

A large, stylized graphic of a human brain in dark blue, centered on a lighter blue background. The brain is composed of thick, rounded lines representing the cerebral cortex and sulci. A teal-colored rectangular box is overlaid on the right side of the brain.

# Annual Report FY 2023

## Letter from the Director

The dedicated team of researchers, clinicians, and trainees at the Concussion Center has been tirelessly working to expand the horizons of our understanding of concussion. This year was marked by a surge in our membership, publication numbers, newsletter subscribers, and social media presence - all of which have had a positive effect on our Clinical, Research, Outreach and Engagement Cores.

Today, we stand strong with member affiliations across 35 departments from 13 schools, colleges, and U-M campuses at Ann Arbor, Flint, and Dearborn. Our diverse members have collaboratively secured \$6M in grant funding for concussion-related research, contributing to a total of \$84M in awards since the Center's establishment in 2018. This support has generated more than 250 publications since we began.

We continue to build a strong network of those interested in addressing concussion-related issues, including collaborations with the University of Michigan Brain Bank, Center for Academic Innovation, School of Information, Michigan Athletics, the Brain Injury Association of Michigan (BIAMI), Michigan Athletic Trainers Society (MATs), Michigan High School Athletics Association (MHSAA), and many more. Moreover, we have committed to proactively supporting coach and administrator training and championing student-athletes' well-being through consultation on policy changes, delivering personalized clinical care, and making our no-cost concussion training certification available to the general public. This multifaceted approach ensures that our commitment to concussion awareness and prevention is not just comprehensive but accessible to all.

In response to our audience's request, we have launched the "Concussion Headliners" podcast. This platform brings together renowned concussion researchers, clinicians, and advocates for enlightening, informal conversations, offering a glimpse into their career experiences, life stories, and valuable insights.

As part of our mission to foster an inclusive scholarly community, we have published manuscripts and white papers highlighting the importance of diversity, equity, inclusion, and justice (DEIJ) in concussion research and clinical care. Additionally, we have introduced a "DEIJ in action" section in our reimagined "Concussion Chronicle" newsletter to keep our 9,500+ subscribers informed and involved. Our engagement with and support for the Pop-up Safety Town in communities across Michigan underscores our dedication to providing resources to those most in need.

As you flip through the pages, you will see our team's unwavering dedication to a healthier and safer society. I invite you to delve deeper into our journey in the past year.

