

Chitra Banarjee
MD-PhD Candidate
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Education

University of Central Florida College of Medicine (August 2022 - Present) Orlando, FL
MD-PhD Candidate, PhD Year 3

University of Miami (August 2016 - May 2020) Coral Gables, FL
Bachelor of Science, Mathematics (Applied Analysis) *GPA: 3.66*
Bachelor of Science, Biochemistry
Chemistry Minor

Honors and Awards

University of Central Florida College of Medicine (UCF COM)

Judges' Choice Award at the UCF Student Scholar Symposium (2026)
UCF Faculty Cluster Initiative Student Scholarship (2025)
1st place Abstract at the FSIPP/FPM&R Conference (2024)
1st place Poster Presentation at the UCF FIRE Conference (2024)
UCF COM MD-PhD Scholarship (2022-present)
International Society for Autism Research (INSAR) Student & Trainee Award (2022)

Yale School of Medicine (YSM)

Yale Postgraduate Travel Award (2022)
Yale Developmental Neuroscience of Autism Fellowship (2020)

Institute for Data Science & Computing (IDSC)

2nd place at IDSC Big Data Conference (2019)
IDSC Fellowship (2019)

University of Miami (UM)

Butler Center for Service and Leadership Social Innovation Grant (2019)
Dean's List (2016-2019)
President's & Provost's Honor Rolls (2016, 2018)
Singer Scholarship for Full Tuition (2016-2020)
Foote Fellow Honors Program (2016-2020)
Benacquisto Scholarship, National Merit program (2016)

2016: International Baccalaureate diploma

Research Experience

01/23 - Present Healthy Aging Lab Orlando, FL

Overall Aim: Utilize wearable devices for biomedical applications in low-income older adults

- *Optimizing a technology-based body and mind intervention to prevent falls and reduce health disparities in low-income populations. NIH Grant #R01MD018025*
 - Implementing the physio-feedback and cognitive reframing intervention, data collection utilizing objective (accelerometers, static balance using balance plate,

bioelectrical impedance analysis) and subjective (questionnaires, physical performance test) measures and statistical analyses.

- Started the weekly journal club to discuss relevant papers with an interdisciplinary team.
- Mentoring undergraduate research assistants for ecological momentary assessments (EMA).
- *Technology-based fall risk assessments for older adults in low-income settings. National Institutes of Health (NIH)/ National Institute on Aging (NIA). NIH Grant #R03AG06799*
 - Collected biobehavioral data using Inertial Measurement Units (IMU) and electromyography sensors (EMG) to predict movement using deep learning
- *Development of Light Physical Activity (LPA) guidelines for safe and effective physical activity intervention in ethnically diverse older adults.*
 - Completed data processing and statistical analyses to support two papers about physical activity and its relation to fall risk

Supervisor: Ladda Thiamwong, PhD; Joon-Hyuk Park, PhD

09/22 - 12/22 Copik Lab (UCF COM PhD Rotation 2) Orlando, FL

Overall Aim: Characterize the efficacy of utilizing natural killer cells as therapeutic treatment for pediatric neuroblastoma

- Extracted leukocytes from whole blood collection and cultured NK cells for 14 days at a time to develop growth curves for NK cells from different donors
- Utilized IncuCyte device and software to characterize cytotoxicity of NK cells against cancerous SKOV-3 tumors

Supervisor: Alicja Copik, Ph.D.

07/22 - 10/22 Hadley Lab (UCF COM PhD Rotation 1) Orlando, FL

Overall Aim: Utilize publicly accessible datasets to characterize racial disparities in clinical research

- Utilized Python and R to analyze breast cancer clinical trials to evaluate racial disparities in participation in completed interventional clinical trials that are publicly accessible on ClinicalTrials.gov
- Contributed to the development of a tool to implement a patient-centric health outcomes questionnaire that works automatically with Fast Healthcare Interoperability Resources (FHIR) terminology to standardize patient responses

Supervisor: Dexter Hadley, M.D, Ph.D, M.S.E

8/20-6/22 Social & Affective Neuroscience of Autism Lab New Haven, CT

Overall Aim: Exploring social attention in infants, toddlers, and adolescents with and without autism spectrum disorder (ASD) using multiple modalities to understand early neural mechanisms

- Utilized R, Matlab, Python, Perl, & SQL to process behavioral data from eye-tracking, wearable sensors, movement-tracking, and neuroimaging (fMRI and fNIRS) studies
- Analyzed vigilance behavior in atypical development, quantifying child movement using objective (Microsoft Kinect depth camera) and subjective measures in response to novel social and non-social stimuli; live eye-tracking datasets collected from toddlers in response

to facing their parent in various conditions of speech and eye-contact; collected fNIRS datasets comparing toddlers' responses to social and non-social stimuli; processed fetal MRI datasets to filter for motion and detect fetal head location

- *Cellular, molecular, and functional imaging approaches to understanding early neurodevelopment in autism. National Institute of Mental Health. NIH Grant #P50MH115716-05*
 - Facilitated and administered fMRI scans for research participants from a range of ages: describing “feed & wrap” scan protocol to parents of newborns, administering behavioral techniques, including the mock scan protocol to adolescents, transferring and processing fetal and neonatal fMRI data using integrated image analysis software

Supervisors: Katarzyna Chawarska, Ph.D, Angelina Verneti, Ph.D, Suzanne Macari, Ph.D.

5/19-9/20 Early Play and Development Lab Coral Gables, FL

Overall Aim: Modeling objectively measured big behavioral data using computational, data-driven processes to understand social, language and emotional development

- *IBSS-L: Continuous Measurement of Children's Behavior and the Development of Social Dynamics. National Science Foundation Award #1620294*
 - Led independent, interdisciplinary research project quantifying social movement in children with ASD in the Interactive Behavior in Schools (IBIS) project using RFID tags worn on vests by children and teachers in preschool classrooms
- Processed data from videos of mothers interacting with their infants using deep learning tool AFAR (automated facial affect recognition)
- Contributed to writing and updating undergraduate textbook chapters of Infancy: Infant, Family, and Society

Supervisors: Daniel Messinger, Ph.D, Lynn K. Perry, Ph.D.

