

Keith Andrew Maggert, Ph.D.

Associate Professor

curriculum vitae – September 1, 2022

CONTACT INFORMATION

University of Arizona
College of Medicine
Department of Cellular & Molecular Medicine

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EDUCATION

2000	University of California, San Diego, Biology	Ph. D.
1992	University of California, Santa Cruz, Biochemistry and Molecular Biology	B. Sc.

POSITIONS AND APPOINTMENTS

Primary Appointment

2015¹–present Associate Professor
Department of Cellular and Molecular Medicine, College of Medicine

Administrative Roles

2019–present Vice-Chair
Cancer Biology Graduate Interdisciplinary Program, Graduate College

¹ In 2015, I moved from Texas A&M University (College Station, Texas) to the University of Arizona (Tucson, Arizona); many of the dates in this CV therefore have January 2015 as a break in employment or committee service.

Joint Appointments, Affiliations, and Memberships

- 2020–present Affiliated Faculty, Department of Molecular and Cellular Biology, College of Science
2016–present Research Member, Cancer Biology Program, University of Arizona Cancer Center
2015–present Faculty Member, Cancer Biology Graduate Interdisciplinary Program
2015–present Faculty Member, Genetics Graduate Interdisciplinary Program

Past Research Experience and Appointments

- 2011–2015¹ Associate Professor of Biology, Department of Biology, Texas A&M University
2004–2015 Faculty of Genetics, Interdisciplinary Genetics Program, Texas A&M University
2004–2011 Assistant Professor of Biology, Department of Biology, Texas A&M University
- 2000–2004 Postdoctoral Research Fellow: “*Genetic and molecular analyses of chromosome imprinting in Drosophila melanogaster*”; Dr. Kent G. Golic, University of Utah, Salt Lake City, Utah (2000-2001, 2002-2004) and The Stowers Institute for Medical Research, Kansas City, Missouri (2001-2002)
- 1996–2000 Graduate Research Fellow: “*Epigenetic regulation of centromere and neocentromere activity in Drosophila melanogaster*”; Dr. Gary H. Karpen, The Salk Institute/University of California San Diego, California
- 1993–1996 Graduate Research Fellow: “*Genetic regulation of mesoderm determination and differentiation in Drosophila melanogaster*” and “*Culturing and genetic cloning of the larvacean Oikopleura dioica*”; Dr. Michael S. Levine, University of California San Diego, California
- 1990–1992 Undergraduate Research: “*Structure and regulation of the vacuolar H⁺-pumping ATP hydrolase in Saccharomyces cerevisiae*”; Dr. Lincoln Taiz, University of California Santa Cruz, California

HONORS, AWARDS, MEMBERSHIPS

- 2016 High-Risk-High-Reward Transformative Research Award, National Institutes of Health
2014 Distinguished Achievement College-Level Award in Teaching, Texas A&M University Association of Former Students
2012 Wakonse Conference on College Teaching Fellow, Missouri ([link](#))
2006 March of Dimes Basil O’Connor Starter Scholars Researcher
2001–2004 National Institutes of Health, National Research Service Award, University of Utah and The Stowers Institute for Medical Research
1999–2000 Chapman Charitable Trust Fellowship, The Salk Institute
1999 Society for Research Fellows Presentation Award, The Salk Institute
1994–1998 Basic Biochemical and Biological Mechanisms in Cancer, National Institutes of Health Predoctoral Training Grant, University of California San Diego
1993 Excellence in Teaching Award, University of California San Diego
1995 Excellence in Teaching Award, University of California San Diego
1992–1998 Lucille P. Markey Charitable Trust Fellowship, University of California San Diego
1992 Honors in the Major, University of California Santa Cruz
1992 College Honors, University of California Santa Cruz

