

## Emily A. Wiley

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### EDUCATION

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Ph.D.	1996	Molecular Genetics; Department of Pathology, University of Washington, Seattle, WA
B.S.	1989	Biology, <i>magna cum laude</i> Western Washington University, Bellingham, WA

### ACADEMIC POSITIONS

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Full Professor	2017	Claremont McKenna, Pitzer, and Scripps Colleges, Claremont, CA
Associate Professor	2008-2016	Claremont McKenna, Pitzer, and Scripps Colleges,
Adjunct Professor	2015 - pres	Claremont Graduate University, School of Education, Claremont, CA K-12 teacher education: Transferable STEM Skills course instructor for Claremont Colleges STEM Initiative
Assistant Professor	2002-2008	Claremont McKenna, Pitzer, and Scripps Colleges,
Visiting Asst. Professor	1999-2001	Mount Holyoke College, South Hadley, MA
Postdoctoral Research Associate	1996-1999	University of Rochester, Rochester, NY Advisor: Dr. C. David Allis
Visiting Scientist	1996	Fred Hutchinson Cancer Research Center Laboratory of Dr. Meng-Chao Yao
Graduate Research Student	1991-1996	Fred Hutchinson Cancer Research Center, Seattle, WA and Princeton University, Princeton, NJ Advisor: Dr. Virginia A. Zakian
Laboratory Technician	1989-1990	Division of Infectious Disease, Children's Hospital Seattle, WA

### ADMINISTRATIVE POSITIONS

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Assoc. Dean of the Faculty	2019-pr.	Claremont McKenna College
Co-Interim Dean of the Faculty	2020-21	Claremont McKenna College
Biology Convener (Chair)	2009-12; 2014-16	Keck Science Department, Claremont McKenna, Pitzer, and Scripps Colleges
Chair, Ciliate Genomics Consortium	2006- present	Consortium of ~40 institutions
Chair, Faculty Search, Review	2006 -	Keck Science Department, Claremont

Committees present McKenna, Pitzer, and Scripps Colleges

## RESEARCH AND SCHOLARSHIP AREAS

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- Histone post-translational modifications and modifiers: roles in chromatin differentiation, nuclear development, and nuclear degradation
- Mechanisms of targeting and regulation of chromatin proteins
- Best practices in undergraduate biology education: integrating teaching and research; development and testing of research modules for course-based research; faculty support for genomics education; transferrable STEM skills; K-12 science teaching preparation; active learning approaches; strategies for broadening access to and success in science

## HONORS/AWARDS

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2017	Glenn R. Huntoon Award for Superior Teaching, Claremont McKenna College
2015	Johnson Faculty Achievement Award for Teaching, Scripps College
2010	Johnson Faculty Achievement Award for Teaching, Scripps College
2009	American Publishers PROSE Award for Best Biology Education Title: "Current Protocols Essential Laboratory Techniques" Wiley and Sons, Inc., New Jersey
2003	Mellon Faculty Enhancement Award
1998	Fellowship Award, New College Teachers Workshop Society for Values in Higher Education
1989	Magna cum laude, B.S., Biology, Western Washington University

## GRANTS/RESEARCH FUNDING

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2014-20	NSF Improving Undergraduate Science Education (IUSE) Award	"The Ciliate Genomics Consortium Model for Sustainable Teaching-Research Integration"	\$506,131
2016-19	Keck Research Grant	"Chromatin Modification Through Histone Clipping: Regulation and Biological Roles"	\$15,000
2012-18	NSF Research Grant Sub-award	"Genomics of Tetrahymena" (Molecular and Cellular Biology)	\$76,814
2006-13	NSF CAREER Award	"Investigating Chromatin Assembly Pathways Through Histone Deacetylases"	\$654,000
2009	NSF Award (co-PI)	"Conference on Ciliate Molecular Biology"	\$10,475
2005, 08	Pitzer Research Grant	"Condensing Chromatin with HDACs"	\$2,000 ea
2004	Suzanne and David Johnson Foundation	"Summer Student Research Fund"	\$10,000
2004	Keck Research Grant	"Tetrahymena Chromatin Proteins"	\$15,000
2004	Reed Institute Grant	"Ciliate Genomics Consortium"	\$7,500

