

**Lauren A. (Allen) McKibben, PhD****1) Personal Information**

Name: Lauren A. McKibben, PhD  
 Email: lauren\_mckibben@med.unc.edu

**2) Education**

<u>Institution and Location</u>	<u>Degree/Program</u>	<u>Year</u>	<u>Degree/Focus</u>
University of North Carolina at Chapel Hill Chapel Hill, NC (UNC-CH)	Post-doctoral Fellow	2021-Present	Post-traumatic pain
University of Alabama at Birmingham Birmingham, AL (UAB)	PhD GPA:3.96	2020	Behavioral Neuroscience
Nicholls State University Thibodaux, LA	BA GPA:3.90	2015	Psychology, minor in Mathematics
Fontainebleau High School Mandeville, LA	Diploma GPA: 3.91	2011	

**3) Professional Experience – Employment History**

2022-	Postdoctoral Fellow, Trauma T32 Program, Department of Surgery, UNC-CH
2021-	Postdoctoral Research Associate, Department of Anesthesiology, UNC-CH
2018	Instructor, Department of Psychology, UAB
2017-2020	Teaching Assistant, Department of Psychology, UAB
2017-2020	Research Assistant, Department of Psychiatry, UAB
2015-2017	College of Arts and Sciences Research Fellow, Department of Psychology, UAB
2013-2015	Mathematics Enrichment Workplace Tutor, Department of Mathematics, Nicholls State University, Thibodaux, LA

**Society Memberships:**

2022-Present	US Association for the Study of Pain
2021-Present	Society of Biological Psychiatry
2021-Present	International Association for the Study of Pain
2018 -2020	Society for Neuroscience
2017-2018	Alabama Psychological Association
2014-2015	Psi Chi Psychiatry Honor Society
2014-2015	Pi Mu Epsilon Mathematics Honor Society
2013-2015	Phi Kappa Phi Honor Society

**4) Honors and Awards**

2024	NIH HEAL Initiative Trainee Travel Award
2023	North American Pain School Scholar Travel Award
2022	Best Poster Award from the Sex, Gender, and Racial Differences in Pain Special Interest Group (SIG) at the International Association for the Study of Pain World Congress
2022	International Association for the Study of Pain World Congress Travel Award
2019	2 <sup>nd</sup> Place Poster Award, Annual UAB Department of Psychiatry Research Conference, UAB

## 5) Bibliography

### Refereed Articles

#### *Published Original Research and Review articles*

1. Branham EM, McLean SA, Deliwala IH, Mauck MC, Zhao Y, **McKibben LA**, Lee A, Spencer AB, Zannas AS, Lechner M, Danza T, Velilla MA, Hendry PL, Pearson C, Datner E, Peak DA, Jones J, Rathlev NK, Linnstaedt SD. CpG methylation levels in HPA axis genes predict chronic pain outcomes following trauma exposure. Accepted for publication March 2023. PMID: 36906051
2. Stager L., Morris S., **McKibben L**, Grant M., Szflarski JP, Fobian AD. Selective attention and sense of control in pediatric functional seizures: A case-control study. *Seizure*. Accepted for publication March 2022. PMID: 35430472.
3. **McKibben LA** & Dwivedi Y. Early life and adult stress promote sex dependent changes in hypothalamic miRNAs and environmental enrichment prevents stress-induced miRNA and gene expression changes in rats. *BMC Genomics*. Accepted for publication September, 2021. PMID: 34583641.
4. **McKibben LA** & Dwivedi Y. miRNA regulates early life stress-induced depressive behavior via serotonin signaling in a sex-dependent manner in the prefrontal cortex of rats. *Biological Psychiatry Global Open Science*. Accepted for publication June, 2021. PMID: 36325302.
5. **McKibben LA** & Dwivedi Y. Early-life stress induces genome-wide sex-dependent miRNA expression and correlation across limbic brain areas in rats. *Epigenomics*. Accepted for publication May, 2021. PMID: 34008410.
6. Roy B, Yoshino Y, **Allen L**, Prall K, Schell G, Dwivedi Y. Exploiting circulating microRNAs as biomarkers in psychiatric disorders. *Molecular Diagnosis & Therapy*. Accepted for publication June, 2020. PMID: 32304043.
7. Roy B, Dunbar M, Agrawal J, **Allen L**, Dwivedi Y. Amygdala-based altered miRNome and epigenetic contribution of miR-128-3p in conferring susceptibility to Depression-like behavior via Wnt signaling. *International Journal Neuropsychopharmacology*. Accepted for publication March, 2020. PMID: 32173733.
8. **Allen, L.**, Dwivedi, Y. MicroRNA mediators of early life stress vulnerability to depression and suicidal behavior. *Molecular Psychiatry*. Accepted for publication February, 2020. PMID: 31740756.

