

Rachel E. Turn

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Department of Microbiology & Immunology
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SUMMARY Cell biologist with extensive training in molecular mechanisms that regulate cell function, with a particular focus on the G₀ transition program and fate change. I apply multidisciplinary approaches to identify conserved G₀ programs across diverse cell types and define their molecular markers, with the aim of identifying G₀ transition checkpoints. My research background combines expertise in ciliary biology, signaling pathways, and cutting-edge biological mass spectrometry with advanced imaging technologies to uncover molecular events governing cell fate.

EDUCATION

Postdoctoral Fellowship April 2021 - present
Stanford University, Baxter Laboratories, Stanford, CA

Ph.D.- Biochemistry, Cell, and Developmental Biology (BCDB) August 2015 - March 2021
Emory University, Laney Graduate School Atlanta, GA
GPA: 4.0/4.0

B.A- Biology August 2011 - May 2015
Harriet L. Wilkes Honors College, Florida Atlantic University, Jupiter, FL
GPA: 4.0/4.0

RESEARCH EXPERIENCE

Stanford University April 2021 - present
Postdoctoral Fellow
Advisor: Dr. Peter Jackson
Department of Microbiology and Immunology
Project: "The study of primary cilia as a signaling hub at the crossroads of critical cellular functions"

Emory University May 2016 - March 2021
Doctoral student, dissertation research
Advisor: Dr. Richard Kahn
Department of Biochemistry and Cell Biology
Project: "The ELMOD Family of ARF GAPs: Proposed Roles in Inter-pathway Communication"

Scripps Research Institute, Florida January 2014 - May 2015
Undergraduate Researcher/ Undergraduate Thesis Research
Advisor: Dr. Patricia McDonald
Department of Molecular Therapeutics
Project 1: "Determining the Interaction between β -Arrestin-2 and SERCA2a in the Angiotensin II Pathway."
Project 2: "Autocrine Selection of Novel GABABR Agonists from Intracellular Combinatorial Libraries."
Project 3 (Undergraduate Thesis): "In vivo characterization of a novel GLP-1R biased agonist."

Johns Hopkins University Summer 2013, Summer 2014
Undergraduate Researcher
NSF-REU Program: Visualization of Macromolecules in Biological Research
Advisor: Dr. Haiqing Zhao
Project 1: "Regeneration of Olfactory Epithelium from Horizontal Basal Cells"
Project 2: "Expression of Olfactory Receptor P2 outside the Olfactory System"

Harriet L. Wilkes Honors College, Florida Atlantic University December 2011-May 2013
Undergraduate Researcher
Advisor: Dr. Nicholas Quintyne
Project: "The Investigation of Tracking Techniques for Vesicular Transport"

GRANTS AND FUNDING SOURCES

- 1) NIH K99/R00 Pathway to Independence Award (2024 - present) [PI: R.E. Turn]
NIGMS (Grant #: 1K99GM154060)
Title: TULP3 Integrates Essential Ciliary Functions
- 2) NIH Ruth L. Kirschstein National Research Service Award (NRSA) F32 (2023 - 2024) [PI: R.E. Turn]
NIGMS (Grant #: 1F32GM142180) *Terminated early to begin K99
Title: The Role of eIF4G1 and eIF4G2 in Translational Control of Adipogenesis and Obesity
- 3) Stanford School of Medicine Dean's Fellowship (2022-2023) [PI: R.E. Turn]
1-yr institutional award given to early-career postdoctoral fellows to seed strong research ideas
Title: The Roles of eIF4G1 and eIF4G2 in Translational Control of Adipogenesis
- 4) NIH Ruth L. Kirschstein National Research Service Award (NRSA) F31 (2018 - 2021) [PI: R.E. Turn]
NCI (Grant #: 1F31CA236493)
Title: ELMOD2: proposed roles in regulating mitochondrial fusion and cell cycle
- 5) NIH NRSA BCMB Institutional Training Grant trainee, T32 (2016 - 2018) [PI: L.H. Boise/ A.H Corbett]
NIGMS (Grant #: 5T32GM8367)

PUBLICATIONS: (underline= co-first)

