

ERIK D. ANDRULIS

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EDUCATION

1993–1998 Ph.D., Biochemistry and Molecular Biology, Stony Brook University
1988–1992 B.S., Biological Sciences: Molecular Genetics, University of Rochester

PROFESSIONAL APPOINTMENTS

2021–2026 President and Executive Director, Rude Ranch Animal Rescue, Harwood, MD
2015–2020 Executive Director, Mid-Atlantic Research Institute, Lewes, DE
2003–2015 Assistant Professor, tenure track, Department of Molecular Biology and Microbiology,
Case Western Reserve University School of Medicine
1998–2003 Postdoctoral Fellow, Department of Molecular Biology and Genetics, Cornell University
1992–1993 Predoctoral Fellow, National Cancer Institute, National Institutes of Health

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

1998 Member, Sigma Xi
1997–2015 Member, American Society for Biochemistry and Molecular Biology

HONORS AND AWARDS

2012 2nd place, CWRU Martin Luther King, Jr. Faculty/Staff Essay Contest
2003–2007 Mount Sinai Health Care Foundation Scholar
1999–2002 National Research Service Award, Public Health Service, NIH
1998 Excellence in Graduate Research Award, Stony Brook University
1997 Excellence in Research Award, Sigma Xi
1997 Travel Fellowship, ASBMB
1994 Honors in Teaching, Stony Brook University
1993 General Fellowship, NCI, NIH
1992–1993 Student Research Training Program Fellowship, NCI, NIH

PROFESSIONAL SERVICE

2013 *ad hoc* Reviewer, National Science Centre, Poland
2008–2009 *ad hoc* Reviewer, Netherlands Organization for Scientific Research
2007–2009 *ad hoc* Reviewer, National Science Foundation
2004–2015 *ad hoc* Reviewer, *Nature*, *Molecular Cell*, *PLoS ONE*, *Molecular and Cellular Biology*,
EMBO Journal, *Journal of Cell Biology*, *RNA*, *Molecular Biology of the Cell*, *Cancer*
Research, *Journal of Visualized Experiments*, *Insect Biochemistry and Molecular*
Biology, and *Acta Biochimica et Biophysica Sinica*

ADMINISTRATIVE SERVICE

2008–2013 Steering Committee, Program in Cell Biology
2007, 2012 Krampitz Award Committee, Department of Molecular Biology and Microbiology
2006, 2012 Retreat Planning Committee, Department of Molecular Biology and Microbiology
2004, 2005 Faculty Advisor, Biomedical Graduate Student Symposium
2003–2009 Committee on Appointments, Promotions, and Tenure, Department of Molecular Biology
and Microbiology

TEACHING EXPERIENCE

2005–2012 Medical School Medium-size Group Sessions
2004–2013 MBIO 435: Seminar in Molecular Biology/Microbiology

Fall 2010	BIOL 491: Contemporary Biology And Biotechnology (guest lecture)
2009-2010	CLBY 526: Cell Biology and Human Disease
Spring 2006	CLBY 422: Topics in Cell Biology
2004–2006	MBIO/BIOC 620: Transcription and Gene Regulation
Spring 2005	MBIO/BIOC 522: Protein Phosphorylation and Cell Regulation
Fall 2004	GENE 515: Nuclear Structure and Function
Spring 2001	BIOMG690: The Nucleus (guest lecture); Cornell University
Spring 1994	BIO322: Animal Embryology; Stony Brook University
Fall 1993	BIO150: Undergraduate Biochemistry Laboratory; Stony Brook University

ADVISORY ACTIVITIES

2005–2007	M.S. advisor for Amy Graham
2005–2010	Ph.D. advisor for Megan Smolko (née Mamolen)
2003–2009	Ph.D. advisor for Daniel Kiss
2003–2011	Undergraduate advisor CWRU; Connie Martin, Alexandra Smith, Stephanie Davis, Whitney Huang, Lauren Dehan
1998–2002	Undergraduate research advisor, Cornell University; Michael Seidman, Andy Eisberg, Karen Chinchilla
1995–1998	Undergraduate Research Mentor, Stony Brook University

