

Sarah K McMenamin

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Boston College
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ACADEMIC POSITIONS

- 2023- **Associate Professor**, Biology Department, Boston College, Chestnut Hill MA
2017-23 **Assistant Professor**, Biology Department, Boston College, Chestnut Hill MA
2015-16 **Assistant Professor**, Department of Biological Sciences, University of Massachusetts, Lowell MA

EDUCATION

- 2009-15 **Postdoctoral Researcher**, University of Washington, Seattle WA
Advisor: David M. Parichy
2004-09 **Ph.D.**, Stanford University, Stanford CA
Advisor: Elizabeth A. Hadly
2000-04 **B.A.**, Mount Holyoke College, South Hadley MA
Graduation *cum laude* and with highest departmental honors for undergraduate thesis

FUNDING

Current External Research Funding

- 2022-27 NIH MIRA R35GM146467, \$1,947,845 total costs
Illuminating the mechanisms that generate pattern and shape during growth and regeneration of the zebrafish fin
McMenamin SK (PI)
2019-24 NSF CAREER ([1845513](#)), \$800,000 total costs
CAREER: Integrating research and training to illuminate mechanisms of teleost fin ray morphogenesis and diversity
McMenamin SK (PI)
2021-22 Supplement to NSF CAREER award [1845513](#)-003, \$41,360 total costs
Research Experiences for Post-Baccalaureate Students
Donahue J (Trainee), **McMenamin SK** (PI)
2022-24 Smith Family Foundation, [Odyssey Award](#), \$300,000 total costs
Mechanisms by which shape is specified and remembered during development and regeneration of the zebrafish fin
McMenamin SK (PI)

Completed External Funding

- 2017-21 NIH R03 Small Grant Program ([R03HD091634](#)), \$166,911 total costs
Developmental pathways of thyroid hormone in sculpting the craniofacial skeleton
McMenamin SK (PI), Hernandez LP (Co-PI)
2017-18 Burroughs Wellcome Fund Collaborative Research Travel Grant ([1017493](#)), \$10,000 total
Roles of thyroid hormone in shaping the vertebrate craniofacial skeleton
McMenamin SK (PI)

- 2016-20 NIH R00 Pathway to Independence Award ([R00GM105874](#)), \$746,999 total costs
Mechanisms of vertebrate post-embryonic developmental progression
McMenamin SK (PI)
- 2013-15 NIH K99 Pathway to Independence Award ([K99GM105874](#)), \$205,000 total costs
Mechanisms of vertebrate post-embryonic developmental progression
McMenamin SK (Trainee), Parichy DM (PI)
- 2009-12 NIH Ruth L. Kirschstein National Research Service Award ([F32GM090362](#)), \$146,000 total
Hormonal controls of zebrafish post-embryonic melanocyte development
McMenamin SK (Trainee), Parichy DM (PI)

Completed Award to Trainee

- 2019-21 Charles A. King Trust Postdoctoral Fellowship Program [Basic Science](#), \$109,792 total costs
Mechanisms of thyroid hormone-mediated bone patterning
Hu, Y (Trainee), **McMenamin SK** (PI)

Completed Internal Funding

- 2023 Boston College Institute for the Liberal Arts [Minor Grant](#), \$2000 total costs
Support for the Boston Area Zebrafish Researchers (BAZaR) meeting, Mar 18 2023
McMenamin SK (Lead)
- 2022-23 Boston College Innovation in Graduate Education [Major Grant](#), \$6000 total costs
Recognizing diversity and achieving work-life balance in biomedical sciences careers
Losik V (Lead), Meyer M, **McMenamin SK** (Collaborators)
- 2018-19 Boston College Institute for the Liberal Arts [Major Grant](#), \$23,605 total costs
Facilitating conversations about women in STEM at Boston College
Tonn J (Lead), **McMenamin SK**, Lindsey K, Prud'hommeaux E (Collaborators)
- 2016-17 Seed Grant, University of Massachusetts, Lowell, \$10,000 total costs
Investigating defective BMP signaling as the proximate cause of Nager syndrome
McMenamin SK (Co-PI), Fish J (Co-PI)

PUBLICATIONS

McMenamin Lab members are underlined
Undergraduate researchers identified with +
Corresponding authors identified with #

Preprints

1. Parikh P⁺, Nguyen S, **McMenamin SK**, Kenaley C[#]. Thyroid ablation alters passive stiffness and swimming kinematics in zebrafish. [bioRxiv: /2022.09.09.507357](#).
2. Nguyen SV, Lee RS⁺, Mohlmann E⁺, Petrullo G⁺, Blythe J⁺, Ranieri I⁺, **McMenamin SK**[#]. Craniofacial diversity across Danionins and the effects of thyroid hormone status on craniofacial morphology of two *Danio* species. [bioRxiv. 2023:/10.1101/2023.08.09.552728](#).

Peer-Reviewed Research

3. Harper MA (equal contributor), Hu Y (equal contributor), Acosta B⁺, Donahue J⁺, Bui H⁺, Lee H⁺, Nguyen S, **McMenamin S**[#]. Thyroid hormone regulates proximodistal identity in the fin skeleton. [120 \(21\) e2219770120](#).
4. Faith M, Nguyen S, Donahue J⁺, **McMenamin SK**, Tytell E[#]. 2023 Static stability and swim bladder volume in bluegill sunfish *Lepomis macrochirus*. *Integrative Organismal Biology*. doi: [10.1093/iob/obac049](#).

