Amy Thompson Hark (she/her)
amyhark@muhlenberg.edu

EDUCATION

Postdoctoral Research, Biochemistry and Molecular Biology, Michigan State University, East Lansing, MI *2001-2004*

Ph.D., **M.A.**, Molecular Biology, Princeton University, Princeton, NJ *2000, 1997*

B.S., Biology, *summa cum laude*, College of William and Mary, Williamsburg, VA *1994*

PROFESSIONAL EXPERIENCE

Professor of Biology, Muhlenberg College *2018-present*

Co-director of Biochemistry Program, Muhlenberg College *2005-present*

Director, Faculty Center for Teaching, Muhlenberg College *2011- 2014*

Associate Professor of Biology, Muhlenberg College *2010-2018*

Assistant Professor of Biology, Muhlenberg College *2004-2010*

Postdoctoral Research Associate in the laboratory of Dr. Steven Triezenberg, Department of Biochemistry and Molecular Biology, Michigan State University *2001-2004*

Visiting Assistant Professor of Biology, Kalamazoo College, Kalamazoo, MI *2000-2001*

Graduate Student in the laboratory of Dr. Shirley Tilghman, Howard Hughes Medical Institute and Department of Molecular Biology, Princeton University *1995-2000*

Teaching Assistant and Guest Lecturer for courses in cell, molecular, and developmental biology, Princeton University *1995-1998*

PEER-REVIEWED PUBLICATIONS

***** denotes undergraduate co-author; **^** listed as a Contributing Author**;** ¶ Denotes equal contribution by these authors to the work

Full length scientific reports

Poulios, S., D. Dadarou, M. Gavriilidis, N. Mougiou, N. Kargios, V. Malliori, **A.T. Hark**, J.H. Doonan, and K.E. Vlachonasios. 2021. The transcriptional adaptor protein ADA3 modulates flowering of *Arabidopsis thaliana. Cells* 10: 904.

PUBLICATIONS *Continued*

Kotak, J.*, M. Saisana, V. Gegas, N. Pechlivani, A. Kaldis, P. Papoutsoglou, A. Makris, M. Sheikh*, J. Burns*, A.L. Kendig*, C.E. Kuschner*, G. Whitney*, H. Caiola*, J.H. Doonan, K.E. Vlachonasios, E.R. McCain, and **A.T. Hark**. 2018. Transcriptional coactivators affect leaf development and trichome morphogenesis in *Arabidopsis. Planta* 248: 613-628

Leung, W.…**A.T. Hark**,… M. Scheuerman*,… S.C.R. Elgin (276 authors). 2017. Retrotransposons are the major contributors to the expansion of the *Drosophila ananassae* Muller F element. *G3: Genes, Genomes, Genetics* 7: 2439-2460.

Leung, W.…**A.T. Hark**, A. Bertolet*, C.E. Kuschner*, K. Parry*, M. Quach*, L. Shantzer*…and S.C.R. Elgin (>1000 authors). 2015. Drosophila Muller F elements maintain a distinct set of genomic properties over 40 million years of evolution. *G3: Genes, Genomes, Genetics* 5: 719-740.

Cohen, R.*****, J. Schocken*****, A. Kaldis, K.E. Vlachonasios, **A.T. Hark**, and E.R. McCain. 2009. The histone acetyltransferase GCN5 affects the inflorescence meristem and stamen development in *Arabidopsis. Planta* 230: 1207-1221.

Hark, A.T., K.E. Vlachonasios, K.A. Pavangadkar, S. Rao, H. Gordon*****, I.-D. Adamakis, A. Kaldis, M.F. Thomashow, and S.J. Triezenberg. 2009. Two *Arabidopsis* orthologs of the transcriptional coactivator *ADA2*
have distinct biological functions. *Biochimica et Biophysica Acta* 1789: 117-124.

Hark, A.T.¶, C.S. Schoenherr¶, D.J. Katz, R.S. Ingram, J.M. Levorse, and S.M. Tilghman. 2000. CTCF mediates methylation-sensitive enhancer blocking activity at the *H19/Igf2* locus. *Nature* 405: 486-489.

Hark, A.T. and S.M. Tilghman. 1998. Chromatin conformation of the *H19* epigenetic mark. *Human Molecular Genetics* 7: 1979-1985.

Discipline-Based Education Research and Scholarship of Teaching and Learning publications

Lopatto, D., S.C.S. Key, M. Van Stry, J. Siders, W. Leung, K.M. Sandlin, C.P. Rele, **Members of the Genomics Education Partnership^,** and L.K. Reed. 2023. Supporting the democratization of science during a pandemic: Course-based Undergraduate Research Experiences (CUREs) as effective remote learning strategies for genomics. *Journal of Microbiology & Biology Education*, published online September 22, 2023 https://doi.org/10.1128/jmbe.00039-23

Hark, A.T. and L.E. Washco*. 2023. Fragile States: A case study exploring genetics, molecular biology, and biochemistry through the lens of Fragile X syndrome. *CourseSource* 10. https://doi.org/10.24918/cs.2023.33

