***CURRICULUM VITAE***

# Jennifer R. Morgan, Ph.D.

Senior Scientist & Director
The Eugene Bell Center for Regenerative Biology
Marine Biological Laboratory (MBL)
7 MBL St.
Woods Hole, MA 02543

Phone: (508) 289-7409
Fax: (508) 289-7900
Email: jmorgan@mbl.edu
Office: Rowe 411
Lab: Rowe 402, 407-410

## EDUCATION AND TRAINING:

**Yale University:** Department of Cell Biology — New Haven, CT
Postdoctoral Fellow — 2001-2005
Advisor: Pietro De Camilli, M.D.
*"Roles of phosphoinositides at synapses"*

**Duke University:** Department of Neurobiology — Durham, NC
Ph.D. in Neurobiology — 1996-2001
Advisor: George J. Augustine, Ph.D.
*"Mechanisms of synaptic vesicle endocytosis: the functions of clathrin in the nerve terminal"*

**University of North Carolina:** Department of Physiology — Chapel Hill, NC
B.S. in Biology with Honors — 1991-1995
Advisor: Ann E. Stuart, Ph.D.

## PROFESSIONAL EXPERIENCE:

***Academic Appointments:***
Senior Scientist: MBL; Eugene Bell Center for Regenerative Biology; Woods Hole, MA (2020-present)
Associate Scientist: MBL; Eugene Bell Center for Regenerative Biology; Woods Hole, MA (2013-2020)
Assistant Scientist: MBL; Eugene Bell Center for Regenerative Biology; Woods Hole, MA (2012-2013)
Assistant Professor: Univ. of Texas at Austin; Molecular Cell & Developmental Biology (2007- 2012)
Visiting Assistant Professor: Bowdoin College; Biology Dept. (2006-2007)

***Other Relevant Experience:***
Director, Eugene Bell Center for Regenerative Biology & Tissue Engineering: MBL (2017-present)
Associate Director, Eugene Bell Center: MBL (2012-2017)
Associate Director, Grass Fellowship Program in Neuroscience: MBL (2006)
Postdoctoral Fellow and Lecturer: Yale University School of Medicine; Cell Biology (2001-2005)
Graduate Research Assistant: Duke University; Neurobiology Dept. (1996-2001)
Laboratory Technician: UNC-Chapel Hill; Physiology Dept. (1995-1996)

## HONORS, FELLOWSHIPS AND AWARDS:

Kavli Frontiers of Science / National Academy of Sciences Fellow (2014)
The University of Texas Regents' Outstanding Teaching Award (2012)

Society for Neuroscience Janett Trubatch Career Development Award (2011)
College of Natural Sciences Teaching Excellence Award; Univ. of TX at Austin (2011)
Winter Conference on Brain Research Travel Fellowship (2010)
Faculty Research Award; Bowdoin (2006-2007)
Individual Postdoctoral National Research Service Award; NIH/NIMH (2002-2005)
- *"Roles of Phosphoinositides at the Synapse" F32MH067385-01*

Grass Fellowship in Neurosciences; MBL (2003)
Brown – Coxe Postdoctoral Fellowship; Yale (2001-2002)
Individual Predoctoral National Research Service Award; NIH/NIMH (2000-2001)
- *"Mechanisms of Synaptic Vesicle Endocytosis" F31MH012632-01*

Ruth K. Broad Biomedical Foundation Fellowship; Duke (1999-2000)

## GRANTS:

### ***Current:***

**R01 NS078165-14 (J. Morgan, PI)** 06/01/12-05/31/27
NIH-NINDS/NIA
*"Mechanisms of Synaptic Dysfunction in Parkinson's and Other Synuclein-Linked Diseases"*
The goal of this project is to determine how excess $\alpha$-synuclein and Parkinson's disease-linked mutations affect synaptic vesicle trafficking.
Role: PI

**NSF Major Research Instrumentation Grant #2510173 (J. Morgan, PI)** 02/01/26-01/31/29
National Science Foundation
*"MRI: Track 1 Acquisition of a JEOL JEM-120i Transmission Electron Microscope with 3D Tomography"*
This MRI will support the acquisition of a new state-of-the-art TEM at the MBL expanded research capacity while also training of the next generation of scientists in electron microscopy techniques, theory and analysis.
Role: PI

### ***Completed (last 3 years):***

**G-2022-19477 (L. Hyman, PI)** 12/01/22-08/31/26
Alfred P. Sloan Foundation
*"Creating Equitable Pathways to STEM Graduate Education"*
This is a seed grant for piloting a post-baccalaureate program at the MBL in partnership with minority-serving institutions across the U.S.
Role: Co-PI

**R25 HD079345-07 (J. Morgan, PI)** 07/16/19-04/30/25
NIH-NICHD
*"Frontiers in Stem Cells and Regeneration Course"*
This is a one-week intense lecture and laboratory course that trains young scientists and faculty in the newest theory and technologies on stem cells and regeneration.
Role: PI and Course Director

**RF1 NS078165-12S1 Research Suppl. (J. Morgan, PI)** 01/01/24-12/31/24
NIH-NINDS/NIA
*"Mechanisms of Synaptic Dysfunction in Parkinson's and Other Synuclein-Linked Diseases"*