SERVICE AND COMMITTEES

Scientific

- 2021–present 2017 NIH Director's New Innovator High-Rick-High-Reward Award Stage-Two Review, National Institutes of Health
- 2019 14th International Conference on *Drosophila* Heterochromatin, Spoleto, session chair
- 2018–2019 Early Stage Investigator Maximizing Investigators' Research Award (ESI MIRA, R35) Grant Application review, National Institutes of Health
- 2017 13th International Conference on *Drosophila* Heterochromatin, Sardegna, session chair
- 2016–2020 2017 NIH Director's New Innovator High-Rick-High-Reward Award Stage-One Review, National Institutes of Health
- 2015–2020 Study Section for K99/R00 Grant Award Proposals, National Institutes of Health (NIH)
- 2011–2018 Study Section for SC1/SC2/SC3 Grant Award Proposals, Special Emphasis Panel/Scientific Review Group MBRS-SCORE, National Institutes of Health/General Medicine (NIH/GM)
- 2017 Biotechnology and Biological Sciences Research Council Grant Award Review
- 2017 2017 4D Nucleome Grant Application Review, National Institutes of Health and the 4D Nucleome Initiative
- 2014 Study Section, 2014 Space Biology Flight Review, National Aeronautics and Space Administration (NASA)
- 2013–2013 Solicited Mail-in Review, National Science Foundation (NSF)
- 2011 *Drosophila* Research Conference, session chair ("Chromatin Structure and Function")
- ongoing Journal Reviewer (Cell, PNAS, eLife, Science, Nature, Genetics, PLoS-Genetics, PLoS-Biology, Genome Research, G3, Biology, Cytogenetic & Genome Research, Molecular Biology & Evolution, Fly, etc.)

University – University of Arizona

- 2022– present Academic Personnel Policy Committee
- 2021– present Graduate Interdisciplinary Programs Advisory Council
- 2019– present Vice-Chair, Genetics Graduate Interdisciplinary Program
- 2019–present Admissions Committee, Curriculum Committee, and Executive Committee, Genetics GIDP
- 2018–2022 Organizer, University of Arizona College of Medicine Internal Study Section
- 2019 Academic Program Review (APR) Committee, Genetics, member
- 2017–2019 Graduate Studies Committee, member
- 2017–2019 Micro-campus Development Committee, member
- 2017 Academic Program Review (APR) Committee, Cellular & Molecular Medicine, member
- 2015–present Evaluator during Multiple Mini-Interviews at University of Arizona College of Medicine Applicant Visit Day
- 2015–present Interviewer during Student Recruiting for Arizona Biological and Biomedical Sciences Graduate Program

University – Texas A&M University

- 2012–2014 Committee on Academic Freedom, Responsibility, and Tenure

2012	Wakonse South, instructor
2011–2014	Capstone Research Program in Biology Committee
2011–2014	Dean’s Faculty Advisory Council, at-large representative for College of Science
2010–2014	LGBTQ Aggies, faculty mentor
2010–2014	Center for Teaching Excellence, fellow (and occasional instructor)
2010–2013	Annual Review Committee, Department of Biology
2007–2009	Department of Biology Seminar Committee
2006	Association of Former Students Awards Committee
2005–2009	Council of Principal Investigators
2005–2007	Department of Biology Seminar Committee, chair
2005	Department of Biology Graduate Student Awards selection Committee
2005	Department of Biology Staff Awards selection Committee
2005	Texas Regional Science Fair judge
2005	Student Research Week judge
2005–2006	Texas Junior Science and Humanities Symposium judge
2004–2007	Aggie Allies mentoring program (mentoring for LGBT students)
2004–2007	Regents Scholars mentoring program (mentoring students “at-risk” of underperformance)
2004–2007	ATMentors program (mentoring for students with special needs)

PUBLICATIONS

Research publications (peer-reviewed)