#### *Manuscripts in Submission*

9. Son E, Gaither R, Lobo J, Zhao Y, **McKibben LA**, Arora R, Albertorio-Saez L, Mickelson J, Wanstrath BJ, Bhatia S, Stevens JS, Jovanovic T, Koenen K, Kessler R, Ressler K, Beaudoin FL, McLean SA, Linnstaedt SD. Data from humans and animals suggesting that 17 $\beta$ -estradiol is a promising preventative therapeutic for the reduction in chronic post-traumatic musculoskeletal pain in women. Expected submission December 2023.

#### *Published Abstracts (Presenter is marked with \*)*

1. **McKibben LA\***, McLean SA, Zhao Y, Géranton SM, Florea R, Wanstrath B, Kuhl-Chimera S, Deliwala I, Hausch F, Linnstaedt SD. Traumatic stress-induced RNA expression signatures in rats reveal insights into *Fkbp5*-mediated posttraumatic pain development. *Poster presentation* at the 2023 US Association for the Study of Pain Meeting, Durham, NC, April 2023.
2. **McKibben LA\***, Zhao Y, Mickelson J, Burnham L, Lin T, Wang TW, Lee S, Shih YI, Harnett N, van Rooij S, Stevens J, Jovanovic T, Koenen K, Kessler RC, Ressler KJ, McLean SA, Linnstaedt SD. Early life adversity increases risk for posttraumatic chronic pain via enduring hippocampal changes: preliminary evidence from the AURORA cohort and a reverse-translated rodent model. *Poster presentation* at the 2023 Society for Biological Psychiatry Meeting. San Diego, CA. April 2023.
3. Branham EM\*, Deliwala IH, Mauck MC, Zhao Y, Lee A, Zannas A, **McKibben LA**, Spencer AB, Cairns BA, Lechner M, Danza T, Kurz MC, Velilla MA, Hendry PL, Pearson C, Datner E, Peak DA, Jones J, Rathlev