This is a research supplement that helped to support a research project and the career development of a post-baccalaureate scholar in the Morgan lab. Ms. Caroline Casiano-Rivera is now a Ph.D. candidate in the Graduate Program in Neuroscience at Boston University.
Role: PI

## NATIONAL AND INTERNATIONAL SERVICE:

NIH Reviewer: Cellular Mechanisms of Neurodegeneration (CMN) Study Section, Ad hoc (2026)
NIH Reviewer: Neuronal Communication (NC) Study Section (previously SYN), Member (2018-2024)
Annual Society for Neuroscience Meeting Mini-Symposium, Organizer and Chair (2019)
Swiss National Science Foundation Grant Reviewer (2019)
NIH Reviewer: BDCN Special Emphasis Panel, Chair (2018)
NIH Reviewer: MCDN-Q Special Emphasis Panel (2018)
Aquatic Models of Human Diseases Conference, Co-Organizer (2018)
North West Cancer Research Grant Reviewer (UK) (2018)
Israel Science Foundation Grant Reviewer (2018)
University of Wisconsin-Milwaukee: Research Growth Initiative Grant Reviewer (2017)
University of Missouri System: Spinal Cord Injury Research Program Reviewer (2014)
NIH Reviewer: SYN Study Section, Ad hoc member (2013-2016)

## INSTITUTIONAL SERVICE:

Director, Eugene Bell Center for Regenerative Biology and Tissue Engineering (2017-present)
Bell Center Search Committee, Member (2021-2022) and Chair (2022-2023; 2026)
MBL Diversity and Inclusion Advisory Committee, Chair and Member (2018-2022)
Scientific Advisory Committee for the MBL Director of Research Search (2021)
Scientific Advisory Committee for the MBL Director Search (2014, 2017)
Friday Evening Lecture Advisory Committee (2016-2019)
MBL Environmental Health and Safety Representative (2016-2017)
MBL Director's Council (2015-2016)
Director of Education Search, Advisory Committee (2015)
MBL/UChicago Affiliation Committee (2014-2016)
MBL/UChicago Retreat Planning Committee (2013- 2015)
SUCCESS Career Development Program, Organizer and Panelist (2013-2017)
Whitman Center Steering Committee, Member (2013-2014)
Institutional Committee, Member (2012-2015)
Assoc. Director, Eugene Bell Center for Regenerative Biology and Tissue Engineering (2012-2017)

## TEACHING EXPERIENCE:

***Marine Biological Laboratory:***
MBL's Spring Semester in Biological Discovery (SBD): Fundamentals of Synapses (2025-present)
UChicago Neuroscience Quarter at the MBL: Fundamentals of Synapses (2023)
Frontiers in Stem Cells and Regeneration: Co-Director and Faculty (2012-2022)
Woods Hole Partnership Education Program (PEP) (2020-2022)
SPINES Course: Lecturer (2016, 2018-2019)
UChicago Biosciences Bootcamp (2016-2017)
Frontiers in Aging and Regeneration Course for undergraduates: Instructor (2015)
NSF REU Program "Biological Discovery in Woods Hole": Mentor (2013-present)

Brown-MBL NeuroPracticum Course for graduate students: Instructor (2013-2015)
Neurobiology Course: Instructor and Lecturer (2005, 2018, 2022)

***The University of Texas at Austin:***
Cell Biology Laboratory for undergraduates; 4 semesters (2008-2012)
- Designed and implemented this new course

Presentation Skills for graduate students; 6 semesters (2009-2012)
- Designed and implemented this new course

Cell Biology core course for graduate students: Co-Instructor; 1 semester (2008)
Topics in Cell and Developmental Biology for graduate students; 1 semester (2007)

***Bowdoin College:***
Cell Biology of the Neuron for undergraduates: 1 semester (2007)
- Designed and implemented this new course

Brain to Behavior for non-majors: 2 semesters (2006-2007)
- Designed and implemented this new course

Neurobiology: Lecture and Lab for undergraduates: 1 semester (2006)
- Designed new lectures and exams for this existing course

Biochemistry and Cell Biology Lecture and Lab for undergraduates: 1 semester (2006)
- Designed new lectures and exams for this existing course

***Yale University:***
Neurobiology Laboratory for undergraduates: Instructor; 1 semester (2005)
- Taught 3 stand-alone lab sections in neurophysiology