- Ray J, Maggert KA. *Symmetric Inheritance of Histones H3 in Drosophila Male Germline Stem Cell Divisions*. *Science Advances: in revision, Science Advances*.
- Bughio FJ, Maggert KA. (2022). *Live analysis of position-effect variegation in Drosophila reveals different modes of action for HP1a and Su(var)3-9*. *Proceedings of the National Academy of Sciences U.S.A.*: 119 (25): e2118796119.
- Bughio F, Huckell G, Maggert KA. (2019). *Live Monitoring of Switches in Heterochromatin-Induced Epigenetic Silencing Shows Incomplete Establishment and Developmental Instabilities*. *Proceedings of the National Academy of Sciences U.S.A.*, 116 (40): 20043-20053.
- Valori V, Tus K, Laukaitis C, Harris DT, LeBeau L, Maggert KA. (2019). *Human rDNA Copy Number Is Unstable in Metastatic Breast Cancers*. *Epigenetics*, DOI: 10.1080/15592294.2019.1649930.
- Ji J, Tang X, Hu W, Maggert KA, Rong YS. (2019). *The processivity factor Pol32 mediates nuclear localization of DNA polymerase delta and prevents chromosomal fragile site formation in Drosophila development*. *PLoS Genetics*, 15(5): e1008169.
- Aldrich JA, Maggert KA. (2015). *Transgenerational Inheritance of Nutrition-Induced Genome Rearrangements*. *PLoS Genetics*, 11(4): e1005148.
- Aldrich JA, Maggert KA. (2014). *Simple Quantitative PCR Approach to Reveal Naturally Occurring and Mutation-induced Repetitive Sequence Variation on the Drosophila Y Chromosome*. *PLoS ONE*, 9: e109906.
- Maggert KA. (2014). *Reduced rDNA Copy Number Does Not Affect “Competitive” Chromosome Pairing in XYY Males of Drosophila melanogaster*. *G3 (Bethesda)*. 2014 Jan 21. pii: g3.113.008730v1.

- Paredes S, Branco AT, Hartl DL, Maggert KA, Lemos B. (2011). *Ribosomal DNA Deletions Modulate Genome-Wide Gene Expression: 'rDNA-Sensitive' Genes and Natural Variation*. PLoS Genetics, 7: e1001376.
- Guerrero PA, Maggert KA. (2011). *The CCCTC-Binding Factor (CTCF) of Drosophila Contributes to the Regulation of Ribosomal DNA and Nucleolar Stability*. PLoS ONE, 6: e16401.
- Alfonso-Parra C, Maggert KA. (2010). *Drosophila SAF-B Links the Nuclear Matrix, Chromosomes, and Transcriptional Activity*. PLoS ONE, 5: e10248.
- Paredes S, Maggert KA. (2009). *Ribosomal DNA contributes to global chromatin regulation*. Proceedings of the National Academy of Sciences U.S.A., 106: 17829-34.
- Paredes S, Maggert KA. (2009). *Expression of I-Crel Endonuclease Generates Deletions Within the rDNA of Drosophila*. Genetics, 181: 1661-71.
- Goll MG, Kirpekar F, Maggert KA, Yoder JA, Hsieh C-L, Zhang X, Golic KG, Jacobsen SE, Bestor TH. (2006). *Methylation of tRNA-Asp by DNA methyltransferase-2 in mammals, flowering plants, and Dipteran insects*. Science, 311: 395-398.
- Maggert K, Golic K. (2005). *Highly-Efficient Sex Chromosome Interchanges Produced by I-Crel Expression in Drosophila*. Genetics, 171: 1103-1114.
- Maggert K, Golic K. (2002). *The Y Chromosome of Drosophila melanogaster Exhibits Chromosome-Wide Imprinting*. Genetics, 162(3): 1245-1258.
- Maggert K, Karpen G. (2001). *The Activation of a Neocentromere in Drosophila Requires Proximity to an Endogenous Centromere*. Genetics, 158(4): 1615-1628.
- Maggert K, Levine M, Frasch M. (1995). *The somatic-visceral subdivision of the embryonic mesoderm is initiated by dorsal gradient thresholds in Drosophila*. Development, 121: 2107-2116.
- Ip YT, Maggert K, Levine M. (1994). *Uncoupling gastrulation and mesoderm differentiation in the Drosophila embryo*. EMBO Journal, 13(24): 5826-5834.
- Taiz L, Nelson H, Maggert K, Morgan L, Yatabe B, Taiz SL, Rubinstein B, Nelson N. (1994). *Functional analysis of conserved cysteine residues in the catalytic subunit of the yeast vacuolar H⁺-ATPase*. Biochimica et Biophysica Acta, 1194(2): 329-34.