PUBLICATIONS *Continued*

Lopatto, D., A.G. Rosenwald, R.C. Burgess, C.S. Key, M. Van Stry, M. Wawersik, J. DiAngelo, **A.T. Hark**…and L.K. Reed (~100 authors). 2022. Student attitudes contribute to the effectiveness of a genomic CURE. *Journal of Microbiology & Biology Education*. doi.org/10.1128/jmbe.00208-21

Lopatto, D., A. Rosenwald, J. DiAngelo, **A. T. Hark**…and S.C.R. Elgin (~100 authors). 2020. Facilitating Growth through Frustration: Using Genomics Research in a Course-based Undergraduate Research Experience. *Journal of Microbiology & Biology Education* 21(1*).* doi:10.1128/jmbe.v21i1.2005

Wagner, M.*, J. Hanna*, and **A.T. Hark**. 2020. Making Connections: The role of dystrophin in Duchenne Muscular Dystrophy. National Center for Case Study Teaching in Science. https://sciencecases.lib.buffalo.edu/collection/detail.html?case_id=1104&id=1104

Hark, A.T. 2017. Understanding Protein Domains: A Modular Approach. *CourseSource.* https://doi.org/10.24918/cs.2017.21 (Accessed December 6, 2017)

Farber, G. A¶. and **A.T. Hark¶**. 2017. Cut-It-Out: CRISPR-Cas9 case study. National Center for Case Study Teaching in Science. http://sciencecases.lib.buffalo.edu/cs/files/crispr.pdf (Accessed June 20, 2017)

Elgin, S.C.R, C. Hauser, T. Holzen, C. Jones, A. Kleinschmit, J. Leatherman, and **the Genomics Education Partnership^.** 2017. The GEP: Crowd-Sourcing Big Data with Undergraduates. *Trends in Genetics* 33: 81-85.

Lopatto, D.…**A. Hark**…and S.C.R. Elgin (68 authors). 2014. A Central Support System Facilitates Sustainability of Research-Based Laboratory Courses. *CBE-Life Science Education* 13: 711-723.

Shaffer, C.D.…..**A.T. Hark**...and S.C.R. Elgin (84 authors). 2014. A Course-Based Research Experience: How Benefits Change with Increased Investment in Instructional Time. *CBE-Life Science Education* 13: 111-130.

Wightman, B. and **A.T. Hark**. 2012. Integration of Bioinformatics into an Undergraduate Biology Curriculum and the Impact on Development of Mathematical Skills. *Biochemistry and Molecular Biology Education* 40: 310-319.

Hark, A.T. 2008. Crossing over: An undergraduate service learning project that connects to biotechnology education in secondary schools. *Biochemistry and Molecular Biology Education* 36: 159-165.

PUBLICATIONS *Continued*

Micropublications

Sharp, M.*, Z. Lill*, C. Xiong*, **A.T. Hark**, J. Youngblom, and C.P. Rele. 2023. *Drosophila simulans – GlyS*. *Manuscript accepted.*

Shelley-Tremblay, S.*, A. Koehle*, E. Tiedemann*, B. Chen*, C. Reinke, **A.T. Hark**, C. Rele. 2023. *Drosophila eugracilis – GlyS. Manuscript accepted*.

Backlund, A.E.*, J. Silverman*, M, Galvan*, **A.T. Hark**, J.J. Youngblom, S. Page, N. Kokan, and C.P. Rele. 2023. *Drosophila ananassae – srl*. *Manuscript in revision.*

Keirn, G.*, C.A. Kiser*, L.F. Laskowski*, B. Chen*, L. Kalisa*, J. Kang*, J. Lacoste*, G. Uwera Mihigo*, **A.T. Hark**, J. Kennell, L.J. Long, and C.P. Rele. 2023. *Drosophila kikkawai – Akt1*. *Manuscript in revision.*

Sharp, M.*, C.A. Kiser*, L.F. Laskowski*, Z. Lill*, J.C. Martinez-Cruzado, **A.T. Hark**, and C.P. Rele. 2023. *Drosophila miranda – Akt1*. *Manuscript in revision.*

Nicanovsky, G.N.*, V. Le*, I. Wellik*, **A.T. Hark**, J.S. Thompson, C. P. Rele. 2023. *Drosophila grimshawi – GlyP. Manuscript in preparation.*

Dufur, R.*, C. Gutierrez*, Z. Lill*, J.J. Youngblom, **A.T. Hark**, and C.P. Rele. 2023. *Drosophila erecta – Tor. Manuscript in preparation*

Sharp, M.*, C.A. Kiser*, L.F. Laskowski*, B. Chen*, A. Elewski*, J. Miller*, C. Schwab*, L. Laskowski*, **A.T. Hark**, J. Kennell, L.J. Long, and C.P. Rele. 2023. *Drosophila arizonae – Akt1*. *Manuscript in preparation.*

Bicanovsky, G.N.*, E.N. Bennett*, Z. Lill*, R.M. McSweeney*, G.D. Findlay, **A.T. Hark**, S.T. Page, C.P. Rele. 2023. *Drosophila ananassae – GlyP. Manuscript in preparation.*

Chamberlain, M.*, B. Chen*, C. Xiong*, **A.T. Hark**, J. Youngblom, and C.P. Rele. 2023. *Drosophila erecta – GlyS*. *Manuscript in preparation.*