## MENTORING EXPERIENCE:

| ***Postdoctoral Trainees:*** | ***Current Positions:*** |
|---|---|
| Cristina Román-Vendrell, Ph.D.; MBL (2018-2025) | Assistant Prof., Georgia Southern U. |
| Hilary Katz, Ph.D.; MBL (2018-2022) | Assistant Prof., Hofstra Univ. |
| Karina Vargas, Ph.D.; MBL (2018-2023) | Assistant Prof., Univ. of Pittsburgh |
| Sofia Ibarraran Viniegra, Ph.D.; MBL (2016-2018) | Project Coordinator, WHOI |
| Lindsey Soll, Ph.D.; MBL (2014-2017) | Clinical Research Coordinator, Tufts |
| Susan M. Banks, Ph.D.; MBL (2012-2016) | Associate Prof., FL Southern College |
| Abraham Rosas-Arellano, Ph.D.; MBL (2012-2013) | Postdoc, UNAM – Mexico City |
| Naila Alieva, Ph.D.; UT-Austin (2008-2009) | Core Manager, Natl. Univ Singapore |

| ***Graduate Student Trainees:*** | |
|---|---|
| Jaqulin Wallace (2024-present) | Ph.D. student, Physics, U. Maine |
| David J. Busch, Ph.D.; UT-Austin (2008-2012) | Senior Scientist, Merck |
| Billy Y-B. Lau, Ph.D.; UT-Austin (2008-2012) | Assistant Professor, Univ. of Tennessee |

| ***Postbaccalaureate Trainees:*** | |
|---|---|
| Julia Afsar-Keshmiri (2026-present) | Research Assistant I, MBL |
| Ella Whitney (2025-present) | Research Assistant I, MBL |
| Miranda Holland (2025-present) | Research Assistant II, MBL |
| Samantha Schreiter (2024-2025) | Research Assistant, Dana Farber |
| Caroline Casiano-Rivera (2023-2024) | Ph.D. student, Boston University |
| Emma Johnson (2023-2024) | Ph.D. student, Duke |
| Jaqulin Wallace (2022-2024) | Ph.D. student, Physics, U. Maine |

| | |
|---|---|
| Zachary Crockford (2022-2023) | Medical student, Duke |
| Maliea Slocum (2021-2023) | Cape Cod Community College |
| Elizabeth Wegman, B.A. (2020-2022) | Medical Writer, Boston |
| Emily Brady, B.S. (2019 - 2022) | Ph.D. student, Biology, Duke |
| Kaitlyn Fouke, B.S. (2019-2021) | Ph.D. student, Neurobiology, Duke |
| Eduardo Guadarrama, (2018-2020) | Postdoc, Northwestern |
| Julia Eisen, B.A. (2018-2020) | Resident, Yale School of Med. |
| Molly McQuillan, B.A. (2017-2019) | Postdoc, Neuroscience, Brown |
| Tessa Harkenrider (2017-2018) | Undergraduate, Cape Cod Community |
| Kendra Hanslik, B.S. (2016-2017) | Ph.D. student, Neuro, UW-Madison |
| Audrey Medeiros, B.S. (2015-2018) | Program Director, Mass Life Sci. Ctr. |
| Scott Allen, B.S. (2014-2016) | Postdoc, UNC-Chapel Hill |
| Stephanie Fogerson, Ph.D. (2012-2014) | Manager, Powered Research LLC |
| Rylie Walsh, Ph.D. (2012-2014) | Research Scientist, MBL |
| Paul Oliphint, B.A. (2007-2012) | Research Scientist III, UT-Austin |

***Undergraduate Trainees:***

| | |
|---|---|
| Samantha Kang: Dartmouth Fellow (2026) | Undergraduate, Dartmouth |
| Johann Valera-Vega: MBL NSF REU Fellow (2024) | Ph.D. student, Marine Studies, Duke |
| Ryan Breitenbach: MBL NSF REU Fellow (2023) | Research Assistant, WPI |
| Gia Fisher: MBL UChicago Metcalf Fellow (2022) | Research Assistant, Novartis |
| Sarah Weber: MBL UChicago Metcalf Fellow (2021) | Ph.D. student, Neuroscience, Yale |
| Daniel Gonzalez-Kosasky: MBL NSF REU Fellow (2021) | Fulbright Fellow |
| Nicole McCarthy Losurdo: MBL NSF REU Fellow (2019) | Ph.D. student, Neuro, Univ. of Utah |
| Yohan Auguste: MBL NSF REU Fellow (2018) | Ph.D. student, Stanford |
| Eduardo Guadarrama: MBL NSF REU Fellow (2017) | Postdoc, Northwestern |
| Yangtian Yi: MBL (2015) | Resident, Mass General Hospital |
| • U. Chicago Jeff Metcalf Fellow | |
| Michele Nsianya; MBL (2015) | Undergraduate, UNC-Chapel Hill |
| • REU Fellow | |
| Scott Allen; MBL (2013) | Postdoc, UNC-Chapel Hill |
| • REU Fellow | |
| Julia Eisen; MBL (2013) | Resident, Yale School of Med. |
| Helena Lane; MBL (2013) | Lead producer, Kluge Interactive |
| Alexa van Brummen; UT-Austin (2011-2013) | Ophthalmology, Seattle Children's |
| • Parkinson's Disease Foundation Summer Fellowship; MBL (2012) | |
| • Undergraduate Research Forum Award (2012) | |
| • UT Presidential Scholarship (2012) | |
| Adam Lipsitt; UT-Austin (2010-2011) | Psychiatry, Palm Harbor, FL |
| Derek Su (2010) | Psychiatry, Kaiser Permanente CA |
| • ICMB Summer Fellow | |
| Melanie Molina; UT-Austin (2010) | Asst. Prof. Emergency Med., UCSF |
| • Undergraduate Research Fellowship (2010) | |
| Akila Amsavelu; UT-Austin (2008-2009) | Pediatrics, Kid's Choice TX |
| • Undergraduate Research Fellowship (2008) | |
| Julie Schackman; UT-Austin (2008-2009) | Asst. Prof. Anesthesiology, Baylor |
| • Undergraduate Research Fellowship (2008) | |
| Andrea Foldes; UT-Austin (2007-2008) | Pediatrics, San Antonio |
| • Applied Biosystems/Ambion Award for Excellence in Molecular Biology Research (2008) | |
| • Undergraduate Research Fellowship (2007) | |