1/19-11/19 Intensive Behavioral Intervention Services Clinic Coral Gables, FL

Overall Aim: Providing state-of-the-art behavioral services including early intervention, picky eating intervention, and treatment for severe problem behavior

- Characterized imitation skill mastery as assessed through the Motor and Vocal Imitation Assessment (MVIA) and used binomial regression in R to explore the predictive relationship between mastery of imitation and general skill acquisition in other domains of development

Supervisors: Elaine Española-Aguirre, Ph.D, BCBA-D, Anibal Gutierrez, Ph.D, BCBA-D, Yanerys Leon, Ph.D, BCBA-D, Melissa Hale, Ph.D, BCBA-D

1/17-12/18 Barrientos Lab Coral Gables, FL

Overall Aim: Investigating molecular assembly mechanisms of mitochondrial protein complexes involved in health, disease, and aging, particularly the biogenesis of mitochondrial translation machinery

- Explored mitoribosome assembly processes affected by Sov1, Var1, and various other gene products within the mitochondrial and nuclear genome of *Saccharomyces cerevisiae*
- Characterized the phenotype of the $\Delta\text{Sov1}^{\circ}/\text{Var1}^{\text{u}}$ strain in comparison to W303I^o/Var1^u
- Contributed to publishing this work in *Nucleic Acids Research*

Supervisor: Flavia Fontanesi, Ph.D.

Publications

- Suarez JR, Banarjee C, Lafontant K, Xie R, Thiamwong L.(2026) Activity Metrics from the ActiGraph GT9X Link and ActiGraph LEAP Using an Open-Source R Package. *Research in Health and Medicine*, 6(1).
- Banarjee C, Lafontant K, Suarez JRM, Lopez J, Wang Z, Leinbach C, Xie R, Thiamwong L (2026) Characterization of Physical Health Variables across Fall Risk Appraisal Groups: A Cross-Sectional Study. *BMC Geriatrics*.
- Decker, V.B., Patrick, S., Ozougwu, N., Lopez, J., Suarez, J.R.M., Banarjee, C., Kim, D., Leinbach, C.S. and Thiamwong, L., 2026. Depressive Symptoms, Fear of Falling, and the Case for Integrated Mental Health Interventions in Geriatric Care: Breaking the Cycle. *Journal of Psychosocial Nursing and Mental Health Services*, pp.1-12.
- Dino, M.J., Thiamwong, L., Xie, R., Enriquez, A.J., Malacas, M.K., Hernandez, R., Vital, J.C., Banarjee, C., Daher, S., Abadir, P. and Balbin, P.T., 2026. Using mixed reality in improving health and mobility among community-dwelling older adults: A non-randomized quasi-experimental proof-of-concept study. *Computers in Human Behavior Reports*, 22, p.101115.
- Lafontant K, Leinbach CS, Armas N, Maldonado PM, Suarez JR, Banarjee C, Lopez J, Stout JR, Fukuda DH, Thiamwong L. Associations Between Fall Risk and Lower Limb Joint Range of Motion During Sit-to-Stand Among Community-Dwelling Older Adults. *Research in Health and Medicine*, 6(1).
- Suarez, J. R. M., Lafontant, K., Banarjee, C., Xie, R., Park, J. H., & Thiamwong, L. (2026). Effect of a Physio-Feedback Exercise Intervention Program on the Static Balance of Community-Dwelling Older Adults: A Clustered Randomized Controlled Trial. *Geriatrics*, 11(1), 6.
- Lopez, J., Dino, M. J., Banarjee, C., & Thiamwong, L. (2025). Fall prevention interventions for Hispanic/Latino older adults: a scoping review protocol. *Frontiers in Public Health*, 13, 1615837.
- Banarjee, C., Xie, R., Chen, C., Lopez, J., & Thiamwong, L. (2025). Using Ecological Momentary Assessment to Examine Predictors of Motivation for Physical Activity in Older Adults. *Research in Health and Medicine*, 5(1).
- Lafontant K, Fukuda DH, Chovatia D, Latta C, Banarjee C, Stout JR, Xie R, Lopez J, Thiamwong L (2025) Examining Classic Bioimpedance Vector Patterns Between BMI Classifications Among Community-Dwelling Older Women. *Sensors*. 25(13), 4181.
- Lafontant K, Fukuda D, Zamarripa E, Tice AL, Suarez JR, Banarjee C, Kim D, Stout JR, Park JH, Xie R, Thiamwong L (2025) Application of Levi's Muscle Index in Frailty Assessment: Comparison of Bioimpedance Measures Among Older Adults. *Frontiers in Medicine*, 12, 1525569.
- Lafontant K, Tice AL, Suarez JR, Blount A, Banarjee C, Fukuda DH, Stout JR, Garcia-Retortillo S, Thiamwong L. (2025) Potential Influence of Acute Dysregulated Sleep on Fall Incidence Among Low-Income Older Women: A Case Study. *Journal of Gerontological Nursing*, 1-5.

