 2006-present, vice chair 2006-2008; co-chair, Building Strong Communities Steering Committee, 2009-present
- 14. Transformative Regional Engagement (TRE) Networks, Inc., Board of Directors, 2010-present
- 15. Mid-American Conference Council of Presidents, 1999-present
- 16. Air University, Board of Visitors, 1999-2002
- 17. National Coalition for Advanced Manufacturing (NACFM), Board of Trustees, 1999-2002
- 18. Senior Research Fellow, IC2 Institute (innovation, creativity, capital), the University of Texas, Austin, 1998-present
- 19. Invited participant, Government-University-Industry Research Roundtable (GUIRR) and Committee on Science Engineering and Public Policy (COSEPUP), workshop on Overcoming Barriers to Collaborative Research, March 23-24, 1998, National Academy of Sciences, Beckman Center, Irvine, California
- 20. Graduate Record Examination Board, Minority Graduate Education Committee, 1997-1998
- 21. Association of American Universities (AAU), Association of Graduate Schools (AGS), 1994-1998
 - President Elect, 1998
 - Executive Committee, 1997-1998
 - Nominating Committee, 1995
- 22. Council of Graduate Schools, 1987-1998
 - Nominating Committee, 1995
 - Dissertation Awards Committee, 1997
- 23. Advisory Council, Emory University Graduate School of Arts and Sciences, 1995-1998
- 24. Committee on Institutional Cooperation, Big 10 universities and the University of Chicago; 1994-1998
 - Senior Research Officers; Chair, 1997-1998
 - Graduate Deans; Chair-elect, 1998
- 25. Chairman, Executive Resources Board, United States Arctic Research Commission, 1994
- 26. Council on Academic Affairs, National Association of State Universities and Land-Grant Colleges Committee on the Economics of Higher Education, 1992-1994; Executive Committee, 1993-1994
- 27. North Central Association Commission on Institutions of Higher Education, 1999-present
- 28. Western Interstate Commission on Higher Education, Northwest Academic Forum, State Representative, 1987-1994; Executive Committee, 1993-1994
- 29. Congressional Testimony before the Senate Select Committee on Intelligence: "Radioactive and Other Environmental Threats to the Arctic Resulting from Past Soviet Activities," August 15, 1992, Field Hearing, Fairbanks, Alaska
- 30. Vice-Chairman and Commissioner, United States Arctic Research Commission, 1992-1996; Board of Advisors, 1990-1992 and 1997-1998
- 31. U.S. Diplomatic Delegation to the Preparatory and Ministerial Meetings on the Protection of the Arctic Environment, Rovaniemi, Finland, June 10-14, 1991

- 32. Congressional Testimony before the National Ocean Policy Study, Committee on Commerce, Science, and Transportation, U.S. Senate: "An American Arctic Research University," April 24, 1991, Washington, D.C.
- 33. National Biotechnology Policy Board, National Institutes of Health, 1990-1993; Appointed by the Secretary.
- 34. Panelist; Energy, Economics, and the Environment-Reaching for Consensus; Fall Conference on Earth Observations and Global Change Decision Making, Washington, D.C., October 22, 1991
- 35. Council on Research Policy and Graduate Education, National Association of State Universities and Land-Grant Colleges, 1987-1998. Executive Committee, 1990-1998, and Chair, 1993. Representative to the Commission on Human Resources, 1993-1998
- 36. Task Force on Federal Relations, Council on Research Policy and Graduate Education, National Association of State Universities and Land-Grant Colleges, 1990-1993
- 37. Arctic Research Consortium of the United States (ARCUS), President, 1988-1990; Past President, 1991-1992; Member Executive Committee, Board of Directors, Founders' Committee, 1988-1992
- 38. Committee on Public Education and Public Policy, University Corporation for Atmospheric Research, 1988-1989
- 39. Business-Higher Education Forum, American Council on Education, Advisory Committee on Minorities and The Work Force, 1986
- 40. Committee on Vision, National Research Council, National Academy of Sciences. Member 1979-1982; Study Director 1977-1979
- 41. Social Issues Committee, Society for Neuroscience, 1978-1981
- 42. Reviewed research papers for <u>Journal of General Physiology</u>, <u>Journal of Neurophysiology</u>, <u>Vision Research</u>, <u>Experimental Eye Research</u>, <u>Physiology and Behavior</u>, and <u>Behavior Research Methods & Instrumentation</u>
- 43. Reviewed grants for NSF and CONACYT
- 44. Served on a site-visit team for NIH
- 45. Organizer or Co-organizer of the following symposia:
 - "Applications of Psychophysics to Clinical Problems." (San Francisco), 1978
 - "Applied Problems in Vision." (Washington, D.C.), 1979
 - "Nutrition, Pharmacology, and Vision." (Washington, D.C.), 1981
 - "From retina to brain: current research topics in the visual system." (Queenstown, New Zealand), 1983
 - "Modulations of Extracellular Potassium: Contributions to electrical events and homeostasis of the retina." (Steamboat Springs, Colorado), 1984
 - "International Conference on the Role of the Polar Regions in Global Change." (Fairbanks, Alaska), 1990
 - "Arctic Perspectives: The Changing Role of the U.S. in The Circumpolar North." (Fairbanks, Alaska), 1992
- 46. Consulting assignments at universities, laboratories, and agencies
- 47. The Society of the SIGMA XI