5. Conith MR, Ringo D+, Conith AJ, DeLeon A, Wagner M, **McMenamin SK**, Cason C+, Cooper WJ#. 2022. Why giant danios don't suck like zebrafish: the evolution of jaw protrusion mechanics in the Danionae. *Integrative Organismal Biology*. doi: [10.1093/iob/obad005](https://doi.org/10.1093/iob/obad005).
6. Nguyen S, Yongqi Xi+, Lanni D+, Michaelson JS, **McMenamin SK**#. 2022. Dynamics of the zebrafish skeleton in three dimensions during juvenile and adult development. *Frontiers in Physiology*. doi: [10.3389/fphys.2022.875866](https://doi.org/10.3389/fphys.2022.875866).
7. Keer S, Nguyen S, Storch JD, Prado M, Singh R+, Hernandez LP, **McMenamin SK**#. 2022. Thyroid hormone shapes craniofacial bones during juvenile zebrafish development. *Evolution & Development*. doi: [10.1111/ede.12399](https://doi.org/10.1111/ede.12399).
8. Bagwell J, Ellis K, Norman J, Ellis K, Peskin G, Hwang J, Ge X, Nguyen S, **McMenamin SK**, Stainier DYR, Bagnat M#. 2020. Notochord vacuoles absorb compressive bone growth during zebrafish spine formation. *eLife*. [2020;9:e51221](https://doi.org/10.1101/2020.09.05.1221).
9. Hu Y, Mauri A+, Donahue J+, Singh R+, Acosta B+, **McMenamin SK**#. 2019. Thyroid hormone coordinates developmental trajectories but does not underlie developmental truncation in danionins. *Developmental Dynamics*. [10.1002/dvdy.76](https://doi.org/10.1002/dvdy.76).
10. Galindo D, Sweet E, DeLeon Z+, Wagner M+, DeLeon A, Carter C, **McMenamin SK**, Cooper WJ#. 2019. Thyroid hormone modulation during zebrafish development recapitulates evolved diversity in danionin jaw protrusion mechanics. *Evolution & Development*. [10.1111/ede.12299](https://doi.org/10.1111/ede.12299).
11. Keer S, Cohen K, May C, Hu Y, **McMenamin SK**#, Hernandez LP#. 2019. Anatomical assessment of the adult skeleton of zebrafish reared under different thyroid hormone profiles. *The Anatomical Record*. [10.1002/ar.24139](https://doi.org/10.1002/ar.24139).
12. **McMenamin SK**#, Carter C, Cooper WJ. 2017. Thyroid hormone stimulates the onset of adult feeding behavior in zebrafish. *Zebrafish* 14(6), 517-525. PMID: [28933679](https://pubmed.ncbi.nlm.nih.gov/28933679/).
13. Hur M+, Gistelink CA, Huber P, Lee J, Thompson MH, Monstad-Rios MAT, 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. PMID: [28884682](https://pubmed.ncbi.nlm.nih.gov/28884682/).
14. **McMenamin SK**, Bain EJ, McCann AE, Patterson LB, Eom DS, Waller ZP+, Hamill JC+, Kuhlman JA, Eisen JS, Parichy DM#. 2014. Thyroid hormone-dependent adult pigment cell lineage and pattern in zebrafish. *Science* 345(6202), 1358-1361. PMID: [25170046](https://pubmed.ncbi.nlm.nih.gov/25170046/).
 - Selected for *ScienceExpress* release
15. **McMenamin SK***, Minchin J*, Rawls JF, Gordon TN+, Parichy DM#. 2013. Dwarfism and increased adiposity in *growth hormone 1* zebrafish mutant *vizzini*. *Endocrinology* 154(4), 1476-1487. PMID: [23456361](https://pubmed.ncbi.nlm.nih.gov/23456361/). *Equal contributors
16. **McMenamin SK**# and Hadly EA. 2013. Ancient DNA assessment of tiger salamander population in Yellowstone National Park. *PLoS One* e32763. PMID: [22427878](https://pubmed.ncbi.nlm.nih.gov/22427878/).
17. **McMenamin SK** and Parichy DM#. 2013. Metamorphosis in Teleosts. *Current Topics in Developmental Biology* 103, 127-159. PMID: [23347518](https://pubmed.ncbi.nlm.nih.gov/23347518/).
18. **McMenamin SK**# and Hadly EA. 2010. Developmental dynamics of *Ambystoma tigrinum* in a changing landscape. *BMC Ecology* 10, 10. PMID: [20361876](https://pubmed.ncbi.nlm.nih.gov/20361876/).
19. **McMenamin SK**#, Hadly EA and Wright CK. 2008. Climate change and wetland desiccation cause amphibian decline in Yellowstone National Park. *Proceedings of the National Academy of Sciences, USA* 105(44), 16988-16933. PMID: [18955700](https://pubmed.ncbi.nlm.nih.gov/18955700/).
20. **McMenamin SK**+, Reinsch S and Conway G#. 2003. Direct comparison of common fixation methods for preservation of microtubules in zebrafish embryos. *BioTechniques* 34(3), 468-72. PMID: [12661152](https://pubmed.ncbi.nlm.nih.gov/12661152/).

