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### Education:

B.A. Biology 1991, Reed College

Thesis, 'Offspring Fitness in Unpredictable Environments: The Evolution of Random Plasticity in Maternal Investment'

Advisor, Dr. Robert H. Kaplan

Ph.D. Population Biology 1997, University of California at Davis

Dissertation, 'Evolution of Developmental Mechanisms Underlying Salamander Pigment Patterns'

Fields of oral exam: Development, Ecology, Evolution, Statistics, General Population Biology

Graduate advisors: Dr. Carol A. Erickson, Dr. H. Bradley Shaffer

Post-doctoral 1997–2000, Genetics and genomics, Washington University Medical School, St. Louis

Advisor: Dr. Stephen L. Johnson

### Professional Positions:

1989	Field Assistant to Dr. Robert H. Kaplan, Republic of Korea
1989–1991	Research Associate with Dr. R. H. Kaplan, Reed College
1990	TA Population Biology, Reed College
1991	TA Introductory Biology, UC Davis
1994, 1995	TA Embryology, UC Davis
1995	Center for Population Biology Faculty RAship, UC Davis
1995	RA with Dr. Carol A. Erickson, UC Davis
1996	RA with Dr. H. Bradley Shaffer, UC Davis
1996	PGR (Associate-in) Embryology, UC Davis
1997–2000	Postdoctoral Fellow with Dr. Stephen L. Johnson, Washington University Medical School
1999–2000	Research Instructor, Washington University Medical School
1998–2000	Assistant Professor (on leave to complete postdoc), Section of Integrative Biology and Section of Molecular, Cell and Developmental Biology, Institute for Cellular and Molecular Biology, University of Texas at Austin
2000–2004	Assistant Professor, Section of Integrative Biology and Section of Molecular, Cell and Developmental Biology, Institute for Cellular and Molecular Biology, University of Texas at Austin
2004–2005	Associate Professor, Section of Integrative Biology and Section of Molecular, Cell and Developmental Biology, Institute for Cellular and Molecular Biology, University of Texas at Austin
2005–2006	Assistant Professor, Department of Biology, University of Washington, Seattle
2006–2009	Associate Professor, Department of Biology, University of Washington, Seattle
2005–2017	Affiliate Member, Institute for Stem Cell and Regenerative Medicine, University of Washington
2009–2017	Professor, Department of Biology, University of Washington, Seattle
2017–present	Pratt-Ivy Foundation Distinguished Professor of Morphogenesis, Department of Biology, University of Virginia, Charlottesville
2017–present	Affiliate Professor, Department of Cell Biology, University of Virginia, Charlottesville

### Grants and Federal Fellowships (PI Parichy, unless otherwise indicated):

1991–1994	NSF Graduate Research Fellowship
1995–1997	NSF Dissertation Improvement Grant (IBN-9423116; \$14,000)
1997–1999	NSF–Sloan Postdoctoral Fellowship in Molecular Evolution (DBI-9750006, \$80,000)
1997–2000	NIH Postdoctoral Fellowship (HD08490-01; award declined for NSF–Sloan DBI-9750006)
2000–2004	NSF IBN 007783 "Evolutionary genetics of <i>Danio</i> pigment pattern development" (\$537,000 total costs; declined for NIH R01 GM062182).

2001–2006 NIH R01 GM062182 “Developmental bases for pigment cell variation in *Danio*” (\$1,125,000 total costs; \$150,000 annual direct costs).

2001–2006 NIH R01 HD040165 “Developmental genetics of zebrafish metamorphosis” (\$1,312,500 total costs; \$175,000 annual direct costs).

2002–2007 NIH R24 RR16344 “Genomic resources for model amphibians” (\$1,292,000; PI, SR Voss, Colorado State University; Co-PI, Parichy, no direct costs to UW)

2005–2009 NSF IOB 0444517, IOB 0541733 “Evolutionary convergence and parallelism in zebrafish pigment pattern development” (\$800,000 total costs; \$130,719 annual direct costs)

2005–2007 NIH R03 HD050201 “Zebrafish normal table of post-embryonic development” (\$155,541 total costs; \$50,000 annual direct costs)

2006–2010 NIH R01 GM062182 “Developmental bases for pigment cell variation in *Danio*” (\$1,182,480 total costs; \$195,000 annual direct costs)

2006–2007 Royalty Research Fund #3727, University of Washington, “Genetic and phenotypic analysis of zebrafish dwarf mutant *shortstop*” (\$33,630 total costs)

2007–2011 NIH P01 GM078195 “Regulation of metal ion homeostasis by channel kinases” (A. Ryazanov PI, A. Scharenberg co-PI; 5 years; \$650,805 total costs subcontract to Parichy)

2009–2011 NIH R01 GM062182-09S1 “Technician and qPCR instrumentation supplement for NIH R01 GM062182” (\$246,635 total costs).

2011–2015 NIH R01 GM062182 “Developmental bases for pigment cell variation in *Danio*” (\$1,293,600 total costs; \$210,000 annual direct costs).

2011–2016 NIH R01 GM096906 “Melanocyte boundary interactions in development and neoplasia” (\$1,265,891 total costs; \$190,000 annual direct costs).

2013–2015 NIH R03 HD074787 “Genetic control of post-embryonic developmental progression in zebrafish” (\$154,500 total costs; \$50,000 annual direct costs)

2014–2018 NIH R01 GM111233 “Pigmentary model for thyroid hormone actions on stem cell lineages” (\$1,243,071 total costs; \$190,000–\$207,000 annual direct costs)

2015–2019 NIH R01 GM096906 “Cellular interactions underlying establishment and implementation of zebrafish adult pigment pattern” (\$1,378,057 total costs; \$197,716–\$365,259 annual direct costs).

2016–2017 Royalty Research Fund A112414, University of Washington, “Establishing zebrafish scale development as a new model system for morphogenesis of ossified tissues” (\$35,350).

2016–2017 NIH R01 GM096906 “Equipment supplement request: cellular interactions underlying establishment and implementation of zebrafish adult pigment pattern” (\$132,522 total costs).

2016–2020 NIH R24 OD021479 “Developing regeneration resources for a model amphibian” (PI, SR Voss, U. Kentucky, \$829,155 total costs; Co-PI, Parichy, \$165,831 annual total costs; \$107,334 annual direct costs).

2017–2022 NIH R35 GM122471 MIRA “Development and homeostasis of adult phenotypes” (\$2,807,532 total costs; \$354,180 to \$382,980 annual direct costs across years).

2018 NIH NIGMS R35 GM122471 MIRA “Development and homeostasis of adult phenotypes” administrative supplement for purchase of Illumina NextSeq550 sequencing platform (\$224,956 total costs).

2021–2023 NIH R03 HD104574 “Molecular anatomy resources for postembryonic zebrafish.” (\$161,500 total costs, 2 years; \$50,000 annual direct costs)

2021–2026 NIH R01 AR078320 “Mechanisms of signal transmission in vertebrate skin appendage development.” (\$1,776,500 total costs; \$220,000 annual direct costs)

2022–2027 NIH R35 GM122471 MIRA “Development and homeostasis of adult phenotypes” (\$2,945,800 total costs; \$364,805 annual direct costs).

2022–2024 NIH R35 GM122471-07S1 “Diversity supplement to Developmental origins and homeostatic mechanisms underlying adult phenotypes” (\$53,793 total direct costs, \$35,820 annual direct costs; graduate student salary and tuition).

2023 NIH R35 GM122471-08S2 “Developmental origins and homeostatic mechanisms underlying adult phenotypes: multispectral sorting of pigment cells from zebrafish and non-traditional model species” administrative supplement for purchase of Cytex Aurora CS FACS (\$250,000 total costs with \$227,586 UVa matching funds).

Articles:

1. Parichy DM, Kaplan RH. 1992. Developmental consequences of tail injury on the oriental fire-bellied toad, *Bombina orientalis*. **Copeia** 1992:129–137.
2. Parichy DM, Kaplan RH. 1992. Maternal effects on offspring growth and development depend on environmental quality in the frog, *Bombina orientalis*. **Oecologia** 91:579–586.
3. Parichy DM, Kaplan RH. 1995. Maternal investment and developmental plasticity: functional consequences for locomotor performance of hatchling frog larvae. **Functional Ecology** 9:606–617.
4. Parichy DM. 1996. Pigment patterns of larval salamanders (Ambystomatidae, Salamandridae): the role of the lateral line sensory system and the evolution of pattern-forming mechanisms. **Developmental Biology** 175:265–282. PMID: 8626032
5. Parichy DM. 1996. When neural crest and placodes collide: interactions between melanophores and the lateral lines that generate stripes in the salamander *Ambystoma tigrinum tigrinum* (Ambystomatidae). **Developmental Biology** 175:283–300. PMID: 8626033
6. Parichy DM. 1996. Salamander pigment patterns: how can they be used to study developmental mechanisms and their evolutionary transformation? **International Journal of Developmental Biology** 40:871–884. PMID: 8877461
7. Parichy DM. 1998. Experimental analysis of character coupling across a complex life cycle: pigment pattern metamorphosis in the tiger salamander, *Ambystoma tigrinum tigrinum*. **Journal of Morphology** 237:53–67. PMID: 9642792
8. Parichy DM, Stigson M, Voss SR. 1999. Genetic analysis of *steel* and the PG-M/versican-encoding gene *AxPG* as candidate genes for the *white (d)* pigmentation mutant in the salamander *Ambystoma mexicanum*. **Development, Genes and Evolution** 209:349–356. PMID: 10370116
9. Parichy DM, Rawls JF, Whitfield T, Pratt SJ, Johnson SL. 1999. Zebrafish *sparse* corresponds to an orthologue of *c-kit* and is required for the morphogenesis of a subpopulation of melanocytes, but is not essential for hematopoiesis or primordial germ cell development. **Development** 126:3425–3436. PMID: 10393121
10. Parichy DM, Ransom DG, Paw B, Zon L, Johnson SL. 2000. An orthologue of the *kit*-related gene *fms* is required for development of neural crest–derived xanthophores and a subpopulation of adult melanocytes in the zebrafish, *Danio rerio*. **Development** 127:3031–3044. PMID: 10862741
11. Parichy DM, Mellgren EM, Rawls JF, Lopes SS, Kelsh RN, Johnson SL. 2000. Mutational analysis of *endothelin receptor b1 (rose)* during neural crest and pigment pattern development in the zebrafish, *Danio rerio*. **Developmental Biology** 227:294–306. PMID: 11071756
12. Parichy DM. 2001. Homology and evolutionary novelty in the deployment of extracellular matrix molecules during pigment pattern formation in salamanders (*Taricha*, *Ambystoma*). **Molecular and Developmental Evolution (Journal of Experimental Zoology)** 291:13–24. PMID: 11335913
13. Parichy DM, Johnson SL. 2001. Zebrafish hybrids suggest genetic mechanisms of pigment pattern diversification in *Danio*. **Development, Genes and Evolution** 211:319–328. PMID: 11466528
14. Voss SR, Smith JJ, Gardiner D, Parichy DM. 2001. Conserved vertebrate chromosome segments in the large salamander genome. **Genetics** 158:735–746. PMID: 11404337
15. Parichy DM, Turner JM<sup>§</sup>. 2003. Temporal and cellular requirements for *fms* signaling during zebrafish adult pigment pattern development. **Development** 130:817–833. PMID: 12538511
16. Parichy DM, Turner JM<sup>§</sup>. 2003. Zebrafish *puma* mutant decouples pigment pattern and somatic metamorphosis. **Developmental Biology** 256:242–257. PMID: 12679100
17. Parichy DM, Turner JM<sup>§</sup>, Parker NB. 2003. Essential role for *puma* in development of post-embryonic neural crest-derived cells in zebrafish. **Developmental Biology** 256:221–241. PMID: 12679099
18. Engeszer RE, Ryan MJ, Parichy DM. 2004. Learned social preference in zebrafish. **Current Biology** 14:881–884. PMID: 15186744  
[Comment by: Peichel CL. 2004. Social behavior: how do fish find their shoal mate? *Current Biology* 14:R503–504]