- Banarjee C, Suarez JRM, Lafontant K, Choi H, Chen C, Xie R, Thiamwong L. (2025) Multimodal Factors Affect Longitudinal Changes in Dynamic Balance in Community-Dwelling Older Adults. *Clinical Interventions in Aging*, 335-348.
- Drye M, Banarjee C, Perry LK, Viggiano A, Irvin D, Messenger DS (2025) Children's social preference for teachers versus peers in autism inclusion classrooms: An objective perspective. *Autism Research*, 18(1).
- Banarjee, C., Choudhury, R., Park, J. H., Xie, R., Fukuda, D., Stout, J., & Thiamwong, L. (2024). Common Physical Performance Tests for Evaluating Health in Older Adults: Cross-Sectional Study. *Interactive Journal of Medical Research*, 13(1), e53304.
- Kadhim IF, Banarjee C, Fu J, Choudhury R, Mangum LC, Fukuda DH, Stout JR, Cramer JT, Park JH. (2024) Resistance Training using VARIable Resistance Suit (VARS) Increased Isometric and Isokinetic Muscle Strength. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*. doi:10.1109/TNSRE.2024.3435798
- Vernetti, A, Butler, M, Banarjee, C, Boxberger, A, All, K, Macari, S, Chawarska, K. (2024) Face-to-face live eye-tracking in toddlers with autism: feasibility and impact of familiarity and face covering. *Autism Research*.10.1002/aur.3060
- Choudhury, R, Park, JH, Banarjee, C, Thiamwong, L, Xie, R, Stout, JR. (2023) Associations of Mutually Exclusive Categories of Physical Activity and Sedentary Behavior with Body Composition and Fall Risk in Older Women: A Cross-Sectional Study. *Int. J. Environ. Res. Public Health*. <https://doi.org/10.3390/ijerph20043595>
- Banarjee, C, Tao, Y, Fasano, RM, Song, C, Vitale, L, Wang, J, Shyu, ML, Perry, LK, Messinger, DS. (2023) Objective quantification of homophily in children with and without disabilities in naturalistic contexts. *Scientific Reports*. doi: 10.1038/s41598-023-27819-6
Media release: 2023. News@TheU. A mind made for science.
<https://news.miami.edu/as/stories/2023/02/a-mind-made-for-science.html>
- Horien, C, Greene, AS, Shen, X, Fortes, D, Brennan-Wydra, E, Banarjee, C, Foster, R, Donthireddy, V, Butler, M, Powell, K, Vernetti, A, Mandino, F, O'Connor, D, Lake, EMR, McPartland, J. C, Volkmar, F. R, Chun, M, Chawarska, K, Rosenberg, M. D, Scheinost, D, & Constable, R. T. (2022). A generalizable connectome-based marker of in-scan sustained attention in neurodiverse youth. *Cerebral Cortex*, bhac506.
- Messinger, D, Perry, L, Song, C, Tao, Y, Mitsven, S, Fasano, R, Banarjee, C, Zhang, Y, Shyu, ML. (2020) Data Drive Development – Multimodal Measurement of Classroom Interaction. *2020 International Conference on Multimodal Interaction (ICMI'20 Companion)*, October 25–29, 2020, Virtual Event, Netherlands. ACM, New York, NY, USA, pp. 357-359. doi:10.1145/3395035.3425355
- Seshadri, SR, Banarjee, C, Barros, MH, Fontanesi, F. (2020). The translational activator Sov1 coordinates mitochondrial gene expression with mitoribosome biogenesis. *Nucleic Acids Research*. doi:10.1093/nar/gkaa424

Posters and Presentations (* indicates mentored student poster)

- Banarjee C, Lipat A, Xie R, Thiamwong L (2026, November) Fall Risk Appraisal Predicts Time-Dependent Changes in Gait in Older Adults. Oral presentation at the 2026 AAPM&R Annual Assembly, Orlando, FL.

- Banarjee C, Garcia D, Baker M, Lipat A, Garcia-Retortillo S, Lopez J, Thiamwong L (November 2026) Bilingual Digital Otago Exercise Program via a Virtual Human Assistant on Balance and Physical Activity.
- Banarjee C, Lipat A, Torres J, Garcia D, Aguilar D, Liu C, Xie R, Thiamwong L (November 2026) Short-term effects of fear of falling and physical activity on objective measures of gait in older women.
- Nguyen T, Thiamwong L, Suarez JRM, Banarjee C, Lafontant K, Xie R (2026, November) Fall Risk Appraisal Patterns Linked to Depression, Anxiety, and Fall Risk in Older Adults. Poster presented at the 2026 Gerontological Society of America, National Harbor, MD.
- Maldonado A, Banarjee C, Barakat J, Hollis R, Ruiz D, Lopez J, Huo QT, Thiamwong L (2026, November) A Rapid Nanoparticle Immune Test Reveals Links to Gait Variability in Low-Income Community-Dwelling Older Adults. Poster presented at the 2026 Gerontological Society of America, National Harbor, MD.*
- Liu C, Ambrosius H, Banarjee C, Thiamwong L, Huo Q, Xie R (2026, November) Immune Health as a Marker of Metabolic and Cognitive Vulnerability in Older Adults. Poster presented at the 2026 Gerontological Society of America, National Harbor, MD.
- Rees C, Banarjee C, Thiamwong L, Xie R, Loerzel V, Lopez J (2026, November) Maladaptive Fall-Risk Appraisal and Fall Incidence in Hispanic/Latino Adults Aged 45+: A Pilot Study. Poster presented at the 2026 Gerontological Society of America, National Harbor, MD.
- Lipat A, Suarez JRM, Banarjee C, Lafontant K, Xie R, Thiamwong L (2026, November) Gait Speed is Associated with Fall-Risk in Low-Income Older Adults with and without Cognitive Impairment. Poster presented at the 2026 Gerontological Society of America, National Harbor, MD.
- Baker M, Banarjee C, Garcia-Retortillo S, Lopez J, Ojo E, Thiamwong L (2026, November) A Virtual Companion Health Assistant for Delivering a Home-based Exercise Program. Poster presented at the 2026 Gerontological Society of America, National Harbor, MD.*
- Barakat J, Banarjee C, Lipat A, Maldonado A, Ruiz D, Suarez J, Xie R, Thiamwong L (2026, November) Examining Gait Signatures of Frailty Using Wearable Insole Sensors During Timed-Up and-Go Tasks. Poster presented at the 2026 Gerontological Society of America, National Harbor, MD.*
- Banarjee C, Kwon YJ, Lipat A, Garcia-Retortillo S, Lopez J, Chen C, Xie R, Thiamwong L (2026, June) Video Based Detection of Sit to Stand and Turning Impairments to Identify Fall Risk in Older Adult. Workshop paper presented at the Computer Vision for Biomechanics Workshop at IEEE/CVF Conference on Computer Vision and Pattern Recognition, Denver, CO.
- Banarjee C, Baker M, Rees C, Benoze F, Xie R, Thiamwong L (2026, March) Fall risk appraisal predicts changes in sensor-derived gait metrics. Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL. *Received Judges' Choice Award*.
- Banarjee C, Kwon YJ, Bilic A, Aristizabal SR, Chen C, Thiamwong L (2026, March) Use of Computer Vision with Conventional Video Recordings of Gait in Older Adults: A Scoping Review. Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL.