Other Publications

21. 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[#]. 2018. MicroCT-based skeletal phenomics in zebrafish reveals virtues of deep phenotyping in a distributed organ system. *Zebrafish*. 15(1):77-78. PMID: [29173118](https://pubmed.ncbi.nlm.nih.gov/29173118/).
22. **McMenamin SK**[#], Fedor S, Koyama T. 2022. Editorial: Hormones and Life History Strategies. *Frontiers in Ecology and Evolution*. <https://doi.org/10.3389/fevo.2022.838555>
23. **McMenamin SK**, Chandless M⁺ and Parichy DM[#]. 2016. Working with zebrafish at postembryonic stages. *Methods in Cell Biology* 134, 587-607. PMID: [27312506](https://pubmed.ncbi.nlm.nih.gov/27312506/).
24. Shoo LP[#], Olson DH, **McMenamin SK**, Murray KA, Van Sluys M, Donnelly MA, Stratford D, Terhivuo J, Merino-Viteri A, Herbert SM, Bishop PJ, Corn PS, Dovey L, Griffiths RA, Lowe K⁺, Mahoney M, McCallum HL, Shucker J, Simpkins C, Skerratt LF, Williams SE, Hero JM[#]. 2011. Engineering a future for amphibians under climate change. *Journal of Applied Ecology* [48\(2\)](https://doi.org/10.1111/j.1365-2656.2011.01892.x), 487-492.
25. **McMenamin SK**[#] and Hannah L. 2011. First extinctions on Land. in *Saving a Million Species: Extinction risk from Climate Change*, ed: Lee Hannah. Island Press, Washington, DC
26. **McMenamin SK**[#], Hadly EA and Wright CK. 2009. Reply to Patla *et al*: Amphibian Habitat and Populations in Yellowstone Damaged by Drought and Global Warming. *Proceedings of the National Academy of Sciences, USA* [106\(9\)](https://doi.org/10.1073/pnas.0810099106), E23.
27. **McMenamin SK**[#]. 2009. Biodiversity and the crystal salamanders of Yellowstone. *Yellowstone Science* 16(4), 19-23.
28. **McMenamin SK**[#]. 2007. Status of reptiles in Jasper Ridge. in *Jasper Ridge Biological Preserve State of the Preserve Assessment*, ed: Chiarello, N. Jasper Ridge Biological Preserve, Stanford University, Stanford CA
29. **McMenamin MAS**[#] and **McMenamin SK**⁺. 2001. Homeotic Genes, the Antennapedia Complex in the Trilobite Genome, and Iterative Evolution in *Nevadiid* and *Bristoliid* Trilobites. in *Paleontology Sonora: Lipalian and Cambrian*. Meanma Press, South Hadley MA

PRESENTATIONS

Invited Seminars

- | | |
|------|---|
| 2023 | Clark University, Worcester MA. Host: Néva Mathis |
| 2022 | International Society for Regenerative Biology Webinar Series, Sheffield UK. Host: Celina Juliano |
| 2022 | Northeast Regional Developmental Biology Meeting, Woods Hole MA. Host: Kellee Siegfried-Harris |
| 2021 | European Calcified Tissue Society, Helsinki FI. Host: Ronald Kwon, Matthew Harris [Virtual] |
| 2021 | Central Michigan University MI. Host: Xantha Karp [Virtual] |
| 2019 | Rutgers University, Piscataway NJ. Host: Tetsuya Nakamura |
| 2019 | Tufts University, Medford MA. Host: Eric Tytell |
| 2018 | University of Vermont, Burlington VT. Host: Melissa Pespeni |
| 2018 | Woods Hole Oceanographic Institute, Woods Hole MA. Host: John Stegeman |
| 2018 | Northeast Regional Developmental Biology Meeting, Woods Hole MA. Host: Eric Folker |
| 2015 | George Washington University, Washington DC. Host: L. Patricia Hernandez |
| 2015 | University of Oregon, Eugene OR. Host: Karen Guillemin |

- 2015 University of Michigan, Ann Arbor MI. Host: Cunming Duan
 2014 Lehigh University, Bethlehem PA. Host: Mary Kathryn Iovine

Contributed Talks

Presenting authors are underlined

Undergraduate researchers identified with +

- 2023 Hamilton Symposium Undergraduate Research Day, Boston College MA
Raineri I⁺, Ali S, McMenamin SK.
- 2023 Northeast Regional Society for Developmental Biology, Woods Hole MA
Robinson S⁺, Surette E, Fitzgerald B⁺, Hu Y, McMenamin SK.
 • SDB Award for Best Undergraduate Talk
- 2023 Boston Area Zebrafish Researchers (BAZaR) Meeting, Chestnut Hill MA
Surette E, Donahue D⁺, Robinson S⁺, Fitzgerald B⁺, McMenamin SK.
- 2022 Boston College Biology Department Retreat, Portsmouth NH
Surette E, Donahue D⁺, Robinson S⁺, Fitzgerald B⁺, McMenamin SK.
 • Reverend Donald J. Polke, SJ Award for Best Talk
- 2022 Northeast Regional Society for Developmental Biology, Woods Hole MA
Harper M, Barbaro J⁺, McMenamin SK.
- 2022 Society for Integrative and Comparative Biology, Phoenix AZ
Faith M, Nguyen S, Donahue J⁺, Lee R⁺, McMenamin S, Tytell E.
- 2021 Society for the Study of Evolution [Virtual]
Cooper WJ, McMenamin SK.
- 2021 Society for Developmental Biology Northeast Regional Meeting, Woods Hole MA [Virtual]
Ali S, McMenamin SK.
- 2020 Society for Integrative and Comparative Biology, Austin TX [Virtual]
Hu Y, Harper M, Donahue J⁺, Acosta B⁺, McMenamin SK.
- 2019 Northeast Regional Society for Integrative and Comparative Biology, Chestnut Hill MA
Harper MA, Hu Y, McMenamin SK.
Nguyen S, Lanni D⁺, Yang A⁺, Xu M⁺, McMenamin SK.
- 2019 Connecticut Valley Zebrafish Researchers Meeting, Middletown CT
Harper M, Hu Y, McMenamin SK.
- 2019 Boston College Biology Department Retreat, Portsmouth NH
Harper MA, McMenamin SK.
 • Reverend Donald J. Polke, SJ Award for Best Talk
- 2019 Society for Developmental Biology Northeast Regional Meeting, Woods Hole MA
Hu Y, Donahue J⁺, McMenamin SK.
 • Award for Best Postdoc Flash Talk
May C, McMenamin SK.
- 2019 New England Society for Microscopy, Woods Hole MA
Nguyen S, Lanni D⁺, Yang A⁺, Xu M⁺, McMenamin SK.
- 2019 Society for Integrative and Comparative Biology, Tampa FL
Keer SA, Prado M⁺, May C, McMenamin S, Hernandez LP.
Keer SA, Cohen K, May C, McMenamin S, Hernandez LP.

