

Robert E. Landsman, Ph.D.

CURRENT POSITIONS

President and Founder, ANOVA Science Education Corporation.

Specializing in:

- featuring the Research Investigation Process (RIP™)
- conducting workshops on inquiry approaches to science teaching, grades K-12
- developing, writing, and testing science education curricula
- aligning curricula with state and national science education standards
- integrating science, technology, mathematics, and language arts
- devising transdisciplinary and interdisciplinary approaches to education
- evaluating educational programs and staff development projects:
 - designing measurement tools, analyzing results, and preparing reports
- research design and statistical applications for research, problem solving, evaluation and assessment

EDUCATION AND TRAINING

Postdoctoral:

Visiting Research Scientist. The City University of New York, Department of Biopsychology.
11/91-10/95.

Postdoctoral Scholar. NIH Postdoctoral Fellowship, UCLA School of Medicine, Brain Research
Institute. 11/89-10/91.

Assistant Research Anatomist. UCLA School of Medicine, Department of Anatomy and Cell
Biology. 12/89-12/90.

Degrees:

- Ph.D. Psychology, Concentrations: Experimental Biopsychology/Neuroscience.
Conferred: 5/90. The Graduate School and University Center of the City University of New York in conjunction with the Department of Ichthyology of the American Museum of Natural History, New York, NY. 2/85-10/89.
- MPhil. Concentration: Bioethics. Conferred: 10/89. The Graduate School and University Center of the City University of New York. 2/85-10/89.
- MA. Biopsychology. Conferred: 10/89. The Graduate School and University Center of the City University of New York in conjunction with the American Museum of Natural History, New York, NY. 2/85-10/89.
- MA. General Experimental Psychology, Concentrations: Research Design and Statistical Analyses/Learning and Memory. Conferred: 6/80. Fairleigh Dickinson University, Madison, NJ. 12/78-5/80.
- BA. Liberal Arts: Psychology and English. Conferred: 6/77. Rutgers College, Rutgers University, New Brunswick, NJ. 9/73-6/77.

Other Graduate Education and Training:

- University of Texas at Austin, Marine Biology Institute, Port Aransas, TX. 6/89-8/89. Training in neuroendocrinology assay procedures.
- University of Hawaii at Manoa, Honolulu, HI. 6/86-8/86. Summer Program on Endocrinology of Tropical and Marine Vertebrates: techniques and graduate coursework in marine biology.
- Rutgers University Institute of Animal Behavior, Newark, NJ. 9/84-12/84. Psychobiology Program: graduate coursework in neurophysiology.
- University of Puerto Rico at Mayaguez, PR. 1982-1983. Marine Sciences Program: extensive graduate coursework in Marine Sciences and Animal Behavior of Aquatic Vertebrates.
- Indiana University, Bloomington, IN. 1/82-7/82. Biology Department: extensive graduate coursework in Neuroendocrinology.
- Montclair State University, Upper Montclair, NJ. 1977, 1978, 1981. Psychology Department and School of Sciences: Coursework in Genetics, Ecology, Chemistry, Physiological Psychology, Theories of Learning.

Teaching Certificates:

Teacher of Biological Science, Department of Education, State of NJ, Conferred: 5/94.

Teacher of Psychology, Department of Education, State of NJ, Conferred: 5/94.

Elementary School Teacher, Department of Education, State of NJ, Conferred: 5/94.

TEACHING EXPERIENCE

Academic Positions:

Associate Professor of Science Education and Research, Curriculum Research & Development Group, University of Hawai'i at Manoa, Honolulu, HI. 8/99-1/01.

Director (tenured) of Scientific Research Programs in Biology, Experimental Psychology, Neuroscience and Psychoneuroimmunology and Instructor of Psychology and Biology, Academy for the Advancement of Science and Technology (grades 9-12), Hackensack, NJ. 9/93-7/99.

Adjunct Assistant Professor, Biopsychology Graduate Program, The City University of New York, NY. Dissertation Mentor. 9/95-8/98.

Undergraduate and Graduate (G) Teaching:

Adjunct Assistant Professor of Psychology, College of Mount Saint Vincent, Riverdale, NY.
Psychology I: 9-12/96, 9-12/95.
Psychology II: (with experimental lab): 2-5/97, 2-5/96.

Adjunct Instructor of Biology and Psychology, Kean State College, Union, NJ.
Experimental Behavioral Neuroscience (with lab): 6-8/93.
Social Psychology: 9-12/84, 9-12/80.

Adjunct Assistant Professor of Psychology, Hunter College, C.U.N.Y., NY., NY.
Statistics: 9-12/92, 9-12/88, 6-8/88, 9-12/85.

(G) Adv. Special Topics: Quantitative Approaches to the Study of Sex Differences:
1-6/88.

Introduction to Psychology: 9-12/87.

Social Psychology: 1-6/86.

Adjunct Assistant Professor of Psychology, Barnard College, Columbia University, NY., NY.
Introduction to Psychology: 1-6/92 (2 sections), 1-6/89, 9-12/88, 9-12/86.

Adjunct Assistant Professor of Psychology, Montclair State University, Upper Montclair, NJ.

Experimental Psychology (with Lab): 9-12/92 (2 sections), 1-5/92, 1-5/88, 1-5/87
(2 sections), 1-5/86, 9-12/85, 1-5/85, 9-12/84, 1-5/81.