Solicited Reviews or Commentaries (peer-reviewed)

- Kindelay SM, Maggert KA. (2022). *Under the magnifying glass: The ups and downs of rDNA copy number*. Seminars in Cell and Developmental Biology: S1084-9521(22)00163-X.
- Maggert KA. (2019). *Stress: an Evolutionary Mutagen*. Proceedings of the National Academy of Sciences U.S.A. 116 (36): 17616-17618.
- Bughio FB, Maggert KA. (2018). *The peculiar genetics of the ribosomal DNA blurs the boundaries of transgenerational epigenetic inheritance*. Chromosome Research, 2018 Dec 4.
- Deans C, Maggert KA. (2015) *What Do You Mean "Epigenetic"?* Genetics, 199: 887-296.
- Maggert KA. (2011). *Genetics: Polymorphisms, Epigenetics, and Something In Between*. Genetics Research International, 2012: Article ID 867951.
- Maggert KA, Karpen GH. (2000). *Acquisition and metastability of centromere identity and function: sequence analysis of a human neocentromere*. Genome Research, 10: 725-728.

Dobie KW, Hari KL, Maggert KA, Karpen GH. (1999). *Centromere proteins and chromosome inheritance: a complex affair*. *Current Opinion in Genetics & Development*, 9: 206-217.

Solicited Book Chapters (peer-reviewed)

Maggert KA, Gong WJ, Golic KG. (2008). "Methods for Homologous Recombination in *Drosophila*," in *Drosophila Protocols*, Christian Dahmann editor. Humana Press. ISBN 978-1-58829-817-1.

FUNDING AND GRANTING

Current

- 2016 – 2022 National Institutes of Health, Roadmap Initiative/Office of the Director, High-Risk-High-Reward Transformative Research Award, "Induced Transgenerational Inheritance Without Epigenetics" (R01 GM123640), \$2,130,570 total award
- 2021 – 2022 Cellular and Molecular Medicine Incentive Grant, University of Arizona, "Analysis of *BLM*-dependent replication in *Drosophila*," \$5,000 total award
- 2021 – 2022 Core Facilities Pilot Program Grant, University of Arizona, "Creation of Specialized Mouse Chromosome – *MB-kSH*," \$11,620 total award

Pending

- in revision National Institutes of Health, Roadmap Initiative/Office of the Director, High-Risk-High-Reward Transformative Research Award, "Epigenetic Instabilities -- Mechanisms of Establishment and Maintenance of Heterochromatic Silencing " (R01 GM123640), \$2,137,561 total award
- in revision National Institutes of Health, "Determining the causes and consequences of iron deprivation on genome damage," (R01 GM144416), \$1,881,282 total award
- in revision National Institutes of Health, "New technologies for testing DNA replication in meta-zoans" (R21 GM148946-01), \$415,390 total award, co-PI with NA Ellis

Completed

- 2006 – 2011 National Institutes of Health, National Institute for General Medical Science, "DNA Methylation in *Drosophila*" (R01 GM076092), \$1,623,706 total award
- 2006 – 2008 March of Dimes, Basil O'Connor Starter Scholars Award, "Targets of Cytosine Methylation in *Drosophila*" (5-FY2006-34), \$150,000 total award
- 2001 – 2004 National Institutes of Health, National Research Service Award, University of Utah and The Stowers Institute for Medical Research, "Genetic Dissection of Genomic Imprinting in *Drosophila*" (F32 GM065777), \$129,180 total award

TEACHING, ADVISING, AND TRAINING

Graduate students, Ph.D. Program (Chair of committee)

