

CURRICULUM VITAE

C. Gary Reiness
 Professor of Biology
 Dean, Mathematical and Natural Sciences
 Lewis & Clark College
 0615 SW Palatine Hill Road
 Portland, OR 97219

Phone: (503) 768-7513; FAX: (503) 768-7658; e-mail: reiness@lclark.edu

Education

B.A. 1967 Johns Hopkins University: Chemistry
 M.Phil. 1974; Ph.D. 1975 Columbia University: Biological Sciences

Professional Experience

1975-76 Research Fellow, Dept. of Neurobiology, Harvard Med. School (with Dr. Zach Hall)
 1976-81 Postdoctoral Scholar, Dept. of Physiology, Univ. of California, San Francisco
 (with Drs. Zach Hall and Louis Reichardt)

1981-85 Assistant Professor of Biology, Pomona College, Claremont, CA
 1985-93 Associate Professor of Biology, Pomona College
 1993 Professor of Biology, Pomona College
 1994-present Professor of Biology, Lewis & Clark College, Portland, OR

1987-88 Visiting Associate Professor of Anatomy and Neurobiology, Washington University
 Medical School, St. Louis, MO Host: Jeff W. Lichtman

1988-90 Biology Department Chair, Pomona College

1990-93 Associate Dean of the College, Pomona College

1994-99 Biology Department Chair, Lewis & Clark College

1995 Visiting Scholar in Cell and Developmental Biology, Oregon Health Sciences Univ.,
 Portland, OR Host: Rae Nishi

1998-present Member, Neuroscience Graduate Program of Oregon Health Sciences University

2000-present Dean, Mathematical and Natural Sciences, Lewis & Clark College

2002-3 Visiting Professor of Molecular, Cell and Developmental Biology, University of California,
 Santa Cruz Host: Martha Zuniga

Honors and Awards

Undergraduate: Phi Beta Kappa
 Phi Lambda Upsilon
 General Motors Scholar 1963-67

Graduate: Faculty Fellow of Columbia University 1967-74
 NIH Predoctoral Fellow 1970-73

Postdoctoral: Muscular Dystrophy Association Fellow 1976-78
 NIH Postdoctoral Fellow 1978-80
 California Cancer Society Senior Postdoctoral Fellow 1980-81

Professional Affiliations and Activities

Memberships: American Association for the Advancement of Science; American Society for Cell Biology; Council on Undergraduate Research; Sigma Xi; Society for Neuroscience

Council on Undergraduate Research: Biology Council (governing board)	1989-1994
Project Kaleidoscope, Leadership Committees	1992-1996
Project Kaleidoscope, CoCoordinator for Biology Workshops	1996-1998
Project Kaleidoscope, "Village Elder",	1998-present
Project Kaleidoscope, National Steering Committee	2003-present
Ad hoc grant reviewer for the National Science Foundation	1983-present
Reviewer, College Science Instrumentation Program, NSF	1987
Reviewer, Pew Undergraduate Science Program	1987
Reviewer & Panel Chair, Instrumentation for Laboratory Improvement Program, NSF	1988
Selection Panel, Howard Hughes Predoctoral Fellowship Program (Neuroscience)	1988 & 1989
Selection Panel, NSF Graduate Fellowships	1990,'97,'99,'01
Grant Review Panel, NSF Developmental Neuroscience Program	1990-91
Reviewer for Fund for the Improvement of Postsecondary Education (FIPSE)	1993 & 1994
Reviewer, Course and Curriculum Development Program, NSF	1996
Associate Editor, Cell Biology Education	2005-2007
Manuscript reviewer for Journal of Neuroscience, Journal of Physiology	

Frequent external consultant to biology departments and science programs

Teaching Interests/Courses Taught

Cell and Molecular Biology and Biology for Non-Specialists. Courses for majors: Introductory Cell and Molecular Biology, Introductory Genetics and Evolutionary Biology, Advanced Cell Biology, Immunology, Neurobiology; for non-majors: DNA and Evolution, Biological Determinism

Research Interests

Developmental Neurobiology: Formation and plasticity of mammalian neuromuscular junction; role of neurotrophic factors in the development of the vertebrate nervous system; cell-cell communication via protein factors

Research Grants

1978-80	Dysautonomia Foundation (\$10,000) "Genetic analysis of nerve growth factor action in tissue culture"
1982-84	Muscular Dystrophy Association (\$36,000) "Development of the neuromuscular junction in normal mice and mice with motor endplate disease"
1982-84	Research Corporation (\$20,000) "Neuromuscular development of normal and <i>med</i> mice"
1983-87	National Science Foundation (\$171,000) "A genetic dissection of mouse neuromuscular development"
1984	National Science Foundation (\$18,000; equipment grant) "The role of activity in mouse neuromuscular development"
1987-91	National Science Foundation, RUI (\$201,000) "Development of neuromuscular junction in active and inactive mouse muscles"

