**CONTACT INFORMATION**

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**PERSONAL INFORMATION**

| | |
|---|---|
| DATE OF BIRTH: | October 14, 1968 |
| PLACE OF BIRTH: | Scranton, Pennsylvania (U.S.) |
| CITIZENSHIP: | U.S. |
| MARITAL STATUS: | Single |

**EDUCATION**

AA, Chemistry (1990); Bucks County Community College, Newtown, PA
BA, Biochemistry (1992); Cornell University, Ithaca, NY
PhD, Biology (2000); University of California, San Diego, CA

**RESEARCH AND PROFESSIONAL EXPERIENCE**

January 2001 to present

*Postdoctoral Researcher* (Lab: Dr. Daniel E. Gottschling)
Division of Basic Sciences, Fred Hutchinson Cancer Research Center, Seattle, WA

Discovered new protein quality control degradation pathway that targets aberrant proteins in the nucleus for destruction. Characterized the dynamics of ubiquitination/deubiquitination in epigenetic silencing at the telomeres. Developing new technique to identify ubiquitinated proteins and their cognate ubiquitin-protein ligases.

August 2000 to December 2000

*Postdoctoral Researcher* (Lab: Dr. Randolph Y. Hampton)
Department of Biology, University of California, San Diego, CA

April 1996 to August 2000

*Graduate Student Researcher* (Lab: Dr. Randolph Y. Hampton)
Department of Biology, University of California, San Diego, CA

Characterized the regulation of sterol production by ER-associated degradation of HMG-CoA reductase (HMGR), the rate-limiting enzyme in sterol biosynthesis. Identified determinants with HMGR that programmed its regulated destruction. Genetically identified the pathway molecules that signal its destruction. Characterized the ubiquitin-protein ligase complex that targets HMGR for destruction.

September 1992 to August 1995

*Research Technician* (Lab: Dr. David B. Wilson)
Department of Biochemistry, Cornell University, Ithaca, NY

Characterized various fungal and bacterial enzymes involved in the breakdown of cellulose and hemi-cellulose. Bioengineered enzymes from ruminal bacteria to degrade cellulose with a higher efficiency.

## PUBLICATIONS

**Gardner, R. G.**, Nelson, Z. W., and D. E. Gottschling. **2005**. Ubp10/Dot4p regulates the persistence of ubiquitinated histone H2B: distinct roles in telomeric silencing and general chromatin. *Molecular and Cellular Biology* **25:** 6123-6139.

**Gardner, R. G.**, Nelson, Z. W., and D. E. Gottschling. **2005**. Degradation-mediated protein quality control in the nucleus. *Cell* **120**: 803-815.

**Gardner, R. G.**, Shearer, A. G., and R. Y. Hampton. **2001.** In Vivo Action of the *HRD* Ubiquitin Ligase Complex: Mechanisms of Endoplasmic Reticulum Quality Control and Sterol Regulation. *Molecular and Cellular Biology* **21**: 4276-4291.

**Gardner, R. G.**, Shan, H., Matsuda, S. P. T., and R. Y. Hampton. **2001.** An oxysterol-derived positive signal for 3-hydroxy-3-methylglutaryl-CoA reductase degradation in yeast. *Journal of Biological Chemistry* **276** : 8681-8684.

Bays, N. W., **Gardner, R. G.**, Seelig, L. P., Joazeiro, C. A., and R. Y. Hampton. **2001.** Hrd1p/Der3p is a membrane-anchored ubiquitin ligase required for ER-associated degradation. *Nature Cell Biology* **3**:24-29.

**Gardner, R. G.**, Swarbrick, G. M., Bays, N. W., Cronin, S. R., Wilhovsky, S., Seelig, L., Kim, C., and R. Y. Hampton. **2000.** Endoplasmic reticulum degradation requires lumen to cytosol signaling: transmembrane control of Hrd1p by Hrd3p. *Journal of Cell Biology* **151** :69-82.

Wilhovsky, S., **Gardner, R.**, and R. Hampton. **2000.** HRD gene dependence of endoplasmic reticulum degradation. *Molecular Biology of the Cell* **11** :1697-1708.

**Gardner, R. G.** and R. Y. Hampton. **1999.** A 'distributed degron' allows regulated entry into the ER degradation pathway. *The Embo Journal* **18** :5994-6004.

**Gardner, R. G.** and R. Y. Hampton. **1999.** A highly conserved signal controls degradation of 3-hydroxy-3-methylglutaryl-coenzyme A (HMG-CoA) reductase in eukaryotes. *Journal of Biological Chemistry* **274** :31671-31678.

**Gardner, R.**, Cronin, S., Leader, B., Rine, J., and R. Hampton. **1998.** Sequence determinants for regulated degradation of yeast 3-hydroxy-3-methylglutaryl-CoA reductase, an integral endoplasmic reticulum membrane protein. *Molecular Biology of the Cell* **9**:2611-2626.

Hampton, R. Y., **Gardner, R. G.**, and J. Rine. **1996.** Role of 26S proteasome and *HRD* genes in the degradation of 3-hydroxy-3-methylglutaryl-CoA reductase, an integral endoplasmic reticulum membrane protein. *Molecular Biology of the Cell* **7**:2029-2044.

**Gardner, R. G.**, Wells, J. E., Fields, M. W., Wilson, D. B., and J. B. Russell. **1997.** A *Prevotella ruminicola* B(1)4 operon encoding extracellular polysaccharide hydrolases. *Current Microbiology* **35** :274-277.

**Gardner, R. G.**, Russell, J. B., Wilson, D. B., Wang, G-R., and N. B. Shoemaker. **1996.** Use of a Modified *Bacteroides-Prevotella* Shuttle Vector To Transfer a Reconstructed b-1,4-D-Endoglucanase Gene into *Bacteroides uniformis* and *Prevotella ruminicola* B14. *Applied and Environmental Microbiology* **62** :196-202.

**Gardner, R. G.**, Wells, J. E., Russell, J. B., and D. B. Wilson. **1995.** The Cellular location of *Prevotella ruminicola* b-1,4-D-Endoglucanase and Its Occurrence in Other Strains of Ruminal Bacteria. *Applied and Environmental Microbiology* **61** :3288-3292.

**Gardner, R. G.**, Wells, J. E., Russell, J. B., and D. B. Wilson. **1995.** The effect of carbohydrates on the expression of the *Prevotella ruminicola* 1,4- b-D-endoglucanase. *FEMS Microbiology Letters* **125** :305-310.

## TEACHING EXPERIENCE

University of California,
San Diego, CA

Graduate Teaching Assistant, Department of Biology
*Biochemical Techniques*, BIBC103 (1996)
*Structural Biochemistry*, BIBC100 (1998)
*Physical Biochemistry*, BIBC110 (1999)
Teaching Consultant, Center for Teaching Development (1999-2000)

## GRANTS, SCHOLARSHIPS, HONORS

Bristol Myers Squibb Fellow of the Life Sciences Research Foundation (2001-2004), Fred Hutchinson Cancer Research Center, Seattle, WA

National Research Service Award (1996-1999), University of California, San Diego, Dept. of Biology, San Diego, CA

Excellence in Teaching Award (1996), University of California, San Diego, Dept. of Biology, San Diego, CA

## SEMINARS

| | | |
|---|---|---|
| 2005 | Gordon Research Conference | "Stress proteins in growth, development and disease" |
| 2004 | Yeast Genetics Meeting | |
| 2004 | FASEB Summer Research Conference | "Ubiquitination and cellular regulation" |

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