- Ergül Ergen, Genetics Graduate Interdisciplinary Research Program, Jan 2022 – present
- Selina Kindelay, Genetics Graduate Interdisciplinary Research Program, Mar 2019 – present
- Farah (Sarah) Bughio, Department of Cellular and Molecular Medicine, Aug 2017 – Dec 2022, Chief Scientific Officer at On-Point Laboratories, Marana, Arizona [PubMed](#)
- Nicholas Panayi, Genetics Graduate Interdisciplinary Research Program, Sep 2017 – Dec 2018, terminated for cause
- John Aldrich, Ph.D., Department of Biology, Jan 2009 – Aug 2015, Laboratory Manager for SG Britt, Dell Medical School, University of Texas Austin, Austin, Texas, [PubMed](#)
- Paola Guerrero, Ph.D., Department of Biochemistry and Biophysics, Feb 2006 – Oct 2011, Research Group Leader, Translational Molecular Pathology with A Maitra, MD Anderson Cancer Center, Houston, Texas, [PubMed](#)
- Silvana Paredes, Ph.D., Department of Biology, Jan 2005 – Dec 2010, Senior Scientist at Cepheid, Palo Alto, California, [PubMed](#)
- Catalina Alfonso, Ph.D., Department of Biochemistry and Biophysics, Feb 2005 – Jun 2010, Research Investigator at Instituto Colombiano de Medicina Tropical, Sabaneta, Colombia, [PubMed](#)

Graduate students, Masters Program (Chair of committee)

- Chuol Kueth, Department of Cellular and Molecular Medicine, Jan 2017 – Nov 2018, switched labs
- Julie Ray, M.S., Department of Cellular and Molecular Medicine, Sep 2016 – May 2018, graduated
- Nicholas Panayi, Department of Cellular and Molecular Medicine, Jul 2016 – Sep 2017, moved to Ph.D.
- Virginia Valori, Department of Applied Biosciences, Sep 2015 – Jul 2017, medical withdrawal from UA
- Kudakwashe Kupara, Department of Biology, Jan 2010 – Dec 2013, terminated for cause

Graduate students, Ph.D. Program (member of committee)¹

- Barış Kerimoğlu, Genetics Graduate Interdisciplinary Research Program, Oct 2021 – present, N Ellis chair
- Doraid Sadideen, Cancer Biology Graduate Interdisciplinary Research Program, Jun 2020 – present, M Shaheen chair
- John Ryniawec, Department of Cellular and Molecular Medicine, Oct 2015 – Dec 2020, G Rogers chair
- Cody Boese, Cancer Biology Interdisciplinary Program, Oct 2015 – Oct 2020, G Rogers chair
- Erik Lehmkuhl, Department of Molecular and Cellular Biology, Sep 2017 – Sep 2020, D Zarnescu chair
- Sharvani Mahadevaraju, Department of Biology, Jan 2007 – Apr 2015, J Erickson chair
- Vangmayee Sharma, Department of Chemistry Jun 2013 – Jan 2015 (resigned on departure from Texas A&M), W Liu chair
- Kylee Veazey, Program in Genetics, July 2012 – Jan 2015 (resigned on departure from Texas A&M), M Golding chair
- Tianxin Liu, Department of Biology, May 2012 – Jan 2015 (resigned on departure from Texas A&M), P Hardin chair

Claudia Castillo, Dept of Biochemistry and Biophysics, Feb 2012 – Jan 2015 (resigned on departure from Texas A&M), X Zhang chair

Katayoon Keyhanian, Department of Biology, Jun 2011 – Jan 2015 (resigned on departure from Texas A&M), K Ryan chair

Ryan Millimaki, Program in Genetics, Dec 2005 – Jan 2015 (resigned on departure from Texas A&M), R Aramayo chair

Kory Douglas, Program in Genetics, Jul 2008 – Aug 2013, P Samollow chair

Jiajie Wei, Department of Biology, Jul 2008 – May 2013, M Sachs chair

Alejandra Noemi Gonzalez, Department of Biology, Sep 2005 – Mar 2012, J Erickson chair