- 1995-7 American Heart Association--Oregon Affiliate (\$30,000)
"Mechanism of secretion of a neurotrophic factor"
- 1996-98 National Science Foundation, Academic Research Infrastructure Program (\$224,000)
"Renovation of BoDine Hall and Replacement of Greenhouse"
- 1997-98 Oregon Health Sciences Foundation (\$12,000)
"Mechanism of secretion of chicken ciliary neurotrophic factor"
- 2001-2004 National Institutes of Health, AREA program (\$100,000)
"Nonclassical export of chicken ciliary neurotrophic factor"

Teaching Grant

- 1995-7 National Science Foundation, Instrumentation & Lab Improvement (\$28,524)
"Research-like undergraduate neurobiology laboratory"

Scientific Publications

- Riggs, A., G. Reiness, and G. Zubay (1971). Purification and DNA-binding properties of the catabolite gene activator protein. *Proc. Nat. Acad. Sci. USA.* **68**:1222-25.
- Manley, J., G. Reiness, G. Zubay, and M.L. Gefter (1973). Cell-free synthesis of *Su+III* tyrosyl-tRNA: Characterization of the 4S product. *Arch. Biochem. Biophys.* **157**:50-54.
- Reiness, G. and G. Zubay (1973). The messenger-directed synthesis of the alpha fragment of the enzyme beta-galactosidase. *Biochem. Biophys. Res. Comm.* **53**: 967-974.
- Zubay, G., H-L. Yang, G. Reiness, and M. Cashel (1973). Regulation of bacterial genes. In Molecular Cytogenetics, eds. B. A. Hamkala and J. Papaconstantinou, pp. 253-259, Plenum Press.
- Yang, H-L., G. Zubay, E. Urm, G. Reiness, and M. Cashel (1974). The effects of guanosine tetraphosphate, guanosine pentaphosphate and beta-gamma methylenyl-guanosine pentaphosphate on gene expression of *Escherichia coli in vitro*. *Proc. Nat. Acad. Sci. USA* **71**:63-67.
- Landy, A., E. Olchowski, W. Ross, and G. Reiness (1974). Isolation of a functional *lac* regulatory region. *Mol. Gen. Genet.* **133**:273-281.
- Reiness, G., H-L. Yang, G. Zubay, and M. Cashel (1975). Effects of guanosine tetraphosphate on cell-free synthesis of *Escherichia coli* ribosomal RNA and other gene products. *Proc. Nat. Acad. Sci. USA* **72**:2881-5.
- Mailhammer, R., H-L. Yang, G. Reiness, and G. Zubay (1975). Effects of bacteriophage T4-induced modification of *Escherichia coli* RNA polymerase on gene expression *in vitro*. *Proc. Nat. Acad. Sci. USA* **72**:4928-32.
- Mailhammer, R., G. Reiness, G. Ponta, H-L. Yang, M. Schweiger, W. Zillig, and G. Zubay (1976). RNA-polymerase modifications after T-phage infections of *E. coli*. In Metabolic Interconversion of Enzymes 1975, ed., S. Shaltiel, pp. 161-166, Springer-Verlag.
- Reiness, C. G., P. G. Hogan, J.M. Marshall, Z.W. Hall, G.E. Griffin and A.L. Goldberg (1977). Factors influencing degradation of extrajunctional acetylcholine receptors in skeletal muscle. In *Progress in Clin. and Biol Res.*, vol. 15, Cellular Neurobiology, eds., Z.W. Hall, R.B. Kelly and C.F. Fox, pp. 207-215, Alan R. Liss.
- Reiness, C.G. and Z.W. Hall (1977). Electrical stimulation of denervated muscle reduces the incorporation of radioactive methionine into the ACh receptor. *Nature* **268**: 655-6.
- Froehner, S.C., C.G. Reiness, and Z.W. Hall (1977). The subunit structure of the acetylcholine receptor from denervated rat muscle. *J. Biol. Chem.* **252**:8589-96.
- Reiness, C.G., C.B. Weinberg, and Z.W. Hall (1978). Antibody to acetylcholine receptor increases the degradation of junctional and extrajunctional receptors in adult muscles. *Nature* **274**: 68-70.
- Froehner, S.C., N.M. Nathanson, C.G. Reiness, and Z.W. Hall (1979). Biochemical control and molecular properties of the acetylcholine receptors in skeletal muscle. In Neurobiology of Chemical Transmission, eds., M. Otsuka and Z. Hall, John Wiley and Company, pp. 25-40.
- Weinberg, C.B., C.G. Reiness, and Z.W. Hall (1981). Topographical segregation of old and new acetylcholine receptors at developing ectopic endplates in adult rat muscle. *J. Cell Biol.* **88**:215-218.