Statistics: 9-12/92, 7-9/87 (2 sections), 1-5/86, 1-5/84, 1-5/81.

Physiological Psychology: 1-5/92.

General Psychology I (Growth and Development): 6-8/92 (3 sections), 9-12/89, 1-5/89,
9-12/88, 1-5/88, 9-12/87, 1-5/87, 1-5/81(2 sections).

Comparative Psychology: 1-5/89, 1-5/87, 1-5/85.

Brain, Mind and Behavior: 1-5/89, 9-12/88, 1-5/88, 9-12/86, 1-5/86, 9-12/84.

General Psychology II (Experimental Approach): 9-12/89, 1-5/89, 9-12/88, 9-12/87,
1-5/85, 1-5/84, 1-5/81, 9-12/80.

Fundamentals of Learning and Conditioning: 9-12/80.

Adjunct Instructor of Psychology, University of California at Los Angeles, LA., CA.

Statistics: 6-8/91, 2-5/91.

Physiological Psychology: 2-5/91.

Adjunct Instructor of Psychology, Felician College, Lodi, NJ.

Statistics: 1-5/85.

Adjunct Instructor of Biology, Indiana University, Bloomington, IN.

General Biology Laboratory: 1-6/82.

Adjunct Instructor of Psychology, Fairleigh Dickinson University, Madison, NJ.

(G) Statistics: 1-5/80.

Secondary Teaching:

Associate Professor, University of Hawai`i at Manoa Laboratory School.

Eighth Grade FAST III: 8/99-5/00 (2 sections).

Senior Biology: 8-12/00 (2 sections).

Instructor (tenured) of Psychology, Biology and Scientific Research Methods and Director,
Scientific Research Program in Neuroscience and Psychoneuroimmunology, Academy for the
Advancement of Science and Technology, Hackensack, NJ. 1993-1998.

College Accredited Psychology I: 9-12/97, 9-12/96, 9-12/95 (2 sections), 9-12/94 (2 sections), 9-12/93 (2 sections).

College Accredited Psychology II: 1-6/98, 1-6/97 (2 sections), 1-6/96, 1-6/95, 1-6/94 (2 sections).

College level Scientific Research Methods (Research Design and Statistical Analyses): 9/97-6/98, 9/96-6/97, 9/95-6/96, 9/94-6/95, 9/93-6/94.

Teacher of Advanced Placement Biology, West Orange High School, West Orange, NJ.
A.P. Biology (with lab): 12/926/93 (4 sections).

CURRICULUM DEVELOPMENT

Scientist/Educational Consultant-Invited Participant in National Geographic Society/NOAA Ocean Literacy Workshop. Participated in determining ocean topics to be included in K-12 education, addressed how those topics can be aligned with National Science Education and National Geography Standards and Scope and Sequence in Geographic Education K-12, and examined techniques to measure the effectiveness of including ocean content in the classroom on student learning. National Geographic Society Ocean Literacy On-Line Conference, 1/02-2/02.

Initiated, designed proposal for, and coordinated development and support of 1.2-million dollar nationally-recognized In-House High School Scientific Inquiry Program. Implemented and tested high school level science education inquiry process: RIP. Developed entire curricula and directed interdisciplinary scientific research programs for secondary students in Biology, Neuroscience and Psychoneuroimmunology. Formed educational partnerships with local, national, and international corporations. Served as teacher trainer and mentor for development of in-house scientific inquiry programs in secondary schools. Developed complete 10th and 11th grade Biology Department curricula. Developed methods courses focusing on quantitative methods, experimental design, research ethics, behavioral toxicology, neuroscience (neuroendocrinology, behavioral pharmacology) and immunology. Academy for the Advancement of Science and Technology, Hackensack, NJ. 9/93-6/98.

Developed Psychoneuroimmunology Laboratory, UCLA Brain Research Institute, UCLA Medical School, CA. 12/89-11/91.

Developed Experimental Aquatics Laboratory as part of the Core Curriculum Expansion in Experimental Psychology, Montclair State University, NJ. 9/86-8/89.

Developed Academic Courses:

- The Question of Sex Differences, Hunter College Psychology Department, NY. 1988.
- Medical Physiology, Program for the Academically Young and Talented, Montclair State University, Upper Montclair, NJ. 1985.
- Brain, Mind and Behavior, Program for the Academically Young and Talented, Montclair State University, Upper Montclair, NJ. 1984.

Developed, implemented, and tested the Research Investigation Process (RIP), a critical thinking model based on scientific inquiry, for K-12 education. 1983-1998.

Developed Marine Biology Laboratory for the study of Behavioral Ichthyology, Fairleigh Dickinson University, NJ. 9/79-5/80.