Jones, G.M.*, D. Harrington*, Z. Lill*, **A.T. Hark,** C. McKenna, and C.P. Rele. 2023. *Drosophila ananassae – Pten. Manuscript in preparation.*

Koehler, A.C.*, I. Romo*, V.Le*, J. Youngblom, **A.T. Hark**, and C.P. Rele. 2023. *Drosophila yakuba – GlyS*. *Manuscript submitted.*

Laskowski, L.F.*, A. Abizadeh*, Z. Lill*, A. Kleinschmit, P. Cronnquist, J.S. Thompson, S.T. Chi Chak, **A.T. Hark**, and C.P. Rele. 2023. *Drosophila simulans – GlyP. Manuscript in preparation.*

PUBLICATIONS *Continued*

Lawson, M.E.*, L. Washco*, J. O'Brien*, **A.T. Hark**, L.J. Long, and C.P. Rele. 2023. *Drosophila eugracilis – S6K. Manuscript in preparation.*

Kotak, J.*, A. Kendig*, K. Cann*, J. Shaffer*, **A.T. Hark**, and E.R. McCain. 2019. Disruption of the Histone Acetyltransferase GCN5 and the Transcriptional Coactivator ADA2b Affect Trichome Density in *Arabidopsis thaliana. microPublication Biology*. https://doi.org/10.17912/micropub.biology.000174

Trachtman, N.*, P. Sockler*, H. Caiola*, E.R. McCain, and **A.T. Hark**. 2019. Expression of the DELLA Repressor GAI and its Regulators SPY and SEC are Impacted by Disruption of Chromatin Modifiers. *microPublication Biology*. https://doi.org/10.17912/micropub.biology.000175

Hark, A.T. and E.R. McCain. 2019. The Histone Acetyltransferase GCN5 and the Transcriptional Coactivator ADA2b Affect Trichome Initiation in *Arabidopsis thaliana*. *microPublication Biology*. https://doi.org/10.17912/micropub.biology.000176

Other publications

Lee, C., H. Goodson, B. Gellin, J. Hanna, **A. Hark**, S. Jaspensen, J. Kimble, R. Kleiman, J. Nunnari, T. Pollard, A. Sanchez, K. Wilson, and S.M. Tilghman. 2022. Next Acts for Scientists: Career Transitions in Mid- and Late-Career. American Society for Cell Biology white paper. http://www.ascb.org/wp-content/uploads/2022/10/ASCB-Transition-Task-Force-FINAL-for-web-and-print.pdf

Hark, A.T. 2021. Cultivating the next generation of scientists and the scientific literature through micropublications. American Society of Plant Biologists Plant Science Today blog (invited post). *Published 11 July 2021.*

SELECTED TALKS AND PRESENTATIONS

* denotes undergraduate co-author

Hark, A.T., D. Lopatto, S. C. Silver Key, P. Croonquist, V. Mingo, and L.K. Reed. "Additional Benefits of Genomics CUREs: how the Genomics Education Partnership is helping to democratize science," poster presentation at the Gordon Research Conference on Undergraduate Biology Education *June 2023*

Hark, A. "Transition States: Lessons from Biochemistry for Higher Education," invited talk given at Honors Convocation, part of 175th Anniversary Celebration, Muhlenberg College *April 2023*

SELECTED TALKS and PRESENTATIONs *Continued*

Washco, L.* and **A. Hark.** "The role of GCN5 and SVALKA in the regulation of *CBF1* and cold acclimation in *Arabidopsis thaliana*," poster presented at the 7th annual Lehigh Valley Molecular and Cell Biology Symposium *April 2023*

Touitou, A.* and **A. Hark.** "Conservation of Key Players of the Insulin Signaling Pathway on Genetic and Protein Levels," poster presented at the 7th annual Lehigh Valley Molecular and Cell Biology Symposium *April 2023*

Ali, A.* and **A. Hark.** "Annotating *wdb* in Drosophila sechellia," poster presented at the 7th annual Lehigh Valley Molecular and Cell Biology Symposium *April 2023*

Campbell, A.* and **A. Hark.** "Genetic Annotation of Pdk1 in Various *Drosophila* Species," poster presented at the 7th annual Lehigh Valley Molecular and Cell Biology Symposium *April 2023*

Washco, L.* and **A.T. Hark.** 2022. "Analysis of the *Fmr1* gene," poster presented at the Lehigh Valley Molecular Symposium on CRISPR Implementation and Ethics *September 2022*

Hark, A. and N. Tsotakos. "Genomics Education and Research in the Undergraduate Classroom," invited workshop presented in the American Society for Biochemistry and Molecular Biology CURE Lunch and Learn Series *June 2022*

Washco, L.* and **A. Hark.** "Drosophila gene conservation within the insulin pathway," poster presented at the 6th annual Lehigh Valley Molecular and Cell Biology Symposium *April 2022*

Tsotakos, N., **A.T. Hark**, E. Merkhofer, M. Santisteban, D. Lopatto, and L. Reed. "The Genomics Education Partnership as a Model of Course-Based Undergraduate Research Experience (CURE) that Promotes Growth Mindset," poster presentation at the American Society for Biochemistry and Molecular Biology annual meeting, Philadelphia, PA *April 2022*