19. Putta, S, Smith JJ, Walker J, Rondet M, Weisrock DW, Monaghan J, Samuels AK, Kump K, King DC, Maness NJ, Habermann B, Tanaka E, Bryant SV, Gardiner DM, [Parichy DM](#), Voss SR. 2004. From biomedicine to natural history research: EST resources for ambystomatid salamanders. **BMC Genomics** 5:54. PMID: [15310388](#)
20. Quigley IK, Turner JM<sup>§</sup>, Nuckels RJ<sup>§</sup>, Manuel JL, Budi EH<sup>§</sup>, MacDonald EL, [Parichy DM](#). 2004. Pigment pattern evolution by differential deployment of neural crest and post-embryonic melanophore lineages in *Danio* fishes. **Development** 131:6053–6069. PMID: [15537688](#)
21. Quigley IK, Roberts R<sup>§</sup>, Manuel JL, Nuckels RJ<sup>§</sup>, Herrington E, MacDonald EL, [Parichy DM](#). 2005. Evolutionary diversification of pigment pattern in *Danio* fishes: differential *fms* dependence and stripe loss in *D. albolineatus*. **Development** 132:89–104. PMID: [15563521](#)
22. Elizondo MR, Arduini BL, Paulsen J, Macdonald EL, Sabel JL, Henion PD, Cornell RA, [Parichy DM](#). 2005. Defective skeletogenesis with kidney stone formation in dwarf zebrafish mutant for *trpm7*. **Current Biology** 15:667–671. PMID: [15823540](#)
23. Smith JJ, Kump DK, Walker JA, [Parichy DM](#), Voss SR. 2005. A comprehensive EST linkage map for tiger salamander and Mexican axolotl: enabling gene mapping and comparative genomics in *Ambystoma*. **Genetics** 171:1161–1171. PMID: [16079226](#)
24. Engeszer RE, Patterson LB, Rao AA, [Parichy DM](#). 2007. Zebrafish in the wild: a review of natural history and new notes from the field. **Zebrafish** 4:21–40. PMID: [18041940](#)
25. Mills MG, Nuckels RJ<sup>§</sup>, [Parichy DM](#). 2007. Deconstructing evolution of adult phenotypes: genetic analyses of *kit* reveal homology and evolutionary novelty during adult pigment pattern development of *Danio* fishes. **Development** 134:1081–1090. PMID: [17287252](#)
26. Engeszer RE, Alberici da Barbiano L<sup>§</sup>, Ryan MJ, [Parichy DM](#). 2007. Timing and plasticity of shoaling behaviour in the zebrafish, *Danio rerio*. **Animal Behaviour** 74:1269–1275. PMC[2211725](#)
27. Engeszer RE, Wang G, Ryan MJ, [Parichy DM](#). 2008. Sex-specific perceptual space for a vertebrate basal social aggregative behavior. **Proc. Natl Acad. Sci. USA** 105:929–933. PMC[2242707](#)
28. Budi EH<sup>§</sup>, Patterson LB, [Parichy DM](#). 2008. Embryonic requirements for *ErbB* signaling in neural crest development and adult pigment pattern formation. **Development** 135:2603–2614. PMC[2704560](#)
29. Hultman KA, Budi EH<sup>§</sup>, Teasley DC, Gottleib AY, [Parichy DM](#), Johnson SL. 2009. Defects in *ErbB*-dependent establishment of adult melanocyte stem cells reveals independent origins for embryonic and regeneration melanocytes. **PLoS Genetics** 5:e1000544. PMC[2699538](#)
30. [Parichy DM](#), Elizondo MR, Mills MG, Gordon TN<sup>§</sup>, Engeszer RE. 2009. Normal table of post-embryonic zebrafish development: staging by externally visible anatomy of the living fish. **Developmental Dynamics** 238:2975–3015. PMC[3030279](#)
31. Lang MR, Gordon TN<sup>§</sup>, Patterson LB, Johnson SL, [Parichy DM](#). 2009. *Basonuclin-2* functions in adult pigment pattern formation and female fertility. **PLoS Genetics** 5:e1000744. PMC[2776513](#)
32. Christiansen HE, Lang MR, Pace JM, [Parichy DM](#). 2009. Critical roles for *col27a1a* and *col27a1b* in notochord morphogenesis, vertebral mineralization and post-embryonic axial growth. **PLoS One** 4:e8481. PMC[2794549](#)
33. Curran K, Lister JA, Kunkel GR, Prendergast, [Parichy DM](#), Raible DW. 2010. Interplay between *Foxd3* and *Mitf* regulate cell fate plasticity in the zebrafish neural crest. **Developmental Biology** 344:107–118. PMC[2909359](#)
34. Larson TA, Gordon TN<sup>§</sup>, Lau HE<sup>§</sup>, [Parichy DM](#). 2010. Defects in oligodendrocyte and Schwann cell development, pigment pattern, and craniofacial morphology in *puma* mutant zebrafish having an alpha tubulin mutation. **Developmental Biology** 346:296–309. PMC[2957186](#)
35. Elizondo MR, Budi EH<sup>§</sup>, [Parichy DM](#). 2010. *trpm7* regulation of in vivo cation homeostasis and kidney function involves *stanniocalcin1* and *fgf23*. **Endocrinology** 151:5700–5709. PMC[2999483](#)
36. Budi EH<sup>§</sup>, Patterson LB, [Parichy DM](#). 2011. Post-embryonic nerve-associated precursors to adult pigment cells: genetic requirements and dynamics of morphogenesis and differentiation. **PLoS Genetics** 7:e1002044. PMC[3098192](#)
37. [Perspective: Kelsh RN, Barsh GS. 2011. A nervous origin for fish stripes. *PLoS Genetics* 7:e1002081] Roeselers G, Mittge EK, Stevens WZ, [Parichy DM](#), Cavanaugh CM, Guillemain K, Rawls JF. 2011. Evidence for a core gut microbiota in the zebrafish. **ISME J** 5:1595–1608. PMC[3176511](#)

38. Eom DS, Inouye S, Patterson LB, Gordon TG<sup>§</sup>, Kondo S, Watanabe M, [Parichy DM](#). 2012. Melanophore migration and survival during zebrafish adult pigment stripe development require the immunoglobulin superfamily adhesion molecule, Igsf11. ***PLoS Genetics*** 8:e1002899. [PMC3420941](#)  
[Perspective: Kelsh RN. 2013. Spotting a role for an Ig superfamily member in pigment pattern formation. *Pigment Cell and Melanoma Research* 26:161–162]
39. McMenamin SK, Minchin JEN, Gordon TN<sup>§</sup>, Rawls JF, [Parichy DM](#). 2013. Dwarfism and increased adiposity in the growth hormone 1 mutant zebrafish *vizzini*. ***Endocrinology*** 154:1476–1487. [PMC3602633](#)
40. Patterson LB, [Parichy DM](#). 2013. Interactions with iridophores and the tissue environment required for patterning melanophores and xanthophores during zebrafish adult pigment stripe formation. ***PLoS Genetics*** 9:e1003561. [PMC3667786](#)  
[Perspectives: How the (Zebra)fish got its stripes. *Cell* 154:709, 2013; News and Views: Kondo S, Watanabe M. 2014. Black, yellow or silver: who leads skin pattern formation. *Pigment Cell Melanoma Res* doi: 10.1111/pcmr.12328]
41. Hamada H, Watanabe M, Lau HE<sup>§</sup>, Nishida T, Hasegawa T, [Parichy DM](#), Kondo S. 2014. Involvement of Delta–Notch signaling in zebrafish adult stripe patterning. ***Development*** 141:1–7. [PMC3879813](#)  
[Perspective: Goda M, Kelsh RN, Hashimoto H. 2014. Taking striping up a notch. *Pigment Cell and Melanoma Research* 27:688–689]
42. Inouye S, Kondo S, [Parichy DM](#)<sup>\*</sup>, Watanabe S<sup>\*</sup>. 2014. Tetraspanin-3c requirement for pigment cell interactions and boundary formation in zebrafish adult pigment stripes. 2013. ***Pigment Cell and Melanoma Research*** 27:190–200. [PMC3988474](#) <sup>\*</sup>Co-corresponding authors.  
[Editorial: Arnheiter H, Kelsh, RN, Bosenberg M. 2014. Stripes, dots and *dali*. *Pigment Cell and Melanoma Research* 154:709, 2013]
43. McMenamin SK, Bain EJ, McCann AE, Patterson LB, Eom DS, Waller ZP<sup>§</sup>, Hamill JC<sup>§</sup>, Kuhlman JA, Eisen JS, [Parichy DM](#). 2014. Thyroid hormone-dependent adult pigment cell lineage and pattern in zebrafish. ***Science*** 345:1358–1361. [PMC4211621](#)  
[Editorial: Purnell BA. 2014. Origin of fish pigment cell pattern. *Sci. Signaling* 7:ec256.]
44. Patterson LB, Bain EJ, [Parichy DM](#). 2014. Pigment cell interactions and differential xanthophore recruitment underlying zebrafish stripe reiteration and *Danio* pattern evolution. ***Nature Communications*** 5:6299. [PMC4224114](#)
45. Eom DS, Bain EJ, Patterson LB, Grout ME<sup>§</sup>, [Parichy DM](#). 2015. Long-distance communication by specialized cellular projections during adult pigment pattern development and evolution. ***eLife*** 10.7554/eLife.12401. [PMC4764569](#)  
[Perspective: McGowan KA, Barsh GS. 2016. How the zebrafish got its stripes. *eLife* doi:10.7554/eLife.14239; recommended as “exceptional” by F1000Prime]
46. McMenamin SK, Chandless M<sup>§</sup>, [Parichy DM](#). 2016. Working with post-embryonic zebrafish. ***Methods in Cell Biology*** 134:587–607.
47. Woodcock MR, Vaiugn-Wbolfe J, Elias A, Kump, DK, Kendall KD, Timoshevskaya N, Timoshevskiy V, Perrt DW, Smith JJ, Spiewak JE, [Parichy DM](#)<sup>\*</sup>, Voss SR<sup>\*</sup>. 2017. Identification of mutant genes and introgressed tiger salamander DNA in the laboratory axolotl, *Ambystoma mexicanum*. ***Scientific Reports*** 7:6. PMID: 28127056.
48. Eom DS, [Parichy DM](#). 2017. A macrophage relay for long distance signaling during post-embryonic tissue remodeling. ***Science*** 355:1317–1320. [PMC5836293](#).  
[Perspectives: Guillemins M. 2017. Macrophage, a long distance middleman. *Science* 355:1258–1259; Kornberg TB. 2017. Macrophages help cells connect to pattern zebrafish stripes. *Developmental Cell* 40:520–521; Martins A. 2017. The people behind the papers; Dae Seok Eom & David Parichy. *The Node*, April 7; Offord C. 2017. Macrophages physically relay signals between cell types. *The Scientist*, May 1.]
49. Hur M, Gistelinc CA, Huber P, Lee J, Thompson MH, Monstad-Rios AT, Watson CJ, McMenamin, SK, Willaert A, [Parichy DM](#), Coucke P, Kwon RY. 2017. microCT-based skeletal phenomics in zebrafish reveals virtues of deep phenotyping at the whole-organism scale. ***eLife*** 6:e26014. [PMC5606849](#)