HAWAII STATE DEPARTMENT OF EDUCATION PROJECTS

Project/Program Evaluations:

- Evaluation for Scientific Inquiry using the Research Investigation Process (RIP) for Grades K-5, Higher Education Eisenhower Professional Development Program, University of Hawaii, Honolulu, HI, 2004.
- Evaluation for Scientific Inquiry and Statistics-based Data Analysis using the Research Investigation Process (RIP) for Grades 6-12, Higher Education Eisenhower Professional Development Program, University of Hawaii, Honolulu, HI, 2004.
- Teaching and Modeling the Teaching of Science Literacy through Inquiry-the Research Investigation Process (RIP): Program Evaluation, DOE, Honolulu, HI, 2003.
- Evaluation for the 2003 Honolulu District Elementary Teacher Professional Development Program: Teaching Science Literacy through Inquiry-the Research Investigation Process (RIP), Honolulu, HI, 2003.
- Higher Education Eisenhower Professional Development Program Evaluation for Fundamentals of Scientific Research and Data Analysis for K-5 Science Teachers, University of Hawaii, Honolulu, HI, 2003.
- Higher Education Eisenhower Professional Development Program Evaluation for Statistics for Grades 6-12 Science Teachers, University of Hawaii, Honolulu, HI, 2003.

Teaching through Inquiry: The Research Investigation Process Project Evaluation, Halau Lokahi Public Charter School, Honolulu, HI, 2002.

Critical Thinking and Standards-Secondary Project Evaluation. DOE, Environmental Education. *In progress*, Honolulu, HI, 2002.

Higher Education Eisenhower Professional Development Program Evaluation for Scientific Research and Data Analysis for K-5 Teachers, University of Hawaii, Honolulu, HI, 2002.

Higher Education Eisenhower Professional Development Program Evaluation for Statistics for Grades 6-12 Teachers, University of Hawaii, Honolulu, HI, 2002.

Critical Thinking/Scientific Inquiry-Elementary Project Evaluation. DOE, Environmental Education. Honolulu, HI, 2002.

Ala Wai Watershed Inquiry Workshop Project Evaluation. DOE, Environmental Education, Honolulu, HI. Project report submitted 2001.

Blue Ribbon School's Program Committee. Assisted the DOE with school evaluations. This effort involved statistical data analyses and the construction of school portfolios for presentation and competition, Honolulu, HI, 1999.

RIP Program Implementation:

Manoa Elementary School, Honolulu, HI. 2004-2005 (grades, 3, 4, and 5), 2005-2006 (grades K & 1), 2006-2007 (full-school implementation).

Halau Lokahi Charter School, Honolulu, HI. 2002 & 2004: high school grades; 2003: middle and elementary school grades.

Teacher Professional Development Workshops/Seminars:

Developed and conducted standards-based workshop, *Introduction to Inquiry and the RIP*, Manoa Elementary School, Honolulu, HI, 2004.

Developed and conducted standards-based graduate Seminar for Science Teachers: Scientific Inquiry using the Research Investigation Process (RIP) for Grades K-5, Higher Education Eisenhower Professional Development Program, University of Hawaii, 2004.

Developed and conducted standards-based graduate Seminar for Science Teachers: Scientific Inquiry and Statistics-based Data Analysis using the Research Investigation Process (RIP)

for Grades 6-12, Higher Education Eisenhower Professional Development Program, University of Hawaii, 2004.

Co-Developed and conducted standards-based workshop for teachers and students, *Self-Responsible Learning Using The Research Investigation Process*, Halau Lokahi Charter School, Honolulu, HI, 2004.

Developed and conducted standards-based workshop, *Inquiry through the Research Investigation Process (RIP™)*, Hilo District, Hilo, HI, 2003.

Developed and conducted standards-based workshop, *Learning through Scientific Inquiry-The Research Investigation Process (RIP)*, Halau Lokahi Charter School, Honolulu, HI, 2003.

Developed and conducted standards-based graduate Seminar for Science Teachers: Statistics for Grades 6-12 Science Teachers, Higher Education Eisenhower Professional Development Program, University of Hawaii, 2003.

Developed and conducted standards-based graduate Seminar for Science Teachers: Fundamentals of Scientific Research and Data Analysis for K-5 Science Teachers, Higher Education Eisenhower Professional Development Program, University of Hawaii, 2003.

Developed and conducted standards-based workshop, *The Research Investigation Process (RIP™): Handling and Analyzing the Data*, Honolulu District, Honolulu, HI, 2003.

Developed and conducted standards-based workshop, *Teaching through Inquiry: The Research Investigation Process*, Halau Lokahi Charter School, Honolulu, HI, 2003.

Developed and conducted standards-based graduate Seminar for Science Teachers: Statistics for Grades 6-12 Teachers, Higher Education Eisenhower Professional Development Program, University of Hawaii, 2002.

Developed and conducted standards-based graduate Seminar for Science Teachers: Scientific Research and Data Analysis for K-5 Teachers, Higher Education Eisenhower Professional Development Program, University of Hawaii, 2002.

Consulted/Instructed. Ran series of teacher workshops, providing direct instruction to 34 teachers from elementary schools in the Honolulu District. Introduced inquiry-based instruction using the research investigation process as a tool to student-centered, standards-based learning. DOE, Environmental Education, Critical Thinking/Scientific Inquiry Ala Wai Watershed Project, 2002.

Consulted/Instructed. Ran series of teacher workshops, providing direct instruction to 8 teachers from 3 middle schools in Hawaii. Examined and introduced inquiry-based teaching techniques for the research investigation process. Investigated what the elements in this process are and how they are carried out to address many science education standards as

well as those from a number of other disciplines. DOE, Science and Environmental Education, Ala Wai Watershed Inquiry Workshop, 2001.