1997 NIH Postdoctoral Fellowship Award

**PUBLICATIONS**

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**A. Peer Reviewed Articles** \* indicates corresponding author; undergraduate authors are underlined

\***Wiley, E.A.**, Horrell, S., Yoshino, A., Schornak, C., Bagnani, C., Chalker, D.L. (2017) Diversification of HP1-like chromo domain proteins in *Tetrahymena thermophila*. *Eukaryotic Microbiology* 65(1) 104-116.

Yale, K., Neuman, M., Bulley, E., Tackett, A., Chait, B.T., \***Wiley, E.A.** (2016) Phosphorylation-dependent targeting of *Tetrahymena* HP1 to condensed chromatin. *mSphere* 4.

\***Wiley, E.A.** and Chalker, D.L. (2016) A community model for course-based student research that advances faculty scholarship. *CUR Quarterly* 37(2).

\***Wiley, E.A.** and Stover, N. (2014) Immediate dissemination of student discoveries to a model organism database enhances classroom-based research experiences. *CBE Life Sci. Educ.* 13(1): 131-8.

Slade, KM., Freggiaro, S., Cottrell, K.A., Smith, J.J., and \***Wiley, E.A.** (2011) Sirtuin-mediated nuclear differentiation and programmed degradation in *Tetrahymena*. *BMC Cell Biology* 12(1): 40-54.

\*Coyne, R.S., Thiagarajan, M., Jones, K.M., Wortman, J.R., Tallon, L.J., Haas, B.J., Cassidy-Hanley, D.M., **Wiley, E.A.**, et al. (2008) Refined annotation and assembly of the *Tetrahymena thermophila* genome sequence through EST analysis, comparative genomic hybridization, and targeted gap closure. *BMC Genomics* 9: 562-579

Smith, J., Torigoe, S., Maxson, J., Fish, L., and \***Wiley, E.A.** (2008) A class II HDAC deacetylates newly-synthesized histones in *Tetrahymena*. *Eukaryotic Cell* 7(3): 471-482.

Parker, K., Maxson, J., Mooney, A., and \***Wiley, E.A.** (2007) Class I histone deacetylase Thd1p promotes global chromatin condensation in *Tetrahymena thermophila*. *Eukaryotic Cell* 6: 1913-1924.

\***Wiley, E.A.**, Myers, T., Parker, K., Braun, T., Yao, M.-C. (2005) The class I histone deacetylase Thd1p affects nuclear integrity in *Tetrahymena thermophila*. *Eukaryotic Cell* 4: 981-990.

\***Wiley, E.A.**, Ohba, R., Yao, M.-C., Allis, C.D. (2000) Developmentally regulated Rpd3p homolog specific to the transcriptionally active macronucleus of vegetative *Tetrahymena thermophila*. *Mol. Cell. Biol.* 20(22):8319-8328.

Huang, H., Smothers, J.F., **Wiley, E.A.**, \*Allis, C.D. (1999) A nonessential HP1-like protein affects starvation-induced assembly of condensed chromatin and gene expression in macronuclei of *Tetrahymena thermophila*. *Mol. Cell. Biol.* 19(5):3624-3634.

Huang, H., **Wiley, E.A.**, Lending, C.R., \*Allis, C.D. (1998) An HP1-like protein is missing from transcriptionally silent micronuclei of *Tetrahymena*. *Proc. Natl. Acad. Sci. USA* 95: 13624-13629.

**Wiley, E.A.** and \*Zakian, V.A. (1995) Extra telomeres, but not internal tracts of telomeric DNA, reduce transcriptional repression at *Saccharomyces* telomeres. *Genetics* 139:67-79.