Anjali Misra, Department of Biology, Oct 2006 – Jun 2011, T McKnight chair

Dmitry Lyalin, Department of Biochemistry and Biophysics, Jul 2005 – May 2011, V Panin chair

Pamela Sandoval, Department of Biochemistry & Biophysics, May 2006 – Nov 2010, G Kapler

Graduate students, Masters Program (member of committee)

Jeremy Myers, Genetics Graduate Interdisciplinary Research Program, Aug 2021 – Aug 2022, G Sutphin chair

Moriah Gottman, Department of Cellular and Molecular Medicine, Sep 2017 – Sep 2018, L Restifo chair

Michael Johanson, Program in Genetics, Aug 2008 – May 2013, C Coates chair

Elena Kozhina, Department of Biology, Oct 2005 – Jun 2009, J Erickson chair

Tiffany Johnston, Department of Agricultural Education, Sep 2007 – Aug 2008, G Roberts chair

Jennifer Koop, M.S., Department of Nuclear Engineering, Apr 2007 – Jul 2008, J Ford chair

TEACHING

Graduate (excluding research/thesis) – University of Arizona

2022 Fall	Advanced Genetics (CMM 518): 24 students
2022 Spring	Morality and Ethics in Science (GENE 671): 7 students
2021 Fall	Advanced Genetics (CMM 518): 14 students
2021 Fall	Epigenetics and Cancer (CBIO 552): ~20 students, 2 lectures
2021 Spring	Responsible Conduct in Research (CTS 595C): 10 students
2020 Fall	Advanced Genetics (CMM 518): 13 students
2020 Fall	Epigenetics and Cancer (CBIO 552): ~40 students, 2 lectures
2020 Spring	Chromosome Biology Journal Club (CMM 595A): 5 student
2019 Fall	Chromosome Biology Journal Club (CMM 595A): 7 students
2019 Fall	Advanced Genetics (CMM 518): 18 students
2019 Fall	Epigenetics and Cancer (CBIO 552): ~40 students, 2 lectures
2019 Spring	Chromosome Biology Journal Club (CMM 595A): 5 student
2018 Fall	Chromosome Biology Journal Club (CMM 595A): 5 students
2018 Fall	Advanced Genetics (CMM 518): 4 students
2018 Fall	Epigenetics and Cancer (CBIO 552): ~40 students, 1 lecture
2018 Spring	Chromosome Biology Journal Club (CMM 595A): 2 students

2017 Fall	Chromosome Biology Journal Club (CMM 595A): 4 students
2017 Fall	Epigenetics and Cancer (CBIO 552): ~40 students, 1 lecture
2017 Fall	Chromosome Biology Journal Club (CMM 595A): 4 students
2017 Spring	Chromosome Biology Journal Club (CMM 595A): 2 students
2016 Fall	Chromosome Biology Journal Club (CMM 595A): 3 students

Graduate (excluding research/thesis) – Texas A&M University

2013 Fall	Epigenetic Inheritance and its Mechanisms (Biology 652): 8 students
2011 Fall	Epigenetic Inheritance and its Mechanisms (Biology 652): 6 students
2010 Spring	Seminar in Biology (Biology 681): 2 students
2009 Spring	Epigenetic Inheritance and its Mechanisms (Biology 652): 8 students
2006 Fall	Epigenetic Inheritance and its Mechanisms (Biology 689): 4 students
2005 Fall	Epigenetic Inheritance and its Mechanisms (Biology 689): 7 students
2005 Fall	Developmental Biology Journal Club (Biology 681): 13 student

Undergraduate – University of Arizona

2022 Fall	Gene Regulation and Sex Determination (for MCB 181): ~100 students, 4 lectures
2022 Summer	Introductory Biology I (MCB 181): 34 students
2021 Fall	Gene Regulation and Sex Determination (for MCB 181): ~100 students, 1 lecture
2020 Fall	Gene Regulation and Sex Determination (for MCB 181): ~50 students, 1 lecture
2019 Fall	Gene Regulation and Sex Determination (for MCB 181): ~50 students, 1 lecture
2018 Fall	Gene Regulation and Sex Determination (for MCB 181): ~50 students, 1 lecture
2017 Fall	Gene Regulation and Sex Determination (for MCB 181): ~50 students, 1 lecture