1. **Turn RE**, Dacks J, Soubias O, Rosenberg EM, Northup JK, Randazzo PA. "ARF: the most misunderstood GTPase I ever knew. Why study ARF GAPs." Invited Opinion Piece. In press at **Frontiers in Molecular Biosciences** in September 2025.
2. **Turn RE**, Aziz-Zanjani MO, Asthana A, Jackson PJ. "Multimodal Strategies for Spatiotemporal Profiling of Phosphorylation in Cilia Biology." Invited Perspective Piece. In press at **Journal of Cell Science** in September 2025.
3. **Turn RE**, Hilgendorf KI, Johnson CT, Han K, Rabiee A, Demeter J, Aziz-Zanjani MO, Cheng R, Domizi P, Zhu Y, Jiang Z, Svensson KJ, Bassik MC, Jackson PK. A CRISPR-based genome-wide screen for adipogenesis reveals new insights into mitotic expansion and lipogenesis. **Genes & Development**. 2025 Jul 17. doi: 10.1101/gad.352779.125. Epub ahead of print. PMID: 40675820. (underline = co-first)
4. Azizzanjani MO, **Turn RE**, Asthana A, Linde-Garelli KY, Xu LA, Labrie LE, Mobedi M, Jackson PK. Synchronized temporal-spatial analysis via microscopy and phosphoproteomics (STAMP) of quiescence. **Science Advances**. 2025 Apr 25;11(17):eadt9712. doi: 10.1126/sciadv.adt9712. Epub 2025 Apr 25. PMID: 40279433; PMCID: PMC12024681. (underline = co-first)
5. Kahn RA, Virk H, Laflamme C, Houston DW, Polinski NK, Meijers R, Levey AI, Saper CB, Errington TM, **Turn RE**, Bandrowski A, Trimmer JS, Rego M, Freedman LP, Ferrara F, Bradbury ARM, Cable H, Longworth S. Antibody characterization is critical to enhance reproducibility in biomedical research. **Elife**. 2024 Aug 14;13:e100211. doi: 10.7554/eLife.100211. PMID: 39140332; PMCID: PMC11324233.
6. Wu CT, Lidsky PV, Xiao Y, Cheng R, Lee IT, Nakayama T, Jiang S, He W, Demeter J, Knight MG, **Turn RE**, Rojas-Hernandez LS, Ye C, Chiem K, Shon J, Martinez-Sobrido L, Bertozzi CR, Nolan GP, Nayak JV, Milla C, Andino R, Jackson PK. SARS-CoV-2 replication in airway epithelia requires motile cilia and microvillar reprogramming. **Cell**. 2023 Jan 5;186(1):112-130.e20. doi: 10.1016/j.cell.2022.11.030. Epub 2022 Dec 2. PubMed PMID: 36580912; PubMed Central PMCID: PMC9715480.
7. **Turn RE**, Hu Y, Dewees SI, Devi N, East MP, Hardin KR, Khatib T, Linnert J, Wolfrum U, Lim MJ, Casanova JE, Caspary T, Kahn RA. The ARF GAPs ELMOD1 and ELMOD3 act at the Golgi and cilia to regulate ciliogenesis and ciliary protein traffic. **MBoC**. 2022 Jun 1;33(7):cor1. doi: 10.1091/mbc.E21-09-0443_corr. PubMed PMID: 35612986; PubMed Central PMCID: PMC9561853. (underline = co-first)
8. Dewees SI, Vargová R, Hardin KR, **Turn RE**, Devi S, Linnert J, Wolfrum U, Caspary T, Eliáš M, Kahn RA. Phylogenetic profiling and cellular analyses of ARL16 reveal roles in traffic of IFT140 and INPP5E. **MBoC**. 2022 Apr 1;33(4):ar33. doi: 10.1091/mbc.E21-10-0509-T. Epub 2022 Feb 23. PubMed PMID: 35196065; PubMed Central PMCID: PMC9250359.
9. **Turn RE**, Linnert J, Gigante ED, Wolfrum U, Caspary T, Kahn RA. Roles for ELMOD2 and Rootletin in ciliogenesis. **MBoC**. 2021 Apr 15;32(8):800-822. doi: 10.1091/mbc.E20-10-0635. Epub 2021 Feb 17. PubMed PMID: 33596093; PubMed Central PMCID: PMC8108518.
10. **Turn RE**, East MP, Prekeris R, Kahn RA. The ARF GAP ELMOD2 acts with different GTPases to regulate centrosomal microtubule nucleation and cytokinesis. **MBoC**. 2020 Aug 15;31(18):2070-2091. doi: 10.1091/mbc.E20-01-0012. Epub 2020 Jul 2. PubMed PMID: 32614697; PubMed Central PMCID: PMC7543072.
11. Schiavon CR, **Turn RE**, Newman LE, Kahn RA. ELMOD2 regulates mitochondrial fusion in a mitofusin-dependent manner, downstream of ARL2. **MBoC**. 2019 May 1;30(10):1198-1213. doi: 10.1091/mbc.E18-12-0804. Epub 2019