- Research Technician in my lab (2009-2010)

Jenna Pariseau; Bowdoin College (2006-2007) OBGYN, Mt. Auburn Hospital

- INBRE Fellow

***Graduate Student Committees:***

Member of 15 Ph.D. dissertation committees at UT-Austin (2008-2012)

Member of 8 Ph.D. dissertation committees for graduate students at Brandeis, Northeastern, NJIT, Princeton, UChicago, University of Puerto Rico Río Piedras (2012-present)

## PROFESSIONAL ACTIVITIES:

***Professional Societies:***

MBL Society (formerly the MBL Corporation), Member (2004-present)
Society for Neuroscience, Member (1996-present)
American Society for Cell Biology, Member (2016-present)

***Invited Seminars (last 6 years):***

University of Nevada, Las Vegas; Department of Life Sciences (Oct. 2025)
Marine Biological Laboratory; 2025 Friday Evening Lecture series (August 2025)
Dartmouth College; Department of Biological Sciences (Nov. 2024)
Brown University; Neuroscience Graduate Program Seminar Series (Sept. 2024)
Weill Medical College of Cornell University; Appel Forum for Neurodegeneration (March 2024)
Vollum Institute; Oregon Health Science University (Dec. 2023)
University of Pennsylvania; Department of Physiology (Oct. 2023)
Case Western Reserve University; Neurosciences Department (Dec. 2022)
Brigham and Women's Hospital/Harvard University; Movement Disorders Conference (March 2022)
University of Rhode Island; Ryan Institute for Neuroscience (March 2022)
Temple University; Shriner's Hospital's Center for Neural Repair and Rehabilitation (Dec. 2021)
University of Georgia; Cell Biology Department (Oct. 2021)
Marine Biological Laboratory; Neural Systems & Behavior Course; Konishi Lecture (May 2021)
NeuroImaging Seminar Series NIH; Virtual (Jan. 2021)
University of Chicago; Neuroscience Institute; Virtual (Nov 2020)
University of Kentucky; Biology Department; Lexington, KY (April 2019)
University of Illinois at Chicago; Biology Department; Chicago, IL (April 2019)
University of Wisconsin, Milwaukee; Biological Sciences Dept.; Milwaukee, WI (Mar. 2019)

***Invited Presentations at Meetings and Conferences (selected):***

2024 Puerto Rico Neuroscience Conference plenary talk (Dec. 2024)
Gloucester Marine Genomics Institute (GMGI) Science Forum (Oct. 2024)
New England Society for Microscopy Spring Symposium (April 2024)
Iowa Neuroscience Institute Synapse Workshop (Oct. 2022)
Experimental Biology Conference; Virtual (April 2021)
Louis J. Fox Center for Vision Restoration Conference; Virtual (Oct. 2020)
Annual Society for Neuroscience Meeting: Mini-Symposium; Chicago, IL (Oct. 2019)
National Center for Brain Mapping NeuroProbes Conference; MBL, Woods Hole, MA (Oct. 2018)
The 8th Aquatic Models of Human Diseases Conference; MBL; Woods Hole, MA (Sept. 2018)
Giant Synapse Symposium; Georgetown University; Washington DC (Nov. 2017)
Louis J. Fox Center for Vision Restoration Conference; Washington, DC (July 2017)
Society for Developmental Biology: Regeneration Symposium; Boston, MA (Aug. 2016)
International Symposium on the Neurobiology of Locomotion; Washington, DC (June 2016)
The 7th Aquatic Animal Models of Human Diseases Conference; Austin, TX (Dec. 2014)
Kavli Frontiers of Science Symposium; National Academy of Sciences; Irvine, CA (Nov. 2014)

## PUBLIC OUTREACH AND K-12 EDUCATION:

***Invited Lectures:***
Logan Science Journalism Course (June 2023)
University of Chicago Graham School (Sept. 2022)
Lynn High School, Invited Lecture at MBL on Adaptation and Evolution (Feb. 2022)
Falmouth Academy, Women in Science and Engineering (WiSE) Club (Dec. 2018, Nov. 2019)
Sandwich High School, Human Body Systems Course (April 2018)
Mullen Hall, 1st Grade Science Class on "How the Brain Works" (April 2017)
Spinal Cord Injury Awareness Day, MA State House (Sept. 2015, 2017-2018)
Science Before Supper; Falmouth Library (Mar. 2016)
New England Ocean Science Education Collaborative: Ocean Literacy Summit (Nov. 2014)
MBL Board of Overseers (July 2013)