Silverman, J.*, **A.T. Hark**, C.P. Rele, and L.K. Reed. "Examining Rates of Evolution Within the *Drosophila* Insulin Signaling Pathway" poster presentation at the American Society for Biochemistry and Molecular Biology annual meeting, Philadelphia, PA *April 2022*

Raab, S.* and **A.T. Hark**. "Conservation of the *trbl* Gene Across *Drosophila* Species: How Does Structure Support Function?" poster presentation at the American Society for Biochemistry and Molecular Biology annual meeting, Philadelphia, PA *April 2022*

Harris, L.* and **A.T. Hark**. "Conservation of *Ilp4*, *Pdk1*, and *HDAC4* Across *Drosophila* Species," poster presentation at the American Society for Biochemistry and Molecular Biology annual meeting, Philadelphia, PA *April 2022*

TALKS AND PRESENTATIONS *Continued*

Hark, A.T. 2021. "Measured Growth: Considering the benefits of reporting results via micropublications for science and particularly undergraduate researchers," poster presentation at the International Conference on Arabidopsis Research (virtual).

Le, V.*, B. Chen*, Z. Lill*, and **A. Hark.** "Evolution of Glycogen Phosphorylase and Glycogen Synthase in Drosophila," microtalk given at the 5th annual Lehigh Valley Molecular and Cell Biology Symposium *April 2021*

Silverman, J.* and **A. Hark.** "Spargel (srl) across Drosophila: A Comparative Genomics Approach," microtalk given at the 5th annual Lehigh Valley Molecular and Cell Biology Symposium *April 2021*

Harris, L.* and **A. Hark.** "Annotation of HDAC4 with Drosophila Genomes," microtalk given at the 5th annual Lehigh Valley Molecular and Cell Biology Symposium *April 2021*

Raab, S.* and **A. Hark.** "Conservation of Pathway Research on trbl as a player in the insulin signaling pathway" microtalk given at the 5th annual Lehigh Valley Molecular and Cell Biology Symposium *April 2021*

Rosenwald, A., J. DiAngelo, **A. Hark**, and M. Wawersik. "Facilitating growth through frustration: Using genomics research in a course-based undergraduate research experience." JMBE Live!, *Journal of Microbiology Education* webinar *November 2020*

Hark, A.T., H. Caiola*, P. Sockler*, J. Kotak*, A. Kendig*, K. Cann*, and E.R. McCain. 2019. "The Histone Acetyltransferase GCN5 and Transcriptional Coactivator ADA2b Affect Trichome Initiation in Arabidopsis thaliana," poster presentation at the American Society for Biochemistry and Molecular Biology annual meeting, Orlando, FL *April 2019*

Hanna, J.*, M. Wagner*, and **A.T. Hark**. "Making Connections: The Role of Dystrophin in Duchenne Muscular Dystrophy," poster presentation given at the Lehigh Valley Molecular and Cell Biology Symposium *April 2019*

Trachtman, N.* and **A.T. Hark**. "Annotating Transcription State Sites on the Dot Chromosome of *D. elegans*," poster presentation given at the Lehigh Valley Molecular and Cell Biology Symposium *April 2019*

Wiggley, N.* and **A.T. Hark**. "The Annotation of *Drosophila takahashii* and its comparison in gene structure and conservation to *Drosophila melanogaster*," poster presentation given at the Lehigh Valley Molecular and Cell Biology Symposium *April 2019*

TALKS AND PRESENTATIONS *Continued*

Caiola, H.* and **A. Hark**. "Interaction Between Histone Acetyltransferase GCN5 and Genes Involved in the Trichome Regulatory Pathway," poster presentation given at the Lehigh Valley Molecular and Cell Biology Symposium *April 2018*

Tener, S.* and **A. Hark**. "Connecting Hormones to HATs in *Arabidopsis thaliana*," poster presentation given at the Lehigh Valley Molecular and Cell Biology Symposium *April 2018*

Molk, H.* and **A. Hark**. "Leaf Area and Trichome Number in *Brassica rapa*," poster presentation given at the Lehigh Valley Molecular and Cell Biology Symposium *April 2018*

Imran, I.*, N. Trachtman*, and **A. Hark**. "Annotating a section of the 3L chromosome of *Drosophila eugracilis*," poster presentation given at the Lehigh Valley Molecular and Cell Biology Symposium *April 2018*

Sockler, P.*, J. Shaffer*, and **A. Hark**. "Annotation of Transcription Start Sites (TSS) in *Drosophila elegans*," poster presentation given at the Lehigh Valley Molecular and Cell Biology Symposium *April 2018*

Caiola, H.*, E. Chiacchiaro*, and **A.T. Hark**. "Annotation of novel sequences in *D. ficusphila* and *D. elegans*," poster presentation given at the Lehigh Valley Molecular and Cell Biology Symposium *April 2017*

S.L. Albert and **A.T. Hark**. "What Theory? Whose Practice?: Promoting Dialogue between Science & Religion in the Liberal Arts," paper given at the American Academy of Religion annual meeting, San Antonio, TX *November 2016*