Consulted/Instructed. Ran series of teacher workshops, providing direct instruction to 40 teachers from eight high schools in Hawaii. Mentored in methodology and data analyses procedures for scientific field and laboratory studies involving human social variables and natural sciences. Provided round-the-clock assistance, in the form of site visits, phone conferences, etc., to individual teachers and school teams as needed. Evaluated, critiqued and helped revise the schools' research proposals prior to the start of their studies. This involved attending symposia at participating schools and interacting with teachers conducting studies in both lab and field. DOE Environmental Education Workshop for Integrated Teaming Secondary Project, 1999-2000.

Special Projects:

Developed, authored and designed statistics manual to support scientific research projects conducted by high school students. This 9-chapter manual presents step-by-step procedures for conducting statistical tests on research data and will assist teachers in coaching students in using statistical tests. DOE, Environmental Education, 2000-2001.

Developed, authored and designed research methods manual to support scientific research projects conducted by secondary students. This 19-chapter manual presents step-by-step procedures for students to follow for designing research using the research investigation process. A second supporting manual presenting inquiry-based activities, evaluation and assessment is currently being planned. DOE, Environmental Education, 2001.

PUBLICATIONS

Books:

Landsman, R.E. (2001). *Methods for Decision Making in Science: Procedural Steps in Statistical Thought and Analyses for Grades 9-12*. Hawaii State Dept. of Education.

Landsman, R.E. (2001). *Scientific Inquiry through Student Research: Methods for High School Teachers*. Hawaii State Dept. of Education.

Book Chapters:

Landsman, R. E. (2005, in press). RIP-ing away barriers to science education: Inquiry through the research investigation process. In R. E. Yager (ed.), *Exemplary science in grades 9–12: Standards-based success stories*, NSTA Press, Arlington, VA.

Landsman, R.E. (1995). Sources of plasticity in behavior and its physiology: sex, hormones, environment and the captivity model. In P. Moller (ed.), *Electric Fishes: History and Behavior*, Fish and Fisheries Series 17, Chapman and Hall, New York, Chapter 13, 303-343.

Video Production:

Landsman, R. E. (2004). *If health breeds happiness, does happiness breed health?* Pompton Plains, NJ: Pedersen-Keller Productions..

Refereed Articles:

Iding, M., Landsman, R.E., and Nguyen, T. (2002). Critical evaluation of scientific websites by high school students. In D. Watson and J. Andersen (Eds.), *Networking the Learner: Computers in Education*. Kluwer Academic Publishers, Boston, 373-382.

Landsman, R.E. (2002). Demonstrating scientific inquiry in the classroom. *The Science Teacher*, 69(1), 56-60.

Landsman, R.E. (2001). Ethical or not: a case for personal and agency guidelines. *Eubios J. Asian Intl. Bioethics*, 11(4), 99-101.

Abraham, E., Adhvaryu, A., Gupta, P., Han, A., Lolis, M.S., Parikh, N.M., Perrotti, L., Viswanathan, S. and Landsman, R.E. (2000). Effects of exogenous melatonin on the electric organ discharge and plasma melatonin levels in *Brienomyrus brachyistius*. *Making Connections*, electronic media, Lockheed Martin and The Park School, MD.

Chen, D. and Landsman, R.E. (2000). Promotion of science literacy among high school and undergraduate students through affordable, time and space efficient research. *Making Connections*, electronic media, Lockheed Martin and The Park School, MD.

Gajria, D., Nemirovsky, L., Ramakrishnan, R., and Landsman, R.E. (2000). The in vivo and in vitro effects of melatonin on lymphocyte proliferation in koi. *Making Connections*, electronic media, Lockheed Martin and The Park School, MD.

Park, K.H. and Landsman, R.E. (2000). The effects of tranquilization on the stressed immune system in Koi, *Cyprinus carpio*. *Making Connections*, electronic media, Lockheed Martin and The Park School, Baltimore, MD.

- Perkins, T.F. and Landsman, R.E. (2000). Accentuating the importance and nature of interdisciplinary science study through neuroscience research in a secondary educational environment: pros and cons. *Making Connections*, electronic media, Lockheed Martin and The Park School, MD.
- Park, K.H. and Landsman, R.E. (1999). Are sedated koi healthy koi? *Koi USA*, 24(3), 70-79.
- Ellerbee, A., Perrotti, L.I. and Landsman, R.E. (1997). Temperature and the koi immune system. *Koi Health Quarterly* 15, (Summer), 5-8.
- Ellerbee, A., Perrotti, L.I. and Landsman, R.E. (1997). Temperature and fish immunology: assumptions, truths, and new data. *Mid-Atlantic Koi*, 10(11), 5-8.
- Gajria, D., Perrotti, L.I. and Landsman, R.E. (1997). The modern wonder drug: an initial study of the effects of melatonin on the immune system in fish. *Mid-Atlantic Koi*, 11(1), 5-13.
- Majithia, A.R., Perrotti, L.I. and Landsman, R.E. (1997). Tranquilization and koi health: preliminary findings on the effects of anesthetics on T-cell proliferation. *Nishikigoi International*, (Spring), 68-69.
- Shah, M., Gajria, D., Perrotti, L.I. and Landsman, R.E. (1997). Focusing on fish immunology at the cellular level. *Mid-Atlantic Koi*, 10(8-9), 7-11.
- Landsman, R.E. (1993). The effects of captivity on the electric organ discharge and plasma hormone levels in *Gnathonemus petersii* (Mormyriiformes). *J. Comparative Physiology A*, 172(5), 619-631.
- Landsman, R.E. (1993). Sex differences in external morphology and electric organ discharges in imported *Gnathonemus petersii* (Mormyriiformes). *Animal Behaviour*, 46(3), 417-429.
- Landsman, R.E. and Moller, P. (1993). Captivity and signal plasticity in mormyrid fish communication. *J. Comparative Physiology A*, 173(6), 732-733.
- Landsman, R.E. (1991). Captivity affects behavioral physiology: plasticity in signaling sexual identity. *Experientia*, 47(1), 31-38.
- Landsman, R.E. and Moller, P. (1991). Laboratory captivity reverses sex differences in electric organ discharges in mormyrid fish. In S. Scott, J. Sumpter, N. Bromage, D. Kime and G. Shelton (eds.), *Reproductive Physiology of Fish*, University of East Anglia Press, Norwich, U.K., 204.
- Landsman, R.E., Harding, C.F., Moller, P. and Thomas, P. (1990). The effects of androgens and estrogen on the external morphology and electric organ discharge waveform of