GRANT SUPPORT

1R01GM072820-01 (PI: Andrulis) National Institutes of General Medical Sciences <i>Compartmentalized exosome structure and function</i>	10/1/06-9/30/11 (\$190,000 direct/yr/5 yrs.)
AFAR AA05105 (PI: Andrulis) American Federation for Aging Research <i>Mechanisms of mRNA Turnover during Aging</i>	7/1/05-6/30/07 (\$60,000)
IRG-91-002-09 (PI: Andrulis) American Cancer Society <i>Specificity and targeting of the exosome, a co-transcriptional mRNA surveillance complex, to the BRCA1 gene</i>	1/01/04-12/31/04 (\$20,000)

PUBLICATIONS

1. Kleff, S., Andrulis, E. D., Anderson, C. W., and R. Sternglanz. (1995) Identification of a Gene Encoding a Yeast Histone H4 Acetyltransferase. *Journal of Biological Chemistry*, **270**: 24672-24677.
2. Andrulis, E. D., Neiman, A. M., Zappulla, D. C., and R. Sternglanz. (1998) Perinuclear Localization of Chromatin Facilitates Transcriptional Silencing. *Nature*, **394**: 592-595. (Erratum: *Nature* **395**: 525; Reviewed in *Curr. Opin. Genet. Dev.* 1999; **9**:199-205.)
3. Matern, H. T., Yang, X., Andrulis, E., Sternglanz, R., Trepte, H.-H., and D. Gallwitz (2000) A Novel and Essential Golgi Membrane Protein Acts in or Close to Transport Vesicle Docking. *EMBO Journal*, **19**:4485-4492.
4. Andrulis, E. D., Guzmán, E., Döring, P., Werner, J., and J. T. Lis (2000) High Resolution Localization of *Drosophila* Spt5 and Spt6 at Heat Shock Genes *in vivo*: Roles in Promoter-proximal Pausing and Transcription Elongation. *Genes and Development*, **14**: 2635-2649.
5. Andrulis, E. D., Zappulla, D. C., Ansari, A., Laiosa, C. V., Perrod, S., Gartenberg, M. R., and R. Sternglanz (2002) ESC1, a Nuclear Periphery Protein Required for SIR4-based Plasmid Partitioning and Anchoring. *Molecular and Cellular Biology*, **22**: 8292-8301.
6. Andrulis, E. D., Werner, J., Erdjument-Bromage, H., Nazarian, A., Tempst, P., and J. T. Lis (2002) The RNA Processing Exosome is Linked to Elongating RNA Polymerase II in *Drosophila*. *Nature*, **420**: 837-841. (Reviewed in *Nat. Struc. Bio.* 2003; **10**: 10-12.)