Steven Brogio, PhD  
Director, U-M Concussion Center



## Concussion Center Progress | Global Impact

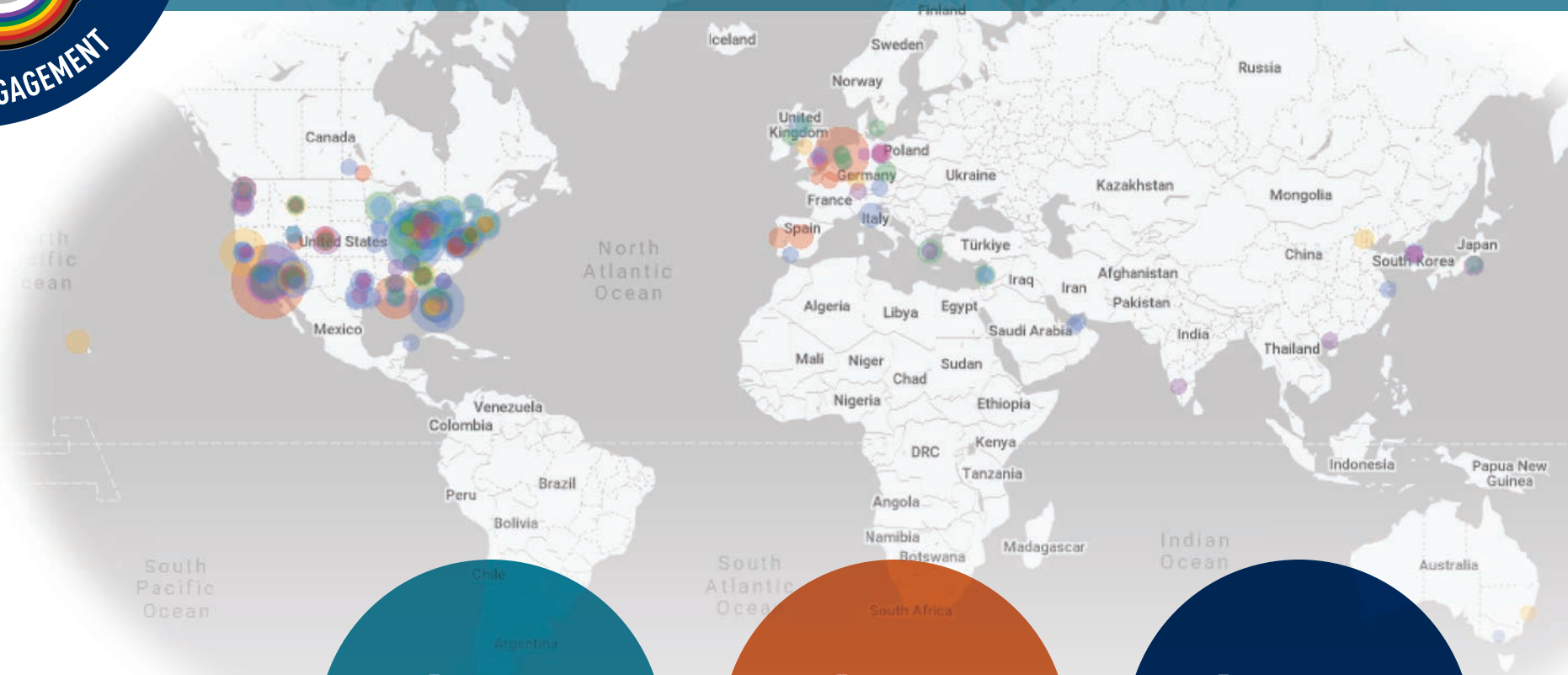
>150  
Members

>250  
Publications  
-90% growth  
since 2018

>500  
Talks given  
across 25  
countries

>10,000  
Subscribers

>37,000  
Concussion  
Training  
Certificate  
Trainees



**\$9M**  
Proposals submitted  
FY2023

**\$6M**  
Awards received  
FY2023

**\$84M**  
Awards received  
FY2019-FY2023

## Research & Clinical Cores

The Research and Clinical Cores maintain an integrated relationship, each contributing to the knowledge base of the other. Dr. Matthew Lorincz and Dr. Andrea Almeida, Co-directors of Michigan Medicine’s NeuroSport, continued to lead the center’s Clinical Core, whose mission is to foster the discovery and translation of clinically important research into patient care and education. Building upon our existing strength in sports-related concussion, the Clinical Core took the lead in creating the “Michigan Medicine Concussion Dashboard.” This tool consolidates administrative data into a visual aid designed to enhance our comprehension of concussion care across various units within Michigan Medicine. This resource will assist in identifying new patient populations for future concussion research, and it is also geared to enhance the outcomes of concussion care here in Michigan.

**NeuroSport was recognized as one of the top two sites by Michigan Medicine’s Office of Patient Experience for performing the best care received for FY23 Q4.**

In addition, as part of the center’s efforts to facilitate a personalized approach to concussion, the Clinical Core has been working closely with the Research Core to build a Concussion Learning Health System (C-LHS), using patient data to improve clinical care. Thus far, we have identified 23 research projects and 16 infrastructure/quality improvement (QI) initiatives falling under the C-LHS umbrella. The aspiration is to integrate the C-LHS across various clinical units in Michigan Medicine.

In June 2023, the international concussion community saw a landmark development in concussion management - the most recent iteration of the “Sports Concussion Assessment Tool,” known as the SCAT6, brought to fruition by the Concussion in Sport Group (CISG). Several of our center members were involved in the scientific contribution of this new international guideline. Leveraging our scientific knowledge and clinical expertise, we continued to offer support and consultation to our clinical partners on campus, such as the University Health Service and Athletic Medicine. Notably, we developed a “return-to-learn” protocol specifically serving college students’ post-injury journey returning to their classroom, which was adopted campus-wide.



Steve Broglio, PhD (Director, U-M Concussion Center), Ruben Echemendia, PhD, Phil Johnson, MS, AT, ATC (U-M Papadopoulos Family Director of Athletic Training for Football)



BrainsRule! 2023



Brain Injury Awareness Month 2023

Under the leadership of Dr. James Eckner from the Department of Physical Medicine and Rehabilitation, the Research Core has spent the last year enhancing research capabilities, initiating new studies, and broadening our research portfolio. To help support the work of the Research Core, last year, we welcomed two research coordinators, Mr. Matthew Morley and Ms. Michaela Broadnax, into our team. They play an integral role in leading the C-LHS development and bolstering the research endeavors of our center members, leveraging their cumulative years of experience in research coordination and data management.