Hark, A.T., J. Kotak*, M. Sheikh*, A. Kendig*, C.E. Kuschner*, G. Whitney*, M. Saisana, V. Gegas, A. Makris, J.H. Doonan, K.E. Vlachonasios , E.R. McCain. "The histone acetyltransferase GCN5 affects trichome development in *Arabidopsis*," poster presented at Plant Biology 2016 (annual meeting of the American Society of Plant Biologists), Austin, TX *July 2016*

Sheikh, M*., G. Whitney*, C. Kuschner*, and **A. Hark**. "Investigating the Role of GCN5 in trichome development in *Arabidopsis thaliana*", poster presentation given at the Lehigh Valley Molecular and Cell Biology Symposium *April 2016*

Hark, A.T. "DNA and Determinism," invited presentation given in Adult Education Seminar, First Presbyterian Church, Allentown, PA *September 2014*

Hark, A.T., J. Kotak*, A. Kendig*, E.R. McCain, M. Saisana, V. Gegas, J.H. Doonan, and K. Vlachonasios. "Trancriptional coactivators affect trichome development in *Arabidopsis*," poster presented at Plant Biology 2013, Providence, RI *July 2013*

TALKS AND PRESENTATIONS *Continued*

Hark, A.T. "Human Life: DNA, Determinism, and Personality," invited presentation given at DaVinci Science Center, Allentown, PA *December 2012*

Hark, A.T. "Taking off your HAT: The effects of *gcn5* mutations on leaf trichomes in *Arabidopsis thaliana*," invited talk given at Cedar Crest College (Biology Dept.), Allentown, PA *November 2012*

Hark, A.T. "Taking off your HAT: The effects of *gcn5* mutations on the inflorescence meristem and rosette trichomes," invited talk given at the University of Pennsylvania (plant biology group), Philadelphia, PA *December 2011*

Hark, A.T. "Connections to Liberal Education: exploring science in a broader context as part of an undergraduate biochemistry course," poster presented at the American Society for Biochemistry and Molecular Biology symposium entitled "Student-Centered Education in the Molecular Life Sciences II," Richmond, VA *July 2011*

Hark, A.T., A. Kendig*, J. Kotak*, and E.R. McCain. "The histone acetyltransferase GCN5 affects trichome patterning," poster presented at the 22nd International Conference on Arabidopsis Research, Madison, WI *June 2011*

Hark, A. T., C.P. Bailey, S. Parrish, W. Leung, C.D. Shaffer, and S.C.R. Elgin. "Undergraduate research in the Genomics Education Partnership: a comparative genomics project exploring genome organization and chromatin structure in *Drosophila*," poster presented at the American Society for Biochemistry and Molecular Biology Annual Meeting, Washington, D.C. *April 2011*

Tedesco, D.C.*, N. Lord, S.J. Triezenberg, and **A.T. Hark**. "Structure and function of histone acetyltransferase complexes in *Arabidopsis thaliana*," poster presented at the American Society for Biochemistry and Molecular Biology Annual Meeting, Washington, D.C. *April 2011*

Hark, A. T., C.P. Bailey, S.C. Bhalla, and S.C.R. Elgin. "Promoting undergraduate research through the Genomics Education Partnership," poster presented at the American Society for Biochemistry and Molecular Biology Annual Meeting, Anaheim, CA. *April 2010*

Hark, A.T., R. Cohen*, J. Schocken*, and E.R. McCain. "The histone acetyltransferase GCN5 affects floral bud initiation and stamen development in *Arabidopsis*," poster presented at the Society for Developmental Biology Annual Meeting, Philadelphia, PA. *July 2008*

Hark, A.T. "Crossing over: An undergraduate service learning project aimed at creating instructional materials for genetics education in high school classrooms," contributed talk given at the American Society for Biochemistry and Molecular Biology Annual Meeting, Washington, D.C. *April 2007*

TALKS and PRESENTATIONS *Continued*

Gordon, H.***** and **A.T. Hark.** "Investigation of the function of transcriptional coactivator ADA2 in the growth, development, and stress response of *Arabidopsis thaliana*," poster presented at the American Society for Biochemistry and Molecular Biology Annual Meeting, Washington, D.C. *April 2007*

Hudis, N.***** and **A.T. Hark.** "Domains of *Arabidopsis* ADA2a and ADA2b necessary for proper biological functioning," poster presented at the American Society for Biochemistry and Molecular Biology Annual Meeting, Washington, D.C. *April 2007*

Hark, A.T., K.E. Vlachonasios, K.A. Pavangadkar, S. Rao, M.F. Thomashow, and S.J. Triezenberg. "Two *Arabidopsis* orthologs of the transcriptional coactivator *ADA2* have distinct biological functions," poster presented at the American Society for Biochemistry and Molecular Biology Annual Meeting, San Francisco, CA *April 2006*

Hark, A.T. "Genomic imprinting," invited lecture given at Cedar Crest College, Allentown, PA *April 2006*

Hark, A.T. "Taking off your HAT: The effect of disrupting transcriptional coactivators involved in histone acetylation in *Arabidopsis thaliana*," invited talk given at Bryn Mawr College, Bryn Mawr, PA *April 2005*