- NK, Lewandowski C, McLean SA, Linnstaedt SD. DNA methylation levels in hypothalamic-pituitary-adrenal axis genes predict chronic pain outcomes following trauma exposure. *Poster presentation* at the 2023 Society for Biological Psychiatry Meeting. San Diego, CA. April 2023.
4. **McKibben LA**, An X, Li Q, Lin T\*, Burnham L, Ressler K, Koenan K, Kessler RC, Linnstaedt SD, McLean SA. Derivation and validation of a brief emergency department-based prediction tool for persistent severe pain after motor vehicle collision trauma using data from the AURORA study. *Poster presentation* at the 2023 Society for Biological Psychiatry Meeting. San Diego, CA. April 2023.
  5. **McKibben LA\***, Zhao Y, Mickelson J, Wang TW, Burnham L, Lin T, Lee S, Shih YI, Stevens J, McLean SA, Linnstaedt S. Early life adversity increases risk for posttraumatic chronic pain via enduring hippocampal changes: preliminary evidence from the AURORA cohort and a reverse-translated rodent model. *Poster presentation* at the 2023 NIH Help End Addiction Longterm (HEAL) Meeting. Bethesda, MD. February 2023.
  6. **McKibben LA\***, Zhao Y, Mickelson J, Wang TW, Burnham L, Lin T, Lee S, Shih YI, Stevens J, McLean SA, Linnstaedt S. Early life adversity increases risk for posttraumatic chronic pain via enduring hippocampal changes: preliminary evidence from the AURORA cohort and a reverse-translated rodent model. *Poster presentation* at the 2023 NIH Help End Addiction Longterm (HEAL) Meeting. Bethesda, MD. February 2023.
  7. Branham EM\*, Deliwala IH, Mauck MC, Zhao Y, Lee A, Zannas A, **McKibben LA**, Spencer AB, Cairns BA, Lechner M, Danza T, Kurz MC, Velilla MA, Hendry PL, Pearson C, Datner E, Peak DA, Jones J, Rathlev NK, Lewandowski C, McLean SA, Linnstaedt SD. DNA methylation levels in hypothalamic-pituitary-adrenal axis genes predict chronic pain outcomes following trauma exposure. *Poster presentation* at the 2023 NIH Help End Addiction Longterm (HEAL) Meeting. Bethesda, MD. February 2023.
  8. **McKibben LA\***, Zhao Y, Mickelson J, Wang TW, Burnham L, Lin T, Lee S, Shih YI, Stevens J, McLean SA, Linnstaedt S. Early life adversity increases risk for posttraumatic chronic pain via enduring hippocampal changes: preliminary evidence from the AURORA cohort and a reverse-translated rodent model. *Poster presentation* at the 2022 World Congress of the International Association for the Study of Pain. Toronto, Ontario. September 2022.
  9. **McKibben LA\***, Mickelson J, Kuhl-Chimera S, Wanstrath B, McLean SA, Linnstaedt S. microRNA-19 influences posttraumatic chronic pain development via sex-dependent regulation of sleep/circadian rhythm and innate immune pathways: results of a preliminary analysis in humans and animals. *Poster presentation* at the 2022 World Congress of the International Association for the Study of Pain. Toronto, Ontario. September 2022. *\*received Best Poster Award from the Sex, Gender, and Racial Differences in Pain SIG.*
  10. Branham EM\*, Deliwala IH, Mauck MC, Zhao Y, Lee A, Zannas A, **McKibben LA**, Spencer AB, Cairns BA, Lechner M, Danza T, Kurz MC, Velilla MA, Hendry PL, Pearson C, Datner E, Peak DA, Jones J, Rathlev NK, Lewandowski C, McLean SA, Linnstaedt SD. DNA methylation levels in hypothalamic-pituitary-adrenal axis genes predict chronic pain outcomes following trauma exposure. *Poster presentation* at the 2022 Conference of the US Association for the Study of Pain. Cincinnati, OH. May 2022.
  11. **McKibben, LA** and Dwivedi Y\*. (2022) miRNA regulates early-life stress-induced depressive behavior via serotonin signaling in a sex-dependent manner in the prefrontal cortex of rats. *Poster presentation* at the 2022 Society for Biological Psychiatry Meeting, New Orleans, LA. April 2022
  12. Kim R, **McKibben LA\***, Lin T, Pang G, Liu Y, Tungate AS, Hendry PL, Kurz MC, Peak DA, Jones J, Rathlev NK, Swor RA, Domeier R, Velilla M, Lewandowski C, Datner E, Pearson C, Lee D, Mitchell PM, McLean SA, Linnstaedt SD. Risk prediction for posttraumatic stress symptoms following trauma exposure. *Poster presentation* at the 2022 Society for Biological Psychiatry Meeting, New Orleans, LA. April 2022
  13. **McKibben LA** & Dwivedi Y\*. (2022) miRNA regulates early-life stress-induced depressive behavior via serotonin signaling in a sex-dependent manner in the prefrontal cortex of rats. *Poster presentation* at the 2022 meeting of the Molecular Psychiatry Association, Maui, HI. March 2022
  14. **Allen L\*** & Dwivedi Y. (2019). A rodent model of early life stress alters miRNA expression in the hypothalamus. *Poster presentation* at Neuroscience 2019, Chicago, IL. October 2019.
  15. **Allen L\***, Wood KH, Knight DC, Deshpande G, and Grant MM. (2017). Parsing emotion regulation causal connectivity by trauma history in depression. *Poster presentation* at the Annual Convention of the Alabama Psychological Association, Orange Beach, AL. August 2017.