- Mar 13. PubMed PMID: 30865555; PubMed Central PMCID: PMC6724520. (underline = co-first)
12. **Turn RE**, D'Souza RS, Wall AA. Meeting report-Small GTPases in membrane processes: FASEB summer research conference. *Traffic*. 2019 Mar;20(3):259-262. doi: 10.1111/tra.12633. Epub 2019 Feb 4. PubMed PMID: 30666771.
 13. Newman LE, Schiavon CR, **Turn RE**, Kahn RA. The ARL2 GTPase regulates mitochondrial fusion from the intermembrane space. *Cellular Logistics*. 2017;7(3):e1340104. doi: 10.1080/21592799.2017.1340104. eCollection 2017. PubMed PMID: 28944094; PubMed Central PMCID: PMC5602422.
 14. Francis JW, **Turn RE**, Newman LE, Schiavon C, Kahn RA. Higher order signaling: ARL2 as regulator of both mitochondrial fusion and microtubule dynamics allows integration of 2 essential cell functions. *Small GTPases*. 2016 Oct;7(4):188-196. doi: 10.1080/21541248.2016.1211069. Epub 2016 Jul 11. Review. PubMed PMID: 27400436; PubMed Central PMCID: PMC5129891.
 15. Zhang H, Sturchler E, Zhu J, Nieto A, Cistrone PA, Xie J, He L, Yea K, Jones T, **Turn R**, Di Stefano PS, Griffin PR, Dawson PE, McDonald PH, Lerner RA. Autocrine selection of a GLP-1R G-protein biased agonist with potent antidiabetic effects. *Nature Communications*. 2015 Dec 1;6:8918. doi: 10.1038/ncomms9918. PubMed PMID: 26621478; PubMed Central PMCID: PMC4686834.

FORTHCOMING PUBLICATIONS (underline: co-first)

1. **Aziz-Zanjani MO**, **Turn RE**, **Hang Y**, Asthana A, LaBrie LE, Mobedi MA, Xu LA, Kim SK, Jackson PK. Higher Order Signaling of GPCR-mediated Glucose Stimulated Insulin Secretion (GSIS) in Pancreatic Beta Cells via metabolic STAMP. *Manuscript on bioRxiv*.
2. **Turn RE**, **Aziz-Zanjani MO**, Asthana A, Philbrook A, Chavez ME, LaBrie LE, Mobedi MA, Sengupta P, Jackson PJ. TULP3 Regulates Axonemogenesis and Golgi-to-Cilia Membrane Traffic. *Manuscript in preparation*.
3. **Turn RE**, **Aziz-Zanjani MO**, Asthana A, Kahn RA, Jackson PJ. ARF GEFs BIG1 and BIG2 have opposing roles in ciliogenesis. *Manuscript in preparation*.