50. Aman AJ, Fulbright AN, [Parichy DM](#). 2018. Wnt/ $\beta$ -catenin regulates an ancient signaling network during zebrafish scale development. *eLife* 10.7554/eLife.37001  
[News: Wu KJ. 2018. Combing through the fishy origins of human hair [Smithsonian.com](#); Samarrai F. 2018. The ancient armor of fish—scales—provide clues to hair, feather development. *UVA Today*. Insight: Brunsdon H, Patton EE. 2018. Patterning: Fishing for Ancestry. *eLife* 7:e39524; Gained N, 13 Aug 2018, “Whales, scales and moons — July’s best science images” [nature.com](#)]
51. Spiewak JE, Bain EJ, Liu J, Kou K<sup>§</sup>, Sturiale SL<sup>§</sup>, Patterson LB, Diba P<sup>§</sup>, Eisen JS, Braasch I, Ganz J, [Parichy DM](#). 2018. Evolution of endothelin signaling and diversification of adult pigment pattern in *Danio* fishes. *PLoS Genetics* 14:e1007538.
52. Salis P, Lorin T, Lewis V, Rey C, Marcionetti A, Escande M-L, Toux N, Besseau L, Salamin N, Sémon M, [Parichy DM](#), Volff J-N, Laudet V. 2019. Developmental and comparative transcriptomic identification of iridophore contribution to white barring in clownfish. *Pigment Cell and Melanoma Research* pcmr.12766. [PMC6483885](#)
53. Lewis VM, Saunders LM, Larson TA, Bain EJ, Sturiale SL<sup>§</sup>, Gur D, Chowdhury S, Flynn JD, Allen MC, Deheyn DD, Lee JC, Simon JA, Lippincott-Schwartz J, Raible DW, [Parichy DM](#). 2019. Fate plasticity and reprogramming in genetically distinct populations of *Danio* leucophores. *Proc. Natl Acad. Sci. USA* 116:11806–11811. [pnas.1901021116](#). [PMC6575160](#)
54. Saunders LM, Mishra AK, Aman AJ, Lewis VM, Toomey MB, Packer JS, Qiu X, McFaline-Figueroa JL, Corbo JC, Trapnell C\*, [Parichy DM](#)\*. 2019. Thyroid hormone regulates distinct paths to maturation in pigment cell lineages. *eLife* 10.7554/eLife.45181. [PMC6588384](#)
55. Volkov LI, Kim-Han J, Saunders LM, [Parichy DM](#), Corbo JC. 2020. Thyroid hormone regulates two mechanisms of long-wavelength vision with different transcription factor dependencies. *Proc. Natl Acad. Sci. USA* 117:15262-15269.
56. Gur D, Bain E, Johnson K, Aman AJ, Pasoili A, Flynn JD, Allen MC, Deheyn DD, Oron D, Levkowitz G, Lee JC, Lippincott-Schwartz J\*, [Parichy DM](#)\*. 2020. *In situ* differentiation of iridophore crystallotypes underlies zebrafish stripe patterning. *Nature Communications* 11:6391.
57. McCluskey BM, Uji S, Mancusi JL<sup>§</sup>, Postlethwait JH, [Parichy DM](#). 2021. A complex genetic architecture in zebrafish relatives *Danio quagga* and *D. kyathit* underlies development of stripes and spots. *PLoS Genetics* 17:e1009364.
58. Salis P, Roux N, Huang D, Marcionetti A, Mougnot P, Reynaud M, Salles O, Salamin N, Pujol B, [Parichy DM](#), Planes S, Laudet V. 2021. Thyroid hormones regulate the formation and environmental plasticity of white bars in clownfishes. *Proc. Natl Acad. Sci. USA* 118:e2101634118.
59. Eom DS, Patterson LB, Bostic RR, [Parichy DM](#). 2021. Immunoglobulin superfamily receptor Junctional adhesion molecule 3 (Jam3) requirement for melanophore survival and patterning during formation of zebrafish stripes. *Developmental Biology* 476:314–327.
60. Aman AJ, Kim M<sup>§</sup>, Saunders LM, [Parichy DM](#). 2021. Thyroid hormone couples skin morphogenesis to body growth during post-embryonic zebrafish development. *Developmental Biology* 477:205–218.
61. McCluskey BM, Liang Y, Lewis VM, Patterson LB, [Parichy DM](#). 2021. Pigment pattern morphospace of *Danio* fishes: evolutionary diversification and mutational effects. *Biology Open* bio.058814.
62. Huang D, Lewis VM, Toomey MB, Corbo JC, [Parichy DM](#). 2021. Development and genetics of red coloration in the zebrafish relative *Danio albolineatus*. *eLife* 10:e70253.
63. Lalonde RL, Kemmler CL, Riemsdagh FW, Aman AJ, Kresoja-Rakic J, Moran HR, Nieuwenhuize S, [Parichy DM](#), Burger A, Mosimann M. 2022. Heterogeneity and genomic loci of ubiquitous Cre reporter transgenes in zebrafish. *Developmental Dynamics* 251:1754–1773.
64. Toomey MB, Marques CI, Araújo PM, Huang D, Zhong S, Liu Y, Schreiner GD, Myers CA, Pereira P, Afonso S, Andrade P, Gazda MA, Lopes RJ, Viegas I, Smith DJ, Ogawa Y, Murphy D, Kopec RE, [Parichy DM](#), Carneiro M, Corbo JC. 2022. A mechanism of ketocarotenoid biosynthesis in vertebrates. *Current Biology* 32:1–14.
65. Aman AJ, Saunders LM, Carr AA, Srivatsan SR, Eberhard CD, Carrington B, Watkins-Chow D, Pavan WJ, Trapnell C, [Parichy DM](#). 2023. Transcriptomic profiling of tissue environments critical for post-embryonic patterning and morphogenesis of zebrafish skin. *eLife* eLife.86670.4.  
[Tan YR, L M, Chen C-H. 2023. Development: The hidden depths of zebrafish skin. *eLife* eLife.88597]

66. Huang D, Kapadia E<sup>§</sup>, Liang Y, Shriver LP, Dau S, Patti GJ, Humbel BM, Laudet V, [Parichy DM](#). 2025. Agouti and BMP signaling drive a naturally occurring fate conversion of melanophores to leucophores in zebrafish. *Proc. Natl Acad. Sci. USA* 122:e2424180122.
67. Korzeniowsky KG, de Mello PLH, Liang Y, Feltes N, Farber SA, [Parichy DM](#). 2025. Dominant negative Mitf allele impacts melanophore and xanthophore development and reveals collaborative interactions with Tfec in zebrafish chromatophore lineages. *Pigment Cell and Melanoma Research*, 38:e7009.
68. Klann M, Miura S, Lee S-H, Vianello S, Watanabe M, Gaiin E, Liang Y, Herrera-Sarrias M, Kondo S, Pigolotti S, Besseau L, [Parichy DM](#)<sup>\*</sup>, Kinoshita M<sup>\*</sup>, Laudet V<sup>\*</sup>. 2026. The clownfish *snowflake* mutation reveals cell–cell communication as an underlying principle governing color pattern formation in teleost fishes. *Nature Communications* 10.1038/s41467-026-69524-8.
69. Huang D, de Mello PLH, Liu T<sup>§</sup>, Liu Y, Kapadia EH<sup>§</sup>, Liang Y, Lu J, Corbo JC, [Parichy DM](#). 2026. Graded BMP signals modulate yellow and red color in fishes, impacting adult pigment patterns and conspecific shoaling behavior. *Current Biology* 36:1–10.
70. Huang D, Liu T<sup>§</sup>, Carr AA, de Mello PLH, Liang Y, Shriver L, Chauvigné F, Johnson SL, Cerda J, Patti GJ, [Parichy DM](#). 2026. Cell type diversification and phenotype convergence underlying white fin-ornamentation of cyprinid fishes. *Proc. Natl Acad. Sci. USA* 123:e2537571123..
- Lu J, Podobnik M, Huang J, McCluskey B, Gao D, Huang J, Liu J, Fang W, Huang P, Ma C, [Parichy DM](#)<sup>\*</sup>, Irion U<sup>\*</sup>, Liu J, Howe K<sup>\*</sup>, Postlethwait JH<sup>\*</sup>. 2025. Genomic and genetic insights into speciation and pigment pattern diversification in *Danio* fishes. [bioRxiv 2025.10.17.682988](#). *Nature Communications*, in revision.
- Patterson LB, Liang L, Malezyna M, Dennis A, McCluskey BM, Sepich DS, Solnica-Krezel L, Dhayalan A, Jomaa A, [Parichy DM](#). DEAD-box RNA helicase 49 (Ddx49) requirements for proliferative expansion of post-embryonic neural crest derived pigment cell populations and ribosome biogenesis in zebrafish. In preparation.
- Aman AJ, Carr AA, Liang Y, Kim M<sup>§</sup>, de Mello PLH, Johnson SL, Chauvigné F, Cerdà J, Patterson LB, [Parichy DM](#). Dermal progenitor cell and stromal impacts on skin morphogenesis and pigment pattern formation of zebrafish. In preparation.