State of Ohio:

• Governor's Third Frontier Advisory Board; Appointed by Governor Bob Taft, 2003-2008

- Governor's Third Frontier Campaign Steering Committee; Appointed by Governor Bob Taft, 2003
- Great Lakes Science Center Board, 2007
- Ohio Aerospace Council, 2000-present; Chair, 2003-2004
- Ohio Supercomputer Center, Chair, 2003-2008
- Cleveland Clinic Foundation Industrial Advisory Board, 2000-present
- Inter-University Council, 1999-present; President, 2004
- Northeast Ohio Council on Higher Education (NOCHE), Board Member, 1999-present
- Northeast Ohio Technology Coalition (NorTech), Executive Council, 1999-present
- Ohio Aerospace Institute, Board Member, 1999-present
- Ohio Polymer Strategy Council, 2001-present
- Northeastern Ohio Universities College of Medicine, Board of Trustees, 1999-present
- Northeastern Educational Television of Ohio, Inc. (WNEO/WEAO, PBS), Board of Trustees, 1999-present

State of Indiana:

- High Technology Task Force, Member; and Co-Chair, Technology Committee, 1997-1998. Appointed by Mayor Steve Goldsmith of Indianapolis
- Indianapolis and Central Indiana Technology Partnership, Executive Committee, 1998
- Indianapolis Economic Development Corporation, Board of Directors, 1998
- Indiana Health Industry Forum, Board of Directors, 1998
- Board of Advisors, Indiana University-Purdue University Indianapolis, 1994-1998

Purdue University:

- Academic Reinvestment Committee
- Excellence 21 (Continuous Quality Improvement), Steering Committee
- Economic Development Council
- Cancer Center, Director's Search Committee, Chair
- Academic Computing Policy Committee
- Patents and Copyrights Committee, Chair
- University Promotions Committee
- Trask Committee, (investments related to R&D), Chair
- Graduate Council, Chair
- Faculty Senate Faculty Affairs Committee University Resources Policy Committee
- Hazardous Materials Management Oversight Committee, Co-Chair

State of Alaska:

- Hazardous Substance Spill Technology Review Council, State of Alaska, 1991-1994; Appointed Governor Walter J. Hickel.
- Advisor to the Governor for Science & Technology Policy, 1991-1994; Appointed by Governor Walter J. Hickel.

University of Alaska:

- Intellectual Property Committee (System-wide), 1989-1994; Chair
- University of Alaska Six-Year Plan (System-wide), 1989-1990
- Chairman, Research Council, 1987-1992
- Graduate Council, 1987-1992
- Faculty Small Grants Committee, 1987-1992

University of Georgia:

- Secretary, Search Committee, Vice President for Research, 1985-1986
- University Council, 1983-1986
- Faculty Senate, 1981-1984
- Search Committee, Chairman, Division of Biological Sciences, 1983-1984
- Advisory Committee on International Development, 1983-1987
- General Education Committee of the Faculty Senate, 1981-1982
- Basic Life Sciences Review Committee, Faculty Research Grants Program, 1981-1982; Chairman, 1982-1983
- Committee on Departmental Development, Department of Zoology, 1980-1981
- Organizer, University of Georgia Chapter of the Society for Neuroscience; and Coordinator of its Seminar Series, 1973-1977; President, 1982-1983
- Numerous other departmental, college, and university committees

COMMUNITY SERVICE:

- The 50 Club of Cleveland, 2001-present
- Sales and Marketing Executives (SME) of Akron, 2001-present
- The City Club of Cleveland, 2001-present
- Greater Akron Chamber of Commerce, Executive Committee, 1999-present
- Akron Roundtable, Board of Directors, 1999-present. President, 2004
- Akron Tomorrow, Trustee, 1999-present
- United Way of Summit County, Board Member, 1999-present
- Cleveland Tomorrow, Board Member, 2002-2004
- Akron Civic Theatre, Ex-Officio Board Member, 1999-2007
- Akron Rotary, 1999-2001
- Lafayette Center for Medical Education, Community Advisory Council, 1998
- Lafayette Town & Gown, 1997-1998
- Greater Lafayette Progress, Inc., Board of Directors and Executive Committee, 1995-1998
- Lafavette Rotary, 1994-1998
- Fairbanks Industrial Development Corporation, Board of Directors, 1988-1994

- Rotary International, Fairbanks, Downtown (Paul Harris Fellow), 1987-1994
- Commonwealth North, Anchorage, 1987-1994
- Greater Fairbanks Chamber of Commerce, 1987-1994
- North Slope Environmental Achievement Awards, Judges' Panel, 1991, 1992. Chair, 1993
- Ecological Economics of Alaska, Board of Directors, 1990-1991
- Overall Economic Development Steering Committee, Fairbanks North Star Borough, 1989
- The Wednesday Roundtable, Fairbanks, 1987-1994
- Riverside Military Academy, Board of Trustees, 2005-present
- Riverside Military Academy, Alumni Advisory Board, 1993-2000

AFFILIATIONS:

- The Union Club, 1999-present
- Portage Country Club, 1999-present