Gnathonemus petersii (Mormyridae, Teleostei). *Hormones and Behavior*, 24(4), 532-553.

Landsman, R.E. and Moller, P. (1988). Testosterone changes the electric organ discharge and external morphology of the mormyrid fish, *Gnathonemus petersii*. *Experientia*, 44(10), 900-903.

Landsman, R.E., David, L.A. and Drew, B. (1987). Effects of 17 α -methyltestosterone and mate size on sexual behavior in *Poecilia reticulata*. In D.R. Idler, L.W. Crim and J.M. Walsh (eds.), *Reproductive Physiology of Fish*, Memorial University Press, St. John's, Newfoundland, Canada, 133.

Landsman, R.E., Jou, S.H. and Moller, P. (1987). Stress obscures signaling of sexual identity in *Gnathonemus petersii* (Mormyriiformes). In D.R. Idler, L.W. Crim and J.M. Walsh (eds.), *Reproductive Physiology of Fish*, Memorial University Press, St. John's, Newfoundland, Canada, 307.

Published Abstracts:

Landsman, R.E. and Perrotti, L.I. (1997). Development of an inexpensive, time and space efficient neuroscience research program for high school and undergraduate students. *Society for Neuroscience Abstracts* 23, Part 1, 279.

Miao, M.H., Gupta, S.G., Perrotti, L.I. and Landsman, R.E. (1997). Epinephrine induces rapid changes in centrally and peripherally mediated electric organ discharge characteristics in a weakly electric fish. *Society for Neuroscience Abstracts* 23, Part 2, 1323.

Han, A., Gupta, P., Perrotti, L.I., DeWitt, D. and Landsman, R.E. (1997). Influence of melatonin on electric organ discharge behavior in the weakly discharging electric fish, *Brienomyrus brachyistius*. *Society for Neuroscience Abstracts* 23, Part 2, 2388.

Parikh, A.M., Schwenkler, J.L., Perrotti, L.I., Ostfeld, D. and Landsman, R.E. (1997). Hexavalent and trivalent chromium affect specific phases but not rate of the electric organ discharge in a mormyrid. *Society for Neuroscience Abstracts* 23, Part 1, 249.

Landsman, R.E., Perrotti, L.I., Nidosik, D.M. and DeWitt, D. (1996). Integration of science disciplines in a high school science program through neuroscience research. *Society for Neuroscience Abstracts* 22, Part 1, 252.

Lin, C., Gupta, S.G., Perrotti, L.I. and Landsman, R.E. (1996). Norepinephrine alters the centrally controlled rate and peripherally controlled waveform of the electric signal in a weakly discharging electric fish. *Society for Neuroscience Abstracts* 22, Part 2, 1337.

Prabhakar, A. and Landsman, R.E. (1994). Lead alters the waveform and frequency of the electric organ discharge in *Gnathonemus petersii* (Mormyriiformes, Teleostei). *Society for Neuroscience Abstracts* 20, Part 1, 372.

Landsman, R.E., Umali, M., Branch, B.J., Shryne, J.E., Gorski, R.A. and Taylor, A.N. (1991). Interactions between sex and handling: thymic and splenic glucocorticoid receptors (GCCR), mitogen responses, and plasma hormone levels in adult rats. *Society for Neuroscience Abstracts* 17, Part 2, 1201.

Landsman, R.E., Taylor, A.N., Gorski, R.A., Branch, B.J., Shryne, J.E., Nguyen, L.A. and Chiappelli, F. (1990). Gonadectomy increases glucocorticoid cystolic receptor (GCCR) number in thymus but not spleen of adult rats. *Society for Neuroscience Abstracts* 16, Part 2, 1312.

Landsman, R.E., Harding, C.F. and Moller, P. (1988). Androgen, not estrogen, affects electric organ discharge and external morphology in *Gnathonemus petersii*. *Society for Neuroscience Abstracts* 14, Part 1, 435.