\* co-corresponding authors; § undergraduate researcher or started in lab as undergraduate researcher

#### Invited articles, book chapters, and reports:

1. [Parichy DM](#), Shaffer HB, Mangel M. 1992. Heterochrony as a unifying theme in evolution and development. *Evolution* 46:1252–1254.
2. Reedy MV, [Parichy DM](#), Erickson CA, Mason K, Frost-Mason SK. 1998. “Regulation of melanoblast migration and differentiation.” Chapter 5, in: *The Pigmentary System and its Disorders* (Nordland JJ, Boissy RE, Hearing VJ, King RA, Ortonne JP, Eds.). Oxford.
3. [Parichy DM](#). 2001. “Pigment patterns of ectothermic vertebrates: heterochronic vs. non-heterochronic models for pigment pattern evolution.” In: *Beyond Heterochrony* (Zelditch M, Ed.). Wiley.
4. Voss SR, [Parichy DM](#). 2001. Salamander genome project. *Axolotl Newsletter* Issue 28.
5. Quigley IK, [Parichy DM](#). 2002. Pigment pattern formation in zebrafish: a model for developmental genetics and the evolution of form. *Microsc. Res. Tech* 58:442–455. [PMID: 12242701](#)
6. [Parichy DM](#). 2003. Pigment patterns: fish in stripes and spots. *Current Biology* 13:R947–R950. [PMID: 14680649](#)
7. Brainerd E, Brakefield P, Crawford D, Emlen D, Feder M, Haag E, Hanken J, Koehl M, Kaufman T, Nijhout F, [Parichy D](#), Peichel C, True J, West-Eberhard M-J, Wheeler D, Wray G, Zera A. 2004. An integrative developmental biology workshop report. National Science Foundation, Division of Integrative and Organismal Biology, [NSF document number idbws001](#).
8. [Parichy DM](#). 2005. “Variation and developmental biology: prospects for the future.” Chapter 19, in: *Variation: A Hierarchical Examination of a Central Concept in Biology* (Hallgrimsson B, Hall BK, Eds.). Academic Press.
9. Kocher TD (organizer), Jeffery WR, [Parichy DM](#), Peichel CL, Strelman JT, Thorgaard GH. 2005. Roundtable discussion: Fish models for studying adaptive evolution. *Zebrafish* 2:147–156. [PMID: 18248189](#)

10. [Parichy DM](#), Reedy MV, Erickson CA. 2006. "Regulation of melanoblast migration and differentiation." Chapter 5, in: ***The Pigmentary System and its Disorders***, 2<sup>nd</sup> Ed. (Nordland JJ, Boissy RE, Hearing VJ, King RA, Ortonne JP, Eds.). Oxford.
11. [Parichy DM](#). 2006. Evolution of danio pigment pattern development. *Heredity* 97:200–210. PMID: [16835593](#)
12. [Parichy DM](#). 2007. Homology and the evolution of novelty during danio pigment pattern development. ***Molecular and Developmental Evolution (Journal of Experimental Zoology)***. 3-8:578–590. PMID: [17094081](#)
13. Kelsh RN, [Parichy DM](#). 2007. "Pigmentation." In: ***Fish Larval Physiology*** (Finn RN, Kapoor BG, Eds.). Science Publishers Inc.
14. Streebman JT, Peichel C, [Parichy DM](#). 2007. Developmental genetics of adaptation in fishes: the case for novelty. ***Annual Review of Ecology, Evolution, and Systematics*** 38:655–682.
15. Ekker SC, [Parichy DM](#), Cheng KC. 2008. Research implications of pigment biology in zebrafish: A roundtable discussion. ***Zebrafish*** 5:233–235. PMID: [19133820](#)
16. [Parichy DM](#). 2009. Animal pigment pattern: an integrative model for studying the development, evolution, and regeneration of form. ***Seminars in Cell and Developmental Biology*** 20:63–64. PMID: [19146966](#)
17. McMennamin SK, [Parichy DM](#). 2012. Metamorphosis in teleosts. ***Current Topics in Cell and Developmental Biology*** 103:128–165. PMID: [23347518](#)
18. [Parichy DM](#), Spiewak JE. 2014. Origins of adult pigmentation: developmental diversity in pigment stem cells and lineages and implications for pattern evolution. ***Pigment Cell and Melanoma Research*** 28:31–50. [PMC4276524](#)
19. [Parichy DM](#). 2015. Advancing biology through a deeper understanding of zebrafish ecology and evolution. *eLife* 4:05636. PMID: [25807087](#)
20. [Parichy DM](#). 2016. *News and views*: The gar is a fish...is a bird...is a mammal? ***Nature Genetics*** 48:344–345.
21. Patterson LB, [Parichy DM](#). 2018. *Preview*: Melanophores tune out the noise to make stripes. ***Developmental Cell*** 45:544–545.
22. Patterson LB, [Parichy DM](#). 2019. Zebrafish pigment pattern formation: insights into the development and evolution of adult form. ***Annual Review of Genetics*** 53:505–530.
23. [Parichy DM](#). 2020. "Zebrafish Pigmentation," Chapter 21 in: ***Zebrafish in Biomedical Research*** (Cartner SC, Eisen J, Farmer S, Kent MS, Sanders GE, Guillemin K, Eds.). Elsevier.
24. Aman AJ, [Parichy DM](#). 2020. "Zebrafish Integumentary System," Chapter 4 in: ***Zebrafish in Biomedical Research*** (Cartner SC, Eisen J, Farmer S, Kent MS, Sanders GE, Guillemin K, Eds.). Elsevier.
25. [Parichy DM](#), Postlethwait J. 2020. "The Biotic and Abiotic Environment of Zebrafish," in: ***Behavior and Neural Genetics of Zebrafish*** (Gerlai R, Ed.). Elsevier.
26. [Parichy DM](#). 2021. Evolution of pigment cells and pattern: recent insights from teleost fishes. ***Current Opinion in Genetics and Development*** 69:88–96.
27. [Parichy DM](#). 2021. "Evolution of Pigment Pattern Formation in Fish," Chapter 10, in: ***Pigments, Pigment Cells and Pigment Patterns*** (Hashimoto H, Goda M, Futahashi R, Kelsh RN, Eds.). Springer.
28. Aman AJ, [Parichy DM](#). 2024. Anatomy, development and regeneration of zebrafish elasmoid scales. ***Developmental Biology*** doi: 10.1016/j.ydbio.2024.03.001.

#### Awards and non-Federal Fellowships:

1991	Phi Beta Kappa
1991	Ellen Knowlton Johnson Scholarship, Reed College
1991	Class of 1921 Award, Reed College
1993	Center for Population Biology Graduate Research Grant, UC Davis
1994	Graduate Research Award, UC Davis
1994	Grant-in-Aid of Research, Sigma Xi
1994, 1997	Travel grants, Pan American Society for Pigment Cell Research
1994–1995	Jastro-Shields Graduate Research Scholarship, UC Davis
1994–1995	Center for Population Biology Graduate Fellowship, UC Davis

1995 Phi Beta Kappa Graduate Scholarship, UC Davis  
 1996, 1997 ARCS Foundation Graduate Scholarships, UC Davis  
 1996 Honorable Mention, Best Student Presentation, Society for Developmental Biology Annual Meeting  
 1997 Merton Love Award for best dissertation in ecology and evolution, UC Davis  
 2001–2004 Institute for Cellular and Molecular Biology Fellowships, UT Austin  
 2001, 2002 Reeder Centennial Fellowships in Systematic and Evolutionary Biology, UT Austin

Professional Service (grants):

2002, June NIH Study Section CDF-5, Ad hoc member  
 2002, Nov NIH Study Section ZRG1 SSS-Y, Ad hoc member  
 2002, Nov NIH Study Section F05 CDF-IRG, Ad hoc member  
 2003, Feb NIH Study Section F05 CDF-IRG, Ad hoc member  
 2003, June NIH Study Section F05 CDF-IRG, Ad hoc member  
 2003, June NIH Study Section ZRG1 CDF-4, Ad hoc member  
 2004, Feb NIH Study Section DEV2, Ad hoc member  
 2004, July NIH Study Section ZRG1 F05, Ad hoc member  
 2005, March NIH Study Section PAR Genetic resources for zebrafish, Ad hoc member  
 2005, March NIH Study Section SSDB, Ad hoc member  
 2005, Oct NSF Animal Development and Evolution of Development Panel  
 2006, Feb NIH Study Section SSDB, Ad hoc member  
 2007, July NIH Study Section ZNS1 SRB-M (50), Ad hoc member  
 2008, June NIH Study Section ZHD1 DSR-Z (DE) 1, Ad hoc member  
 2008, June NIH Study Section ZAR1 MLB-G (M1) NIAMS Building Interdisciplinary Research Team, Ad hoc  
 2010 NSF Animal Development and Evolution of Development Panel  
 2007–2010 NIH Study Section DEV1, Regular member (three panels annually)  
 2012, March NIH Study Section ZRG1 MOSS-B (04), Ad hoc member  
 2012, June NIH Study Section GVE, Ad hoc, mail-in reviewer  
 2015, Feb NIH CSR Application Comparison Pilot Study  
 2016, May Science Technology Policy Institute, reviewer of NIH Director’s New Innovator Award Program  
 2016, Oct NIH ZHD1 DRG-D (57) K99/R00, Chair  
 2017, Feb NIH ZHD1 DSR-G (02) K99/R00, Chair  
 2017, Feb NIH ZRG1 BCMB-A (51) TR01 mail-in reviewer  
 2019, Apr NIH ZGM1 TRN-5 (MR) NIGMS ESI-MIRA Special Emphasis Panel  
 2021, June NIH Study Section ACTS, Ad hoc, mail-in reviewer  
 2000–present External grant reviews: NSF (20+ ad hoc); Austrian Science Fund FWF (1); German–Israeli Foundation for Scientific Research and Development (1); Keck Foundation (1); Konrad Lorenz Institute für Evolutions und Kognitionsforschung (1); Netherlands Organization for Scientific Research (2); New Zealand Genesis Oncology Trust (1); Agence National de la Recherche, France (2); US Air Force Office of Scientific Research (1); US Army Research Office, Life Sciences Division (1); Boehringer Ingelheim Fonds Foundation for Basic Research (1); Swiss National Science Foundation (1); Wellcome Foundation (1)  
 2025 NSF-GRFP reviewer, *ad hoc*  
 2023–2026 NIH Study Section ZRG1 F05-D 25L, Chair (3 meetings annually)

Professional Service (manuscript reviews, editorial, other):

2006–2008 Advisory board, *Ambystoma* Genetic Stock Center, Lexington KY  
 2007 Guest Editor, *Seminars in Cell and Developmental Biology* “Development of Pigment Cells and Pigment Pattern”  
 2008 Guest Editor, *Zebrafish* “Pigment Biology”  
 2009–2012 Editorial Board, *Pigment Cell and Melanoma Research*  
 2012–2015 Associate Editor, *Genetics*

2014–present Guest Editor, Ad hoc, *PLoS Genetics*

2012 External consultant, Developmental Biology Faculty Search Committee, Reed College

2014 Organizer, Northwest Regional Developmental Biology Meeting, Friday Harbor Labs

2014 Session Chair, Zebrafish Development and Genetics, Madison WI

2014–2018 Advisory board, *Ambystoma* Genetic Stock Center, Lexington KY

2015 Session Chair, 6th Strategic Conference of Zebrafish Investigators, Asilomar CA

2021 International Zebrafish Society, 16th International Zebrafish Conference, Session Chair

2021 External examiner, dissertation defense: J Owen (Ph.D., University of Bath, UK)

2021 External examiner, dissertation defense: T Frantz (M.D./Ph.D., U Mass Medical School, Amherst)

2023 Participant, National Academy of Science, Institute for Laboratory Animal Research, NIH Guide for the Use of Laboratory Animals, updates for zebrafish

