Motor and Brain Development Lab

INSIDE:

A note from Brittany

Hello from the Waisman Center's Motor & Brain Development Lab! We hope this newsletter finds you well! Within these pages, we are excited to share scientific and personal updates from our lab over the last year. It's been a busy one. Lots of science and trainee milestones, and I am grateful to continue to do this work with the best team there is and amongst such an amazing community. You and this community are why we do this work, so thank you for sharing your time, insights, and resources. It means more to us than you may ever know.

We recognize that changes in 2025 have impacted many in our community. Thus far, our scientific funding remains intact, which means we get to continue to do the work we are so passionate about. However, we simultaneously hold grief for the uncertainty that potential policy changes could mean for our community and scientific peers, and we have been disheartened by inaccurate portrayals of autism in the media and elsewhere. In response, I am part of a coalition of scientists that encompasses many different perspectives, but we agree that participant/client privacy, scientific rigor, research transparency, and open discussion are essential for research in general (and autism research more specifically). Our full statement can be found here: https://www.eurekalert.org/news-releases/1081669

As a lab, we continue to make sure that we protect the confidentiality of our participants. In working with our community advisory boards, we continue to strive for research that aligns with the priorities of the autistic community. And, we continue to be centered in our lab's mission: To promote autistic flourishing through collaborative and rigorous research that seeks unique insights into the brain basis of sensory and motor features. Thank you for all you do for our lab and this community to pursue this work.

Sincerely,

Brittany Travers

Brittany Travers, PhD
Carla and Mike Austin Faculty Fellow
Associate Professor, Occupational Therapy Program
Kinesiology Department
Waisman Center

Recent Findings

Do Gross or Fine Motor Skills have the biggest impact on daily life?

Emily Skaletski and summer student **Sailery Cortes Cordana** explored the impact of specific motor skills on daily living skills. The findings suggest that it's better to focus on fine motor skills, like writing and tying shoelaces rather than gross motor skills like running and jumping when looking for ways to improve daily living skills in autistic youth. The results highlight how important fine motor skills are in daily life.

Skaletski EC, Cardona SC, Travers BG. The relation between specific motor skills and daily living skills in autistic children and adolescents. Front Integr Neurosci. 2024;18:1334241. doi: 10.3389/fnint.2024.1334241. eCollection 2024. PubMed PMID: 38841108; PubMed Central PMCID: PMC11150622..

Do ADHD features lead to different motor-brain pathways in autistic children?

Olivia Surgent studied how the brain is related to grip strength in autistic and non-autistic children. Using brain scans, we found that kids with stronger grip strength had more organized brain pathways and those pathways were better insulated. No significant differences were observed between autistic and non-autistic children, but how the brain supported grip strength varied withing the autistic participants based on the presence of ADHD features.

Grip things might help us understand how people with autism move and sense the world differently

Surgent O, Guerrero-Gonzalez J, Dean DC 3rd, Adluru N, Kirk GR, Kecskemeti SR, Alexander AL, Li JJ, Travers BG. Microstructural neural correlates of maximal grip strength in autistic children: the role of the cortico-cerebellar network and attention-deficit/hyperactivity disorder features. Front Integr Neurosci. 2024;18:1359099. doi: 10.3389/fnint.2024.1359099. eCollection 2024. PubMed PMID: 38808069; PubMed Central PMCID: PMC11130426.

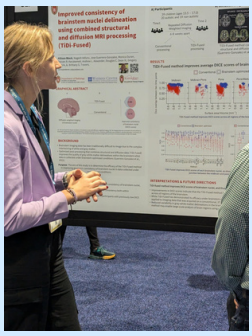
How common are motor differences in autism?

We wanted to understand if having motor milestone delays is associated with an earlier age at autism evaluation or diagnosis. The study found that 71.5% of 8-year-old autistic children had motor milestone delays documented in their health or educational records. These delays were associated with earlier evaluations for autism, on average, 8 months sooner than children without such delays.

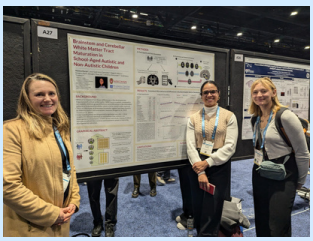
71.5% of 8-year-old autistic children had motor milestone delays

Pokoski OM, Furnier SM, Gangnon RE, Howerton EM, Kirby AV, Protho T, Schweizer ML, Travers BG, Durkin MS. Prevalence of Motor Milestone Delays in Autistic Children. JAMA Pediatr. 2025 Apr 14:e250216. doi: 10.1001/jamapediatrics.2025.0216. Epub ahead of print. PMID: 40227744; PMCID: PMC11997849.