INVITED SPEAKER

1. December 2025- "Mechanisms at the crossroads of Primary Cilia Axonemogenesis."
New England Cilia Group, Organizer: Gregory Pazour, UMass Chan Medical School, Worcester, MA. (Virtual).
2. September 2024- "Establishing the G₀ Entry Point."
New England Cilia Group, Organizer: Gregory Pazour, UMass Chan Medical School, Worcester, MA. (Virtual).
3. May 2024- "How Cancer loses primary cilia and the quiescent signature."
Department of Biology, Organizer: Dr. Nicholas Quintyne, The State University of New York at Fredonia. (Virtual).
4. April 2022- "The Primary Cilium: A Critical Signaling Hub in Cancer."
Department of Biology, Organizer: Dr. Nicholas Quintyne, The State University of New York at Fredonia. (Virtual).
5. May 2020- "ARF GTPases and their regulators mediate inter-pathway communication."
Department of Biology, Organizer: Dr. Nicholas Quintyne, The State University of New York at Fredonia. (Virtual).
6. March 2018- "How I Made Cancer."
Department of Biology, Organizer: Dr. Nicholas Quintyne, The State University of New York at Fredonia. (Virtual).
7. April 2016- "Ras family GTPases are molecular switches that regulate diverse signaling pathways."
Department of Biology, Organizer: Dr. Nicholas Quintyne, The State University of New York at Fredonia. (Virtual).

SELECTED ABSTRACTS

Oral Presentations

1. December 2025- "Temporal-spatial regulation of protein synthesis and degradation serves as a key checkpoint of G₀ transition and fate change"
Cell Bio 2025, Philadelphia, PA
2. November 2025- "Standing at the Crossroads: How does a cell determine its fate?"
ABRCMS, San Antonio, TX
3. October 2025- "Mapping the mechanisms at the crossroads of primary cilia axonemogenesis."
Cilia, Flagella, Centrosome Meeting in Institut Pasteur, Oberbronn, France
4. April 2025- "Mechanisms at the crossroads of Primary Cilia Axonemogenesis"
Bay Area Cytoskeleton Meeting, San Francisco, CA
5. July 2024- "Ciliogenesis and Licensing of the G₀ Program."
FASEB- Small GTPases: Membrane Traffic and Cytoskeleton, Tucson, AZ
6. May 2024- "Ciliogenesis and Licensing of the G₀ Program."

7. December 2022- "Temporal Mapping of the Phospho-Footsteps of Ciliogenesis."
FASEB- The Biology of Cilia and Flagella Conference, St. Paul, MN
Cell Bio 2022 (ASCB), Washington DC
8. January 2021- "Roles for ELMOD2 and Rootletin in Ciliogenesis."
UK Cilia Network eSymposium
9. August 2019- "Roles for the ARF Family GAPs, ELMODs, in cilia and cytokinesis"
FASEB- The Biology of Cilia and Flagella Conference, Snowmass, CO
10. September 2018- "Distinct and Shared Regulation of the ELMOD Family of ARF GAPs."
FASEB Small GTPases in Membrane Processes: Trafficking, Autophagy, and Disease,
Leesburg, VA
11. September 2016- "A role for the ARL2 GTPase in mitochondrial fusion."
FASEB Small GTPases in Membrane Processes: Trafficking, Autophagy, and Disease,
West Palm Beach, FL
12. April 2013- "Live analysis of vesicular transport in CAD cells: determining the activity of +/- end directed motors."
Harriet L. Wilkes Honors College Research Symposium, Jupiter, FL