- 2018 Evolution and Development Group Meeting, Harvard University, Cambridge MA
Hu Y, Donahue J+, Singh R+, Mauri A+, McMenamin SK.
- 2018 Northeast Regional Society for Integrative and Comparative Biology. Providence RI
Parikh P+, Kenaley C, McMenamin SK.
- 2018 Northeast Craniofacial Meeting. Boston MA
McMenamin SK, Redgrave A, May CM, Hu Y, Keer S, Hernandez LP.
Hu Y, McMenamin SK.
- 2018 Society for Integrative & Comparative Biology Annual Meeting. San Francisco CA
Keer S, May CM, McMenamin SK, Hernandez LP.
Hu Y and McMenamin SK.
- 2017 American Society for Bone and Mineral Research Annual Meeting. Denver CO
Hur M+, Gistelinck C, Huber P, Lee J, Thompson M, Monstad-Rios A, Watson C,
McMenamin SK, Willaert A, Parichy DM, Coucke P and Kwon R.
- 2017 Society for Integrative & Comparative Biology Annual Meeting. New Orleans LA
Cooper WJ, Carter C, McMenamin SK, Galindo D, Wagner M+, Nazaire C+, Khalid A+.
- 2017 Society for Integrative & Comparative Biology Annual Meeting. New Orleans LA
McMenamin SK, Carter C, Nazaire C+, Khalid A+, Deshpande N, Cooper J.
- 2016 Northeast Regional Meeting of the Division of Vertebrate Morphology and Comparative Biomechanics. Boston, MA
McMenamin SK, Carter C, Nazaire C+, Khalid A+, Deshpande N, Cooper J.
- 2016 Connecticut Valley Zebrafish Researchers Bi-Annual Meeting. Amherst MA
McMenamin SK.
- 2016 Society for Craniofacial Genetics and Developmental Biology Annual Meeting, Boston MA
McMenamin SK, Carter C, Nazaire C+, Khalid A+, Deshpande N, Cooper J.
• UML Doug Williams Travel Award awarded to Aisha Khalid and Caroline Nazaire
- 2016 Society for Developmental Biology Northeast Regional Meeting, Woods Hole MA
McMenamin SK.
- 2016 Connecticut Valley Zebrafish Researchers Bi-Annual Meeting. Boston MA
McMenamin SK.
- 2014 University of Washington Department of Biology Retreat, Friday Harbor WA
McMenamin SK, Parichy DM.
• Award for Best Postdoc Talk
- 2012 10th International Zebrafish Conference, Madison WI
McMenamin SK, Parichy DM.

Contributed Posters

Presenting authors are underlined

Undergraduate researchers identified with +

- 2023 Society for Craniofacial Genetics and Developmental Biology, Cincinnati OH.
Woronowicz KC, Esin EV, Markevich GN, Soto-Martinez C, Daane JM, McMenamin SK, Harris MP,
Shkil FN
- 2023 Society for Developmental Biology Annual Meeting, Chicago IL
Harper M, McMenamin SK
• Selected for Poster Teaser session

- Robinson S+, Surette E, Fitzgerald B+, Hu Y, McMenamin SK
- 2023 Northeast Regional Society for Developmental Biology, Woods Hole MA
Fitzgerald B+, Surette E, Robinson S+, Donahue J+, McMenamin SK
Harper M, McMenamin SK
Petrullo G+, Nguyen S, Lee RS+, Mohlmann E+, Blythe JO, Ranieri I+, McMenamin SK
Ranieri I+, Ali S, McMenamin SK
Robinson S+, Surette E, Fitzgerald B+, Hu Y, McMenamin SK
Surette E, Donahue J+, Robinson S+, Fitzgerald B+, Ali S, Murphy C, McMenamin SK.
- Award for best graduate student poster
- Zeng J+, Harper M, McMenamin SK
- 2023 Boston Area Zebrafish Researchers (BAZaR) Meeting, Chestnut Hill MA
Harper M, McMenamin SK
Petrullo G+, Nguyen S, Lee RS+, Mohlmann E+, Blythe JO, Ranieri I+, McMenamin SK
Ranieri I+, Ali S, McMenamin SK
Robinson S+, Surette S, Donahue S, Fitzgerald B+, Murphy C, McMenamin SK
- Award for best undergraduate poster
- 2022 Smith Family Foundation Awards Program for Excellence in Biomedical Research, Boston MA
Donahue J, Surette E, Fitzgerald B+, Robinson S+, Ali S, McMenamin SK
- 2022 Society for Developmental Biology 81st Annual Meeting/Pan American Society for Evolutionary Developmental Biology 4th Biennial Meeting, Vancouver BC, Canada
Harper M, Barbaro J+, McMenamin S
McMenamin SK, Harper M, Hu Y, Donahue J+, Acosta B+
- 2022 Northeast Regional Society for Developmental Biology, Woods Hole MA
Dievenich Braes F+, Donahue J+, McMenamin SK
Donahue J, Surette E, Fitzgerald B+, Robinson S+, McMenamin SK
Fitzgerald B+, Surette E, Harper M, McMenamin SK
Nguyen S, Lanni D+, Xu Y+, McMenamin SK
Nguyen S, Lee RS+, Mohlmann E+, Hu Y, McMenamin SK
Nguyen S, Mohlmann E+, Lee RS+, Xu Y, McMenamin SK
- Award for best trainee poster
- Ranieri I+, Ali S, McMenamin SK
- Award for best trainee poster
- 2021 Society for Developmental Biology Northeast Regional Meeting, Woods Hole MA [Virtual]
Dievenich Braes F, Hu Y, McMenamin SK.
Harper M, Hu Y, McMenamin SK.
- Award for best graduate student poster
- Hu Y, Dievenich Braes F, Lee H, McMenamin SK.
Nguyen S, Mohlman E+, McMenamin SK.
- Award for best undergraduate poster
- 2020 Society for Developmental Biology 79th Annual Meeting, Chicago IL [Virtual]
Hu Y, Harper MA, Acosta B+, Donahue J+, Lee H+, Bui H+, McMenamin SK.
- Selected for Virtual Question and Answer Session
- 2020 UMove Symposium, Lowell MA
Parikh P+, McMenamin SK.