7. Saunders, A., Werner, J., Andrulis, E. D., Nakayama, T., Hirose, S., Reinberg, D. and J.T. Lis (2003) Tracking FACT and the RNA Polymerase II Elongation Complex Through Chromatin *in vivo*. *Science*, **301**: 1094-1096. (Cover of *Science*; Perspective in *Science*, **301**: 1053-1054)
8. Andrulis, E. D., Zappulla, D. C., Alexieva-Botcheva, K., Evangelista, C., and R. Sternglanz (2004) One-hybrid Screens at the *Saccharomyces cerevisiae* HMR Locus Identify Novel Transcriptional Silencing Factors. *Genetics*, **166**: 631-635.
9. Adelman, K., Marr, M.T., Werner, J., Saunders, A., Ni, Z., Andrulis, E.D., and J.T. Lis (2005) Efficient Release Through the Promoter-proximal Stall Sites Requires Transcript Cleavage Factor TFIIS. *Molecular Cell* **17**:103-112.
10. Graham, A. C., Kiss, D. L., and E. D. Andrulis (2006) Differential Distribution of Exosome Subunits at the Nuclear Lamina and in Cytoplasmic Foci. *Molecular Biology of the Cell*, **17**: 1399-1409.
11. Hattier, T., Andrulis, E. D., and A. Tartakoff (2007) Immobility, Inheritance and Plasticity of Shape of the Yeast Nucleus. *BMC Cell Biology*, **8**: 47-64
12. Graham, A.C., Davis, S. M.¹, and E. D. Andrulis (2009) Interdependence of Nucleocytoplasmic Distribution and Interactions of Dis3 with Rrp6, the Core Exosome, and Importin-alpha3. *Traffic* **10**: 499-513
13. Graham, A. C., Kiss, D. L., and E. D. Andrulis (2009) Core Exosome-independent Roles for *Drosophila* Rrp6 in Cell Cycle Progression. *Molecular Biology of the Cell*, **20**: 2242-2253.
14. Mamolen, M. and E. D. Andrulis (2009) Characterization of the *Drosophila melanogaster* Dis3 Ribonuclease. *Biochemical and Biophysical Research Communications*, **390**: 529-34.
15. Kiss, D.L. and E. D. Andrulis (2010) Genome-wide Analysis Reveals Distinct Substrate Specificities of Rrp6, Dis3, and Core Exosome Subunits. *RNA*, **16**(4):781-91.
16. Mamolen, M., Smith, A.¹, and E. D. Andrulis (2010) *Drosophila melanogaster* Dis3 N-terminal Domains are Required for Ribonuclease Activities, Nuclear Localization, and Exosome Interactions. *Nucleic Acids Research*, **38**(16):5507-17.
17. Kiss, D.L. and E. D. Andrulis. (2011) The Exozyme Model: A Continuum of Functionally Distinct Complexes. *RNA*, **17**(1):1-13.
18. Smith, S. B., Kiss, D. L., Turk, E., Tartakoff, A. M., and E. D. Andrulis. (2011) Pronounced and Extensive Microtubule Defects in a *Saccharomyces cerevisiae* DIS3 Mutant. *Yeast*, **28**:755-769.
19. Andrulis, E.D. (2011) Theory of the Origin, Evolution, and Nature of Life. *Life*, **2**:1-105. (Commentary by Publisher: *Life*, **2**: 213-214)
20. Kiss, D.L., Hou, D., Gross, R.H., and E. D. Andrulis (2012) Dis3- and Exosome Subunit-responsive 3' mRNA Instability Elements. *Biochemical and Biophysical Research Communications*, **423**:461-466.
21. Hou, D., Ruiz, M., and E. D. Andrulis (2012) The Ribonuclease Dis3 is an Essential Regulator of the Developmental Transcriptome. *BMC Genomics*, **13**:359-370.
22. Turk, E., Das, V., Seibert, R.², and E. D. Andrulis (2013) The Mitochondrial RNA Landscape of *Saccharomyces cerevisiae*. *PLoS ONE*, **8**(10): e78105.

PLATFORM PRESENTATIONS

2013	Department of Molecular Biology and Microbiology, CWRU School of Medicine
2012	Physis: From Elementary Particles to Human Nature, University of the Basque Country
2011	Eukaryotic mRNA Processing Meeting, Cold Spring Harbor Laboratory (CSH)
2011	Department of Biochemistry, Emory University
2011	Department of Biological Sciences, Cleveland State University (CSU)
2010	Center for RNA Molecular Biology, CWRU School of Medicine
2009	Department of Genetics, CWRU School of Medicine
2009	Department of Molecular Biology and Microbiology, CWRU School of Medicine
2009	Department of Cell Biology, Lerner Research Institute
2007	Department of Biochemistry, CWRU School of Medicine
2006	Program in Cell Biology Retreat, Squire Vallevue Farm
2005	Center for RNA Molecular Biology, Case School of Medicine