2024 External examiner, dissertation defense: S Perlee (Ph.D., Memorial Sloan Kettering Cancer Center, NY)

2005–present External reviewer promotion and tenure (14, 1 in 2025)

1991–present Reviewer for journals: *Animal Behaviour*; *Anatomical Record*; *Behavioral Ecology*; *Bioessays*; *Biological Research*; *Biological Reviews*; *Bioscience*; *Biotechniques*; *BMC Developmental Biology*; *BMC Evolutionary Biology*; *Cell and Tissue Research*; *Cell Reports*; *Comparative Biochemistry and Physiology*; *Copeia*; *Current Biology*; *Development*; *Developmental Dynamics*; *Disease Models and Mechanisms*; *eLife*; *Genes and Evolution*; *Developmental Biology*; *Developmental Dynamics*; *Differentiation*; *DNA Sequence*; *EMBO J*; *Evolution*; *Evolution and Development*; *Experimental Biology and Medicine*; *G3*; *Gene*; *Genes and Development*; *Genesis*; *Genes to Cells*; *Genetics*; *Heredity*; *Herpetologica*; *International Journal of Developmental Biology*; *Journal of Evolutionary Biology*; *Journal of Experimental Zoology*; *Journal of Fish Biology*; *Journal of Investigative Dermatology*; *Life Science Alliance*; *Microscopy Research and Technique*; *Journal of Molecular Evolution*; *Journal of the Royal Society Interface*; *Mechanisms of Development*; *Methods*; *Molecular Biology and Evolution*; *Molecular Biology of the Cell*; *Molecular Genetics and Genomics*; *Nature*; *Nature Cell Biology*; *Nature Communications*; *Nature Genetics*; *Pigment Cell and Melanoma Research*; *PLoS*; *PLoS Genetics*; *PLoS One*; *Proceedings of the Royal Society of London, Series B*; *PNAS*; *Science*; *Trends in Ecology and Evolution*; *Trends in Genetics*; *Zebrafish*

University or departmental committees and service:

2000–2001 Zoology Graduate Fellowship Committee, UT

2001 Ecology, Evolution, and Behavior Graduate Curriculum Committee, UT

2001–2004 Cell and Molecular Biology Graduate Admissions Committee, UT

2002 Institute for Cellular and Molecular Biology, Core Facilities Evaluation Committee, UT

2002–2004 Institute for Cellular and Molecular Biology, Core Facilities Standing Oversight Committee, UT

2001–2003 Member at large, Faculty Council, UT

2003 Developmental Biologist Search Committee, Section of Mol, Cell and Dev Biology, UT

2003 UTeach Evolutionary Biologist Search Committee, Section of Integrative Biology, UT

2002–2004 Ecology, Evolution and Behavior Graduate Fellowship and Evaluation Committee, UT

2002–2003 Chair, Faculty Council Calendar Committee, UT

2002–2004 Faculty Grievance Panel Pool, UT

2003 Cell and Molecular Biology Qualifying Exam Chairmans Committee, UT

2003 Molecular Evolution Search Committee, Section of Integrative Biology, UT

2000–2004 12 qualifying exam committees in Mol Biol, Zoology, and Ecol, Evol, and Behav, UT

2000–2004 7 dissertation committees Mol Biol, Zoology, and Ecol, Evol, and Behav, UT

2005–2007 Graduate Program Committee, Department of Biology, UW

2007 Faculty Appointments Committee, Department of Biology, UW

2007, 2008 Organizer, Seattle Developmental Biology Fall Retreat

2007 Burke Museum, Department of Biology Curator Genetic Resources Search Committee, UW

2010 Co-organizer MCD-Biology Minisymposium, Department of Biology, UW

2008–2011 Chair, Faculty Appointments Committee (standing faculty search committee), Department of Biology, UW

2008–2011 Executive Committee, Department of Biology, UW

2010–2011 Chair, Website Committee, Department of Biology, UW

2010–2011 IT Committee, Department of Biology, UW

2011 Faculty Mini-Retreat Committee, Department of Biology, UW

2011 Chair, IT and Website Committee, Department of Biology, UW

2011 Chair, Promotion and Tenure Committee, Department of Biology, UW

2010–2012 Royalty Research Foundation Review Committee, UW

2006–2014 Molecular and Cellular Biology Steering Committee, UW

2013–2014 Member, Faculty Appointments Committee, Department of Biology, UW

2014–2015 Member, Cell Biology Search Committee, Department of Biology, UW

2015–2016 Member, Graduate and Postdoctoral Studies Committee, Department of Biology, UW

2005–2017 Member, dissertation committees in Biology, Molecular and Cellular Biology, UW (Hannah Arbach, Ivan Cruz, Kevin Curran, Nick Coley, Melissa Eng, Ashley George, Juliane Gust, Nan Jiang, Amy Lanctot, Jiae Lee, Chelsea Kidwell, Ann Wen-Yang Lin, Shawn Luttrell, Kory Luedke, Tiffany Malek, Hillary McGraw, Lauren Vandepas, Cristina Walcher)

2017–2018 Member, Graduate Studies Committee, Department of Biology, UVA

2017–2020 Member, Steering Committee, Biomedical Sciences Graduate Program, UVA

2018 Chair, Promotion Committee, Sarah Kucenas (to Professor), Department of Biology, UVA

2018–2020 Member, Steering Committee, Cell Biology Graduate Program, UVA

2018–2019 Chair, Research Committee, Department of Biology, UVA

2019 Member, *Ad hoc* Space Committee, Department of Biology, UVA

2019 College of Arts & Sciences submission for Department of Biology, strategic 5-year hiring plan (principal author)

2019–2020 Chair, Research and Website Committee, Department of Biology, UVA

2019–2020 Member, School of Data Science / Biology Search Committee, Department of Biology, UVA

2019–2020 Member, Promotion Committee, Sarah Siegrist (to Associate Professor), Department of Biology, UVA

2020–2021 Chair, Promotion Committee, Jennifer Guler (to Associate Professor with tenure), Department of Biology, UVA

2017–present Member or chair (first reader), dissertation committees in Biology: Kim Arena, Kira Boyce, Abbas Ghaddar, Theresa Gibney, Rebeccah Messcher, Chris Robinson, Cigdem Sarikartal, Chavi Sood

2017–present Organizer, Cellular Dynamics and Genomics Research Group, UVA (~12 participating laboratories from Biology and SOM Cell Biology; listed also as BIOL8010 *Colloquium in Developmental Biology*)

2021 UVA Prominence to Preeminence Program Strategic Investment Fund submission on behalf of Department of Biology: “An integrative research-driven framework towards precision health” (principal author, \$8,011,788 requested).

2021–2022 Member, *Ad hoc* Space Committee, Department of Biology, UVA

2021–2022 Member, Peer Evaluation Committee, Department of Biology, UVA

2022–2023 Chair, Peer Evaluation Committee, Department of Biology, UVA

2021–2022 Member, Steering Committee, Department of Biology, UVA

2021–2022 Chair, Faculty Search Committee for Developmental Biology, Department of Biology, UVA

2022 Chair, Promotion Committee, Martin Wu (Associate Professor to Professor)

2022 Member, Promotion Committee, Colo Danna (considered for Associate Professor with tenure)

2022–2023 Lead, Physical and Life Science Building 3, space planning and implementation, UVA

2023–2024 Member, College of Arts & Sciences Strategic Research Plan Steering Committee, UVA

2022–2025 Member, Animal Care and Use Committee, UVA

2024–2025 Member, Graduate Studies Committee, Department of Biology, UVA

2025 Chair, Promotion Committee, Sarah Siegrist (Associate Professor to Full Professor), Department of Biology, UVA

2025 Spring *Ad hoc* chair, Community / Seminars Committee, Department of Biology, UVA  
 2025 Member, Inquiry Panel 2025B, Integrity and Ethics, Office of the Vice President, UVA  
 2025–2026 *Ad hoc* member, Graduate Studies Committee, Department of Biology, UVA

Research Advising:

Postdoctoral current: Yipeng Liang, Zhenkang Luo  
former: Andrew Aman, Pietro de Mello, Ray Engeszer, Dae Seok Eom, Dylan Huang, Jin Liu, Michael Lang, Braedan McCluskey, Sarah McMenamin, Nathan Parker, Larissa Patterson, Megan Sayyad

Graduate current: Abigail Dennis (Biology), Alexandra Faur (Biology), Katia Korzeniowski (Biology); Akila Abeyaratna (Biology, co-advised with Tracy Larson)  
former: Emily Bain (Ph.D., UW); Erine Budi (Ph.D., UW); Michael Elizondo\* (Ph.D., UT); Ray Engeszer (Ph.D., UT); Victor Lewis (Ph.D., UW); Alyssa Matthews (M.A., UW), Ian Quigley (Ph.D., finished with M. Shankland, UT); Anna McCann (M.S., UW); Larissa Patterson (Ph.D., UW); Lauren Saunders (Ph.D., UW); Jessica Spiewak (Ph.D. pending, UW); Helena Telfer (Ph.D., UW)

Undergraduate UVA (54 total, 5 current): Kian Adili, Anastasia Blecker, Julia Boehling‡, Madison Boyle, Jailing Cai, Olivia Colli, Sydney Connors, Lucia Crovatto, Ryan Curley\*, Madison Dietl, Olivia Findorff, Nicole Freeman‡, Yeg Garoossi, Gabrielle James\*, Hilda Joseph\*, Katherine Helmicki, Gesi Huang, Walker Hutto, Emaan Kapadia, Margaret Kim, Lucy Lannon, Tiffany Liu, Xavier Lyu, Joseph Mancusi‡, Danni Martin, Bethany Mays, Liz Minor‡, Hannah Moriarty, Kaiden Moss, Anthony Odish, Katherine Padgett, Charlotte Papacosma, Dev Patel, Rylan Pearsall, Joe Pizzuti‡, Emilia Preda, Zola Price, Emily Quick-Cole\*, Julia Quigley, Gabriela Ramirez\*, Claire Reagan, Michael Rhodes, Peyton Rieger‡, Lavinia Sims\*, Brittany Steifel, Samantha Sturiale, Stella Sui, Ingrid Sukow, Virginia Swarr, Patrick Volk, Michael Waugh, Chloe Wetzler, Isabel Weir, Chapin Zerner  
 \*URM, ‡Distinguished Major Program honors thesis