- 2019 Society for Developmental Biology 78th Annual Meeting, Boston MA
Harper MA, Redgrave A, Hu Y, McMenamin SK.
Hu Y, Mauri A+, Donahue J+, Singh R+, Acosta B+, McMenamin SK.
May C, McMenamin SK.
Nguyen SV, Yang A+, Xu M+, McMenamin SK.
- 2019 Society for Developmental Biology Northeast Regional Meeting, Woods Hole MA
Acosta B+, Hu Y, McMenamin SK.
Harper MA, Redgrave A, Hu Y, McMenamin SK.
Hu Y, Donahue J+, McMenamin SK.
- Award for best postdoc research
May C, McMenamin SK.
Nguyen SV, Yang AL+, McMenamin SK.
 - Runner up award for best graduate student poster
Parkih P+, Kenaley C, McMenamin SK.
 - Runner up for best undergraduate student poster
Redgrave A, Xu M+, McMenamin SK.
Singh R+, May C, Nguyen SV, McMenamin SK.
- 2019 Society for Integrative and Comparative Biology. Tampa FL
Keer SA, Cohen K, May C, McMenamin SK, Hernandez LP.
- 2019 8th Strategic Conference of Zebrafish Investigators. Asilomar, CA
McMenamin SK, Keer SA, Hu Y, May C, Redgrave A, Nguyen S, Cohen K, Hernandez LP.
- 2018 7th Meeting of the European Society for Evolutionary Developmental Biology, Galway IRE
McMenamin SK, May C, Redgrave A, Hu Y, Keer S, Hernandez LP.
- 2018 Society for Developmental Biology Northeast Regional Meeting, Woods Hole MA
Acosta B+, McMenamin SK.
- Award for best undergraduate student poster
Hu Y, McMenamin SK.
May CM, Keer S, Hernandez LP, McMenamin SK.
Mauri A+, Hu Y, McMenamin SK.
Redgrave A, McMenamin SK.
- 2017 Pan-American Society for Evolutionary Developmental Biology. Calgary, Alberta CAN
May CM, Keer S, Hernandez LP, McMenamin SK.
- Funded by conference Travel Award to Catherine May
- 2017 Society for the Study of Evolution. Portland OR
Cooper WJ, McMenamin SK.
- 2017 Society for Developmental Biology Northeast Regional Meeting, Woods Hole MA
May C, Keer S, Hernandez LP, McMenamin SK.
Merkuri F+, Phamduy C+, Fish J, McMenamin SK.
- 2016 American Society of Human Genetics. Vancouver, BC, CAN
Kwon RY, Hur M+, Huber P, Lee J, Thompson MH+, Watson CJ, McMenamin SK,
Parichy DM.
- 2015 American Society for Bone Mineral Research. Seattle WA.
Kwon RY, Hur M+, Huber P, Lee J, Thompson MH+, Watson CJ, McMenamin SK,
Parichy DM.

- 2015 Society for Developmental Biology Northeast Regional Meeting, Woods Hole MA
McMenamin SK, Bain EJ, McCann AE, Patterson LB, Parichy DM.
- 2014 Society for Developmental Biology Meeting, Seattle, WA.
McMenamin SK, Bain EJ, McCann AE, Patterson LB, Parichy DM.
- 2011 Society for Developmental Biology Northwest Regional Meeting, Friday Harbor WA.
McMenamin SK, Parichy DM.
- Award for Best Postdoc Poster