\*Mendelman, P.M., Chaffin D.O., Kilov, L.R., Kalaitzoglou, G., Serfass, D.A., Onay, O., **Wiley, E.A.**, Overturf, G.D., Rubin, L.G. (1990) Cefuroxime treatment failure of nontypable *Haemophilus influenzae* meningitis associated with alteration of penicillin-binding proteins. *Journal of Infectious Disease* 162:1118.

\*Mendelman, P.M., **Wiley E.A.**, Stull, T.L., Clausen, C., Chaffin, D.O., Onay, O. (1990) Problems with current recommendations for susceptibility testing of *Haemophilus influenzae*. *Antimicrobial Agents and Chemotherapy* 34(8):1480 – 1484

\*Mendelman, P.M., Henritzy, L.L., Chaffin, D.O., Lent, K., Smith, A.L., Stull, T.L., **Wiley, E.A.** (1989) In vitro activities and targets of three cephem antibiotics against *Haemophilus influenzae*. *Antimicrobial Agents and Chemotherapy* 33(11):1878 – 1882

*In preparation for peer-review:*

\***Wiley, E.A.** Ciliate Functional Genomics: Integrating original molecular research into the undergraduate classroom.

### **B. Book Chapters and Edited Books**

Gallagher, S.R. and **Wiley, E.A.**, Editors. (2021) Current Protocols: Essential Laboratory Techniques. Wiley and Sons, Inc., New Jersey. *Online Supplements* (2009-2021)

Gallagher, S.R. and **Wiley, E.A.**, Editors. (2012) Current Protocols: Essential Laboratory Techniques. Wiley and Sons, Inc., New Jersey, 2<sup>nd</sup> Edition (*print*).

Smith, J.J., **Wiley, E.A.**, Cassidy-Hanley, D. (2012) "*Tetrahymena* in the Classroom" in *Methods in Cell Biology* 109:411-30.

Gallagher, S.R. and **Wiley, E.A.**, Editors. (2008) Current Protocols: Essential Laboratory Techniques. Wiley and Sons, Inc., New Jersey (*print*).

**Wiley, E.A.** and Chakravarti, D. (2008) "Measurement of pH" in Current Protocols: Essential Laboratory Techniques, Wiley and Sons, Inc., New Jersey.

**Wiley, E.A.**, Mizzen, C., Allis, C.D. (2000) Isolation and characterization of in vivo modified histones and an activity gel assay for identification of histone acetyltransferases. *Methods in Cell Biology: Tetrahymena thermophila*. Academic Press, San Diego, CA., Vol. 62:379 - 394.

### **C. Published Abstracts and Other Publications**

Elgin, S.C.R, Bangera, G., Buonaccorsi, V.P., Chalker, D.L., Dinsdale, E., Dolan, E.L., Fletcher, L., Hunt, A., Lawrence-Dill, C.J., Leung, W., Reed, L.K., Rosenwald, A.G., Subramanya, S., **Wiley, E.A.**, Williams, J. (2017): A Genomics Education Alliance. *Figshare* <https://doi.org/10.6084/m9.figshare.5197228.v1>

**Wiley, E.A.** and Chalker, D. (2010) The Ciliate Genomics Consortium: Involving undergraduates in a community research effort. *Journal Microbiol. Education* 11:71

Freggiaro, S., Smith, J.S., **Wiley, E.A.** (2009) Histone deacetylases in *Tetrahymena* heterochromatin formation. *Biochemistry and Cell Biology* 87:513

Torigoe, S. and **Wiley, E.A.** (2007) Characterization of a histone deacetylase in *Tetrahymena thermophila*. *Biochemistry and Cell Biology* 85:52

Parker, K., Blum, E., Greaves, T., and **Wiley, E.A.** (2004) The *Tetrahymena* histone deacetylase Thd1p affects nucleolar integrity and global chromatin condensation. *Biochem. & Cell Biol* 82:522