UW (62 total): Matt Bessee, Olivia Blackstone, Kyle Barry, Enina Bogdani\*, Jared Brinck, Paige Castro\*, Madeleine Chandless, Derek Chen, Sonya Chen, Adrienne Cohen, Marianne Cole, Hannah Correll, Brittany Dean, Amy Erdman, Christopher Ferguson\*†, Alexis Fulbright, Dany Hage, James Hamill, Patrick Herndon, Inseok Hwang, Chris Kaperak, Danish Khan, Emiko Kobayashi, Kellie Kou, Rachel Krzeczowski, Andrew Krisnawan, Eunice Lau, Briana Lee, Kate Lee, Jasmine Lee-Barber, Hannah Leingang, Christina Leonhard, Jacqui Levy, Eva Li, Matt Lincoln, Tiffany Gordon, Megan Grout, Kellie Kou, Hannah Majeski, Michelle McCarthy, Tristan O'Mara, Serge Palehka, Juil Park, Stephanie Pham\*, Thao Pham, Anne Pruett, Sarah Redmond, Kai Rogers†, Shadrack Schneider†, Amanda Sekijima, Rebecca Slingwine, Colin Smith†, Samantha Stearns, Kristine Yuchen Sun, Alexandra Townsend, Caitlyn Tung, Zach Waller, Jessica Wasicek, Tyson Winder, Corey Winston Jones-Wienert, Caterina Zagona-Prizo

UT (22 total): Gayle Klein, Attila Kalocsay, Kristyn Becker, Kristin Cerame, Yung-Ping Chin, Clarissa Lieu, Theresa Yang, Richard Nuckels\*, Ronald Seo, Kalyani Naik, Reid Roberts, Ronald Seo, Ray Mody, Jessica Klodt, Krista Musser, Michelle Kierstead, Laura Alberici da Barbiano, Flavia Araujo\*, Travis Ruetz\*, Daniel Quiat, Abhishek Kumar, Matt Davis

Research Staff and Postbac Jasmine Lee Barber, Amy Blackburn, August Carr, Sharon Colangelo, Marianne Cole, Tiffany Gordon, Samer Halabiya\*, Emily Herrington, Rachel Krzeczowski, Lauren Lam, Tracy Larson, Cynthia Lee, Erin MacDonald, Joan Manuel, Anna McAnn, Margaret Mills, Liz Minor, Larsen Moore, Ryan Munroe, Richard Nuckels\*, Margaret Ryan, Deqwon Pendergrass\*, Thao Pham, Margaret Ryan, Amber Schwindling, Rebecca Slingwine, Colin Smith†, Jessica Turner

Visiting Scholars Dr. Xue Tian (Associate Professor, College of Fisheries, Henan Normal University, China; UVA 2018–2019)

Awards and fellowships received by trainees:

2001–2004	NSF Graduate Research Fellowship to Ray Engeszer
2006–2009	NSF Graduate Research Fellowship to Helena Telfer
2006–2009	NIH NRSA F31 DK074369 Ruth Kirchstein Minority Predoctoral Fellowship to Michael Elizondo
2006–2007	NIH T32 HD007183 Interdisciplinary Training in Developmental Biology to Larissa Patterson
2007–2010	NSF Graduate Research Fellowship to Margaret Mills
2007–2010	NSF Graduate Research Fellowship to Larissa Patterson
2008–2010	NIH NRSA F31 AG032825 Ruth Kirchstein Predoctoral Fellowship to Helena Telfer
2010–2013	NIH NRSA F32 GM090362 Ruth Kirchstein Postdoctoral Fellowship to Sarah McMenamin
2012–2013	Mary Gates Research Scholarship to Hannah Majeski
2012	University of Washington-Howard Hughes Medical Institute Integrative Research Internship Program, Olivia Blackstone
2014–2016	NIH K99 GM105874 Pathway to Independence Award to Sarah McMenamin
2014–2016	NIH T32 GM007067 Training Program in Cellular and Molecular Biology to Jessica Spiewak
2014–2017	NIH T32 HD007183 Interdisciplinary Training in Developmental Biology to Emily Bain
2015–2016	NIH T32 HD007183 Interdisciplinary Training in Developmental Biology to Meredith Bache-Wiig
2016–2019	NIH NRSA F32 GM119202 Ruth Kirchstein Postdoctoral Fellowship to Braedan McCluskey
2016–2018	NIH T32 GM007067 Training Program in Cellular and Molecular Biology to Lauren Saunders
2016–2018	NIH T32 GM007067 Training Program in Cellular and Molecular Biology to Christina Carnevale
2017–2019	Swiss National Science Foundation Early Postdoc Mobility Grant P2FRP3_171825 to Abishek Kumar Mishra
2019–2020	NIH T32 GM008136 Training in Cell and Molecular Biology to Raegan Bostic
2020	UVA College Council Scholars Award to Julia Boehling
2020–2023	NIH NRSA F32 HD103332 Ruth Kirchstein Postdoctoral Fellowship to Megan Sayyad
2021–2023	NIH NRSA F31 HD104398 Ruth Kirchstein Predoctoral Fellowship to Raegan Bostic
2022	Schwager Scholarship, University of Virginia to Gabrielle James
2022–2024	University of Virginia Rising Scholars Program postdoctoral fellowship to Pietro de Mello
2023–2025	Interdisciplinary Doctoral Fellowship, University of Virginia to Alexandra Faur
2023–2025	NIH F31 HD112152 Ruth Kirchstein Predoctoral Fellowship to Theresa Gibney (co-Sponsor with Ari Pani)
2024	Harrison Awards, University of Virginia to Walker Hutto, Olivia Colli
2026–2029	Swedish Research Council Postdoctoral Fellowship to Zhengkang Luo arriving Spring 2026 (3.9M SEK awarded, ~\$423k)
2026–2029	NIH F31 Ruth Kirchstein Predoctoral Fellowship to Katia Korzenisky (pending)
2026–2029	NIH F31 Ruth Kirchstein Predoctoral Fellowship to David Hawtoff (pending; co-Sponsor with Dan McIntyre)

Teaching:

2001–2005	Bio337/383k8 <i>Development and Evolution</i> (UT)
2002	Bio383k4 <i>Recent advances in Development and Reproduction</i> (UT)
2003	Bio383K8 <i>Current Literature in Developmental Biology</i> (UT)
2001–2005	Bio377/277 Undergraduate Research (23 semesters individual instruction) (UT)
2005	BIOL500A <i>Graduate Professional Life Seminar</i> , guest speaker (UW)
2005	BIOL560H Graduate student grant writing seminar, guest speaker (UW)
2005	BIOL485 <i>Zebrafish Embryology and Biotechnology</i> , guest speaker (UW)

2006–2007	BIOL546/CONJ536 <i>Evolution of Developmental Signaling Pathways</i> (UW; shared instruction with B. Swalla, 1 quarter/year)
2012	BIOL560H Graduate student grant writing seminar, guest reviewer and discussion leader (UW)
2011–2014	BIOL545 MCD-Biology Professional Skills Seminar (UW; sole instructor, enrollment 15, 3 quarters/year)
2006–2012, 2014–2015	BIOL415 <i>Development and Evolution</i> (UW; sole instructor, enrollment 60, 1 quarter/year)
2006–2012, 2014–2016	BIOL411 <i>Developmental Biology</i> (UW; sole instructor, enrollment 120, 1 quarter/year)
2016–2017	BIOL415 <i>Development and Evolution</i> (UW; sole instructor, enrollment 120, 1 quarter/year)
2018–2020	BIOL3010 <i>Genetics and Molecular Biology</i> (UVa; shared instruction with Doug Taylor or Laura Galloway enrollment 285–320, 1 semester/year)
2018–2019	BIOL8270 First year graduate student professional seminar
2019–present	BIOL8010 <i>Colloquium in Developmental / Integrative Biology</i> (UVa; co-organizer; 2 units, enrollment 5–15; 8 credit hours in 2025)
2021–present	BIOL3010 <i>Genetics and Molecular Biology</i> (UVa; sole instructor; 3 units, enrollment 330–406; 1209 credit hours in 2025)
2022–present	BIOL8240 <i>Professional Skills for the Life Sciences</i> (UVa; sole instructor; 3 units, enrollment 15–20; 45 credit hours in 2025)
2023–present	BIOL8011 <i>Integrative Biology</i> (UVa; organizer plus 12–16 lectures with responsibility for semester paper/proposal review and grading; 4 units, enrollment 5–18; ~22 credit hours in 2025)

#### Outreach:

2007–2010	Host lab tour, Naches High School
2007	Host lab tour, Summer Institute in Life Science program, UW
2007	Class exercise on human perception for Summer Institute in Life Science program high school teachers (resulting data published in Engeszer et al. <i>PNAS</i> 105:929, 2008)
2012	Host lab tour, Anacortes High School
2010–2012	Participating lab, National Lab Day
2012	Host lab tour, high school students in UW Summer Scholars Program
2019, 2020	Participating lab, Skyline and Thomas Harrison Middle Schools Department of Biology visit

#### Invited seminars and symposia:

1994	Center for Population Biology, University of California at Davis
1995	<i>Evolution of Development: Molecules, Mechanisms, Phylogenetics</i> , Bodega Marine Lab, CA
1996	Department of Biological Structure, University of Washington, Seattle
1996	Department of Biology, Humboldt State University, CA
1996	Institute of Neuroscience, University of Oregon, Eugene
1997	Department of Integrative Biology, University of California at Berkeley
1997	Department of Zoology, University of New Hampshire, Durham
1997	Section of Evolution and Ecology, University of California at Davis
1998	Department of Biology, Washington University, St. Louis
1998	Department of Zoology, University of Texas, Austin
1998	<i>Developmental Constraints in Development and Evolution</i> , University of Kentucky
1999	<i>Banbury Center Conference on Biology of Pigmentation</i> , Cold Spring Harbor
1999	Department of Biology, Colorado State University, Ft. Collins
1999	Department of Biology, Reed College, Portland OR
1999	Section of Integrative Biology, University of Texas at Austin
1999	Southwest Regional Developmental Biology Meeting, Austin
2000	Department of Biology, University of Maryland, College Park
2000	<i>Keynote address</i> , Annual Meeting Japanese Society for Pigment Cell Research, Sapporo, Japan
2000	Department of Integrated Biosciences, University of Tokyo, Japan

2000 Graduate School of Medicine, Kyoto University Medical School, Japan

2001 *Color patterns: Development and Evolution*, European Society for Evolutionary Biology, Denmark.