TEACHING AT BOSTON COLLEGE

BIOL 4050: *Evolution and Development*

2023 Fa; 2021 Fa; 2021 Sp

BIOL 5040: *Topics in Developmental Biology*

2023 Fa; 2021 Fa; 2021 Sp; 2018 Fa

BIOL 4500: *Investigations in Biological Research*

2023 Sp

BIOL 8370: *Topics in Development and Molecular Biology*

2017 Sp

MENTORING AND ADVISING AT BOSTON COLLEGE

Postdoctoral

Yinan Hu, 6/17-2/22

- *Currently a Bioinformatic Scientist at Veracite Inc*

Shahid Ali, 9/20-10/21

- *Currently a postdoc at the University of Chicago*

PhD

Melody Harper, 12/18-present

Eric Surette, 9/20-present

Stacy Nguyen, 12/17-7/23

- *Currently faculty at Wheaton College*

MS

Catherine May, 12/17-12/19

- *Currently a Bioinformatics Scientist at Tempus Labs*

Undergraduate Researchers

§ Undergraduate research fellowship, * Research credit

Yuchen (Anna) Zhou (Biology, 2026), Fa23

Wayne Waliggo (Biology, 2024), Fa23*

Katherine (Kate) Backus (Biology, 2025), Su23§, Fa23§

Bethlehem (Betty) Solomon (Biology, 2024), Su23§, Fa23§

Elird Haxhimihali (Biology, 2024), Su23\$, Fa23\$

Deirdre McKenna (Biology, 2025), Fa22, Sp23\$, Su23\$, Fa23\$

Abigail (Abi) Gallant (Biology, 2024), Fa22, Sp23*, Fa23\$

Andrew Gans (Biology, 2024), Fa22, Sp23*, Su23\$, Fa23*

Zengel (Ziggy) Chin (Biology, 2023), Fa22, Sp23\$

Gabriella (Gabby) Patullo (Biology, 2025), Sp22, Fa22\$, Sp23\$

Omaima (Mia) Serhan (Sociology, 2024), Sp22

Jenny Zeng (Biology, 2024), Fa21\$, Sp22*, Su22\$, Fa22\$, Sp23*

Stephanie Robinson (Biology, 2023), Fa21, Sp22*, Su22\$, Fa22*, Sp23\$

Isabella (Bella) Ranieri (Biology; English, 2023), Su21\$, Fa21\$, Sp22\$, Su22\$, Fa22*, Sp23*

- Senior Thesis Student, awarded Grant Balkema Award for best Undergraduate Thesis

Brendan Fitzgerald (Biology, 2023), Su21\$, Fa21\$, Fa22\$, Sp23\$

Julianna Barbaro (Biology, 2023), Su21\$, Fa21\$, Sp22*, Fa22*, Sp23*

John Blythe (Biology, 2022), Sp22*

Thomas O'Rourke (Biology, 2023), Fa21\$, Sp22*, Su22

Katie Miller (Biology, 2024), Fa21

Rachel Lee (Biochemistry, 2022), Sp20*, Su20\$, Fa20*, Sp21*, Su21\$, Fa21\$, Sp22*

- *Currently a business consultant at Veeva Systems*

Emma Mohlmann (Biochemistry, 2022), Fa19, Sp20*, Su20\$, Fa20*, Sp21*, Su21\$, Fa21, Sp22*

- *Currently a research assistant at Boston Children's Hospital*

Flora Dievenich Braes (Biology, 2022), Sp20*, Su20\$, Fa20*, Sp21*, Fa21, Sp22*

- *Currently a research assistant at Dana Farber*

Hoa Bui[‡] (Neuroscience; Biology, 2021), Sp20, Su20\$

- *Currently a clinical research assistant at Boston Children's Hospital*

Flora Hepp[‡] (Biology, 2021), Sp20*, Su20\$, Fa20*, Sp21*

- *Currently a Clinical Research Coordinator at Ora, Inc*

Hyungwoo Lee (Biology, 2021), Fa19, Sp20, Fa20*, Sp21*

- *Currently a Medical Assistant at Wellesley Dermatology Care*

Yoonji (Cristina) Lee (Biology and International Studies, 2021), Fa18*, Sp19*, Su19\$, Fa19*, Sp20\$

- *Currently a Life Sciences Consultant at Simon-Kucher & Partners*

Andrew Yang (Biology, 2022), Su18, Fa18*, Sp19*, Su19\$

- *Currently an MD student at Drexel University College of Medicine*

Joan Donahue (Biology, 2020), Fa17, Sp18\$, Su18\$, Fa18*, Sp19*, Su19\$, Fa19*, Sp20*

- Senior Thesis Student
- *Currently a PhD student at University of Pennsylvania*

Yongqi (Mary) Xu[‡] (Biochemistry, 2021), Sp17, Su17\$, Fa17*, Sp18*, Su18\$, Fa18*, Sp19*, Fa19*, Sp20*

- *Currently a Researcher at Q2 Solutions*

Pranav Parikh (Biochemistry, 2020), Fa17, Sp18*, Su18\$, Fa18*, Sp19*, Su19\$, Fa19*, Sp20*

- Senior Thesis Student

- *Currently an MD student at Rutgers University*

Benjamin Acosta[‡] (Biology, 2019), Sp17, Su17[§], Fa17*, Sp18*, Su18[§], Fa18*, Sp19*

- Senior Thesis Student
- *Currently a Lab Operations Manager at Blue Rock Therapeutics*

Rajendra Singh (Biology, 2019), Sp17, Su17[§], Fa17*, Sp18*, Su18[§], Fa18*, Sp19*

- *Currently an MD student at New York Institute of Technology*

Angela Mauri[‡] (Biology, 2018), Su17[§], Fa17*, Sp18*

- *Currently a Public Health Advisor at the Centers for Disease Control and Prevention*

Undergraduate Researchers from other Universities

Mary Ossar (Macalester College, 2024), Su22

Dominic Lanni (Vassar College, Biology, 2020), Su18, Su19

- *Currently Research Assistant at GO Therapeutics*

Eleonore Kugener[‡] (Smith College, Biology, 2022), Su18

- *Currently Research Coordinator at Massachusetts General Hospital*

Technician

Crisvely Soto Martinez, 6/23-current

Rachel Ruggera, 6/23-current

John Blythe, 5/22-5/2023

Joan Donahue, 7/20-6/21

Benjamin Acosta, 6/19-8/20

Anna Redgrave, 6/17-6/19

- *Currently a PhD candidate at University of Michigan*

Catherine May, 2/16-9/18

Thesis Committees at Boston College

Loiselle Gonzalez Baez, Losick Lab. PhD in progress [Committee chair]

Marcus Harrell, Das Lab. PhD in progress

Jingjing Lou, Gubbels Lab. PhD in progress

Alex Burgess, Folker Lab. MS in progress [Committee chair]

Allison Drozda, Gubbels Lab. MS, 2021

Samantha Dyckman, Momeni Lab. MS, 2021 [Committee chair]

Jonathan Meanders, Burgess Lab. PhD, 2020

Micaela Lasser, Lowery Lab. PhD, 2020 [Committee chair]