## Invited/Professional Talks

### *Regional/Local*

1. **Allen, LA\*** Tiny molecules cause widespread changes after early life stress, Invited research presentation at the UAB Psychiatry Department Annual Symposium, UAB, Birmingham, AL, April 2019.

### *International*

2. **McKibben, LA\*** and Linnstaedt, SD. Peripheral and Central Nervous System FKBP5 Expression in a Rat Model of Trauma, Invited research presentation at the 51TaVaIP Quarterly Meeting, Darmstadt University, Germany. October 2022.

## **6) Teaching Activities**

### Research Mentorship

#### *Graduate Students*

- 2023-Present Alice Woolard, 4<sup>th</sup> Year Doctoral Student in Computational Biology, UNC-CH  
2023-2024 Brittanie Winfield, 1<sup>st</sup> Year Doctoral Rotation Student in Computational Biology, UNC-CH  
2023-2024 Anusha Joshi, 1<sup>st</sup> Year Doctoral Rotation Student in Neuroscience, UNC-CH  
2022-2023 Sofia Benavides, 1<sup>st</sup> Year Doctoral Rotation Student in Neuroscience, UNC-CH  
2021-2022 Kylie VanDerMolen, 1<sup>st</sup> Year Doctoral Rotation Student in Neuroscience, UNC-CH  
2021-Present Erica Branham, 4<sup>rd</sup> Year Doctoral Student in Genetics and Molecular Biology, UNC-CH  
2021-2023 Constance Chen, Master's Student, Boston College, Boston, MA

#### *Staff*

- 2023-Present Kennedy Bell, Research Assistant, UNC-CH

#### *Undergraduate Students*

- 2023-Present Kennedy Bell, Postbac Research Assistant, UNC-CH  
2023-Present Taanvii Verma, Sophomore, Undergraduate Student, UNC-CH  
2022-Present Meghna Iyer, Junior, Undergraduate Student, UNC-CH  
2021-2024 Simran Bhatia, Undergraduate Student, UNC-CH. Currently attending UGA for PhD  
2021-2023 Tina Lin, Senior Undergraduate Student, UNC-CH  
2021-2023 Sophia Kuhl-Chimera, Senior Undergraduate Student, UNC-CH  
2021-2023 Ishani Deliwala, Senior Undergraduate Student, UNC-CH, current medical student at UNC-CH  
2022 Namit Luthra, Sophomore, Undergraduate Student, UNC-CH  
2020 Alexandria Jones, Sophomore Undergraduate Student, UAB  
2018-2020 Grant Schell, Junior Undergraduate Student, UAB  
2018-2020 Subhan Ahmed, Junior Undergraduate Student, UAB  
2017 Sri Ponnazhagan, Senior Undergraduate Student, Emory University, Atlanta, GA. Visiting summer undergraduate researcher.  
2017-2020 Juhee Agrawal, Undergraduate Research Assistant, current medical student at UCLA, Los Angeles, CA

#### *High School Students*

- 2021-2023 London Burnham, Senior at Durham Academy, Durham, NC

### Instructional

#### *Undergraduate Student Teaching*

- 2020 Psychology Capstone-TA, Online class of 10 students, 14 weeks, UAB, Birmingham, AL  
2020 PY Psychology of Learning-TA, Online class of 40 students, 10 weeks, UAB, Birmingham, AL  
2020 IO Psychology-TA, Online class of 30 students, 14 weeks, UAB, Birmingham, AL