- Eusebio M, Campbell K, Deguzman J, Pariag G, Marquez CC, Banarjee C, Thiamwong L (2026, March) Digital STEADI: A Machine-Learning Enabled Mobile Platform for Home-Based Fall-Risk. Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL.*
- Persaud M, Echeverry S, Han B, Miryala P, Lookshin A, Thiamwong L, Banarjee C, Lipat A, Chen C (2026, March) AI PEER: An App for Fall-Risk Patient Mobility Improvement. Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL.*
- Aristizabal SR, Banarjee C, Hollis R, Benoze F, Lopez J, Thiamwong L (2026, March) Developing an At-Home Fall Risk Screening Kit Aligned with CDC STEADI: A Pilot Feasibility Study Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL.*
- Barakat J, Banarjee C, Lipat A, Maldonado A, Ruiz D, Suarez J, Xie R, Thiamwong L (2026, March) Examining Gait Signatures of Frailty Using Wearable Insole Sensors During Timed-Up-and-Go Tasks. Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL.*
- Baker M, Banarjee C, Garcia-Retortillo S, Lopez J, Ojo E, Thiamwong L (2026, March) A Virtual Companion Approach to Delivering the Otago Exercise Program: Acceptability and Feasibility. Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL.*
- Baker M, Banarjee C, Garcia-Retortillo S, Lopez J, Ojo E, Thiamwong L (2026, March) Acceptability and Feasibility of Delivering the Otago Exercise Program Through a Virtual Companion System. Poster presented at the Florida Undergraduate Research Conference 2026, Jacksonville, FL.*
- Maldonado A, Banarjee C, Barakat J, Hollis R, Ruiz D, Ambrosius H, Treen Huo Q, Thiamwong L (2026, March) Immune Health and Gait Characteristics in Older Adults. Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL.*
- Reynolds S, Banarjee C, Wang Z, Chen C, Xie R, Thiamwong L (2026, March) Segmentation of Fall Risk Assessment Videos Using Manual Coding and Computer Vision. Poster presented at the Florida Undergraduate Research Conference (FURC) 2026, Jacksonville, FL.*
- Reynolds S, Banarjee C, Nauman A, Sheikh M, Wang Z, Xie R, Thiamwong L (2026, March) Affordable Computer Vision-Driven TUG Assessment for Evaluating Coordination and Stability in Older Adults. Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL.*
- Nauman A, Sheikh M, Reynolds S, Banarjee C, Lopez J, Xie R, Thiamwong L (2026, March) Associations of TUG Subtasks with Frailty in Older Adults. Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL.*
- Rees C, Banarjee C, Xie R, Thiamwong L, Lopez J (2026, March) Maladaptive Fall-Risk Appraisal and Fall Incidence in Rural Spanish Speaking Community-Dwelling Adults Ages 45+. Poster presented at the 2026 UCF Student Scholar Symposium, Orlando, FL and FURC 2026, Jacksonville FL.*
- Rees C, Banarjee C, Xie R, Thiamwong L, Lopez J (2026, March) Maladaptive Fall-Risk Appraisal and Fall Incidence in Rural Spanish Speaking Community-Dwelling Adults Ages 45+. Poster presented at the Florida Undergraduate Research Conference 2026 Jacksonville, FL.*

- Wang Z, Banarjee C, Chen C, Xie R, Thiamwong L (2025, November). Benchmark Study of 2D and 3D Gait Analysis for AI-Powered Mobile Fall Risk Screeners. Poster presented at the 2025 Gerontological Society of America, Boston, MA.
- Banarjee C, Reynolds S, Wang Z, Chen C, Xie R, Thiamwong L (2025, November). Validation of Computer Vision for Segmenting Timed Up and Go Subtasks from Conventional Video Recordings. Poster presented at the 2025 Gerontological Society of America, Boston, MA.
- Banarjee, C, Lafontant K, Suarez JR, Xie R, Thiamwong L (2025, November) Low-Intensity Peer-Led Exercise Improves Fall Risk Appraisal in Older Women. Poster presented at the 2025 Gerontological Society of America, Boston, MA.
- Banarjee C, Maldonado PM, Hossain MSB, Choi H, Xie R, Thiamwong L (2025, November). Associations of Gait Characteristics with Fall Risk and Frailty in Older Women. Poster presented at the 2025 Gerontological Society of America, Boston, MA.
- Banarjee C, Maldonado PM, Choi H, Hossain MSB, Xie R, Thiamwong L (2025, August). Correlations of Objective Measures of Gait with Clinical and Subjective Measures. Poster presented at the 2025 American Society of Biomechanics, Pittsburgh, PA.
- Choudhury, R, Nguyen, VTH, Fu, J, Banarjee, C, Thiamwong, L, & Park, JH (2025, August). A Cable-Driven Ankle Perturbation System for Studying Reactive Balance Control. In *International Design Engineering Technical Conferences and Computers and Information in Engineering Conference* (Vol. 89251, p. V005T08A052). American Society of Mechanical Engineers.
- Decker, V.B., Suarez, J.R., Lopez, J., Lui, Y., Dino, M.J., Kim, D., Banarjee, C., Thiamwong, L. (2025, October). Partnering with Community Centers to Screen for Depression and Fear of Falling Among Older Adults. Poster presented at the 39th Annual APNA Conference, New Orleans, LA. 10/15-18/2025
- Drye, M., Banarjee, C., Viggiano, A., Perry, L., Irvin, D., & Messinger, D. (2025, May). Children's social preference for teachers versus peers in autism inclusion classrooms: An objective perspective. Paper presented at the Society for Research in Child Development. Minneapolis, MN.
- Banarjee, C., Choudhury, R., Park, J. H., Xie, R., Fukuda, D., Stout, J., & Thiamwong, L. (November 2024). Short Physical Performance Battery Outperforms Common Physical Performance Tests In Older Adults. Poster presented at the Gerontological Society of America (GSA) 2024, Seattle, Washington.
- Banarjee C, Lafontant K, Suarez JR, Park JH, Fukuda D, Stout J, Lighthall N, Thiamwong L. (November 2024). Peer-Led Exercise Results In Improved Sleep Efficiency Without Concurrent Changes In Mood. Poster presented at GSA 2024, Seattle, Washington.
- Banarjee C, Suarez JR, Choudhury R, Park, JH, Xie R, Stout J, Thiamwong L (November 2024). Low-Intensity Peer-Led Exercise Does Not Change Physical Activity Or Balance In Older Adults. Poster presented at GSA 2024, Seattle, Washington.
- Suarez JR, Banarjee C, Park JH, Thiamwong L (November 2024). Determination of Physical Activity And Sleep Levels From Actigraph Leap Using Open-Source R Package. Poster presented at GSA 2024, Seattle, Washington.
- Banarjee C, Lafontant K, Suarez JR, Xie R, Stout J, Thiamwong L (September 2024). *Evaluation of Skeletal Muscle Mass in Community-Dwelling Older Adults With and Without Fall History*. Oral presentation at the 2024 Florida Society of Interventional Pain Physicians