**“The support of the Concussion Center has been vital in allowing us to get our student-athletes to a successful gameday experience!”**

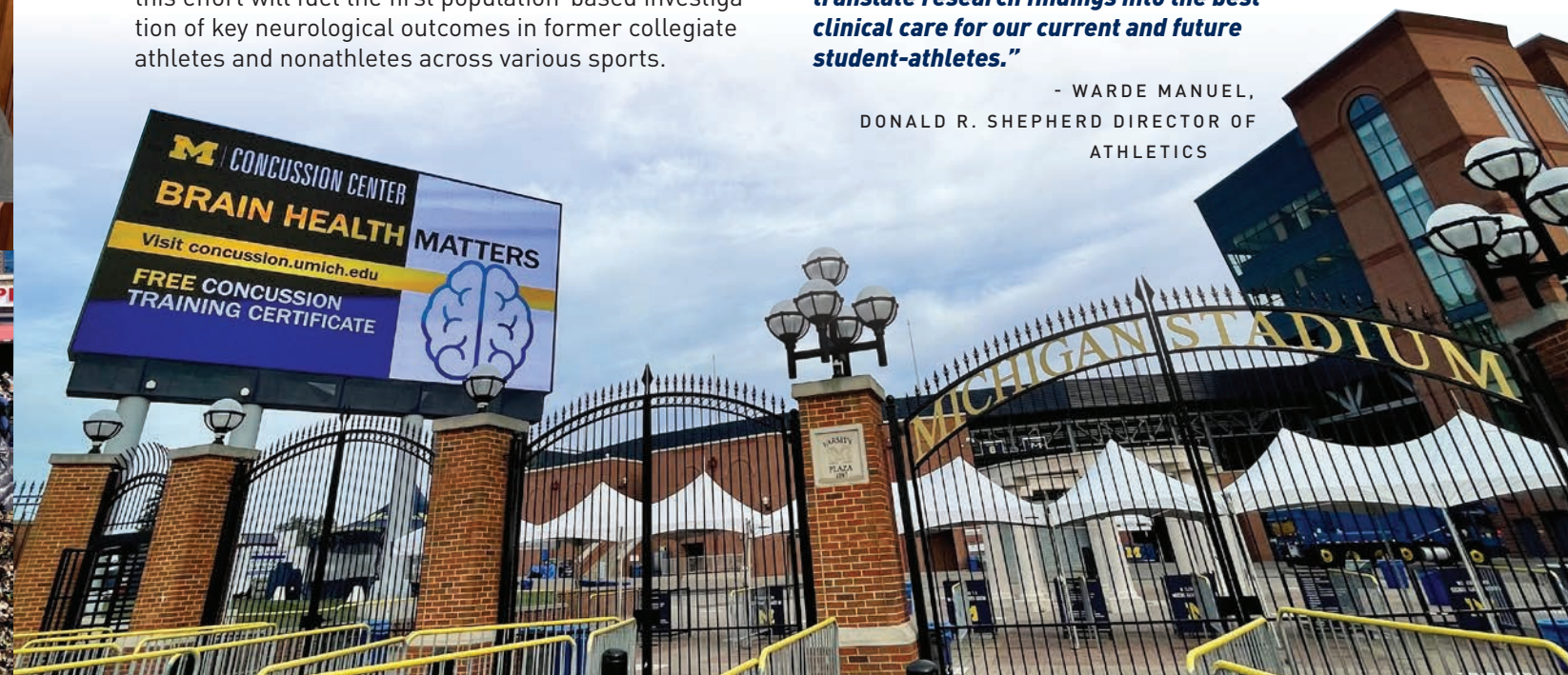
- LENNY NAVITSKIS, STAFF ATHLETIC TRAINER, MICHIGAN ATHLETICS

In partnership with Michigan Athletics, the U-M Alumni Association, and a number of campus partners, we launched the “U-M Alumni Neurological Health Study” in the fall of 2022. This survey-based pilot research invited all U-M alums who graduated before 2010 to participate. To date, the study has seen more than 1,000 alums participating. The valuable data collected from this effort will fuel the first population-based investigation of key neurological outcomes in former collegiate athletes and nonathletes across various sports.

On a national level, Dr. Douglas Wiebe, our Associate Director for the Outreach & Engagement Core, leads the Ivy League Big Ten Epidemiology of Concussion Study. This collaborative, multi-institutional research initiative aims to delve deeper into sport-related concussions, seeking to understand their causes and impacts. In addition, the U-M Concussion Center continues leadership of the NCAA-DoD Concussion Assessment, Research, and Education (CARE) Consortium. This is the largest concussion study undertaken, supporting NCAA student-athletes and military service cadets. Dr. Steven Broglio, who leads its longitudinal study core, was awarded the 2022 William Fields Caveness Award by the Brain Injury Association of America (BIAA). This award recognizes a researcher who, through national and international research, has made outstanding contributions to bettering the lives of people with brain injury.