SCIENTIFIC RESEARCH AND EDUCATION PRESENTATIONS
(WITHOUT PUBLISHED ABSTRACTS)

Landsman, R. E. *Science Education: Where we've gone wrong in science, education & medicine and how it affects you*. Cedar Crest Retirement Village Speaker's Forum: Topics in Education and Medicine, Pompton Plains, NJ, 2004.

Landsman, R. E. *Science and science education: what's wrong and how can we change it?* St. Thomas Aquinas College, Sparkill, NY, 2004.

Landsman, R. E. *Science Education: Revamping thinking and process*. Keynote speaker, NJ Science Education Convention, Somerset, NJ, 2003.

Landsman, R. E. *Revamping Science Education*. Plenary speaker, Roosevelt-McKinley Science Articulation Day, Honolulu, HI, 2003.

Menon, U, Kojima, D., Albrett, L., Wong, H., Nagasawa, J. & Landsman, R.E. *He Ui a He Ninau: Embracing traditional Hawaiian culture and spirituality through authentic inquiry-based, thematic learning- a student/teacher/scientist collaboration*. Annual Native Science Connections Conference, Honolulu, HI, 2002.

- Landsman, R. E. *If health breeds happiness, does happiness breed health?* Cedar Crest Retirement Village Speaker's Forum: Topics in Psychoneuroimmunology, Pompton Plains, NJ, 2003.
- Iding, M., Landsman, R.E., and Nguyen, T. *Using the World Wide Web for scientific information: high school students as critical evaluators of websites.* 7th World Conference on Computers in Education, Copenhagen, Denmark, 2001.
- National Association for Research in Science Teaching (NARST) 2001 Annual Conference accepted paper set proposal, ***Revamping science education- answering the call for curriculum reform to meet national guidelines:***
- Paper 1:** Rodman, L., Baumgartner, E.P., Pak, S., Son, Y., Landsman, R.E., Lee, Y., Young, D.B. & Pottenger III, F.M. *Reaching beyond the science education guidelines: thematic-based approaches.*
- Paper 2:** Landsman, R.E., Son, Y., Shin, Y. & Pottenger III, F.M. *Reaching beyond the science education guidelines: project-centered approaches.*
- Paper 3:** Son, Y., Landsman, R.E., Pottenger III, F.M., Lee, Y., Young, D.B. & King, Jr., A.R. *Identification of guideline-based components for innovative science curricula.*
- Landsman, R.E. *Shocking truths about electrocommunication in weakly discharging electric fish: do steroids tell the whole story?* Hawaii Chapter of the Society for Neuroscience Symposium Series. University of HI, Honolulu, HI, 2000.
- Landsman, R.E. *Koi and kids: the scientific study of koi health as a tool for revamping science education,* Hawaii Goldfish and Carp Association, Honolulu, HI, 2000.
- Landsman, R.E. *Addressing TIMSS and scientific education reform through scientific research in a secondary school.* University of Hawai'i, Curriculum Research and Development Group, 1999.
- Landsman, R.E. *In-House scientific research in a secondary school: answering the call for science education reform,* Hawaii Association of Independent Schools, Honolulu, HI, 1999.
- Landsman, R.E. *The making of high school student-scientists: electrifying research in environmental science,* Workshop, Fall Conference of the Hawaii Environmental Education Association and Hawaii Science Teachers Association, Honolulu, HI, 1999.
- Landsman, R.E. *Science education in the US: implementing changes in educational curriculum and practice.* Longwood Garden Lecture Series, Longwood Gardens, Kennett Square, PA, 1997.
- Landsman, R.E. *Koi Research at AAST: Answering the call for science education reform.* Annual Meeting of the Associated Koi Clubs of America, Denver, CO, 1997.

- Landsman, R.E. *Stress and immunology in Koi*. Longwood Garden Lecture Series, Longwood Gardens, Kennett Square, PA, 1996.
- Landsman, R.E. *Studies on stress in fish and immunology in Koi*. Hofstra University Fish Health Seminar, New York, 1996.
- Landsman, R.E. *Neuroendocrinological-behavioral mechanisms and stress in fish*. Biochemistry Seminar Series, Stevens Institute of Technology, Hoboken, NJ, 1996.
- Moller, P. and Landsman, R.E. *Captivity and signal variation in mormyrid fish communication*. Conference on Contributions of Electrosensory Systems to Neurobiology and Neuroethology, McGill University, Montreal, Canada, 1992.
- Landsman, R.E. *Laboratory captivity reverses sex differences in electric organ discharges in mormyrid fish*. Fourth International Symposium on the Reproductive Physiology of Fish, University of East Anglia, Norwich, U.K., 1991.
- Landsman, R.E., Jou, S.H. and Moller, P. *Stressful manipulation obscures signaling of sexual identity in the weakly electric fish, *Gnathonemus petersii**. Third International Symposium on the Reproductive Physiology of Fish, St. John's, Newfoundland, Canada, 1987.
- Landsman, R.E., David, L.A. and Drew, B. *Effects of 17 α -methyltestosterone and mate size on sexual behavior in *Poecilia reticulata**. Third International Symposium on the Reproductive Physiology of Fish, St. John's, Newfoundland, Canada, 1987.
- Murphy, M.E. and Landsman, R.E. *Sweetness preference as a function of menstrual cycle*. Sigma Xi Research Conference, Montclair State University, Upper Montclair, NJ, 1987.
- Bouchédid, R., Rabben, S., Willis, S. and Landsman, R.E. *Behavioral Sex-Reversal: The effects of mate size on adult female *Poecilia reticulata* (Guppy) fed testosterone*. Sigma Xi Research Conference, Montclair State University, Upper Montclair, NJ, 1987.
- Landsman, R.E., Jou, S.H. and Moller, P. *Sexually dimorphic electric organ discharges in *Gnathonemus petersii* (Mormyridae, Teleostei)*. American Psychological Association, Washington, DC, 1986.
- Altiero, C., Landsman, R.E. and Pendergrass, M. *Perceptions of promiscuity as a function of physical attractiveness*. Fourteenth Annual Hunter College Psychology Convention, New York, NY, 1986.
- Walsh, B. and Landsman, R.E. *Analysis of stimulus cues in the conspecific attraction of *Poecilia reticulata**. Fourteenth Annual Hunter College Psychology Convention, New York, NY, 1986.