Poster Presentations

1. April 2025- "Mapping the Mechanisms at the Crossroads of Primary Cilia"
Bay Area Cytoskeleton Symposium, University of California San Francisco, San Francisco, FL
2. July 2024- "Ciliogenesis and Licensing of the G0 Program."
FASEB Small GTPases: Membrane Traffic and Cytoskeleton, Tucson, AZ
3. June 2024- "GPCR pathway-specific regulatory mechanisms drive β cell insulin secretion."
American Society of Mass Spectrometry (ASMS), Anaheim, CA
4. May 2024- "Ciliogenesis and Licensing of the G0 Program"
FASEB: The Biology of Cilia and Flagella Conference, St. Paul, MN
5. December 2023- "Ciliogenesis and Ciliary Signaling revealed by STAMP (Synchronized Time-lapse Analysis via Microscopy and Phosphoproteomics)."
Cell Bio 2023 (ASCB), Boston, MA
6. September 2023- "Temporal Mapping of the Phospho-Footsteps of Ciliogenesis."
EMBO Centrosome, Istanbul, Turkey
7. March 2023- "Temporal Phosphoproteomics of Ciliogenesis in Human Nasal Epithelia"
US Human Proteome Organization (US HUPO), Chicago, IL
8. December 2022- "Temporal Mapping of the Phospho-Footsteps of Ciliogenesis."
Cell Bio 2022 (ASCB), Washington DC
9. June 2022- "Proteomic analysis of differentiation of multiciliated human nasal epithelial cells."
FASEB: The Biology of Cilia and Flagella Conference, Tucson, AZ
10. May 2022- "A CRISPR-based genome-wide screen for adipogenesis reveals critical roles for translational control in mitotic expansion and lipogenesis."
Stanford Diabetes Research Conference (SDRC), Stanford, CA
11. August 2019- "Roles for the ARF Family GAPs, ELMODs, in cilia and cytokinesis"
FASEB: The Biology of Cilia and Flagella Conference, Snowmass, CO
12. September 2018- "Distinct and Shared Regulation of the ELMOD Family of ARF GAPs."
FASEB Small GTPases in Membrane Processes: Trafficking, Autophagy, and Disease
Conference in Leesburg, VA
13. June 2018- "A Role for the ARF Family GTPase Activating Protein (GAP), ELMOD2, in Cytokinesis."
Cell Cycle Symposium, Salk Institute, La Jolla, CA
14. November 2017- "A Role for the ARL2 GTPase Activating Protein GAP (ELMOD2), in Mitochondrial Fusion."
"New York Academy of the Sciences: Mitochondria in Health and Disease," New York, NY
15. September 2016- "A role for the ARL2 GTPase in mitochondria."
FASEB: GTPases in Traffic, Autophagy, and Disease, West Palm Beach, FL
16. December 2014- "Regeneration of Olfactory Epithelium from Horizontal Basal Cells."
Cell Bio 2014 (ASCB Conference) Philadelphia, PA
17. December 2010- Autocrine Selection of Novel GABABR Agonists from Intracellular Combinatorial Libraries."
Cell Bio 2014 (ASCB Conference) Philadelphia, PA
18. 2013-2014 – "Expression of Olfactory Receptor P2 outside the Olfactory System."
Conference of Undergraduate Research REU Symposium in Arlington, VA (October 2013)
National Conference of Undergraduate Research, Lexington, KY (April 2014)
19. December 2012- "Live analysis of vesicular transport in CAD cells: determining the activity of +/- directed motors."
Cell Bio 2012 (ASCB) Conference, San Francisco, CA