Torrey Mandigo, Folker Lab. PhD, 2020

Mary Ann Collins, Folker Lab. PhD, 2020

Burcu Erdogan, Lowery Lab. PhD, 2019

Elizabeth Bearce, Lowery Lab. PhD, 2019

Amy Valera, Chiles Lab. PhD, 2018

Jacklyn Mallard, Williams Lab. PhD, 2018

External Thesis Committees

Elizabeth Miller, Goessling Lab, Harvard University, Cambridge MA. PhD, 2023

Kaitlyn Webster, Siegfried-Harris Lab, University of Massachusetts, Boston MA. PhD, 2018

Priyanjali Ghosh, Sagerstrom Lab, University of Massachusetts, Worcester MA. PhD, 2017

Daniel Stratford, Hero Lab, Griffith University, QLD AU. PhD, 2013

Comprehensive Exam Committees at Boston College

Laurie Brutus, Meyer Lab, 2023

Courtney Stuart, Gubbels Lab, 2023 [Committee chair]

Jorel Padilla, Folker Lab, 2022

Casey Roberts, Johnson Lab, 2022

Minqi Shen, Losick Lab, 2022 [Committee chair]

Loiselle Gonzalez Baez, Losick Lab, 2022

Jingjing Lou, Gubbels Lab, 2021

Alexandra Burgess, Folker Lab, 2020 [Committee chair]

Joseph Enders, Williams Lab, 2019

Micaela Lasser, Lowery Lab, 2018

Kevin White, Williams Lab, 2018

Torrey Mandigo, Folker Lab, 2017

PROFESSIONAL SERVICE

Conference Organization

- 2023 Founder and Co-Organizer with Trista North and Jenna Galloway for Boston Area Zebrafish Researchers (BAZaR) Meeting, Boston College, Chestnut Hill MA. March 18 (92 attendees)
- 2020 Co-Organizer with Vincent Laudet, Fedor Shkill, Catarina Nunes and Takashi Koyama for the Symposium Hormones and Life History Strategies, European Evolution and Development, Napoli Italy, July 7-10. [Cancelled due to COVID19]
- 2019 Co-Organizer with Christopher Kenaley for Northeast Regional Society for Integrative and Comparative Biology Meeting, Boston College, Chestnut Hill MA, October 2 (142 attendees)
- 2019 Co-Organizer with Marcos Simoes-Costa for Northeast Regional Society for Developmental Biology Meeting, Marine Biological Laboratories, Woods Hole MA April 4-7 [Elected position] (212 attendees)
- 2018 Co-Organizer with Jennifer Fish for Northeast Craniofacial Meeting, Boston College. Chestnut Hill MA, August 10 (50 attendees)

Grant Review

US Federal Grant Review

- 2023 NIH Panel Member, NIGMS Special emphasis panel
- 2023 NSF *ad hoc* reviewer, Integrative and Organismal Systems (BIO/IOS)
- 2023 NIH *ad hoc* reviewer, NCATS Special emphasis panel
- 2023 NIH *ad hoc* reviewer, NICHD Special emphasis panel

- 2022 NSF *ad hoc* reviewer, Integrative and Organismal Systems (BIO/IOS)
- 2019 NSF *ad hoc* reviewer, Integrative and Organismal Systems (BIO/IOS)
- 2019 NIH Early Stage Investigator Panel Member, DEV2, Washington DC
- 2017 NSF *ad hoc* reviewer, Integrative and Organismal Systems (BIO/IOS)
- 2017 NSF Study Section Panel Member, Integrative and Organismal Systems (BIO/IOS), Arlington VA

International Grant Review

- 2022 European Research Council (ERC), Brussels Belgium. *Ad hoc* reviewer, CRC Consolidator Grant Program.
- 2021 Central Academic Advisory Committee of Academia Sinica, Taiwan. *Ad hoc* reviewer, Grand Challenge Program (GCP)
- 2021 Israel Science Foundation (ISF), Israel. *Ad hoc* reviewer, Research Grants

Mock Grant Review

- 2022 Mock NIH Study Section, Mother Infant Research Institute, Tufts Medical Center

Department and Committee Service

University Level

- 2021- Member, Diversity & Inclusion Across Campus Committee
- 2019-23 Member, University Core Renewal Committee and Diversity Subcommittee
- 2018-20 Chair, University Biosafety Committee

Department Level

- 2023- Chair, PhD Graduate Admissions Committee
- 2023- Mentor to Junior Tenure Track Faculty Member (Juan Manuel González Rosa)
- 2023- Member, Bio DEI Committee
- 2022-23 Chair, Tenure Track Faculty Search Committee, Developmental Biology
 - Reviewed 132 applications, interviewed 4 faculty candidates, made 1 offer resulting in a hire
- 2020-23 Chair, Biology Diversity, Equity and Inclusion (Bio DEI) Committee
 - Founded and led 5-person committee focused on raising awareness and providing support for DEI issues in academia and research
 - Publish quarterly Newsletter of original DEI content and community events
 - Facilitate monthly DEI Coffee Hour Discussions on topics of diversity and belonging
- 2016-23 Member, PhD Graduate Admissions Committee
- 2021-22 Member, Tenure Track Faculty Search Committee, Cell and Developmental Biology
 - Reviewed 200+ applications, interviewed 4 faculty candidates, made 2 offers, 1 hire
- 2020-21 Member, Tenure Track Faculty Search Committee, Cell and Developmental Biology
 - Reviewed 150+ applications, interviewed 6 faculty candidates, made 3 offers
- 2019 Reviewer, Pew Biomedical Scholars pre-proposals to Boston College
- 2018-19 Member, Tenure Track Faculty Search Committee, Cell and Developmental Biology
 - Reviewed 80+ applications, interviewed 6 faculty candidates, made 1 hire