Landsman, R.E. *Sex, Stress and the single fish*. Fourteenth Annual Hunter College Psychology Convention, New York, NY, 1986.

Landsman, R.E. *Experimental methodology for the delineation of parameters involved in the interaction between Pavlovian and Operant conditioning*. Puerto Rico Psychological Association, Ponce, PR, 1983.

Landsman, R.E. and Mendez, A.T. *The Ecology and ethology of the cleaner goby, Gobiosoma evelynae, on Cayo Enrique Reef off the coast of La Parguera, Puerto Rico*. Ethology and Behavioral Ecology of Fishes, Normal, IL, 1983.

Landsman, R.E. and Mendez, A.T. *The occurrence of the cleaner goby, Gobiosoma evelynae, in relation to coral species, coral head size (area), and depth on Enrique Reef, Puerto Rico*. Third Interdisciplinary Scientific Meeting of the American Chemical Society and Resource Center for Science and Engineering of Puerto Rico, Ponce, PR, 1983.

Landsman, R.E. *Behavioral sex-role reversal in sexually mature female Poecilia reticulata*. Animal Behavior Society, Knoxville, TN, 1981.

Landsman, R.E. *Food deprivation and feeding: sex and aggression in the adult female guppy, Poecilia reticulata*. Midwestern Psychological Association, Detroit, MI, 1981.

Salderini, R. and Landsman, R.E. *Effects of sexual bias on academic test performance*. First Annual Psychobiol. Symposium, Montclair State University, Upper Montclair, NJ, 1981.

Walsh, B., Perrella, A. and Landsman, R.E. *Role of chemical and visual cues in mate selection in fish*. Sigma Xi Scientific Research Conference, Montclair State University, Upper Montclair, NJ, 1981.

Landsman, R.E. and Coughlin, R. *The effects of time-out from positive reinforcement in the Estes-Skinner (CER) Procedure*. Midwestern Psychological Association, St. Louis, MO, 1980.

Landsman, R.E. and Drew, B. *The effects of food deprivation on sexual and aggressive behavior of male Poecilia reticulata*. Eighth Annual Hunter College Psychology Convention, New York, NY, 1980.

Landsman, R.E. and Drew, B. *The effects of social isolation on sex and aggression in the guppy, Poecilia reticulata*. American Psych. Assoc., Montreal, Canada, 1980.

Landsman, R.E. and David, L.A. *The effects of methyltestosterone on the sexual behavior of the adult female Poecilia reticulata*. Eastern Psych. Assoc., Boston, MA, 1977.

RESEARCH FUNDING

NJ Public Bond Issue (\$91,000) to fund expansion of Psychoneuroimmunology Laboratory, Academy for the Advancement of Science and Technology. 7/97-6/98.

Fish Health Research Grant (\$15,000), Mid-Atlantic Koi Club. 9/97-8/98.

Fish Health Research Grant (\$15,000), Mid-Atlantic Koi Club. 9/96-8/97.

Special Program Grant (\$60,000) to fund Research Program, Bergen County Technical School Board of Education. 10/96-9/97.

Special Program Grant (\$80,000) to fund Research Program, Bergen County Technical School Board of Education. 10/95-9/96.

Research Startup Grant (\$350,000), Bergen County Technical School Board of Education. 3/94-2/95.

NIH Postdoctoral Traineeship (HD07228), Brain Research Institute, UCLA Medical School. 11/89-10/91.

NIMH Individual National Research Service Award (MH09664-01 and 02), Biopsychology, the Graduate School and University Center of the City University of New York. 11/87-10/89.

Sigma Xi Grants-in-Aid of Research, the Scientific Research Society. 1987, 1988 (Two separate projects).

Faculty Alumni Association Grants-in-Aid of Research, Montclair State University, NJ. 1981, 1988.

NIMH Predoctoral Traineeship (MH15341), Biopsychology, the Graduate School and University Center of the City University of New York. 8/86-7/87.

Intramural Research Grant of the School of Humanities and Social Sciences, Montclair State University, NJ. 1987.

Theodore Roosevelt Memorial Research Fund, American Museum of Natural History, NY. 1983.

Intramural Research Grant of the School of Mathematics and Natural Sciences, Montclair State University, NJ. 1981.

Sloan Fund for Research, School of Humanities and Social Sciences, Montclair State University, NJ. 1981.