HONORS & AWARDS

2025	Finalist for the Stanford Postdoc Champion: Community Impact Award (<i>"highlight the individual contributions of postdocs whose service fosters belonging and uplifts their communities"</i>)
2025	Member of the Stanford Research Career Accelerator Program (ReCAP) Cohort (<i>"ReCAP provides an opportunity for K award/CDA awardees to interact with their peers in the School of Medicine community and to learn from senior faculty how best to position themselves for future success"</i>)
2024	<u>Recipient of Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) NIH K99/R00 Postdoctoral Career Transition Award</u>
2023	Nominee for Stanford Postdoc Justice, Equity, Diversity, and Inclusion (JEDI) Champion award
2021	Emory University GDBBS Graduate Career Award (<i>"highest achievement for PhD student in our graduate division based on academics, scholarship, leadership, and service"</i>)
2019	Emory University John B. Lyon Memorial Scholarship recipient for excellence in Biochemistry research
2019	Emory GDBBS Program Community Service Award
2018	FASEB: Small GTPases in Membrane Processes, 2nd place poster contest winner
2015-2020	Emory University Woodruff Fellowship (<i>"the highest accolade an incoming student can receive... students with exceptional character, scholastic abilities, and leadership qualities"</i>)
2015	Harriet L. Wilkes Honors College Valedictorian Class of 2015
2015	Outstanding Thesis Award, Harriet L. Wilkes Honors College
2015	Stan and Renee Wimberly Scholar (<i>highest achievement for an FAU graduate based on academics, scholarship, leadership, and service</i>)
2015	Undergraduate Researcher of the Year for Harriet L. Wilkes Honors College
2014-2015	Ballen Isles Science Honors Scholarship
2014	Distinguished Community Service Award, Harriet L. Wilkes Honors College
2014	"Students Advocating Volunteer Involvement Organization" Volunteer of the Year Award
2014	"Owl of the Year" Award for the Northern Campuses of FAU (<i>Leadership and Service Award</i>)
2013-2015	Bigony Pay it Forward Scholarship (<i>Leadership and Service Award</i>)
2013-2015	Florida Power and Light STEM Scholarship
2013	Sophomore of the Year, Harriet L. Wilkes Honors College (<i>"The student... who best meets all four of the following criteria: minimum 3.3 cumulative Florida Atlantic GPA, demonstrated strength in scholarship, outstanding service in on-campus and off-campus activities, special initiative"</i>)
2013	Presidential Community Service Award, Silver Medal
2012-2015	Koch Scholarship for Highest GPA
2012	Freshman of the Year, Harriet L. Wilkes Honors College (<i>"The student... who best meets all four of the following criteria: minimum 3.3 cumulative Florida Atlantic GPA, demonstrated strength in scholarship, outstanding service in on-campus and off-campus activities, special initiative"</i>)
2011-2015	Founders Scholarship, Harriet L. Wilkes Honors College
2011	Bishop McLaughlin Catholic High School Valedictorian

PEER REVIEW ACTIVITIES (MANUSCRIPTS)

Editorial Positions

2025-present	<u>Molecular Biology of the Cell (MBOC) Early Careers Editorial Board (ECB)</u> <i>Nominated and selected for this 2-year position in which I participate in the review process, contribute to editorial discussions, invite submissions, and help shape the future of rigorous, constructive publishing in cell biology</i>
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Invited Reviewer

PLOS One	2022 - present
PLOS Genetics	2024 - present
MBoC	2024 - present
Cells	2025 - present
IJMS	2025 - present
Renal Failure	2025 - present
Biology	2025 - present
Methods and Protocols	2025 - present

CONFERENCE/SYMPOSIUM ORGANIZATION

December 2025	<u>Session Co-Chair for Cell Bio 2025 (ASCB EMBO): "Spatiotemporal control of cell signaling across scales"</u> (<i>Prepared competitive session proposal along with co-investigator Dr. Mohammad Ovais Aziz-Zanjani. I invited speakers and selected abstracts to design a 2-hr long session, with speakers from diverse backgrounds and interests. I will be the MC for the session, providing</i>
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March 2025 *speaker introductions)*
Organizer for the ARF Symposium, March 14, 2025 in Bethesda, MD at the Woman's Club of Bethesda (<https://arfsymposium.org/>) (Hosted on the occasion of the retirement of Dr. Richard Kahn, the founder of the ARF GTPase field; Organized a 1-day symposium (no registration fees) with both nation-wide and international attendees, with >50 in-person attendees and >30 virtual attendees; Recruited speakers; organized the schedule; fundraised; booked the venue; assembled a committee to organize meals, generate signage, and set up the new website; served as the main point of contact)

MENTORSHIP AND TEACHING

Mentorship

Summer 2022 - present Stanford-HBMC Diversity Summer Program Volunteer (Program to sponsor diversity, equity, and inclusion in the sciences. We mentor rising second year medical students over the summer from historically black medical colleges to give them early training in biomedical research at the bench)

Fall 2021- present Postdoctoral mentorship: 2 rotation students, 2 high school students, 4 undergrads, 1 visiting medical scholar (5 of whom are URM)

Fall 2016 - April 2021 Graduate mentorship: 3 technicians, 1 lab manager, 3 rotations students, 2 graduate students, 1 foreign medical student (6 of whom are URM)

Teaching

Spring 2021 - present Book a Biology Volunteer Program (Program in which postdoctoral scholars volunteer to teach guest lectures at local grade schools and high schools to instill an early appreciation of STEM. Have taught a total of 4 classes)