¹ CWRU undergraduate student

² Gilmour Academy (Gates Mills, OH) high school student

2005	Department of Pathology, CWRU School of Medicine
2004	Department of Biological, Geological, and Environmental Sciences, CSU
2003	Department of Molecular Biology and Microbiology, CWRU School of Medicine
2003	Department of Oncological Sciences, Huntsman Cancer Institute
2003	Department of Molecular Genetics, Ohio State University
2003	Center for RNA Molecular Biology, CWRU School of Medicine
2003	Department of Biological Sciences, SUNY at Albany
2003	Department of Cell Biology, Albert Einstein College of Medicine
2003	Norris Comprehensive Cancer Center, University of Southern California
2003	Department of Biology, University of Rochester
2002	Department of Biological Sciences, SUNY at Buffalo
2002	Department of Cell and Developmental Biology, Vanderbilt University
2002	Program in Gene Function and Expression, University of Massachusetts Medical Center
2002	Gordon Research Conference (GRC): Nucleic Acids, Roger Williams University
1998	Institute for Cell and Developmental Biology, Stony Brook University
1997	17th International Congress on Biochemistry and Molecular Biology (ICBMB), Asilomar Conference Center, CA
1996	Mid-Atlantic Yeast Meeting, University of Maryland Baltimore County

MEETINGS AND POSTER PRESENTATIONS

2012	Astrobiology Science Conference, Atlanta, GA
2012	GRC: Origin of Life, Galveston, TX
2011	GRC: Geobiology, Ventura Beach, CA
2010	75 th Symposium: Nuclear Structure and Function, CSH
2009	RNA Conference, University of Wisconsin, Madison
2007	RNA Conference, University of Wisconsin, Madison
2006	American Federation for Aging Research (AFAR) conference, Santa Barbara, CA
2006	Dynamic Organization of Nuclear Function, CSH
2004	GRC: The Biology of Post-transcriptional Gene Regulation, Proctor Academy, NH
2001	Mechanisms of Eukaryotic Transcription, CSH
2000	GRC: Chromatin Structure and Function, Tilton Academy, NH
1996	GRC: Nuclear Proteins, Chromatin Structure and Gene Regulation, Tilton Academy, NH

POLICY AND PLANNING EXPERIENCE

2008–2012	Steering Committee, Program in Cell Biology
2007, 2012	Lester O. Krampitz Award Committee
2006, 2012	Retreat Planning Committee, Department of Molecular Biology & Microbiology (MBM)
2010, 2011	Medical Thesis Review Committee
2004, 2005	Faculty Advisor, Biomedical Graduate Student Symposium
2003–2009	Committee on Appointments, Promotions, and Tenure, MBM
2000–2002	Postdoctoral Organization, Cornell University

CWRU AFFILIATIONS AND MEETING GROUPS

2006–2015	Member, Comprehensive Cancer Center
2005–2015	Member, Program in Cell Biology
2004–2010	Member, <i>Drosophila</i> Group Meeting (Andrulis, Broihier, Harte, Mizutani, Salz labs)
2004–2015	Member, Program in Developmental Biology
2004–2015	Mentor, Developmental Biologist Training Program
2003–2015	Mentor, Biomedical Scientist Training Program
2003–2015	Mentor, Cell and Molecular Biology Training Program
2005–2008	Adjunct Member, Center for RNA Molecular Biology
2004–2007	Member, RNA Genetics Group Meeting (Andrulis, Luo, Matera, Salz, Wise labs)

CWRU THESIS COMMITTEES

2003–2012	Chairman; Student, Julian Wong; Advisor, Jonathan Karn, Ph.D., MBM
2006–2010	Advisor; Student, Megan Mamolen, MBM
2006–2010	Chairman; Student, Nicole Dietenberger; Advisor, Patrick Viollier, Ph.D., MBM
2004–2009	Member; Student, Matthew Johnson; Advisor, Helen Salz, Ph.D., Department of Genetics
2003–2009	Advisor; Student, Daniel Kiss, MBM
2006–2008	Chairman; Student, Julie Jadowsky; Advisor, Koh Fujinaga, Ph.D., MBM
2003–2008	Chairman; Student, Felipe Bendezu; Advisor, Piet de Boer, Ph.D., MBM
2006–2008	Advisor and Member; Student, Amy Graham; Department of Biology
2006–2007	Chairman; Student, Jonathan Bell; Advisor, Catherine Patterson, Ph.D., MBM
2004–2005	Member; Student, Thomas Hattier; Advisor, Alan Tartakoff, Ph.D., Department of Pathology