2002 *Evolutionary Developmental Biology: Comparative Approaches to Uncovering Patterns and Constraints*, International Congress of Systematics and Evolutionary Biology VI, Patras Greece

2002 *IGERT Colloquium on Development and Evolution*, Indiana University, Bloomington

2002 Department of Biology, University of Kentucky, Lexington

2003 Department of Human Genetics, University of Utah Medical School, Salt Lake City

2003 Department of Organismal Biology and Anatomy, University of Chicago

2003 Department of Molecular and Cellular Biology, University of California at Berkeley

2003 *Developmental Basis of Evolutionary Change*, University of Chicago

2003 Department of Genetics, University of Georgia, Athens

2004 *Genes Underlying Pattern*, American Association of Anatomists Annual Meeting, Washington DC

2004 Department of Biology, Indiana University, Bloomington

2004 Department of Biology, University of Washington, Seattle

2004 Department of Biology, Duke University, Durham NC

2004 Departement de Biologie du Developpement, Institut Pasteur, Paris

2005 Department of Ecology and Evolution, UC Irvine

2005 Department of Developmental and Cell Biology, UC Irvine

2005 Department of Biological Sciences, University of Idaho

2005 Department of Biological Sciences, Lehigh University, Bethlehem PA

2005 Keynote speaker, Genetics University of Iowa Graduate Program retreat, Iowa City

2005 Fred Hutchinson Cancer Research Center, Seattle

2005 Children's Memorial Research Center, Chicago

2006 *Zebrafish in Context*, Society for Integrative and Comparative Biology

2006 Department of Biology, Simon Fraser University, BC

2006 Department of Biology, Reed College, Portland, Oregon

2007 Department of Zoology, University of Hawaii, Honolulu

2007 Departments of Molecular Biology and Ecology & Evolution, IGERT, University of Oregon

2007 Section of Molecular and Cellular Biology, University of California at Davis

2007 *Disease Connections in Development*, American Association of Anatomists, Washington DC

2007 *NESCent Workshop on Poeciliid Genomics*, Duke University, NC

2007 Department of Zoology, Oregon State University, Corvallis

2007 *Genotype Phenotype Map Symposium*, International Congress on Vertebrate Morphology, Paris

2007 *Evolutionary Genetics of Coloration*, European Society for Evolutionary Biology, Uppsala, Sweden

2007 NOAA Northwest Fisheries Science Center, Seattle

2008 Department of Microbiology, Immunology and Molecular Genetics, University of California Los Angeles

2008 *Molecular Mechanisms of Developmental Timing*, HHMI Janelia Farm Research Conference

2008 National Institute of Child Health and Human Development, NIH, Bethesda MD

2008 *Evolution and Diversity of Pattern*, Society for Developmental Biology, Philadelphia PA

2008 *Morphogenesis, Limb Growth, Gastrulation, Somitogenesis, and Neural Tube Formation Symposium*, Mathematical Biosciences Institute, Ohio State University

2008 Department of Biological Sciences, University of Alberta, Canada

2009 Department of Biology, University of Victoria, Canada

2009 Human Medical Genetics Program, School of Medicine, University of Colorado, Denver

2010 Melanocyte Development, Melanogenesis and Genetics. Pan American Society for Pigment Cell Research, Vancouver, Canada

2011 Department of Genetics, University of North Carolina, Chapel Hill.

2012 *IGERT Evolution, Development and Genomics Symposium: The Future of Evo-Devo*. Portland, OR.

2012 Pan American Society for Pigment Cell Research, Deer Valley, UT.

2012 Huntsman Cancer Institute, University of Utah, Salt Lake City.

2013 Phenome integration Workshop, San Francisco, CA

2013 Max Planck Institute for Developmental Biology, Tübingen, Germany.

2013 Institute for Stem Cell and Regenerative Medicine, Stem Cell Symposium, Seattle, WA.

2013 Neurosciences Seminar Series, Université Paris Descartes, Paris, France.

2013 Gordon Research Conference on Neural Crest & Cranial Placodes (Stonehill College, Easton MA)

2014 Zebrafish Development and Genetics, Madison, WI; Workshop, *Post-embryonic Development*

2015 Developmental Colloquium, Duke University, Durham

2015 Biology Department, Reed College, Portland OR

2015 Department of Pharmacological and Physiological Science, St. Louis University School of Medicine, St. Louis MO

2015 Department of Pharmacology and Toxicology, University of Alabama School of Medicine, Birmingham

2015 European Society for Pigment Cell Research 19<sup>th</sup> Meeting, Edinburgh Scotland

2015 Institute for Cellular and Molecular Biology, University of Texas Austin

2015 Department of Ecology and Evolutionary Biology, Princeton University

2016 Department of Biology, University of Virginia, Charlottesville

2016 Public Responsibility in Medicine and Research (PRIM&R) National Institutional Animal Care and Use Committee (IACUC) Conference, Bellevue WA

2016 Graduate Program in Neuroscience Seminar, University Washington, Seattle WA

2016 Basic and Translational Sciences Seminar Series, Department of Cell, Developmental & Cancer Biology and the Knight Cancer Institute, Oregon Health Sciences University, Portland OR

2017 Keynote speaker, Cell Biology Departmental Retreat, Duke University School of Medicine,

2017 International Pigment Cell Conference, Denver CO

2017 ZDM10 Zebrafish Disease Models Conference San Diego CA

2017 Department of Biochemistry and Cell Biology, Stony Brook University NY

2018 Carnegie Institution, Department of Embryology, Baltimore MD

2018 Memorial Sloan Kettering Cancer Center, Weill Cornell Medical College, New York NY

2018 Mid-Atlantic Regional Society for Developmental Biology Meeting, Charlottesville VA

2018 European Society for Evolutionary Developmental Biology, Galway, Ireland

2018 Society for Developmental Biology 77<sup>th</sup> Annual Meeting, Portland OR

2018 Symposium to honor Steve Johnson, Washington University School of Medicine, St. Louis

2019 Pan American Society for Pigment Cell Research, Portland OR

2019 National Institute of Child Health and Human Development, Division of Developmental Biology, NIH, Bethesda MD

2019 Department of Biology, Virginia Commonwealth University, Richmond VA

2019 Mechanistic and Interdisciplinary Studies of Biological Systems training program, University of North Carolina, Chapel Hill

2020 Department of Biology, University of Maryland, College Park

2020 Committee on Development, Regeneration and Stem Cell Biology, University of Chicago (canceled)

2020 University Program in Genetics and Genomics, Duke University, Durham NC (canceled)

2020 Neuroscience Graduate Program, University of Virginia, Charlottesville VA (canceled)

2020 Genetics Colloquium Series, University of Wisconsin, Madison WI

2021 Molecular Biosciences, Northwestern University, Evanston IL

2022 Midwest Zebrafish Conference (MWZFC), Keynote Speaker, Ohio State University

2022 Department of Cell, Developmental, and Regenerative Biology, Icahn School of Medicine at Mount Sinai, New York, NY

2023 Program in Ecology, Evolution, and Conservation Biology, University of Illinois Urbana-Champaign

2023 City University of New York Queens College, Biology Colloquium

2023 Plenary speaker, Biennial Meeting of the North American Society for Comparative Endocrinology, Queretaro, Mexico

2023 Plenary speaker, Annual Meeting of the American Thyroid Association, Washington DC (rescheduled)

2024 Distinguished Speaker Seminar Series, Department of Stem Cell Biology & Regenerative Medicine, University of Southern California

2024 Life Science Seminar Series, University of Geneva, Switzerland

2024 Michael Sars Symposium, University of Bergen, Norway

2024 Speaker, The Evo-Devo of Fish Biodiversity Satellite Symposium, Euro Evo Devo Helsinki (canceled due to illness)

2024 Speaker, Euro Evo Devo, Symposium “How does neural crest cell biology influence micro-evolution?”  
Helsinki (canceled due to illness)

Presented papers:

- 1991 Society of Ichthyologists and Herpetologists, New York (poster; D Parichy, RH Kaplan)
- 1992 Society for the Study of Evolution, Berkeley (talk)
- 1993 International Workshop on the Molecular Biology of Axolotls, Indianapolis IN (poster)
- 1994 Panamerican Society for Pigment Cell Research, Philadelphia (poster; D Parichy, CA Erickson.)
- 1994 Society for the Study of Evolution, Athens, GA (talk)
- 1995 Society for Developmental Biology, San Diego (poster)
- 1995 Society for the Study of Evolution, Montreal (talk)
- 1996 Society for Developmental Biology, Nashville (poster)
- 1998 Panamerican Society for Pigment Cell Research. Snowmass (poster; K Mason, D Parichy, SR Voss)
- 1998 Zebrafish Development and Genetics, Cold Spring Harbor (talk)
- 1998 Zebrafish Development and Genetics, Cold Spring Harbor (poster; A Nechiporuk, D Parichy, S Johnson)
- 1999 Society for Developmental Biology, Charlottesville, VA (poster; D Parichy, SL Johnson)
- 2000 Society for Integrative and Comparative Biology, Atlanta, GA (talk)
- 2000 Society for Integrative and Comparative Biology, Atlanta, GA (poster; SR Voss, D Parichy)
- 2000 Zebrafish Development and Genetics, Cold Spring Harbor (talk)
- 2001 Annual Meeting Society for the Study of Evolution (poster; J Smith, SR Voss, D Parichy)
- 2001 Texas Regional Zebrafish Meeting, UT Health Sciences Center San Antonio (talk, with J Manuel)
- 2002 Zebrafish Development and Genetics, Madison, WI (talk; JM Turner, D Parichy)
- 2002 Zebrafish Development and Genetics, Madison, WI (poster; JM Turner, D Parichy)
- 2002 Society for Behavioral Ecology, Montreal (talk; R Engeszer, M Ryan, D Parichy)
- 2002 *IGERT Colloquium on Development and Evolution*, Indiana University, Bloomington (poster; SR Voss, D Parichy)
- 2003 Society for Developmental Biology, Boston (poster; JM Turner, D Parichy)
- 2003 Society for Developmental Biology, Boston (poster; N Parker, JM Turner, D Parichy)
- 2003 Society for Developmental Biology, Boston (talk; RA Roberts, J Manuel, D Parichy)
- 2003 NSF-EPSCoR Meeting, University of Kentucky, Lexington (poster; JA Walker, S Putta, JJ Smith, E Tanaka, B Haberman, DM Gardiner, D Parichy, SR Voss)
- 2003 Texas Regional Zebrafish Meeting, Texas A&M (poster; N Parker, J Turner, D Parichy)
- 2003 Texas Regional Zebrafish Meeting, Texas A&M (poster; I Quigley, D Parichy)
- 2003 Texas Regional Zebrafish Meeting, Texas A&M (talk; R Engeszer, M Ryan, D Parichy)
- 2003 Texas Regional Zebrafish Meeting, Texas A&M (talk)
- 2004 Zebrafish Development and Genetics, Madison WI (poster; R Engeszer, M Ryan, D Parichy)
- 2004 Zebrafish Development and Genetics, Madison WI (poster; M Elizondo, E Macdonald, J Turner, D Parichy)
- 2004 Zebrafish Development and Genetics, Madison WI (talk)
- 2004 Zebrafish Development and Genetics, Madison WI (poster; I Quigley, E Macdonald, J Manuel, R Nuckels, D Parichy)
- 2004 Zebrafish Development and Genetics, Madison WI (N Parker, D Parichy)
- 2004 Zebrafish Development and Genetics, Madison WI (E Budi, D Quiat, E Herrington, T Ruetz, J Turner, N Parker, E Macdonald, D Parichy)
- 2004 Society for Developmental Biology, Southwest Regional Meeting, Dallas TX (poster; M Elizondo, E Macdonald, D Parichy)
- 2004 Society for Developmental Biology, Southwest Regional Meeting, Dallas TX (poster; I Quigley, E Macdonald, J Manuel, R Nuckels, D Parichy)
- 2005 Smithville Developmental Biology Meeting (talk; M Elizondo, D Parichy)
- 2005 Seattle Winter Developmental Biology Meeting (poster; E Budi, D Parichy)
- 2005 Seattle Winter Developmental Biology Meeting (poster; M Elizondo, E Macdonald, D Parichy)
- 2006 Society for Integrative and Comparative Biology, Orlando FL (talk, R Engeszer, M Ryan, L. Alberici Barbiano, D Parichy)