**“The University of Michigan remains at the forefront of leading cutting-edge interdisciplinary collaboration and biosciences research. To this end, the Athletic Department is proud to partner with the U-M Concussion Center in supporting efforts to translate research findings into the best clinical care for our current and future student-athletes.”**

- WARDE MANUEL, DONALD R. SHEPHERD DIRECTOR OF ATHLETICS



## Outreach & Engagement Core

Dr. Douglas Wiebe took the reins of our Outreach and Engagement Core following his appointment as a Professor of Epidemiology at the School of Public Health and Director of the U-M Injury Prevention Center. With an established national reputation and passion for concussion research, Dr. Wiebe effectively bridges the gap between the two centers, enhancing our collective impact through collaborative outreach efforts.

In September 2022, faculty members from our center attended the fall conference organized by the Brain Injury Association of Michigan (BIAMI). This event is among the largest of its kind, bringing together brain injury survivors, clinicians, and advocates from across the nation. Given the complexity of concussion and its varied post-injury impact on different patient populations (such as anxiety and depression in student-athletes following a concussion), the panel comprised a broad spectrum of clinical areas. Moderated by Dr. Steven Broglio, the panelists included Dr. David Millward (U-M Athletics Medical Director), Dr. Srijan Sen (Director of U-M's Eisenberg Family Depression Center), Dr. James Eckner (Associate Professor, Physical Medicine & Rehabilitation), and Dr. Katharine Seagly (Clinical Associate Professor, Physician Medicine & Rehabilitation).



2022 Concussion Center Meet and Greet

***“Thank you to the University of Michigan and its partners for working to raise awareness about the importance of safety equipment when participating in sports - especially when it comes to protecting our brains!”***

- DANA NESSEL, MICHIGAN ATTORNEY GENERAL



Dana Nessel, Michigan Attorney General

Last year, we hosted three speaker series events featuring world-renowned researchers, including Dr. Doug Smith from the University of Pennsylvania, Dr. Ruben Echemendia, the lead author of the SCAT6, and Dr. Ross Zafonte from Harvard University. All these experts shared cutting-edge scientific knowledge of concussion. These events attracted unprecedented interest, recording registrants from across 11 countries around the world.

As part of our efforts to incorporate modern technology and innovation into our outreach efforts, the center is working with U-M's Center for Academic Innovation and the School of Information. Together, we are developing a “Concussion XR (extended reality) module” and a “Concussion Navigator” mobile application. While both of these projects are still in their development stages, we aim to launch the finalized products to the general public in the coming year.

Another rewarding initiative the center supports is Dr. Andy Hashikawa's “Pop-up Safety Town,” providing age-focused injury prevention resources to Michigan's underserved communities. In the 2022-2023 school year, we traveled to the Marygrove Conservancy in the Detroit Public School Community District, Cummings Head Start Center in Flint, Genesee Intermediate School District (GISD), Jackson, Ypsilanti, Addison, and Whitmore Lake. Our shared mission saw us fit more than 600 helmets on children aged 3 to 5, a step towards our goal of extending our reach to more underserved areas, and we aim to expand our reach to more tribal and immigrant communities in Michigan in the coming years.

***“As the founder of the National Concussion Awareness Day, I am excited and energized by the work done by the University of Michigan Concussion Center. I look forward to working with them on raising and advocating for concussed patients like me across the country.”***

- BROOKE MILLS, BRAIN INJURY SURVIVOR & FOUNDER OF NATIONAL CONCUSSION AWARENESS DAY



Pop-up Safety Town

## Foundational Partners

Biosciences Initiative  
School of Kinesiology  
Department of Neurology  
Michigan NeuroSport  
Department of Physical Medicine  
and Rehabilitation

## 2022-23 U-M Collaborators

Michigan Athletics  
College of Engineering  
College of Literature, Science, and  
the Arts  
Eisenberg Family Depression  
Center  
Exercise and Sport Science  
Initiative  
Injury Prevention Center  
Institute for Healthcare Policy and  
Innovation  
Michigan Medicine  
Michigan Neuroscience Institute  
Office of the Vice President for  
Research  
School of Education  
School of Nursing  
School of Public Health  
University Health Service

## External Partners

Brain Injury Association of Michigan  
Detroit Public Schools Community  
District  
Michigan Department of Health and  
Human Services  
Michigan High School Athletic  
Association  
Michigan Athletic Trainer's Society

## Concussion Center

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**YouTube:** Michigan Concussion  
Center

**Newsletter:** [myumi.ch/1p7oM](https://myumi.ch/1p7oM)