***Lab Demos:***
Winsor High School Visit (Oct. 2018)
MBL Council visit (July 2017)
Logan Science Journalism Program (June 2016)

***Other:***
ArtLab Presents (September 2020)
"MBL: Through the Lens of Time" Photography and Video Exhibit (June 2018)
NPR/WCAI: "Spinal Cord Regeneration" Interview on Living Lab (June 2012)

## PUBLICATIONS:

***Peer-Reviewed Publications:***

Chhabra A, Hoffmann C, Pérez GA, Korobeinikov AA, Rentsch J, Hümpfer N, Kokwaro L, Gnidovec L, Petrovic A, Wallace JN, Tromm JV, Román-Vendrell C, Johnson EC, Rankovic B, Perego E, Volpi T, Fernández-Busnadiego R, Köster S, Rizzoli SO, Ewers H, **Morgan JR,** Milovanovic D (2025) Condensates of synaptic vesicles and synapsin-1 mediate actin sequestering and polymerization. *EMBO Journal.* doi: 10.1038/s44318-025-00516-y. PMID: 40813925

Hirata-Miyasaki E, Bajor AA, Pettersson GM, Senftleben ML, Fouke KE, Graham TGW, John DD, **Morgan JR**, Haspel G, Abrahamsson S (2025) High-speed 3D imaging with a 25-camera multifocus microscope. *Optica* 12: 1230-1241.

Guadarrama E, Heisse LW, **Morgan JR**, Katz HR (2025) Dynamic microglia/macrophage infiltration during spinal cord regeneration in larval sea lamprey. *Annals of the NY Academy of Sciences*. 1549: 250-259. PMID: 40561357.

Vargas KJ, Wallace JN, Mooney I, Owen DJ, **Morgan JR** (2025) Alpha-synuclein interacts directly with AP2 and regulates its binding to synaptic membranes. *Journal of Biological Chemistry.* 301(5):108502. doi: 10.1016/j.jbc.2025.108502. PMID: 40216248.

Hoffmann C, Ruff KM, Edu IA, Shinn MK, Tromm JV, King MR, Pant A, Ausserwoger H, **Morgan JR,** Knowles TPJ, Pappu RV, Milovanovic DJ (2025) Synapsin condensation is governed by sequence-

encoded molecular grammars. *Journal of Molecular Biology*. 437(8)doi: 10.1016/j.jmb.2025.168987. PMID: 39947282.

Román-Vendrell C, Wallace JN, Watson AH, Celikag M, Bartels T, **Morgan JR** (2024) Acute introduction of monomeric or multimeric alpha-synuclein induces distinct impacts on synaptic vesicle trafficking at lamprey giant synapses. *Journal of Physiology*. doi: 10.1113/JP286281. PMID: 39530449. PMCID: PMC12066801.

Chhabra A, Hoffmann C, Korobeinikov AA, Rentsch J, Kokwaro L, Gnidovec L, Román-Vendrell C, Johnson EC, Wallace JN, Rankovic B, Perego E, Koster S, Rizzoli SO, Ewers H, **Morgan JR,** Milovanovic D (2024) Condensates of synaptic vesicles and synapsin are molecular beacons for actin sequestering and polymerization. *bioRxiv*. https://doi.org/10.1101/2024.07.19.604346. (accepted for publication at *The EMBO Journal*).

Wallace JN, Crockford ZC, Román-Vendrell C, Brady EB, Hoffman C, Vargas KJ, Potcoava M, Wegman ME, Alford ST, Milovanovic D, **Morgan JR** (2024) Excess phosphoserine-129 $\alpha$-synuclein induces synaptic vesicle trafficking and declustering defects at a vertebrate synapse. *Molecular Biology of the Cell*. 35(1):ar10. doi: 10.1091/mbc.E23-07-0269. (* Cover illustration)

Casiano Rivera CV, Wallace JN, Fisher GE, **Morgan JR** (2024) Acute introduction of phosphoserine-129 $\alpha$-synuclein induces severe swelling of mitochondria at lamprey synapses. *microPublication Biology*. 10.17912/micropub.biology.001206. PMCID: PMC11157340. doi: 10.17912/micropub.biology.001206.

Hamlet C, Fauci L, **Morgan JR**, Tytell ED (2023) Proprioceptive feedback amplification restores effective locomotion in a neuromechanical model of lampreys with spinal injuries. *Proceedings of the National Academy of Sciences.* 120(11):e2213302120. doi: 10.1073/pnas.2213302120. PMID: 36897980.

Maxson Jones K, **Morgan JR** (2023) Lampreys and spinal cord regeneration: “a very special claim on the interest of zoologists,” 1830s-present. *Frontiers in Cell and Developmental Biology.* 11:1113961. doi: 10.3389/fcell.2023.1113961. PMID: 37228651.