Dean's Grant-in-Aid of Research, Fairleigh Dickinson University, Madison, NJ. 1980.

University Research Grant-in-Aid, Fairleigh Dickinson University, Madison, NJ. 1979.

Dean's Fund for Research, Rutgers College, Rutgers University, NJ. 1976.

RECOGNITION AND AWARDS

Academic and Professional:

RIP Program selected and featured as NSTA Exemplary Science Education Program in US, 2005.

Invited Speaker, Cedar Crest Retirement Village Speaker's Forum: Topics in Education and Medicine, Pompton Plains, NJ, 2004.

Invited Speaker, St. Thomas Aquinas College, Sparkill, NY, 2004.

Invited Speaker, Roosevelt-McKinley Science Articulation Day, Honolulu, HI, 2003.

Invited Keynote Speaker, NJ Science Education Convention, Somerset, NJ, 2003.

Invited Speaker, Cedar Crest Retirement Village Speaker's Forum: Topics in Psychoneuroimmunology, Pompton Plains, NJ, 2003.

Invited Speaker, Hawaii Goldfish and Carp Association, Honolulu, HI, 2000.

Invited Speaker, Longwood Gardens Lecture Series, Kennet Square, PA, 1997.

Invited Speaker, Associated Koi Clubs of America, Denver, CO, 1997.

Invited Speaker, Longwood Gardens Lecture Series, Kennet Square, PA, 1996.

Invited Speaker, Hofstra University Fish Health Seminar, New York, 1996.

Invited Speaker, Biochemistry Seminar Series, Stevens Institute of Technology, NJ, 1996.

New Jersey Best Practices Award in Sciences and Mathematics, New Jersey Department of Education, Trenton, NJ, 1994-1995.

Invited Speaker, Special Evenings with UCLA Extension, UCLA, 1991.

Recognition for significant contribution to the California State Department of Education Teacher Certification Examination, 1991.

J.M. Cattell Award, New York Academy of Sciences, NY, NY. Finalist among 3, 1990.

Mina S. Rees Scholarship in the Sciences and Mathematics, NY, NY, 1989.

Graduate Initiative Award, the Graduate School and University Center of C.U.N.Y., 1989.

Belle Zeller Scholarship and Leadership Award, NY, NY, 1986.

Mennen Scholarship and Leadership Award, Mennen Company, Morristown, NJ, 1980.

Other Recognition:

Inducted into Marquis Who's Who in Medicine and Health Care, 3rd ed., 2000-2001.

Invited Contributor of 100 Year Vision for Science Education, *Popular Mechanics* 2000 Millennium Issue, 1999.

Nominated by former students for inclusion into Who's Who Among America's Teachers, Educational Communications, Inc., inducted 1996 (twice), 1998, and 1999.

PROFESSIONAL OFFICES

Member, Scientific Editorial Board, *NCSSSMST Journal*, The refereed scientific journal of the National Consortium for Specialized Schools, 1995-2000.

Member, Executive Board, North Jersey Regional Science Fair, 1994-1999.

Member, Executive Committee, Rutgers University Junior Science Symposium, 1993-1999.

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science. 1985-1999.

American Psychological Society. 1993-1999.

Animal Behavior Society. 1982-1998.

Hawaiian Academy of Science. 1999-present.

Hawai'i Educational Research Association. 2000-2001.

Hawai'i Science Teachers Association. 1999-present.

Hawai'i Chapter of the Society for Neuroscience. 2000-present.

Midwestern Psychological Association. 1979-1988.

National Science Teachers Association. 2002-present.

Sigma Xi, the Scientific Research Society. 1988-present.

Society for Neuroscience. 1989-1999.

The New York Academy of Sciences. 1985-1999.

COMMUNITY SERVICE

Science, Medicine & Education Talk, Cedar Crest Village Retirement Community, Pompton Plains, NJ. 2004.

In-service teacher training/mentoring of inquiry-based instruction for economically- and academically-challenged public charter school, Halau Lokahi, Honolulu, HI, 1/2003-12/2003.

Psychoneuroimmunology Talk, Cedar Crest Village Retirement Community, Pompton Plains, NJ. 2003.

Judge, Sterling Scholarship Program, Polynesian Cultural Center, HI. 2000.

Mentor, Society for Neuroscience Teacher Mentor Program, Washington, DC. 1996.

Organizer and Advisor, Academy Chronicle, school newspaper, Hackensack, NJ. 1993-1994.

Participant in Habitat for Humanity fund raiser, San Fernando Valley, CA. 1990.

Counselor, Montclair State University Crises Drop-in-Center, Upper Montclair, NJ. 1981-1982.

Volunteer Tutor, EOF, Fairleigh Dickinson University, Madison, NJ. 1978-1980.

Co-Organizer and Vice-President, New Jersey Chapter Concerned Youth for Cerebral Palsy.
1975-1977.

Organizer and Editor-in-Chief, Concerned Youth for Cerebral Palsy Newspaper. 1975-1977.

President, Rutgers Concerned Students for Cerebral Palsy, New Brunswick, NJ. 1974-1977.

Brother, Alpha-Phi-Omega National Service Fraternity, Delta Rho Chapter, Rutgers University,
New Brunswick, NJ. 1974-1977.

Youth Advisor, Montclair Red Cross, Montclair, NJ. 1971-1973.