May 2017 - May 2019 BCDB Tutor for Qualifying Exam I and II (Mentored junior students to provide them with the skills needed to prepare for their written and oral qualifying exams)

Spring 2017 Teaching Assistant for Cell Biology undergraduate course
Employer: Dr. Arri Eisen, Department of Cell Biology, Emory University
Tasks: Presented lectures, hosted tutoring sessions and exam review sessions, designed and graded exams, developed study questions, trained students in reading primary literature and group presentations on material covered

Fall 2013 - Fall 2015 Laboratory Technician and Teaching Assistant
Employer: April Schimmel, Biology Department, Harriet L. Wilkes Honors College
Lectures TA'd: Life Science, Biological Principals, Biodiversity, Anatomy and Physiology, and Microbiology Labs
Tasks: Manage the biology laboratories by preparing experiments for biology labs; organize and prepare equipment for student thesis researchers; assist and tutor students in biology lab classes

LEADERSHIP AND SERVICE

Fall 2024 – present Stanford Science Small Groups (SSG)- **Positions:** Mentor (Fall 2023-present), Exec Board Member (2024-present) (Program to mentor community college students through their transition to STEM careers (17 mentees so far); Coordinator of the closing celebration each semester)

Spring 2022 - present Chair of Social Community for the CCSR Baxter Labs- (Organizer of monthly happy hours for all the labs on the third floor of CCSR (~50 people); help encourage inter-lab networking and collaborations, boost lab morale, and foster a sense of belonging)

Spring 2022 - present LifeMoves Opportunity Center Volunteer- (Prepare and serve lunch to residents at local homeless shelter)

Spring 2021 - present Common Roots Farm Volunteer- (Volunteer for non-profit, community-owned farm organized by family members of the disabled; perform construction projects, harvest crops, weed crop beds, take care of livestock, etc)

November 2024 – present Judge and Mentor undergraduate trainees for ABRCMS in Pittsburgh, PA (2024) and ABRCMS in San Antonio, TX (2025)

Spring 2020 - Spring 2022 Cilia Trainee Network **Positions:** Coordinator (Spring 2020-Spring 2022) (provide a global network for early career researchers in the cilia field to help foster a sense of community. We create a platform where members can seek career advice, share reagents, protocols, and job postings; engage in journal clubs and happy hours)

Spring 2016 – Spring 2020 GIVE: GDBBS Involvement in Volunteerism at Emory **Positions:** President (Fall 2017-