Brady EB, McQuillan M, Medeiros AT, Bubacco L, Sousa R, Lafer EM, **Morgan JR** (2023). Hsc70 rescues the synaptic vesicle trafficking defects caused by α-synuclein dimers. *microPublication Biology*. 10.17912/micropub.biology.000737. PMID: 3698331. doi: 10.17912/micropub.biology.000737

Pattanayak R, Underwood R, Crowley MR, Crossman DK, **Morgan JR**, Yacoubian TA (2022) Deletion in chromosome 6 spanning alpha-synuclein and multimerin1 loci in the Rab27a/b double knockout mouse. *Scientific Reports* 12:9837 doi: 10.1038/s41598-022-13557-8.

Katz HR, Arcese AA, Bloom O, **Morgan JR** (2022) Activating transcription factor 3 (ATF3) is a highly-conserved pro-regenerative transcription factor in the vertebrate nervous system. *Frontiers in Cell and Developmental Biology.* 10:824036. doi: 10.3389/fcell.2022.824036.

Fouke KE, Wegman ME, Weber SA, Brady EB, Román-Vendrell C, **Morgan JR** (2021) Synuclein regulates synaptic vesicle clustering and docking at a vertebrate synapse. *Frontiers in Cell and Developmental Biology.* 9:774650. doi: 10.3389/fcell.2021.774650.

Fies J, Gemmell BJ, Fogerson SM, **Morgan JR**, Tytell E, Colin SP (2021) Swimming kinematics and performance of spinal transected lampreys with different levels of axon regeneration. *Journal of Experimental Biology*. jeb.242639. doi: 10.1242/jeb.242639.

Haspel G, Severi KE, Fauci LJ, Cohen N, Tytell ED, **Morgan JR** (2021) Resilience of neural networks for locomotion. *Journal of Physiology*. doi: 10.1113/JP279214

Román-Vendrell C, Medeiros AT, Sanderson JB, Jiang H, Bartels T, **Morgan JR** (2021) Effects of excess brain-derived human α-synuclein on synaptic vesicle trafficking. *Frontiers in Neuroscience.* 15:639414 doi: 10.3389/fnins.2021.639414.

Banks SML, Medeiros AT, Sousa R, Lafer EM, **Morgan JR** (2021) Chaperone proteins as ameliorators of α-synuclein-induced synaptic pathologies: insights into Parkinson's disease. *Neural Regeneration Research.* 16:1198-1199.

Katz HR, Fouke KE, Losurdo NA*, **Morgan JR** (2020) Recovery of burrowing behavior after spinal cord injury in the larval sea lamprey. *Biological Bulletin*. December 2020. doi/10.1086/711365. (*Undergraduate contribution)

Soll L, Eisen JN, Vargas KJ, Medeiros AT, Hammar KM, **Morgan JR** (2020) α-Synuclein-112 impairs synaptic vesicle recycling consistent with enhanced membrane binding properties. *Frontiers in Cell and Developmental Biology*. 8:405. doi: 10.3389/fcell.2020.00405.

Banks SML*, Medeiros AT*, McQuillan M, Wang L, Ibarraran-Viniegra AS, Busch DJ, Sousa R, Lafer EM, **Morgan JR**. (2020) Hsc70 Ameliorates the Vesicle Recycling Defects Caused by Excess α-Synuclein at Synapses. *eNeuro* 7(1). pii: ENEURO.0448-19.2020. doi: 10.1523/ENEURO.0448-19.2020. (* equal contributors)

Du Clos KT, Dabiri JO, Costello JH, Colin SP, **Morgan JR**, Fogerson SM, Gemmell BJ (2019) Thrust generation during steady swimming and acceleration from rest. *Journal of Experimental Biology*. 222(Pt 22). pii: jeb212464. doi: 10.1242/jeb.212464.

Chanaday N, Cousin M, Milosevic I, Watanabe S, **Morgan JR** (2019) The synaptic vesicle cycle revisited: new insights into the modes and mechanisms. *Journal of Neuroscience*. 39:8209-8216. https://doi.org/10.1523/JNEUROSCI.1158-19.2019.

Hanslik K, Allen SR, Fogerson SM, Harkenrider T, Guadarrama E, **Morgan JR.** (2019) Behavioral and functional recovery in the sea lamprey after spinal cord re-transection. *PLoS One.* 14(1):e0204193. doi: 10.1371/journal.pone.0204193. (Featured in *Nature:* Research Highlights Feb. 6, 2019)

Romaus-Sanjurjo D, Ledo-García R, Fernández-López B, Hanslik K, **Morgan JR**, Barreiro-Iglesias A, Rodicio MC. (2018) GABA promotes survival and axonal regeneration in identifiable descending neurons after spinal cord injury in larval lampreys. *Cell Death and Disease*. 9:633. doi: 10.1038/s41419-018-0704-9. PMID: 29950557.

Weil M-T, Heibeck S, Töpperwien M, Tom Dieck S, Ruhwedel T, Salditt T, Rodicio MC, **Morgan JR**, Nave KA, Möbius W, Werner HB. (2018) Axonal ensheathment in the nervous system of lamprey: Implications for the evolution of myelinating glia. *Journal of Neuroscience*. doi: 10.1523/JNEUROSCI.1034-18.2018. PMID: 29941446.

Medeiros AT, Bubacco L, **Morgan JR.** (2018) Impacts of increased α-synuclein on clathrin-mediated endocytosis at synapses: implications for neurodegenerative diseases. *Neural Regeneration Research*. 13:647-648.