- and the Florida Society of Physical Medicine and Rehabilitation Conference, Orlando, Florida. *Received 1st place award.*
- Banarjee, C., Suarez, JR, Choudhury, R, Park, JH, Xie, R, Fukuda, D, Stout, J, Lighthall, N, Loerzel, V, Thiamwong, L. (February, 2024). *Early Outcomes: Changes in Physical Activity Show No Correlation with Objectively and Subjectively Measured Balance*. Poster presented at the 2024 FIRE Conference, Orlando, Florida. *Received 1st place award.*
- Suarez, JR, Banarjee, C., Nelson, JS, Frindt, K, Kleeman, K, and Park, JH (November, 2023). *Parameter Optimization for Laser Cutting Expanded Polytetrafluoroethylene for Right Ventricular Outflow Tract Reconstruction*. Poster presented at the Academy of Science, Engineering, and Medicine of Florida (ASEMFL) 2023, Orlando, Florida.
- Banarjee, C., Reyes, K. (October, 2023). *The History of the LGBTQ+ Rights Movement*. Oral Presentation at the Region IV Asian Pacific American Medical Student Association (APAMSA) Conference, Orlando, Florida.
- Suarez, JR, Thiamwong, L, Choudhury, R, Stout, J, Park, JH, Banarjee, C. (November, 2023). *The Associations of Handgrip Strength and Anthropometric Measurements With Upper Limb Body Fat Mass in Older Adults*. Poster presented at the Gerontological Society of America (GSA) 2023, Tampa, Florida.
- Banarjee, C., Choudhury, R, Park, JH, Xie, R, Stout, J, Thiamwong, L. (November, 2023). *Decline in objectively measured static balance with aging*. Poster presented at GSA 2023, Tampa, Florida.
- Choudhury, R, Park, JH, Banarjee, C., Thiamwong, L, Fukuda, D, Xie, R, Stout, J. (November, 2023). *Accelerometry-Based Physical Activity (MIMS/day) and Fall Risk Appraisal Matrix in Older Adults*. Poster presented at GSA 2023, Tampa, Florida.
- Choudhury, R, Park, JH, Banarjee, C., Thiamwong, L, Xie, R, Stout, J. (November, 2023). *Body Composition and Fall Risk in Mutually Exclusive Categories of Physical Activity in Older Women*. Poster presented at GSA 2023, Tampa, Florida.
- Banarjee, C., Choudhury, R, Park, JH, Xie, R, Fukuda, D, Stout, J, Lighthall, N, Loerzel, V, Thiamwong, L. (September, 2023). *Fear of falling is a stronger predictor of accelerometer-based physical activity levels than static balance in community-dwelling older adults*. Oral Presentation at the Florida Geriatrics Society (FGS) 2023, Clearwater Beach, Florida.
- Banarjee, C., Drye, M, Tao, Y, Fasano, RM, Song, C, Vitale, L, Wang, J, Shyu, ML, Perry, LK, Messinger, DS. (May, 2023). *Objective Measurement of Social Approach: A Scaffold for Intervention in Inclusion Classrooms*. Poster presented at the International Society for Autism Research, Stockholm, Sweden.
- Banarjee, C., Choudhury, R, Park, JH, Fukuda, D, Xie, R, Stout, J, Thiamwong, L. (April, 2023). *Comparison of Incremental Shuttle Walk Test (ISWT) and 6-minute walk test (6MWT) in Correlation with Physical Activity in Older Adults*. Oral presentation at the American Heart Association 4th Annual Orlando Research Day, Orlando, Florida.
- Banarjee, C., Tao, Y, Fasano, RM, Song, C, Vitale, L, Wang, J, Shyu, ML, Perry, LK, Messinger, DS. (March, 2023). *Quantification of homophily in naturalistic, early childhood environments*. Poster presented at the 2023 Society for Research in Child Development (SRCD) Conference, Salt Lake City, Utah.

