

Curriculum Vitae  
**Ev L. Nichols, Ph.D.**  
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**Education**

Sept. 2019 – April 2025	Ph.D. Biology Lab of Kang Shen, Ph.D. Department of Biology, Stanford University Palo Alto, California, USA
August 2015 – May 2019	B.S. Neuroscience and Behavior Minor: Constitutional Studies University of Notre Dame South Bend, Indiana, USA

**Research Experience**

January 2025 – present	Postdoctoral Scholar, Lab of Samantha J. Butler, Ph.D. Department of Neurobiology, University of California, Los Angeles Los Angeles, California, USA <i>Circuit development in the spinal cord</i>
March 2020 – Dec. 2024	Ph.D. Candidate, Lab of Kang Shen, Ph.D. Department of Biology, Stanford University Palo Alto, California, USA <i>Cell biology of UNC-6/Netrin-mediated axon guidance</i>
August 2016 – August 2019	Undergraduate Research, Lab of Cody J. Smith, Ph.D. Department of Biological Sciences, University of Notre Dame South Bend, Indiana, USA <i>Development and regeneration of the dorsal root ganglia</i>
May – August 2016	Student Research Assistant, Lab of Tatiana V. Byzova, Ph.D. Lerner Research Institute, Cleveland Clinic Cleveland, Ohio, USA <i>Role of cancer exosomes in tumor metastasis</i>

**Publications**

Nichols EL, Green LA, Smith CJ. 2018. Ensheathing cells utilize dynamic tiling of neuronal somas in development and injury as early as neuronal differentiation. *Neural Dev.* 13:19.

Nichols EL and Smith CJ. Pioneer axons employ Cajal's battering ram to enter the spinal cord. 2019. *Nat Commun.* 10:562.

Zhang Y\*, Nichols EL\*, Zellmer AM, Kankel C, Howard SH, Smith CJ. Generating intravital super-resolution movies with conventional microscopy reveals actin dynamics that construct pioneer axons. 2019. *Development.* 146:dev.171512.

Zhang Y\*, Zhu Y\*, Nichols E, Wang Q, Zhang S, Smith C, Howard S. A Poisson-Gaussian Denoising Dataset with Real Fluorescent Microscopy Images. 2019. *CVPR*.

Nichols EL and Smith CJ. Synaptic-like vesicles facilitate pioneer axon invasion. 2019. *Curr Biol.* 29(16):2652-2664.e4.

Zhang Y, Hato T, Dagher PC, Nichols EL, Smith CJ, Dunn KW, Howard SS. Automatic segmentation of intravital fluorescence microscopy images by K-means clustering of FLIM phasors. 2019. *Opt Lett*. 44(16):3928-3931.

Nichols EL and Smith CJ. Functional regeneration of the sensory root via axonal invasion. 2020. *Cell Rep*. 30(1):9-17.e3.

Kikel-Coury NL, Green LA, Nichols EL, Zellmer AM, Pai S, Hedlund SA, Marsden K, Smith CJ. Pioneer axons utilize a *dcc* signaling-mediated invasion brake to precisely complete their pathfinding odyssey. 2021. *J Neurosci*. JN-RM-0212-21.

Green LA\*, Gallant RM\*, Brandt JP, Nichols EL, Smith CJ. A subset oligodendrocyte lineage cells with the developing dorsal root entry zone during its genesis. 2022. *Front Cell Neurosci*. 16:893629.