- 2006 Northwest Regional Developmental Biology Meeting (poster; E Budi, D Parichy)
- 2006 Northwest Regional Developmental Biology Meeting (talk; M Elizondo, D Parichy)
- 2006 Northwest Regional Developmental Biology Meeting (poster; M Mills, D Parichy)
- 2006 Zebrafish Development and Genetics, Madison WI (poster; R Engeszer, G Wang, M Ryan, D Parichy)
- 2006 Zebrafish Development and Genetics, Madison WI (poster; R Engeszer, L Alberici da Barbiano, D Parichy)
- 2006 Zebrafish Development and Genetics, Madison WI (poster; E Budi, D Parichy)
- 2006 Zebrafish Development and Genetics, Madison WI (poster; M Mills, D Parichy)
- 2006 Zebrafish Development and Genetics, Madison WI (talk; M Elizondo, D Parichy)
- 2006 Society for Developmental Biology, Ann Arbor MI (talk; M Elizondo, D Parichy)
- 2006 Society for Developmental Biology, Ann Arbor MI (poster; M Mills, D Parichy)
- 2007 2<sup>nd</sup> Strategic Conference of Zebrafish Investigators, Asilomar CA (talk; D Parichy)
- 2007 Northwest Regional Developmental Biology Meeting (poster; L Patterson, D Parichy)
- 2007 Northwest Regional Developmental Biology Meeting (talk; E Budi, E MacDonald, L Patterson, D Parichy)
- 2007 Northwest Regional Developmental Biology Meeting (poster; M Elizondo, D Parichy)
- 2007 Gordon Research Conference—Collagens. New London, NH (poster; HE Telfer, RA Underwood, DM Parichy, PH Byers, JM Pace)
- 2007 International Ethological Conference, Dalhousie NS (talk; R Engeszer, D Parichy)
- 2008 Northwest Regional Developmental Biology Meeting (poster; E Budi, L Patterson, D Parichy)
- 2008 Northwest Regional Developmental Biology Meeting (poster; M Lang, T Gordon, D Parichy)
- 2008 Zebrafish Development and Genetics, Madison WI (poster; M Elizondo, D Parichy)
- 2008 Zebrafish Development and Genetics, Madison WI (poster; L Patterson, M Mills D Parichy)
- 2008 Zebrafish Development and Genetics, Madison WI (poster; R Engeszer, D Parichy)
- 2008 Zebrafish Development and Genetics, Madison WI (poster; E Budi, D Parichy)
- 2008 Zebrafish Development and Genetics, Madison WI (poster; K Hultman, E Budi, D Parichy, S Johnson)
- 2008 Zebrafish Development and Genetics, Madison WI (poster; M Lang, D Parichy)
- 2008 Zebrafish Development and Genetics, Madison WI (poster; T Larson, M Mills, T Gordon, D Parichy)
- 2010 Northwest Regional Developmental Biology Meeting (talk; E Budi, D Parichy)
- 2010 Zebrafish Development and Genetics, Madison WI (talk; L Patterson, M Lang, T Gordon, D Parichy)
- 2010 Zebrafish Development and Genetics, Madison WI (poster; E Budi, L Patterson, D Parichy)
- 2010 Zebrafish Development and Genetics, Madison WI (poster; M Elizondo, E Budi, D Parichy)
- 2010 Zebrafish Development and Genetics, Madison WI (poster; D Parichy, R Engeszer, M Elizondo, T Gordon)
- 2010 Society for Developmental Biology, Albuquerque NM (poster; E Budi, L Patterson, D Parichy)
- 2011 Northwest Regional Developmental Biology Meeting (poster; S McMenamin, T Gordon, J Minchin, J Rawls, D Parichy)
- 2011 Northwest Regional Developmental Biology Meeting (poster; L Patterson, D Parichy)
- 2012 Zebrafish Development and Genetics, Madison WI (poster; DS Eom, S Inoue, LB Patterson, TN Gordon, R Slingwine, M Watanabe, S Kondo D Parichy)
- 2012 Zebrafish Development and Genetics, Madison WI (poster; LB Patterson, D Parichy)
- 2012 Zebrafish Development and Genetics, Madison WI (talk; SK McMenamin, J Minchin, JF Rawls, D Parichy)
- 2013 5<sup>th</sup> Strategic Conference of Zebrafish Investigators, Asilomar CA (talk; D Parichy)
- 2013 Pigment Cell Development Workshop, Edinburgh, Scotland (talk and poster; L Patterson, D Parichy)
- 2014 Northwest Regional Developmental Biology Meeting (talk; L Patterson, D Parichy)
- 2014 Northwest Regional Developmental Biology Meeting (poster; S McMenamin, D Parichy)
- 2014 Northwest Regional Developmental Biology Meeting (poster; E Bain, D Parichy)
- 2014 Zebrafish Development and Genetics, Madison, WI (poster; E Bain, D Parichy)
- 2014 Zebrafish Development and Genetics, Madison, WI (poster; J Spiewak, D Parichy)
- 2014 Zebrafish Development and Genetics, Madison, WI (talk; L Patterson, E Bain, D Parichy)
- 2014 Society for Developmental Biology, Seattle WA (poster; L Patterson, D Parichy)
- 2014 Society for Developmental Biology, Seattle WA (poster; E Bain, D Parichy)

- 2014 Society for Developmental Biology, Seattle WA (poster; J Spiewak, D Parichy)
- 2014 Society for Developmental Biology, Seattle WA (poster; J Spiewak, SR Voss, D Parichy)
- 2014 Society for Developmental Biology, Seattle WA (poster; SK McMenamin, D Parichy)
- 2014 Society for Developmental Biology, Seattle WA (talk; DS Eom, D Parichy)
- 2015 6<sup>th</sup> Strategic Conference of Zebrafish Investigators, Asilomar CA (talk; D Parichy)
- 2015 Northeast Regional Developmental Biology Meeting (poster; S McMenamin, D Parichy)
- 2015 American Society of Bone and Mineral Research (poster; P Huber, J Lee, CJ Watson, MH Thompson, SK McMenamin, DM Parichy, RY Kwon)
- 2016 Northwest Regional Developmental Biology Meeting (poster; EJ Bain, D Parichy)
- 2016 Northwest Regional Developmental Biology Meeting (poster; M. Bache-Wiig, D Parichy)
- 2016 Zebrafish Development and Genetics, Orlando, FL (poster; E Bain, L Saunders, D Parichy)
- 2016 Zebrafish Development and Genetics, Orlando, FL (poster; L Saunders, C Trapnell, D Parichy)
- 2016 Zebrafish Development and Genetics, Orlando, FL (poster; C Carnevale, D Parichy)
- 2016 Society for Developmental Biology, Boston (poster; DS Eom, D Parichy)
- 2017 7<sup>th</sup> Strategic Conference of Zebrafish Investigators, Asilomar CA (talk; D Parichy)
- 2017 Northwest Regional Developmental Biology Meeting (poster; L Saunders, D Parichy)
- 2017 Northwest Regional Developmental Biology Meeting (poster; V Lewis, T Winder, D Parichy)
- 2017 Northwest Regional Developmental Biology Meeting (talk; A Aman, D Parichy)
- 2018 Northwest Regional Developmental Biology Meeting (poster; V Lewis, D Raible, D Parichy) — *Second Place Poster Award*
- 2018 Northwest Regional Developmental Biology Meeting (poster; L Saunders, A Mishra, C Trapnell, D Parichy)
- 2018 Zebrafish Development and Genetics, Madison WI (poster; E Bain, B McCluskey, L Patterson, D Parichy)
- 2018 Zebrafish Development and Genetics, Madison WI (poster; B McCluskey, S Uji, J Postlethwait, D Parichy)
- 2018 Zebrafish Development and Genetics, Madison WI (poster; A Aman, A Fulbright<sup>s</sup>, D Parichy)
- 2018 Zebrafish Development and Genetics, Madison WI (poster; L Saunders, C Trapnell, D Parichy)
- 2018 Zebrafish Development and Genetics, Madison WI (talk; V Lewis, J Liu, D Raible, D Parichy)
- 2018 Mid-Atlantic Regional Developmental Biology Meeting, Charlottesville VA (poster; B McCluskey, S Uji, J Postlethwait, D Parichy)
- 2018 Mid-Atlantic Regional Developmental Biology Meeting, Charlottesville VA (poster; A Aman, D Parichy) — *Best Poster Award*
- 2018 Society for Developmental Biology 77th Annual Meeting, Portland OR (poster; V Lewis, D Raible, D Parichy) — *Second Place Poster Award*
- 2018 Society for Developmental Biology 77th Annual Meeting, Portland OR (poster; L Saunders, C Trapnell, D Parichy)
- 2019 Northwest Regional Developmental Biology Meeting (poster; V Lewis, D Raible, D Parichy)
- 2019 Northwest Regional Developmental Biology Meeting (poster; L Saunders, C Trapnell, D Parichy) — *Best Poster Award*
- 2019 Mid-Atlantic Regional Developmental Biology Meeting, Charlottesville VA (poster; J Boehling<sup>s</sup>, AJ Aman, D Parichy)
- 2019 Mid-Atlantic Regional Developmental Biology Meeting, Charlottesville VA (talk; AJ Aman, D Parichy) — *Best Presentation Award*
- 2019 Society for the Study of Evolution. Providence RI (poster; B McCluskey, D Parichy)
- 2019 Pigment Cell and Melanoma Research Annual Meeting, Bar Harbor ME (poster; E Bain, D Gur, A Aman, J Lippincott-Schwartz, D Parichy) — *Best Poster Award*
- 2019 Next-Generation Genomics Conference, New York University, NY (R Bostic, L Saunders, D Parichy)
- 2021 16th International Zebrafish Conference, on-line (talk; McCluskey, Uji, Mancusi, Postlethwait, Parichy)
- 2021 16th International Zebrafish Conference, on-line (poster; D Huang, V Lewis, R Toomey, J Corbo, D Parichy)
- 2021 American Society for Cell Biology, on-line (poster; Bostic, Parichy)
- 2024 The Allied Genetics Conference (TAGC), Washington DC (poster; A Carr, A Aman, D Parichy)

- 2024 The Allied Genetics Conference (TAGC) Washington DC (talk; A Aman, D Parichy)
- 2024 The Allied Genetics Conference (TAGC) Washington DC (talk; D Huang, D Parichy)
- 2024 Euro Evo Devo, Helsinki, Finland (poster; A Faur, D Parichy)
- 2024 Euro Evo Devo, Helsinki, Finland (poster; P de Mello, D Parichy)
- 2025 Gordon Research Conference—Carotenoids. Ventura Beach CA (talk; D Huang, D Parichy)
- 2025 Regional Society for Developmental Biology Conference, Richmond VA (talk; D Huang, D Parichy)
- 2025 Regional Society for Developmental Biology Conference, Richmond VA (poster; A Carr, A Aman, D Parichy)

§ undergraduate researcher or started in lab as undergraduate researcher