- Banarjee, C., Childs, A, Renduchintala, C, Hadley, D. (November, 2022). *Implementation of a HIPAA-compliant, patient-centric, FHIR/ICHOM questionnaire bank*. Poster presented at the 2022 International Consortium for Health Outcomes Measurement Conference.
- Banarjee, C., Childs, A, Renduchintala, C, Hadley, D. (October, 2022). *Examination of Race Disparities in Breast Cancer Clinical Trials using Automated Extraction*. Poster presented at the University of Central Florida (UCF) Wellness, Education, AI, & Lifestyle Technology in Health (WEALTH) Symposium, Orlando, Florida. Awarded 4th place.
- Banarjee, C., Childs, A, Martin, E, Fraser, A, Renduchintala, C, Hadley, D. (October, 2022). *Implementation of a HIPAA-compliant, patient-centric, FHIR/ICHOM questionnaire bank*. Poster presented at the UCF WEALTH Symposium, Orlando, Florida.
- Banarjee, C., Tao, Y, Fasano, RM, Song, C, Vitale, L, Wang, J, Shyu, ML, Perry, LK, Messinger, DS. (July, 2022). *Modeling objective measurements of homophilic movement patterns in a naturalistic environment*. Poster presented at the International Congress of Infant Studies, Ottawa, Canada.
- Horien, C, Greene, A. S, Shen, X, Rosenberg, M. D, Fortes, D, Brennan-Wydra, E, Banarjee, C., Foster, R, Butler, M, Powell, K, Verneti, A, McPartland, J. C, Volkmar, F. R, Scheinost, D, Chawarska, C, & Constable, R. T. (2022, June). *Testing the generalizability and stability of the sustained attention model in adolescents with and without autism*. Poster presented at Organization for Human Brain Mapping (OHBM) 2022 Annual Meeting, Glasgow, Scotland.
- Banarjee, C., Donthireddy, V, Diamond, E, Boxberger, A, All, K, Foster, R, Gordon, B, Brennan-Wydra, E, Verneti, A, Macari, S, Chawarska, K. (May, 2022). *Quantifying Behavioral Inhibition to Unfamiliar Social and Non-Social Stimuli in Toddlers with ASD*. Poster presented at the International Society for Autism Research, Austin, Texas.
- Banarjee, C., Fasano, RM, Tao, Y, Song, C, Wang, J, Vitale, L, Shyu, ML, Perry, LK, Messinger, DS. (May, 2022). *Objective Measures to Quantify Homophily in the Inclusion Classroom*. Poster presented at the International Society for Autism Research, Austin, Texas.
- Verneti, A, Banarjee, C., Boxberger, A, Diamond, E, All, K, Macari, S, Chawarska, K. (May, 2022). *A Demonstration of Limited Attention to Parent Faces during a Live Eye-Tracking Task in Toddlers with Elevated Autism Symptoms*. Poster presented at the International Society for Autism Research, Austin, Texas.
- Boxberger, A, Diamond, E, Banarjee, C., Foster, R, All, K, Gordon, B, Donthireddy, V, Brennan-Wydra, E, Powell, K, Macari, S, Verneti, A, Chawarska, K. (May, 2022). *Regulatory Strategies, Emotional Expression, and Physiological Responses during a Frustration Eliciting Task in Toddlers with and without ASD*. Poster presented at the International Society for Autism Research, Austin, Texas.
- Foster, R, All, K, Banarjee, C., Diamond, E, Boxberger, A, Gordon, B, Donthireddy, V, Powell, K, Brennan-Wydra, E, Macari, S, Verneti, A, Chawarska, K. (May, 2022). *Longitudinal Development of Real-World Executive Function Skills in Preschoolers with Autism Spectrum Disorder*. Poster presented at the International Society for Autism Research, Austin, Texas.
- Diamond, E, All, K, Gordon, B, Banarjee, C., Foster, R, Boxberger, A, Donthireddy, V, Brennan-Wydra, E, Verneti, A, Macari, S, Chawarska, K. (May, 2022). *Sharing Joy during Puppet Shows: Toddlers with Autism Spectrum Disorder Share Positive Affect as*

- Frequently as Typically Developing Controls*. Poster presented at the International Society for Autism Research, Austin, Texas.
- Vernetti, A, Banarjee, C, Boxberger, A, Diamond, E, All, K, Macari, S, Chawarska, K. (November, 2021) *Toddlers with Elevated Autism Symptoms Show Limited Attention to Familiar Faces during Live Eye-tracking Interaction*. Poster presented at the Yale Child Study Center Associates Meeting.
- Diamond, E, All, K, Banarjee, C, Boxberger, A, Foster, R, Donthireddy, V, Gordon, B, Brennan-Wydra, E, Macari, S, Vernetti, A, Chawarska, K. (November, 2021). *Sharing joy during puppet shows: Toddlers with autism spectrum disorder share positive affect as frequently as typically developing controls*. Poster presented at the Yale Child Study Center Associates Meeting.
- Boxberger, A, Diamond, E, Banarjee, C, Foster, R, All, K, Gordon, B, Donthireddy, V, Brennan-Wydra, E, Powell, K, Macari, S, Vernetti, A, Chawarska, K. (May, 2022). *Regulatory Strategies, Emotional Expression, and Physiological Responses during a Frustration Eliciting Task in Toddlers with and without ASD*. Poster presented at the Yale Child Study Center Associates Meeting.
- Banarjee, C, Tao, Y, Fasano, RM, Vitale, L, Song, C, Shyu, ML, Perry, LK, Messinger, DS. (May, 2021). *Quantifying Social Approach in Preschoolers with ASD in Inclusion Classrooms*. Poster presented at the International Society for Autism Research. (Virtual Conference)
- Feiner, H, Diamond, E, Banarjee, C, Butler, M, Fortes, D, Foster, R, Boxberger, A, Vernetti, A, Shic, F, Macari, S, Lewkowicz, D, Chawarska, K. (May, 2021). *Attention to the Mouth at 12 Months Predicts Language Outcomes in Toddlers at Low-Risk but not High-Risk for ASD*. Talk presented at the International Society for Autism Research. (Virtual Conference)
- Fortes, D, Banarjee, C, Feiner, H, Butler, M, Diamond, E, Foster, R, Boxberger, A, Brennan-Wydra, E, Macari, S, Chawarska, K. (May, 2021). *Examining measurement differences across anxiety instruments in toddler-aged samples with and without ASD*. Poster presented at the International Society for Autism Research. (Virtual Conference)
- Butler, M, Foster, R, Banarjee, C, Feiner, H, Fortes, D, Diamond, E, Boxberger, A, Brennan-Wydra, E, Macari, S, Vernetti, A, Chawarska, K. (May, 2021). *Impact of COVID-19 on implementation of live eye-tracking research procedures and social attention in toddlers*. Poster presented at the International Society for Autism Research. (Virtual Conference)
- Ahn, Y. A, Onal Ertugrul, I, Banarjee, C, Chow, S, Cohn, J. F, Messinger, D. (April, 2021). *Is mother-infant face-to-face responsivity affective?* Talk presented at the Society for Affective Science Meeting. (Virtual Conference)
- Messinger, DS, Perry, LK, Song, C, Tao, Y, Mitsven, S, Fasano, RM, Banarjee, C, Zhang, Y, Shyu, ML. (October, 2020) *Data Drive Development—Multimodal Measurement of Classroom Interaction*. Poster presented at the International Conference on Multimodal Interaction in Psychopathology. (Virtual Conference)
- Banarjee, C, Fasano, RM, Vitale, L, Tao, Y, Song, C, Perry, LK, Messinger, D. S. (July, 2020). *Do the Locomotion: Movement and Social Approach in Children with Autism Spectrum Disorder*. Poster presented at the International Congress of Infant Studies (ICIS) Biennial Congress, Glasgow, Scotland. (Virtual Conference)