Undergraduate – Texas A&M University

2014 Spring	Capstone Research Program in Biology (Biology 295): 16 students
2014 Spring	Cellular and Molecular Biology (Biology 213): 100 students
2013 Fall	Capstone Research Program in Biology (Biology 295): 21 students
2013 Spring	Cellular and Molecular Biology (Biology 213): 90 students
2013 Spring	Capstone Research Program in Biology (Biology 285): 17 students
2012 Fall	Capstone Research Program in Biology (Biology 285): 25 students
2012 Spring	Capstone Research Program in Biology (Biology 285): 21 students
2012 Spring	Cellular and Molecular Biology (Biology 213): 89 students
2011 Spring	Cellular and Molecular Biology (Biology 213): 94 students
2010 Fall	Cellular and Molecular Biology (Biology 213): 98 students (joint with W Versaw)
2010 Spring	Seminar in Biology (Biology 481): 14 students
2009 Fall	Cellular and Molecular Biology (Biology 213): 66 students
2008 Fall	Cellular and Molecular Biology (Biology 213): 65 students
2007 Fall	Cellular and Molecular Biology (Biology 213): 48 students
2007 Spring	Cellular and Molecular Biology (Biology 213): 75 students
2006 Spring	Cellular and Molecular Biology (Biology 213): 60 students

Undergraduate laboratory (duration greater than one semester) – University of Arizona

Kayla Burch, May 2022 – present
Michel Goyal, Aug 2021 – present
Christopher Burch, Mar 2020 – May 2021
Andrew Klein, Apr 2018 – May 2021, matriculating to Genetics GIDP
Leocadie Haguma, Sep 2017 – Nov 2018

Undergraduate laboratory (duration greater than one semester) – Texas A&M University

Noah Chapman, Jan 2014 – Jan 2015
Victor Cardenas, Feb 2012 – Sep 2013, currently lab manager at Houston Children's Hospital
Jamie Edelen, Jan 2011 – Nov 2012
Ashley Spiro, Aug 2011 – Aug 2012
Hillary Jackson, Aug 2011 – Aug 2012
Elijah Beavers, May 2011 – Jan 2012
Tan Pham, Jan 2010 – Dec 2010, accepted to Baylor College of Dentistry
Paulo Leal, Jan 2006 – Nov 2009, lab manager at Stowers Institute for Medical Research
Cara Spanel-Weber, Jun 2008 – Mar 2009
Thanh "Johnny" Chiem, Feb 2008 – Jun 2008, accepted to Baylor College of Dentistry
Ali Madha, Jan 2008 – Jun 2008
Alex Wyckoff, Jul 2007 – Jun 2008, accepted to UT Southwestern medical school
Dan Ledbetter, Jun 2006 – Jul 2007, accepted to graduate school at University of Kentucky
Michael Van Hal, Sep 2005 – Jan 2006, accepted to UT Southwestern medical school
Rodolfo Aramayo, Jan 2005 – Jul 2006

Medical – University of Arizona

2019 Fall	Embryology Lab (Foundations): ~50 students, 3 lab-lectures
2018 Fall	Embryology Lab (Foundations): ~50 students, 3 lab-lectures
2017 Fall	Embryology Lab (Foundations): ~50 students, 3 lab-lectures
2017 Fall	Human Embryology (Foundations): ~50 students, 6 lectures
2017 Fall	The Cell Cycle (Foundations): ~50 students, 2 lectures
2016 Fall	Embryology Lab (Foundations): ~50 students, 3 lab-lectures
2016 Fall	The Cell Cycle (Foundations): ~50 students, 1 lecture
2015 Fall	The Cell Cycle (Foundations): ~50 students, 1 lecture