Herman PE, Papatheodorou A, Bryant SA, Waterbury CKM, Herdy JR, Arcese AA, Buxbaum JD, Smith JJ, **Morgan JR***, Bloom O*. (2018) Highly conserved molecular pathways, including Wnt signaling, promote functional recovery from spinal cord injury in lampreys. *Scientific Reports*. 8:742. doi: 10.1038/s41598-017-18757-1. PMID: 29335507. (* co-corresponding)

(#25 in Top 100 most-viewed neuroscience articles in *Sci. Rep.* in 2018)

Medeiros AT, Soll LG, Tessari I, Bubacco L, **Morgan JR**. (2017) α-Synuclein dimers impair vesicle fission during clathrin-mediated synaptic vesicle recycling. *Frontiers in Cellular Neuroscience*. 11:388. doi: 10.3389/fncel.2017.00388. PMID: 29321725.

Gemmell B, Fogerson SM, **Morgan JR**, Costello JH, Dabiri JO, Colin SP. (2016) How the bending kinematics of swimming lampreys build negative pressure fields for suction thrust. *Journal of Experimental Biology*. 219:3884-3895. PMID: 27974534.

Fogerson SM, van Brummen AJ, Busch DJ, Allen SR, Roychaudhuri R, Banks SML, Klarner F-G, Schrader T, Bitan G, **Morgan JR**. (2016) Reducing synuclein accumulation improves neuronal survival after spinal cord injury. *Experimental Neurology*. 278:105-115.

Busch DJ, Oliphint PA, Walsh RB, Banks SML, Woods WS, George JM, **Morgan JR** (2014) Acute increase of α-synuclein inhibits synaptic vesicle recycling evoked during intense stimulation. *Molecular Biology of the Cell.* 25:3926-3941. (With cover illustration). PMID: 25273557.

**Morgan JR,** Comstra HS, Cohen M, Faundex V. (2013) Presynaptic membrane retrieval and endosome biology: Defining molecularly heterogeneous synaptic vesicles. *Cold Spring Harbor Perspectives in Biology*. 5(10):a016915. (With cover illustration).

Lau BYB, Fogerson SM, Walsh RB, and **Morgan JR**. (2013) Cyclic AMP promotes axon regeneration, lesion repair and neuronal survival in lampreys after spinal cord injury. *Experimental Neurology*. 250: 31-42. PMID: 24041988.

**Morgan JR**, Jiang J, Oliphint PA, Jin S, Gimenez LE, Busch DJ, Foldes AE, Zuo Y, Sousa R, Lafer EM. (2013) Role for an Hsp70 nucleotide exchange factor in the regulation of synaptic vesicle endocytosis. *Journal of Neuroscience.* 33:8009-8021. (With cover illustration)

Smith JJ, Kuraku S, Holt C, Sauka-Spengler T, Jiang N, Campbell MS, Yandell MD, Manousaki T, Meyer A, Bloom OE, **Morgan JR**, Buxbaum JD, Sachidanadam R, Sims C, Garruss AS, Cook M, Krumlauf R, Wiedemann LM, Sower SA, Decatur WA, Hall JA, Amemiya CT, Saha NR, Buckley KM, Rast JP, Das S, Hirano M, McCurley N, Guo P, Rohner N, Tabin CJ, Piccinelli P, Elgar G, Ruffier M, Aken BL, Searle SMJ, Muffato M, Pignatelli M, Herrero J, Jones M, Brown CT, Chung-Davidson Y-W, Nanlohy KG, Libants SV, Yeh C-Y, McCauley DW, Langeland JA, Pancer Z, Fritzsch B, de Jong PJ, Zhu B, Fulton LL, Theising B, Flicek P, Bronner M, Warren WC, Clifton SW, Wilson RK, Li W. (2013) Sequencing of the sea lamprey (*Petromyzon marinus*) provides insights into vertebrate evolution. *Nature Genetics.* 45:415-21. PMID: 23435085.

Busch DJ and **Morgan JR** (2012) Synuclein accumulation is associated with cell-specific neuronal death after spinal cord injury. *Journal of Comparative Neurology.* 520: 1751-1771. (Highlighted in BioTechniques 06/22/12). PMID: 22120153.

Bloom OE and **Morgan JR** (2011) Membrane trafficking events underlying axon repair, growth, and regeneration. *Molecular and Cellular Neuroscience*. 48: 339-348. Review. PMID: 21539917.

Smith J, **Morgan JR**, Zottoli SJ, Smith PJ, Buxbaum JD, Bloom OE. (2011) Regeneration in the era of functional genomics and gene network analysis. *Biological Bulletin* 221:18-34. Review.

Lau, BY and **Morgan JR** (2011) "Fishing" for new strategies to improve recovery. *Paraplegia News* 65:68-69. Review.

Lau BYB, Foldes AE†, Alieva NO, Oliphint PA, Busch DJ, and **Morgan JR** (2011) Increased synapsin expression and neurite sprouting in lamprey brain after spinal cord injury. *Experimental Neurology* 228:283-293. († Undergraduate contributions) PMID: 21316361.