- Ahn, Y. A, Bak, T, Onal Ertugrul, I, Banarjee, C, Davila, P, Chow, S, Cohn, J. F, Messinger, D. S. (July, 2020). *Concordant still-face findings for computer vision and expert FACS coders*. Poster presented at the International Congress of Infant Studies, Glasgow, Scotland. (Virtual Conference)
- Banarjee, C, Fasano, RM, Vitale, L, Tao, Y, Song, C, Perry, LK, Ren, G, Messinger, D. (April 2020) *Characterizing Social Approach to Peers in Autism using Big Behavioral Data*. Talk presented at the Institute for Data Science & Computing Fellows Capstone Presentation. Coral Gables, Florida.
- Banarjee, C, Fasano, RM, Vitale, L, Song, C, Perry, LK, Messinger, D. (June, 2020) *Characterization of Movement Patterns through Objective Measurement in Children with Autism*. Poster presented at the International Society for Autism Research, Seattle, WA, United States. (Virtual Conference)
- Banarjee, C, Fasano, RM, Vitale, L, Tao, Y, Song, C, Perry, LK, Messinger, D. (December, 2019) *Turn, turn, turn: Objectively Characterizing Movement in Autism Using Big Data*. Poster presented at Institute for Data Science & Computing Big Data + VizUM. Coral Gables, Florida. 2nd Prize.
- Gutierrez, A, Espanola, E, Banarjee, C. (October, 2019). *Imitation Mastery as a Predictor Of Skill Mastery During Intervention*. Poster presented at the International Society for Autism Research Regional Meeting. Puerto Varas, Chile.
- Banarjee, C, Espanola, E, Gutierrez, A. (September, 2019). *Imitation skill mastery is a predictor of general skill mastery during intervention*. Poster presented at the Florida Applied Behavior Analysis Conference. Ponte Vedra Beach, Florida.
- Banarjee, C, Seshadri, S, Fontanesi, F. (April, 2018). *Characterization of the Translational Activators Sov1 and Mam33 in the yeast Saccharomyces cerevisiae*. Poster presented at the Research, Creativity, and Innovation Fair. Coral Gables, Florida.
- Seshadri, S, Banarjee, C, Fontanesi, F. (April, 2018). *Investigating mitochondrial cytochrome c oxidase translational regulation*. Poster presented at the LSSF STEM Undergraduate Symposium. Miami, Florida.

Teaching and Mentoring Experience

2025- Knight Research Scholar Program, Team Leader

Mentored undergraduate students:

Spring 2025-Present: Amaya Maldonado, Amal Nauman, Fredsendie Benoze, Sarah Reynolds, Riley Hollis, Jannah Barakat

Fall 2025-Present: Connor Rees, Sofia Rojas Aristizabal, Mary Baker, Daisy Ruiz, Maha Sheikh

Spring 2026-Present: Daphne Aguilar, Diego Garcia, Jorge Enrique Torres Chavez

2017-2018 Workshop Leader, General Biology I

- Led workshops to guide students through the information taught in BIL151
- Used previous experience in class to encourage out-of-class learning through peer-led discussions

Instructor: Dr. Daniel DiResta, Dr. Michael Gaines

Extracurricular Activities

University of Central Florida College of Medicine (UCF COM)

January 2025 - Present UCF Biomedical Sciences Graduate Student Association

Role: Social Committee Member

- Organized and participated in social events to foster communication both within graduate students and medical students.

Sep 2022 - Present Association for Women Surgeons

Role: Co-Vice President (2023-2024)

- Organization which promoted student interest in surgery and provided resources and opportunities within the field for women by female mentors
- Organized and participated in group meeting and events, including journal club and meeting female surgeons, and a suture clinic guided by the plastic surgery team from Nemours Children's Hospital

Sep 2022 - Present Healthcare Innovations

Role: Treasurer (2023-2024)

- Organization that encourages medical students to be at the forefront of medical innovation and brainstorm ideas and use creative thinking for generating solutions to current pressing healthcare problems
- Responsible for budgeting, approving and managing financial expenditures, and raising funds
- Presented VR applications in medical education to UCF alumni at Celebration Under the Stars event (October 14, 2023)

Sep 2022 - Present LGBTQ+ Medical Students and Allies

Role: Education Chair (2023-2024)

- Organization that promotes inclusivity and a culture of openness and discussion at UCF COM through outreach, partnership with LGBTQ of Orlando, advocacy, and competency building workshops
- Organized and helped plan and present speaker events and inclusion awareness events for LGBTQ+ students and patients

Sep 2022 - Present American Academy of Developmental Medicine and Dentistry

Role: Treasurer (2023-2024)

- Organization which promoted student interest in developmental medicine and provided resources and opportunities for people with disabilities
- Attended and participated in group meeting and events

Nov 2022 - Aug 2023 UCF COM Student Council

Role: COMPASS Representative

- Elected by peers to address concerns discuss programmatic and outreach efforts related to academic advising, career advising, financial advising, and student wellness
- Responsible for correspondence with the class about how the COMPASS committee is responding to raised concerns and issues