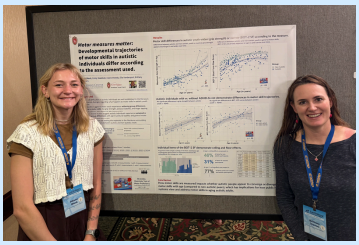
Presentations



Our team had 5 presentations at the Society for Neuroscience (SfN) conference in November 2024 in Chicago

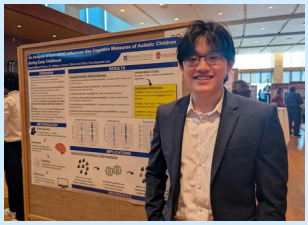


Monica Duran and Al Block each presented at the Gatlinburg Conference in April 2025



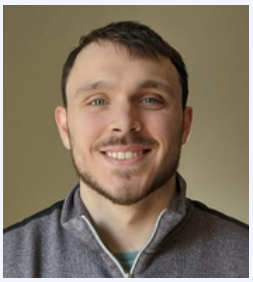
Emily Skaletski presented at the Occupational Therapy Summit of Scholars 2024 and defended her dissertation in April 2025

Three students, Jason Shao, Bella Flowers, and Diane Li, presented at the Undergraduate Research Scholar presentation session in April 2025



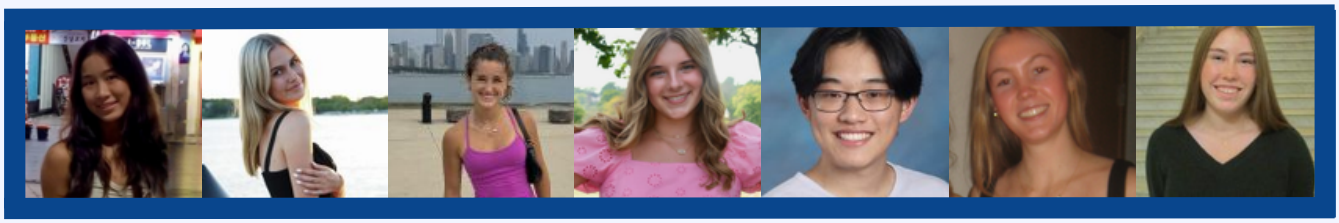
Lab Member Updates

We welcomed . . .



Postdoc fellow, **Nick Cottam**, PhD, came to us from Delaware State University

7 new undergraduate students:
(L-R) Diane Li, Remy Frank, Bella Flowers, Mary Gruber, Jason Shao, Ella Lundberg, and Madelyn DePaul



Lab manager, Kristine Millard joined us after five years in another Waisman Center lab.

6 new entry-level occupational therapy doctoral (OTD) students:
(L-R, top to bottom) Rebecca Alterson, Maddie Caples, Cece Hayman, Maddie Hyland, Pearl Kler, and Andrew Knoke

Collaboration is like carbonation for fresh ideas. Working together bubbles up ideas you would not have come up with solo, which gets you further faster. ~ Caroline Ghosn

We said farewell to . . .

Lab manager, Laura Bradley, who is still at the Waisman Center managing the Clinical Translational Core

Emily Skaletski, PhD, who is heading to Northwestern University in Chicago for a postdoc

4 OTD students: Sarah Dehnel, Crystal Garcia, Kaitlyn Hoang, Shelby Hornberg left for Level II field work.

4 Undergraduate students: Owen Crowell, Sydney Hemann, Susan Lei, Sydney Williams. graduated.

Susan Lei will still be around this summer to help out.

Additional news . . .

OTD-PhD student, Al Block completed the occupational therapy doctoral (OTD) portion of her studies.

In May, Dr. Emily Skaletski found former lab member, Dr. Olivia Surgent at the International Society for Autism Research (INSAR) conference in Seattle.

Research Opportunities

UW LINK Study

Children between 4-7 years old with a diagnosis of autism spectrum disorder are invited to participate in our new research project about autism and ADHD. Families will be asked to visit the Waisman Center once per year for three years. During these visits, a parent completes a clinical interview and questionnaires about their child, while their child completes cognitive assessments and an MRI brain scan. Both parent and child will be asked to provide a saliva sample. In-person study activities total 4 hours in the first year and can be broken into multiple visits. In Year 1, families will receive up to $120 for completed participation. Mileage reimbursement and travel support are available as well.

To learn more, visit: https://uwlink.waisman.wisc.edu/

Discover, Play, & Learn: Brain Research for Kids

Who: We are looking for English-speaking children 5-13 years-old, on or not on the autism spectrum, who are excited to learn about their brains!

What: 6-hours of study activities, including a 20-60 minute MRI. Study activities can be done in one day or multiple days.

Where: The Waisman Center in Madison, WI.

When: We'll work around your schedule!

Compensation: Earn up to $200 while contributing to important research. We'll take care of travel arrangements (up to $249) and meals during study activities.

Interested or have more questions?
We would love to hear from you! BrainyMovtStudy@waisman.wisc.edu
(608)263-8913