Scientific Publications

- Reiness, C.G. and Z.W. Hall (1981). The developmental change in immunological properties of the acetylcholine receptor in rat muscle. *Develop. Biol.* **81**:324-331.
- Reiness, C.G. and C.B. Weinberg (1981). Metabolic stabilization of acetylcholine receptors at newly formed neuromuscular junctions in rat. *Develop. Biol.* **84**:247-254.
- Inestrosa, N.C., C.G. Reiness, L.F. Reichardt and Z.W. Hall (1981). Cellular localization of the molecular forms of acetylcholinesterase in rat pheochromocytoma PC12 cells treated with nerve growth factor. *J. Neurosci.* **1**:1260-67.
- Inestrosa, N.C., W.D. Matthew, C.G. Reiness, Z.W. Hall, and L.F. Reichardt (1985). Atypical distribution of asymmetric acetylcholinesterase in mutant PC12 pheochromocytoma cells lacking a cell surface heparan sulfate-proteoglycan. *J. Neurochemistry* **45**:86-94.
- Yeakley, J.M., J.L. Janavs* and C.G. Reiness (1987). Pattern of activity regulates distribution of acetylcholinesterase molecular forms in developing muscles of normal mice and mice with motor endplate disease. *J. Neurosci.* **7**:4084-94.
- Reiness, C.G., M. J. Seppa*, D. M. Dion*, S. Sweeney*, D. N. Foster, and R. Nishi (2001). Chick ciliary neurotrophic factor is secreted via a non-classical pathway. *Mol. Cell. Neurosci.* **17**:931-944.

*Undergraduate coauthor

General Publications

- Reiness, C.G. (1991) Results of a survey of teaching practices in undergraduate biology departments. *Council on Undergraduate Research Newsletter* **11(3)**: 28-32.
- Bierzychudek, P. and C. G. Reiness (1992) Helping non-majors find out what's so interesting about biology. *BioScience* **42**:125-128.

Scientific Conference Presentations

- Reiness, C.G. and Z.W. Hall (1979). Changes in properties of the acetylcholine receptor during development of rat skeletal muscle. *Soc. Neurosci. Abstr.* **5**:48.
- Reiness, C.G. and J. Yeakley (1983). Developmental changes in acetylcholinesterase in normal and *med* mouse muscle. *Soc. Neurosci. Abstr.* **9**:54.
- Ibsen, L.M., B.A. Hay and C.G. Reiness (1984). Nerve growth factor regulates acetylcholinesterase in sympathetic ganglia. *Soc. Neurosci. Abstr.* **10**:1060.
- Yeakley, J.M. and C.G. Reiness (1987). Activity dependent regulation of acetylcholine receptors in normal and *med* mouse muscle. *Soc. Neurosci. Abstr.* **13**:1506.
- Reiness, C. G. and Lichtman J. W. (1988). Pre- and postsynaptic remodeling in adult mouse muscle induced by botulinum toxin. *Soc. Neurosci. Abstr.* **14**:1209.

- Reiness, C. G. and P. M. Colowit (1991). Regulation of postnatal changes in subunit composition of acetylcholine receptors at neuromuscular junctions of normal and *med* mice. Soc. Neurosci. Abstr. **17**:219.
- Reiness, C.G., S. Sweeney and R. Nishi (1995). Identification of a structural domain responsible for secretion of a neurotrophic factor for ciliary ganglion neurons. Soc. Neurosci. Abstr. **21**:1047.
- Reiness, C.G., S. Sweeney and R. Nishi (1995). An internal signal sequence directs secretion of a chick ciliary neurotrophic factor. Molecular Biology of the Cell **6 (Suppl)**:102a.
- Covington, M., D. Dion and C. G. Reiness (1997). A new pathway for protein secretion? Proceedings of the Oregon Academy of Sciences. **33**:1.
- Wilson-Seppa, M., and C.G. Reiness (1999). Chicken ciliary neurotrophic factor may be secreted by an alternative, Golgi-independent pathway. Proceedings of the Oregon Academy of Sciences. **35**:13-14.
- Seppa, M. C.G. Reiness, and R. Nishi (1999). Different cellular locations of rat and chicken Ciliary Neurotrophic Factor (chCNTF) suggest a novel secretory mechanism for chCNTF. Molecular Biology of the Cell. **10 (Suppl.)**: 90a.

Other Presentations

- Reiness, C. G. (with J. Gentile) (1992). How deans can help promote undergraduate research. (At Council on Undergraduate Research Biennial Meeting, Hope College, Holland, Michigan)
- Reiness, C.G. (panel with L. M. Hoopes and J. Gentile) (Jan., 1993). What deans need to know about the future of biology. (At Annual Meeting of Association of American Colleges, Seattle, WA)
- J. Gentile and C.G. Reiness (April 1993). Building a research-active biology department at undergraduate institutions. (At the "April Dialogue" with NSF and NIH program officers, sponsored by the Council on Undergraduate Research, Bethesda, MD).
- Reiness, C.G. (Nov. 1993) Reforming introductory biology (at Project Kaleidoscope Regional Symposium: *Revitalizing Introductory Courses in Science and Mathematics* Reed College, Portland, OR)
- Reiness, C.G. (Jan. 1994) Establishing a research-friendly undergraduate curriculum (at State of the Art in Biology (SOTAB) Conference, University of Georgia, Athens, GA).
- Reiness, C.G. (April 1994) Developing a successful undergraduate research program in all disciplines Linfield College, McMinnville, OR.
- Reiness, C.G. (March 1999) Building research-active departments with emphases on high-quality education. First Annual Conference on Faculty and Student Research at Teaching Institutions. Utah Valley State College, Orem, UT.