Sept 2022 - Present Orthopedic Surgery Interest Group

Role: Member

- Organization which promoted student interest in Orthopedic surgery and provided resources and opportunities within the field
- Attended and participated in group meeting and events

Sept 2022 - Present Arts in Medicine

Role: Member

- Organization which promoted student interest in arts engagement and provided resources and opportunities to present arts to the medical student community
- Attended and participated in group meeting and events, including the organization and presentation of the 2022 Winter Showcase

University of Miami (UM)

2018-2019 UM Miami Veterans' Philanthropy

Role: Vice President Community Outreach (2018-2019)

- Volunteered at the Veterans Affairs Hospital in Miami, Florida, preparing breakfast and performing with Alpha Mu Music Therapy students from the Frost School of Music for veterans
- Fundraised for the Wounded Warrior Project through planning and implementing events such as the Color Run and In Their Boots

2018-2021 UM Best Buddies

Role: Inclusive Education Chair (2018-2020)

- Developed the first Ableism room at UM's Tunnel of Oppression 2020
- Prepared and presented the Disability Studies Minor to the School of Education at UM
- Awarded the Butler Center Social Innovation Grant to develop a Think College! program at UM, to encourage higher education for people with disabilities (PWD)
- Advocated for inclusion of PWD within the UM Hurricanes community and beyond

Community Engagement

Sep 2022 - Present SHIELD Clinic

Role: Data/Research Chair (2023-2024), Member (2024 - Present)

- Free clinic providing healthcare to low-income patients and people who inject drugs in Orlando, FL

Dec 2022 - Present Saint Thomas Aquinas Clinic

Role: Student Volunteer

- Free clinic providing healthcare to low-income patients in Osceola County, FL
- Partnered with physician, nurse, and translator volunteers to evaluate and treat patients and provide education regarding chronic illness and healthy behaviors

2022 - 2023 Physicians Society of Central Florida (PSCF)

Role: Scholarship Committee Member (2022-2023)

- Reviewed applications for scholarships for high school based on academic achievement and involvement in service

2021 Tomatelo a Pecho

Role: Programming Scientist

- Utilized R in an ongoing project to create an application to convey information about global estimates of women's contributions to health and healthcare
- Communicated with an interdisciplinary team of researchers from the UM Institute for Advanced Study of the Americas to present updated information from the Lancet Commission on Women & Health

2020-2022 Yale University Dean's Advisory Council on LGBTQI+ Affairs

Role: Management Team member

- Facilitated the day-to-day functioning of the Yale School of Medicine council by communicating with working groups and organizing meetings

2019 UM SPARK (Simons Powering Autism Research)

Role: Research Intake/Data Collection/Photographer

- Helped collect genetic data through swabs and saliva samples from multiple family trios
- Managed individual problem behavior throughout the tour of various museum activities
- Organized lunch distribution to all the families coming through SPARK at Jungle Island and took photographs of the families for the upcoming SPARK presentation

2018-2019 Camp CAMP (Children's Association for Maximum Potential)

Role: Camp counselor

- Provided individual care at a camp for children and adults with disabilities to explore a world without limitations, without exclusion
- Facilitated campers' maintenance of personal health and hygiene, participation in summer activities, communication of medical information to nurses and physicians at the campsite
- Organized annual summer trip with with UM undergraduate students from Miami to Texas

Work Experience

2018 - 2019 NCAA UM Athletics Department

Role: Tutor/Best Buddies Volunteer Coordinator

- Tutored athletes at the Schwartz Center for Academic Excellence
- Coordinated volunteering events with athletes and Best Buddies

2016-2017 Cox Science Department

Role: Lab Assistant

- Prepared samples and media for general biology and chemistry labs at the UM
- Maintained lab area and environment, including biological specimens for use in teaching labs

Professional Memberships

American Academy of Physical Medicine and Rehabilitation, 2026-Present

Gerontological Society of America, 2023-Present

American Geriatrics Society, 2025-Present

American Society of Biomechanics, 2025-2026

Physicians Society of Central Florida, 2022-2023

Art Experiences

2022-2025 Arts in Medicine Winter Showcase

Role: Student Performer

- Performed violin with other medical students in the annual showcase presenting student talents at UCF COM

2020-2021 Yale Program for Art in Public Spaces

Role: Performer/Artist

- Created artwork, accepted to the online exhibit Community in a Time of Crisis: Yale, New Haven, and HIV/AIDS, 1981-1996
- Performed virtually at the Yale Child Study Center holiday party during the COVID-19 pandemic for children and families of staff and faculty

2018-2019 Miami Music Project

Role: Teaching Artist

- Taught elementary school students at Toussaint Louverture Elementary School a basic introduction to music and learning how to play the violin through leading weekly sectionals

2017-2018 Anatomy Fashion Show - Phi Delta Epsilon

Role: Performer

- Performed with pianist at Anatomy Fashion Show to raise money for Children's Miracle Network through Phi Delta Epsilon philanthropy

2016-2017 Sylvester Comprehensive Cancer Center

Role: Performer

- Performed weekly at various locations within the Sylvester Cancer Center, including but not limited to, the pediatric ward, the oncology ward, the Crohn's and Colitis Center at the Miller Medical Campus, and the general waiting area

Running

Jan 23 Shark Bite Run 5K

Feb 23 AdventHealth Run 4 Love 4 Mile

Mar 23 Gateway to Space 10K

Apr 23 Central Florida Navy League's 14th Wounded Warfighter Lone Sailor 10K

May 23 Stroll for Scholarships 10K

Jun 23	Medal Madness Ninja 10K at Green Springs Park
Jul 23	Trot for Trans Lives - The Finish Line
Jan 24	Shark Bite Run 5K
Oct 24	Cocoa Beach 10K
Feb 25	Run for the Trees 5K
Jun 25	Annual Fit to be Tied - Father's Day 5K
Sep 25	RUN DAYTONA 5K