2019 PY 215 Research Literacy in Psychology-Instructor, Online class of 80 students, 14 weeks, UAB, Birmingham, AL  
2017-2019 PY 215 Research Literacy in Psychology-TA, MWF class of 70 students, 14 weeks, UAB, Birmingham, AL

## 7) Funding

TITLE: UNC Department of Anesthesiology Research Award  
Grant Type (or Number): Departmental  
Grant Amount: \$10,000  
Funding Agency: UNC Department of Anesthesiology  
Grant Period: 2023-2024  
Grant Status: AWARDED  
Principal Investigators: Lauren McKibben  
Role: Principal Investigator (0% Effort)

TITLE: UNC Trauma Research Fellowship  
Grant Type (or Number): T32 (T32GM008450)  
Grant Amount: \$127,000: Stipend (\$53,000), Tuition (\$4,000), Professional Development (\$4,000) and Insurance (\$2,500)  
Funding Agency: National Institute of General Medical Sciences  
Grant Period: 2022-2024  
Grant Status: AWARDED  
Principal Investigators: Bruce Cairns and Anthony Charles  
Role: Fellowship Awardee (100% Effort)

TITLE: Discovering Diagnostics, Subtypes, and Natural History of Traumatic Brain Injury (TBI) vs. non-TBI Recovery to Gain Military Advantage (D2ISENTANGLE)  
Grant Type (or Number): N/A  
Grant Amount: \$8,000,000  
Funding Agency: Department of Defense  
Grant Period: 2022-2024  
Grant Status: AWARDED  
Principal Investigators: Samuel A McLean  
Role: Contributor, Writer

TITLE: Using an animal model of early life adversity to explore FKBP5 mechanisms of chronic pain susceptibility  
Grant Type (or Number): NC TraCS \$2K pilot grant (#2KR1482120)  
Grant Amount: \$2,000  
Funding Agency: UNC School of Medicine NC Translational and Clinical Sciences Institute  
Grant Period: 2022-2023  
Grant Status: AWARDED  
Principal Investigators: Lauren A. McKibben (0% effort)

TITLE: UAB College of Arts and Science Fellowship Program  
Grant Type (or Number): University Graduate Fellowship  
Grant Amount: \$46,500 annually: Stipend (\$32,000), Tuition (\$12,000), and Insurance (\$2,500)  
Funding Agency: UAB College of Arts and Sciences

Grant Period: 2015-2017  
 Grant Status: COMPLETED  
 Principal Investigators: N/A  
 Role: Fellowship Awardee (100% effort)

**8) Continuing Education**

<u>Institution and Location</u>	<u>Degree/Program</u>	<u>Year</u>	<u>Degree/Focus</u>
The North American Pain School Quebec, Canada	Program Graduate	2023	Multidisciplinary Pain Research and Professional Development
The Center for the Integration of Research, Teaching, and Learning at UAB	Practitioner Certificate GPA: 4.00	2020	College STEM Teaching

**9) Volunteering and Outreach**

2024-Present	Member	Duke Maixner Pain Research Symposium Organizing Committee	Durham, NC
2023-present	Member	UNC Department of Anesthesiology Wellness Committee	Chapel Hill, NC
2022-present	Certified MHFA	Mental Health First Aid	Chapel Hill, NC
2022-present	Mentor/Big	Big Brothers Big Sisters of the Triangle	Durham, NC
2022, 2024	Volunteer	Carolina Community Garden Volunteer	Chapel Hill, NC
2022	Volunteer	North Carolina Science Festival and Expo	Chapel Hill, NC
2018-2020	Volunteer Coordinator	Brain Awareness Week at McWane Science Center (Leadership)	Birmingham, AL
2017-2020	Volunteer	Brain Awareness Week at McWane Science Center	Birmingham, AL