Hark, A.T. "Biological roles of transcriptional coactivator proteins in *Arabidopsis thaliana*," talk given at Muhlenberg College, Biology Department, Allentown, PA. *December 2002*

Hark, A.T. "Biological roles of transcriptional coactivator proteins in *Arabidopsis thaliana*," talk given at Hobart and William Smith Colleges, Department of Biology, Geneva, NY. *November 2002*

Hark, A.T. "Regulation of the imprinted *H19*/*Igf2* locus," invited talk given at Georgian Court College, Department of Biology, Lakewood, NJ. *February 2000*

Hark, A.T. "Regulation of the imprinted *H19*/*Igf2* locus," invited talk given at The College of New Jersey, Department of Biology, Ewing, NJ. *February 2000*

Hark, A.T., C.S. Schoenherr, R.S. Ingram, J.M. Levorse, and S.M. Tilghman. "An enhancer blocking element lies upstream of the mouse *H19* gene," contributed talk given at the Chromatin Structure and DNA Function Symposium at The Pennsylvania State University, State College, PA. *July 1999*

TALKS and PRESENTATIONS *Continued*

Hark, A.T., C.S. Schoenherr, R.S. Ingram, J.M. Levorse, P. Schedl, and S.M. Tilghman. "Enhancer competition on mouse chromosome 7: how does *H19* gain its advantage on the maternal chromosome?", poster presented at the Society for Developmental Biology Annual Meeting, Palo Alto, CA. *June 1998*

Hark, A.T. and S.M. Tilghman. "Enhancer competition on mouse chromosome 7: how does *H19* gain its advantage on the maternal chromosome?", poster presented at a Gordon Research Conference - Epigenetic Mechanisms of Gene Regulation, Holderness, NH. *August 1997*

Hark, A.T., R.S. Ingram, and S.M. Tilghman. "Enhancer competition on mouse chromosome 7: how does *H19* gain its advantage on the maternal chromosome?", poster presented at Delaware Valley Mouse Club Symposium at Fox Chase Cancer Center, Philadelphia, PA. *November 1996*

Thompson, A.M., A.L. Webber, and S.M. Tilghman. "Hypersensitivity analysis of the *H19* upstream region," poster presented at a Gordon Research Conference - Nuclear Proteins, Chromatin Structure and Gene Regulation, Tilton, NH. *August 1995*

HONORS and AWARDS

2022 Recognition of Excellence in Teaching; Teaching Diversity, Equity, and Inclusion, Muhlenberg College
2018 Bridgebuilder's Award, Muhlenberg College *Also received in 2006-2010, 2012, 2015, 2017 (19 semesters in total; not longer awarded)*
2014 The Paul C. Empie '29 Memorial Award for Excellence in Teaching, Muhlenberg College
2011 Lindback Foundation Award for Distinguished Teaching, Muhlenberg College
1993 Barry M. Goldwater Scholar
1993 Elected to Phi Beta Kappa, Omicron Delta Kappa, and Mortar Board honor societies, College of William and Mary
1992 National Science Foundation Summer Undergraduate Research Fellowship

GRANTS

2021 Antiracism Pedagogical Development Grant, Muhlenberg College
2018 Faculty Summer Research and Direct Expense Grants, Muhlenberg College
2013 Faculty Summer Research and Direct Expense Grants, Muhlenberg College
2012 Research Direct Expense Grant, Muhlenberg College
2010 Center for Ethics Course Development Grant, Muhlenberg College
2010 RJ Fellows Faculty Development Grant, Muhlenberg College
2010 Travel award, ASBMB 2010 annual meeting, American Society for Biochemistry and Molecular Biology
2010 Course development grant, "Science and Citizenship," American Society for Biochemistry and Molecular Biology

GRANTS *Continued*

2010 Learning community on service learning, Muhlenberg College
2009 Travel award, Teagle Workshop focused on Biochemistry & Molecular Biology and Liberal Education, American Society for Biochemistry and Molecular Biology
2009 Faculty Summer Research Grant, Muhlenberg College
2008 Co-principal investigator, National Science Foundation-CCLI grant "Integration of Bioinformatics into a Biology Curriculum"
2008 Center for Ethics Course Development Grant, Muhlenberg College
2008 Faculty Summer Research Grant, Muhlenberg College
2008 Contributor, Merck-AAAS Undergraduate Science Research Program Award
2007 Summer First Year Seminar Grant, Muhlenberg College
2005 Faculty Summer Research Grant, Muhlenberg College
2005 Course Development Grant, President's Service Learning Initiative, Muhlenberg College
2003 Co-investigator, LI-COR DNA Sequencer Award, Muhlenberg College

PROFESSIONAL ACTIVITIES

Course Editor, *CourseSource* (publishes evidence-based teaching resources for undergraduate biology and physics) *October 2002-present*

Member of the Genomics Education Partnership. Current Chair of Assessment Committee; Leader of subcommittee on publication workflow in Spring 2022. *2009-present*

Member of the Lehigh Valley Molecular and Cell Biology Society Advisory Board; **co-host** of annual undergraduate research symposium 2019, 2021 *2016-present*