Priest JM, Nichols EL, Smock, RJ, Mendoza JM, Meijers R, Shen K, Özkan E. Structural insights into the formation of repulsive Netrin guidance complexes. 2024. *Sci. Adv*. 10: eadj8083. doi:[10.1126/sciadv.adj8083](https://doi.org/10.1126/sciadv.adj8083)

Nichols EL. A debate in bad faith: Naming anti-transgender bias in the *Journal of Physiology*. 2024. *J Physiol*. doi: [10.1113/JP287492](https://doi.org/10.1113/JP287492)

Weatherton M, Ko M, Nichols EL, Krishnan S, Faber C. All In: Understanding and Motivating Stakeholders to Create an Equitable Culture of Student Success. 2024. *CBE Life Sci Educ*. doi: [10.1187/cbe.24-02-0065](https://doi.org/10.1187/cbe.24-02-0065)

Nichols EL Lee J and Shen K. UNC-6/Netrin promotes adhesion and directed growth within a single axon. 2025. *eLife*. doi: [10.7554/eLife.100424.3](https://doi.org/10.7554/eLife.100424.3)

## **Fellowships**

2022 – 2024	Leaders in Inclusive Teaching Fellowship Center for Teaching and Learning Stanford University, Palo Alto, California
2020 – 2023	Graduate Research Fellowship Program National Science Foundation Stanford University, Palo Alto, California
2018	Research Experience for Undergraduates National Science Foundation University of Notre Dame, South Bend, Indiana
2017	Summer Undergraduate Research Fellowship College of Science, University of Notre Dame, South Bend, Indiana

## **Professional Service**

2024	Co-Chair Cellular Beginnings, Circuit Endings Gordon Research Symposium on Neural Development Renaissance Tuscany Il Ciocco, Lucca, Italy
2021-2023	One-on-one Mentor Biology Preview Program Department of Biology, Stanford University

2023	Retreat Planning Committee Department of Biology, Stanford University Asilomar Conference Grounds, Pacific Grove, California
2020	Interview Weekend Planning Committee Department of Biology, Stanford University

## Honors and Awards

2024	Vice Provost for Graduate Education Academic Achievement Award for the Stanford Queer Student Resources Center Stanford University
2015 – 2019	Dean's List (6 semesters) College of Science, University of Notre Dame
2019	Dean's Research Award College of Science, University of Notre Dame
2019	Outstanding Undergraduate Research Award Neuroscience and Behavior, University of Notre Dame
2018	Goldwater Scholarship Honorable Mention
2018	Outstanding Oral Presentation Summer Research Symposium, University of Notre Dame

## Teaching Experience

Winter 2021 – present	Co-primary Instructor BIO 114: bioBUDS (Building Up Developing Scientists) Stanford University, Palo Alto, California
Winter 2023	Head Teaching Assistant BIO 154 and BIO/NBIO 254: Principles of Neurobiology Stanford University, Palo Alto, California
Fall 2020	Teaching Assistant BIO 158: Developmental Neurobiology Stanford University, Palo Alto, California
Winter 2019-20	Teaching Assistant BIO 84: Physiology Stanford University, Palo Alto, California
Fall 2017	Teaching Assistant BIOS 20250: Classical and Molecular Genetics University of Notre Dame, South Bend, Indiana

## Selected Teaching Portfolio

Nichols, EL. (2023). Guided Goal Setting for Mentors and Mentees. bioBUDS: Building Up Developing Scientists, QUBES Educational Resources. doi:10.25334/YoEX-7W42.

Nichols, EL. (2023). Mentorship Check-In. bioBUDS: Building Up Developing Scientists, QUBES Educational Resources. doi:10.25334/VZGY-EX95.

Mollhoff, IN, Nichols, EL. (2023). BSURP Guided goal-setting workshop for undergraduate researchers. bioBUDS: Building Up Developing Scientists, QUBES Educational Resources. doi:10.25334/VJ5B-YE61.

## Professional Affiliations

2023 – present	Member, Society for Developmental Biology
2019 – present	Member, Phi Beta Kappa

**Work Experience**

October 2023 – Dec. 2024	Trans& Grad Co-Coordinator Queer Student Resources, Stanford University
August 2018 – May 2019	Resident Assistant Sorin Hall, University of Notre Dame
August 2016 – May 2018	Academic Tutor, General Chemistry and Organic Chemistry Academic Services for Student Athletes University of Notre Dame