	Fall 2019), Vice President (Fall 2016-Fall 2017) (<i>Graduate-run organization running volunteer days with diverse organizations: Habitat for Humanity, Trees Atlanta, Atlanta Community Foodbank, Ronald McDonald House, Toys for Tots, Emory Children's Hospital, FurKids Animal Shelter, Perkerson Park, Sweetwater Creek, STEAM club afterschool programs, Fernbank Science Center, Emory Veteran's Hospital, local nursing homes, Chattahoochee River Keeper, El Refugio, Project Openhand</i>)
May 2016 - August 2016 Fall 2015 - Spring 2018	Emory BCDB Graduate Program Annual Retreat Organizer Emory BCDB Graduate Program Recruitment Committee; Positions: Recruitment Coordinator (Fall 2016-Spring 2018); Volunteer (Fall 2015-Spring 2016) (<i>Our program encourages current students to play an active role in recruiting new students to join our program. I served as retreat coordinator for two years along with our Program Administrator, fulfilling such tasks as matching students with buddies, coordinating meetings, arranging the schedule of events, organizing the student volunteers, etc.</i>)
Fall 2015 - Fall 2018	Leading Edge: BCDB Newsletter; Positions: Editor (Fall 2017-Fall 2018), Editorial ;Staff and Contributor (Fall 2015-Fall 2018) (<i>Served as editor and contributor to our program's newsletter, providing program updates, recaps of guest lectures, ongoing science debates, and highlights of activities that students can participate in beyond the bench</i>)
Fall 2015 - Spring 2018	Emory University Graduate Sustainability Group (GSG); Positions: Treasurer, Sustainability Ambassadors Coordinator (<i>Networking organization that connected all the different sustainability-minded groups on campus</i>)
Spring 2016 - Spring 2017	Farmworker Justice Coalition; Position: Board Member (Representing the rights of migrant workers in our local community, inviting guest speakers, hosting a week-long event to provide awareness, conducting rallies for living wages)
Spring 2017 – Spring 2021	Other weekend volunteer works in Atlanta: Habitat for Humanity Volunteer; Central Night Shelter for Homeless Men (Serve as guard of men's homeless shelter overnight during the winter months); A.G Rhodes Nursing Home Volunteer (May 2019- 2021)
Fall 2011 - Spring 2015	Environmental Club; Position: President (Spring 2013-Spring 2015) Co-President (Fall 2012) (<i>Promote environmental awareness in our school, through Earth Week activities, skill-shares, camping and hiking trips, gardening, working in the school Arboretum, beach cleanups, and other volunteer initiatives</i>)
Fall 2011 - Spring 2015	Corn Maya/ El Sol Community Center Partnership; Position: President (Fall 2014-Fall 2015); Co-President (Fall 2013-Spring 2014); Co Vice-President (Fall 2012-Spring 2013); (<i>Coordinated volunteer programs to teach English as a Second Language (ESL) classes to local Guatemalan immigrants; organized the Fiesta Maya event to support Guatemalan migrant workers; Founder of El Pueblo Iluminado Project, which strives to provide scholarships for 27 at-risk children in the village of Chuatroj, Guatemala</i>)
Fall 2011 - Spring 2015	Cliché Literary Magazine; Position: Secretary/Treasurer (Spring 2012-Spring 2015) (<i>Creating school literary magazine two times a year to allow students to share their writing; hosting writing seminars, Poetry Jam Sessions, other social events</i>)
Fall 2011 - Spring 2015	Yarnatics; Positions: Secretary (Fall 2014-Spring 2015) (<i>Crochet/knit clothing that we donate to the homeless of Palm Beach County, FL</i>)

PROFESSIONALIZATION TRAINING

June 2024 - present	UE5 MOSAIC K99/R00 monthly career development/ethics workshops
March 2024 - June 2024	EDUC 343C: Preparing for Faculty Careers Course
July 2023	ASMS short course: Peptides and Proteins
March 2023	US HUPO short course: Mass Spectrometry Imaging: Advances and Omics Applications
June 2022	MED 255: Responsible Conduct of Research Course
September 2015 - April 2021	Monthly Ethics, Methods, and Professionalization Workshops hosted by the Emory University BCDB program
August 2015	Jones Program in Ethics: Core Course hosted by Emory University

PROFESSIONAL AFFILIATIONS

Sigma Xi Scientific Research Honors Society	Summer 2025 - present
Stanford RB Group (Cancer/ Cell Cycle Research Subgroup)	Fall 2023 - present
Bay Area Cytoskeleton Club	Fall 2022 - present
Stanford Polarity, Cytoskeleton, and Mechanobiology (PCM) Journal Club	Fall 2022 - present
Stanford Diabetes Research Center	Spring 2022 - present
Stanford Research Career Accelerator Program (ReCAP)	Fall 2024 - present

US Human Proteome Organization (US HUPO)
UK Cilia Network
Phi Kappa Phi Honors Society
National Society of Collegiate Scholars
American Society for Cell Biology (ASCB)

Fall 2022 - present
Spring 2020 - present
Spring 2014 - present
Spring 2012 - 2015
Fall 2012 – present

REFERENCES:

Peter Jackson, Ph.D. (postdoctoral advisor)

Professor, Department of Microbiology and Immunology, Stanford University
Phone: Email: pjackson@stanford.edu

Richard Kahn, Ph.D. (predoctoral advisor)

Professor, Department of Biochemistry, Emory University
Phone: (404) 727-3561 Email: rkahn@emory.edu

Tamara Caspary, Ph.D.

Professor, Department of Human Genetics, Emory University
Phone: (404) 727-9862 Email: tcaspar@emory.edu