External Reviewer of major programs at Haverford College, Dickinson College, and Goucher College *2023, 2019*

Appointed member, American Society for Cell Biology task force on the scientific workplace *2019-2022*

Reviewer for national Goldwater Scholarship *2021*

Reviewer of manuscripts for scientific journals including *Plants, Plant Cell Reports, Plant Biotechnology Journal, Frontiers in Plant Science, Planta, Biochimica et Biophysica Acta, Molecular and Cellular Biology, Plant Physiology, Human Molecular Genetics*, and *Bioessays 2000-present*

Reviewer for National Center for Case Study Teaching in Science and CourseSource as well as textbooks, lab manuals, and proposals for major publishers of scientific educational materials *2005-present*

PROFESSIONAL ACTIVITIES *Continued*

Member of the American Association for the Advancement of Science (*since 1998)*, American Society for Biochemistry and Molecular Biology (*since 2003*), American Society for Cell Biology (*2015-2016, 2019*), American Society of Plant Biologists (*2013, 2016*), and Society for Developmental Biology (*1998-2008)*

External Reviewer of candidates for promotion at Moravian University, Drew University, Case Western Reserve University *2022, 2018, 2014*

Presenter at How-To Festival at Allentown Public Library (*September 2019*) and at Jefferson Elementary School (*May 2017, 2019*) showing how to extract DNA

Reviewer for *Science Books and Films*, a publication of the American Association for the Advancement of Science that provides critical reviews of educational and scientific materials *2000-2010*

Non-affiliated Member, Institutional Animal Care and Use Committee (IACUC), Moravian College *May 2005-July 2010*

Mentor in the Math Science Partnership of Greater Philadelphia (Lehigh Valley Initiative), a National Science Foundation-sponsored consortium *September 2004-June 2006*

SELECTED COLLEGE SERVICE

Elected member of College-wide committees. Serving a one year term on Faculty Personnel and Policies Committee in AY 2023-2024. Previous service (three year terms unless otherwise noted) includes Nominating Committee (3 terms; Chair AY 2022-2023 and AY 2007-2008), Faculty Personnel and Policies Committee (Fall 2021), Faculty Evaluation Committee (Spring 2020), Curriculum Committee (Chair, AY 2018-2019), Faculty Development and Scholarship Committee, Library Committee (Chair AY 2009-2010), Institutional Review Board (Chair AY 2008-2009), and Academic Judicial Board.

Appointed member of College-wide committees. Current member of Graduate School Preparatory Program for Students from Underrepresented Backgrounds faculty and staff committee. Previous service includes of COACHE working group on Decision Making, Pre-Health Advisory Committee, Faculty Center for Teaching Advisory Board, Woodrow Wilson Visiting Fellow Committee (Chair AY 2007-2008 and Fall 2008), Inaugural Chair of Institutional Animal Care and Use Committee (Spring 2007), and Center for Ethics advisory board.

Invited member, Faculty Staff Campaign Committee, 2016-2019.

Elected member of the Provost Search Committee, 2016-2017.

COLLEGE SERVICE ***Continued***
Elected Faculty Constituent Representative to the Board of Trustees, 2014-2016.

Appointed member of Faculty Working Group, Middle States review, 2014-2016.

Appointed member, Enrollment and Retention Committee, 2016.

Faculty co-leader for assessment of the Natural Sciences and Mathematics (SC) component of Muhlenberg's general education curriculum, 2015-2016.

Faculty Member, Phi Beta Kappa, Pi of Pennsylvania chapter. Previously served as Chapter Vice President, Chapter Historian, and a member of Nominating Committee.

Faculty Advisor for Biology and Biochemistry majors and science majors rostering internships. Faculty member of Honors committees for Biology, Biochemistry, and Neuroscience students. Advisor of first-year students (full year, Summer Advising, and mentor to new advisors).

PROFESSIONAL AND PEDAGOGICAL DEVELOPMENT
Participant in 3D Learning Assessment Virtual Workshop, hosted by the Genomics Education Partnership and led by Diane Ebert-May, Michigan State University *August 2023*

Invited Participant in Build-A-Genome Workshop, funded by National Science Foundation, Hartwick College *August 2023*

Invited Participant in GEP Workshop, funded by Howard Hughes Medical Institute, St. Louis, MO *June 2009; follow-up workshops June 2010, June 2011, June 2013 (online participant), June 2014, June 2015, July 2017, June 2020 (virtual), June 2021 (virtual; session co-chair), June 2022 (virtual), June 2023*

Participant and **Leader** in Muhlenberg Center for Teaching and Learning and other faculty development programs, Muhlenberg College *August 2004-present*

Invited participant in workshop "Dismantling Persistent Racial Equity Problems in Stem," offered by the Liberal Arts Colleges Racial Equity Leadership Alliance, in partnership with the USC Center for Racial Equity *September 2022*

Participant in the Inclusive STEM Teaching Project, edX course *June-July 2021*

Selected participant in Professional-development for Emerging Education Researchers (PEER) Biology workshop *June 2021*