Oliphint PA, Alieva N, Foldes AE†, Tytell ED, Lau BYB, Pariseau JS†, Cohen AH, and **Morgan JR** (2010) Regenerated synapses in lamprey spinal cord are sparse and small even after functional recovery from injury. *Journal of Comparative Neurology* 518:2854-2872. PMID: 20506479.

*Bourne JN, ***Morgan JR**, and Pieribone VA (2006) Actin polymerization regulates clathrin coat maturation during early stages of synaptic vesicle recycling at lamprey synapses. *Journal of Comparative Neurology* 497:600-609 **(*** Contributed equally)

Augustine GJ, **Morgan JR**, Villalba C, Jin S, Prasad K, Lafer E (2006) Clathrin and synaptic vesicle endocytosis: studies at the squid giant synapse. *Biochemical Society Transactions* 34:68-72. Review.

**Morgan JR**, Di Paolo G, Werner H, Shchedrina VA, Pypaert M, Pieribone VA, and De Camilli P (2004) A role for talin in presynaptic function. *Journal of Cell Biology* 167:43-50 (Featured in "News: In this Issue")

**Morgan JR**, Prasad K, Jin S, Augustine GJ, and Lafer EM (2003) Eps15 homology domain-NPF interactions regulate clathrin coat assembly during synaptic vesicle recycling. *Journal of Biological Chemistry* 278:33583-33592

**Morgan JR** (2003) Sniffing calcium from the outside: an extracellular sensor for synaptic vesicle recycling. *Journal of Physiology* 551:2. Review.

**Morgan JR,** Augustine GJ, and Lafer EM (2002) Synaptic vesicle endocytosis: the races, places, and molecular faces. *NeuroMolecular Medicine* 2:101-114. Review.

**Morgan JR**, Lafer EM and Augustine GJ (2001) Rapid-fire synaptic vesicle exocytosis. *Neuron* 29:5-7. Review.

**Morgan JR**, Prasad K, Jin S, Augustine GJ, and Lafer EM (2001) Uncoating of clathrin-coated vesicles in presynaptic terminals is mediated by auxilin-Hsc70 interaction. *Neuron* 32:289-300. PMID: 11683998.

**Morgan JR**, Prasad K, Hao W, Augustine GJ, and Lafer EM (2000) A conserved clathrin assembly motif is essential for synaptic vesicle endocytosis. *Journal of Neuroscience* 20: 8667-8676. PMID: 11102472.

**Morgan JR**, Zhao X, Womack M, Prasad K, Augustine GJ, and Lafer EM (1999) A role for the clathrin assembly domain of AP180 in synaptic vesicle endocytosis. *Journal of Neuroscience* 19:10201-10211

Augustine GJ, Burns ME, DeBello WM, Hilfiker S, **Morgan JR**, Schweizer FE, Tokumaru H, and Umayahara K (1999) Proteins involved in synaptic vesicle trafficking. *Journal of Physiology* 520:33-41. Review.

**Morgan JR**, Gebhardt KA, Stuart AE (1999) Uptake of precursor and synthesis of transmitter in a histaminergic photoreceptor. *Journal of Neuroscience* 19:1217-1225.

Stuart AE, **Morgan JR**, Mekeel HE, Kempter E, Callaway JC (1996) Selective, activity-dependent uptake of histamine into an arthropod photoreceptor. *Journal of Neuroscience* 16:3178-3188.

## ***Books and Book Chapters:***

Walsh RB, Bloom OE and **Morgan JR.** (2018) "Acute manipulations of clathrin-mediated endocytosis at synapses." *Methods in Molecular Biology- Clathrin-Mediated Endocytosis: Methods and Protocols*. Edited by Laura Swan. Springer Science+Business Media, LLC; NY, NY. 1847:65-82. doi: 10.1007/978-1-4939-8719-1_6. PMID: 30129010.

**Morgan, JR.** (2017) "Ch. 22: Spinal cord repair and regeneration." *Regenerative Engineering and Developmental Biology: Principles and Applications.* Edited by David Gardiner. CRC Press, Taylor & Francis Group, LLC; Boca Raton, FL. p. 477-497.

**Morgan JR** and Shifman M. "Non-mammalian models of nerve regeneration." (2014) *Textbook of Neural Repair and Rehabilitation, Volume 1, Second Edition.* Edited by Michael E. Selzer, Stephanie Clarke, Leonardo G. Cohen, Gert Kwakkel, and Robert H. Miller, Cambridge Univ. Press; Cambridge, UK. Chapter 13, p. 329-338.

**Morgan JR** and Bloom O (2006) *The Cells of the Nervous System.* Chelsea House Publishers; NY, NY

Bloom O and **Morgan JR** (2006) *Encephalitis*. Chelsea House Publishers; NYC, NY

## PATENTS:

**Morgan JR**, Bitan G, and Busch DJ. Treatment of spinal cord injury or traumatic brain injury by inhibition of amyloidogenic proteins and synuclein protein accumulation or aggregation (Pending U.S. Patent Application 14/536,176 – Filed Nov. 7, 2014).