Outreach / High School student laboratory – University of Arizona

Nora Shaheen, Aug 2022 – present
Sally Shaheen, Aug 2022 – present
Kayla Burch, Sep 2021 – May 2022
Jude Struble, Jun 2021, accepted to Trinity College, Dublin, Ireland

Teaching Interests

Introductory (freshman- or sophomore-level) biology

Genetics, medical genetics, especially chromosome biology and aneuploidies
Biochemistry (metabolic)
Developmental genetics/biology, embryology
Molecular biology, molecular genetics, cloning and molecular/recombinant techniques
Transposable elements
Eukaryotic gene regulation
Model systems biology

CONFERENCES AND PRESENTATIONS

- "Live Monitoring of Heterochromatic Gene Silencing" – University of South China Mini-Symposium, Nov 2021
- "Bloom Syndrome and Ribosomal DNA Instability: transgenerational effects" – Emerging Roles of the Nucleolus ASBMB Conference, Oct 2021
- "Rethinking Epigenetics: are we stuck at a roadblock that doesn't exist?" – High-Risk-High-Reward Symposium, National Institutes of Health, May 2021
- "Epigenetics: not as epi- as we thought" – University of Alabama Birmingham, Apr 2021
- "Epigenetics: not as epi- as we thought" – CMM Seminar Series, Apr 2020
- "Epigenetics: not as epi- as we thought" – MCB Seminar Series, Feb 2020
- "On the Phenomenon of Epigenetic Instability" – University of Arizona Cancer Center, Apr 2019
- "Somaclonal Variation – not as epigenetic as we thought?" – Fourteenth International Conference on *Drosophila* Heterochromatin, Spoleto Italy, 2019
- "rDNA as a genetic modifier: rethinking the idea of epigenetic modification" – Emerging Roles for the Nucleolus, American Society for Biochemistry and Molecular Biology, Stowers Institute for Medical Research, Kansas City, Missouri, 2017
- "Accessing the timing and stability of epigenetic silencing" – Epigenetics Gordon Research Conference, Holderness, New Hampshire, 2017
- "Heterochromatin, Epigenetic Instability, and Ribosomal DNA" (Keynote) – University of Washington rDNA Symposium, Seattle, Washington, 2016
- "Epigenetic 'Stability' in Position Effect Variegation" – Twelfth International Conference on *Drosophila* Heterochromatin, Palermo Sicily, 2015
- "Nutrition, Epigenetics, and the rDNA" – Eleventh International Conference on *Drosophila* Heterochromatin, Lecce Italy, 2013
- "Diet-Induced Changes to the Genome: a potential "epigenetic" mechanism" – Texas A&M University, Department of Entomology, Nov 2013
- "Natural, Induced, and Progressive Genome Changes" – University of Kentucky, Apr 2011
- "The Nucleolus and genome structure, chromosome instability, and gene regulation" – University of Texas Arlington, Nov 2010
- "The Nucleolus as Governing Body" – University of Kansas, Nov 2010
- "Genome Buffering: can volatile DNA explain genetic expressivity?" – Oregon State University, Jan 2010
- "Understanding Genome-wide Regulation" – Wayne State University, Sep 2007

- "DNA Methylation Affects Genomic Imprinting" – 45th Annual *Drosophila* Research Conference, Washington, D.C., 2004
- "Genomic Imprinting in *Drosophila*" – 6th International Conference on *Drosophila* Heterochromatin, Ravello, Italy, 2003
- "Genomic Imprinting in *Drosophila*" – 44th Annual *Drosophila* Research Conference, Chicago, 2003
- "Regulation of Centromere Activity in *Drosophila melanogaster*" – Cold Spring Harbor and The Salk Institute Annual Series, "The Cell Cycle," The Salk Institute, 1999
- "Epigenetic regulation of the *Drosophila* centromere" – 39th Annual *Drosophila* Research Conference, Washington, D.C., 1998
- "The *Drosophila* neocentromere" – 4th Annual University of California San Diego Biology Retreat, 1997
- "The Determination and Development of the Mesoderm in *Drosophila melanogaster*" – Lucille P. Markey Symposium, San Diego, 1995