PROFESSIONAL AND PEDAGOGICAL DEVELOPMENT *Continued*

Participant in Lehigh Valley Association of Independent Colleges (LVAIC) Facing Higher Education's Future Learning Series *2019*

Selected Participant in LVAIC Higher Education Leaders Institute *Academic Year 18-19*

Participant in PULSE Ambassador Campus Workshop (funded by National Science Foundation), Muhlenberg College *January 2019*

Participant in LVAIC Changing Landscape of Higher Education Workshop *August 2018*

Selected Participant in virtual workshop on "Bringing RNA-Seq into Undergraduate Education," Cold Spring Harbor Laboratory *June 2016*

Attendee at the American Association of Colleges and Universities annual meeting and pre-meeting symposium entitled "New Designs for Integrative Learning: Curricular Pathways, Departments, and the Future of Arts and Sciences," Washington, D.C. *January 2014*

Attendee at POD (Professional and Organizational Development Network in Higher Education) Conference, Pittsburgh, PA *November 2013*

Attendee at Lilly Conference with theme of "Brain-Based Learning and Teaching," Bethesda, MD *May-June 2012*

Participant in workshop entitled "Promoting Concept Driven Teaching Strategies in BMB Through Concept Assessments" sponsored by the American Society for Biochemistry and Molecular Biology, Bethlehem, PA. *March 2012*

Attendee at the American Association of Colleges and Universities annual meeting with theme of "Shared Futures, Difficult Choices: Reclaiming a Democratic Vision for College Learning, Global Engagement, and Success," Washington, D.C. *January 2012*

Participant in education symposium entitled "Promoting Concept Driven Teaching Strategies in BMB Through Concept Assessments" at the American Biochemistry and Molecular Biology national meeting, Washington, D.C. *April 2011*

Participant in American Society for Biochemistry and Molecular Biology symposium entitled "Student-Centered Education in the Molecular Life Sciences," Colorado Springs, CO *August 2009*

Participant in Bioinformatics Workshop, funded by NSF-CCLI grant, Muhlenberg College *May 2009*

PROFESSIONAL and PEDAGOGICAL DEVELOPMENT *Continued*

Student in Genome Consortium for Active Teaching (GCAT) Microarray Workshop, funded by the National Science Foundation, Atlanta, GA *July 2007*

Invited participant in 24th Annual Summer Symposium in Molecular Biology (entitled "Comparative and Functional Genomics"), The Pennsylvania State University, State College, PA *July 2005*

Participant in Central Pennsylvania SENCER (Science Education for New Civic Engagements and Responsibilities) Symposium, Harrisburg University, Harrisburg, PA *February 2005*

Participant in Process Oriented Guided Inquiry Learning (POGIL) in the Classroom and Laboratory, a National Science Foundation-sponsored workshop, Moravian College, Bethlehem, PA *January 2005*

Student in *Arabidopsis* Molecular Genetics course at Cold Spring Harbor Laboratory, Cold Spring Harbor, NY *Summer 2002*

Participant in "Conversations about Active Teaching and Learning," Faculty Development Seminar Series, Michigan State University *2001-2003*

Panelist in "Faculty as Mentors: Teaching with Assistants in Instruction," The Spring Meeting for the Faculty, Princeton University *2000*

Participant in Workshop on Effective College Teaching, Princeton University *1999*

Student in cross-disciplinary graduate course on classroom teaching, Princeton University *1998*

COURSES TAUGHT

At Muhlenberg College unless otherwise noted

Biochemistry with laboratory
From Organisms to Molecules
Concepts of Biology: Genes, Genomics, and Society
Genomes and Gene Evolution (capstone)
Principles of Biology III: Introduction to Molecules and Cells lecture, recitation, and laboratory
Wearing Our Genes: DNA and Determinism
Dana Forum (interdisciplinary senior honors seminar)
Dana Sophomore Seminar (interdisciplinary honors seminar)
Foods, Moods, and Broods: The Impact of Genetics on Society
Biology of Disease, Kalamazoo College
Physiological Ecology, Kalamazoo College

RESEARCH STUDENTS
Lauren Washco ’24, Independent study (Fall 2021, Spring 2022, Summer 2022, Fall 2022, Spring 2023)
Anam Ali ’25, Independent study (Spring 2023)

An additional 57 undergraduate students have been mentored at Muhlenberg College and Michigan State University.

ADDITIONAL TEACHING and RESEARCH EXPERIENCE
Volunteer Tutor for reading and math skills, Capital Area Literacy Coalition, Lansing, MI *2002-2003*

Workshop Instructor in a Howard Hughes Medical Institute-sponsored program for high school student participants, Kalamazoo College *2001*

Student Leader of workshop for incoming graduate student teaching assistants, Princeton University *1998-99*

Instructor, GRE Preparation Course, Kaplan Educational Center, New Brunswick, NJ *1997-98*

Undergraduate Research Student in the laboratories of Dr. Sharon Broadwater and Dr. Stanton Hoegerman, Department of Biology, College of William and Mary *1992-1994*

National Science Foundation Summer Undergraduate Research Program Participant in the laboratory of Dr. Javier Lopez, Department of Biological Sciences, Carnegie Mellon University, Pittsburgh, PA *1992*