Journal Editing

- 2021-22 Review Editor: *Frontiers in Endocrinology*, Thyroid Endocrinology
2020-21 Topic Editor: *Frontiers in Ecology and Evolution*, special issue Hormones and Life History Strategies

Manuscript Peer Review

- 2021-23 *Current Biology* (2x); *Development* (3x); *Developmental Biology* (3x); *Developmental Dynamics* (2x); *Disease Models & Mechanisms* (2x); *eLife*; *Environmental Biology of Fishes* (2x); *Evolutionary Biology*; *Frontiers in Endocrinology* (3x); *Frontiers in Physiology, General and Comparative Endocrinology* (2x); *Integrative and Comparative Biology*; *Journal of Anatomy*; *Journal of Experimental Biology*; *Molecular Biology and Evolution*
- 2015-20 *BMC Developmental Biology*; *Cold Spring Harbor Protocols*; *Current Biology*; *Developmental Biology*; *Developmental Dynamics*; *Ecology* (2x); *eLife* (2x); *Frontiers in Endocrinology* (2x); *Gene Expression Patterns* (2x); *Genesis*; *Journal of Experimental Biology* (2x); *Journal of Fish Biology*; *Mechanisms of Development*; *Molecular and Cellular Endocrinology* (3x); *Nature Communications* (2x); *PeerJ*; *PLoS Genetics* (2x); *Scientific Reports* (2x); *Quaternary Research*; *Zebrafish*
- 2009-14 *Biological Conservation*; *Diversity*; *Environmental Monitoring and Assessment*; *Journal of Herpetology*; *Proceedings of the National Academy of Sciences, USA*; *PLoS One* (2x); *Zebrafish*

Book Reviews and Consulting

- 2021 Reviewed Textbook, Princeton University Press, Princeton NJ
2021 Reviewed Textbook, CRC Press, Boca Raton FL
2013 Consulted for article, National Geographic, Washington DC
2010 Reviewed professional guidance book, Sinauer Press, Sunderland MA
2006-09 Contracting Review Editor for American Journal Experts, Durham NC

OUTREACH

Community Outreach

- 2019 Organizer: Fish skeleton outreach activity, Living Laboratory, Boston Museum of Science
- Designed activities to introduce non-scientists to zebrafish research
 - Volunteers from the McMenemy Lab administered the activity weekly
 - We engaged with 40-100 museum visitors of all ages (2-70+), for a total of more than 550 engagements with the public
- 2017 Guest scientist: Dinner with a Scientist, Undergraduate Summer Research Group, Boston College
2016 Guest speaker: Honors Biology and Biomedical Engineering, UMass Lowell
2015 Guest speaker: Honors Freshman Biology, UMass Lowell
2012 Expert examiner: "Medical Board Exams", Seattle Girls' School
2012 Tour guide: Science Laboratory Day, Anacortes High School
2011 5th Grade Science Mentor, Seattle Girls' School

Panels and Speaking Engagements

- 2023 Faculty speaker, Boston College Order of the Cross and Crown Induction Ceremony
2021 Invited speaker: Fireside Chat, BC Women in STEM
2021 Panelist in BC McNair Exploratory Program Faculty Panel [Virtual]
2020 Panelist in Accessing Opportunities in Research, Boston College SACNAS Chapter [Virtual]

- 2021 Panelist, Seminar on Peer Review; Boston College Research & Scholarship Integrity Program, Chestnut Hill MA [Virtual]
- 2019 Panelist, Collaboration Panel; Boston College Research & Scholarship Integrity Program
- 2019 Panelist, Grant Writing for Postdocs; Boston College Postdoctoral Association
- 2018 Panelist, Women in STEM: Fall Faculty/Graduate Student Conversation, Boston College
- 2018 Guest speaker, Biomedical Ethics course; Boston College, Chestnut Hill MA
- 2018 Panelist, Career Development event; Boston Children’s Hospital Postdoc Association
- 2017 Panelist, Specific Aims Workshop and Grant Writing Workshop; Boston Postdoctoral Association Career Development Symposium, Boston MA
- 2015 Organizer and Panelist: Postdoc Grant Writing and Careers Workshop, University of Washington
- 2013 Organizer and Moderator: Preparing for Graduate School Workshop, University of Washington

Advising Programs

- 2023 Gabelli Presidential Scholars Program, Boston College, Chestnut Hill MA
- 2020-23 McNair Exploratory Advising Program, Boston College, Chestnut Hill MA

SELECTED POPULAR MEDIA ENGAGEMENT

- 2022 Interviewed for story “Flying Fish and Aquarium Pets Yield Secrets of Evolution” in [Quanta Magazine](#) and [Quanta Magazine Podcast](#)
- 2019 Biologist Sarah McMenamin Awarded NSF CAREER [Boston College News](#)
- 2014 Zebrafish erase their stripes [Nature World News](#)
- 2014 Origin of fish pigment cell for pattern, [This Week in Science](#)
- 2011 Eco-engineering hopes for amphibians’ future [BBC News](#)
- 2008 Climate change affects Yellowstone, [USA Today](#)

PROFESSIONAL MEMBERSHIPS

- 2023- American Association for Anatomy; Society for Craniofacial Genetics and Developmental Biology
- 2022- Pan-American Society for Evolutionary Developmental Biology
- 2022- The International Society for Regenerative Biology
- 2018- International Zebrafish Society
- 2016- Zebrafish Disease Models Society, Skeletal Disease Research Interest Group
- 2016- Society for Integrative and Comparative Biology
- 2016- Society for Craniofacial Genetics and Development
- 2012- Genetics Society of America
- 2011- The Endocrine Society
- 2010- Society for Developmental Biology
- 2004- *Sigma Xi* Research Society