UPMC SPORTS MEDICINE CONCUSSION PROGRAM
POST-DOCTORAL FELLOWSHIP IN NEUROPSYCHOLOGY

Established in 2000, the UPMC Sports Medicine Concussion Program currently includes six attending clinical neuropsychologists who work within a multidisciplinary team to assess, diagnose, and treat concussions across the lifespan. This team includes primary care sports medicine, physical medicine and rehabilitation, vestibular rehabilitation, neurosurgery, neuro-radiology, behavioral neuro-optometry, and physical therapy, including both musculoskeletal evaluations and sport-specific exertion therapy.

Under the guidance of **Michael "Micky" Collins, PhD**, clinical and executive director, the UPMC Sports Medicine Concussion Program conducts over 18,000 patient visits, involving between 6,000–7,000 unique patients, each year. The clinical team is involved in the evaluation and management of concussions for athletes at all levels of sports participation, including professional, collegiate, high school, and youth athletes.

The fellowship is a two-year, full-time position adhering to Houston Conference guidelines for hourly clinical training and supervision. Upon completion of fellowship, it is expected that fellows will have the necessary skills and knowledge base to pursue board certification in clinical neuropsychology. Several prior fellows and current faculty have achieved, or are in the process of achieving, board certification.

Neuropsychology fellow duties primarily consist of brief neuropsychological evaluations of pediatric and adult athletes, along with extended batteries as needed. In addition to serving athletes, the program also receives referrals for neuropsychological evaluations of patients with non-sports-related mild traumatic brain injury (mTBI), as well as other neurologic and psychiatric disorders. There is opportunity for forensic and medico-legal consulting work as well.

The fellow has access to all training activities offered to residents, fellows, and other clinical trainees through the UPMC hospital system, including professional development workshops, seminars, grand rounds, and conferences. Each fellow receives support to travel to and present at one professional conference during each year of their fellowship.

The program is based within the University of Pittsburgh's Department of Orthopaedic Surgery and is housed within clinical space at the UPMC Rooney Sports Complex. The state-of-the-art facility is home to UPMC Freddie Fu Center for Sports Medicine and includes a training and rehabilitation gym with a plyometric training floor, a therapeutic pool, and a specialized performance training center. In addition to this primary location, there are currently five satellite clinics located throughout the Greater Pittsburgh area. Although the fellow rotates through all of the satellite clinics, the UPMC Freddie Fu Center for Sports Medicine is the fellow's home base.

Next door is the UPMC Indoor Training Center, which features a quarter-mile, four-lane running track and full-size practice football field. The climate-controlled facility is utilized by the Pittsburgh Steelers and the University of Pittsburgh Panther football teams, who also occupy the Sports Training Center, which includes team meeting and film viewing rooms, weight training rooms, hydrotherapy facilities, and four 80-yard outdoor fields with observation towers.

CLINICAL TRAINING MODEL

Fellows begin with a one-month training intensive working closely with Dr. Collins and other faculty. Alongside current senior fellows, new junior fellows will become competent with the clinical interview, administration of the vestibular/ocular-motor screening (VOMS), and interpretation of both computer-based neurocognitive testing and more traditional neuropsychological tools. After the first month, fellows will enter into the regular clinical rotation, in which they will work in some capacity with all faculty members and rotate among the satellite clinics. Fellow offices are located at the UPMC Freddie Fu Center for Sports Medicine, where all fellows have access to all necessary computer equipment and resources.

The educational philosophy of the program is one of scientist-practitioner. The fellowship program emphasizes an evidence-based, patient-centered approach to treatment and recovery, which recognizes that each patient will have a unique clinical presentation and course of recovery. Fellows are expected to spend 80 percent of their time on clinical work and 20 percent of their time focusing on research-related, educational, and outreach activities. Of the 80 percent of time spent on clinical work, approximately 70 percent involves direct face-to-face services with the remaining 10 percent dedicated to report writing, documentation, and supervision. The UPMC Sports Medicine Concussion Fellowship Program is a member of APPIC (Member Code #9139). The fellowship program meets hourly requirements for clinically supervised practice in the Commonwealth of Pennsylvania.

Clinical Experiences

Although fellows spend the majority of their time in clinic, there are a number of additional clinical learning experiences available. Clinical opportunities within the Department of Neurosurgery include weekly teaching case conferences, didactic lectures, and morbidity and mortality conferences. In addition, David Okonkwo, MD, PhD, clinical director of the Brain Trauma Research Center and director of the neurotrauma program in the Department of Neurosurgery, invites all fellows to join him and his team, along with members of rehabilitation medicine, for weekly Rehab Rounds at the Neurotrauma ICU. Weekly brain cuttings are also offered through the Department of Neuropathology.

Evaluation of Fellows

Fellows receive formal evaluations from all supervisors up to four times per academic year. In addition, the fellow will meet with both the Training Director, Clinical/Executive Director, and Research Director twice per year for a general overview of their performance and supervisors' feedback. Fellows will be provided with a specific plan to improve upon areas needing improvement if necessary. Formal due process procedures are in place for both the fellow and the training program regarding problem situations.

Learning Experiences

The following experiences are available to all postdoctoral fellows, who are encouraged to be active and engaged in the research process, and take advantage of available opportunities.

Monthly Grand Rounds – Presentations by nationally recognized speakers in the area of concussion and mTBI. Previous speakers have included: Gary Solomon, PhD, John Leddy, MD, David Howell, PhD, Jaclyn Caccese, PhD, Chris Giza, MD, Mike McCrea, PhD, and Grant Iverson, PhD. Junior and Senior fellows also present their own research projects at the Lightning Grand Rounds sessions each spring.

Monthly Clinical Case Conference – Variety of topics related to clinical care, as well as case presentations with round table case conceptualization discussion.

Monthly Research Meeting – Research Director, Fellow Research Coordinator, and the research post-doctoral fellow direct monthly research didactics for all fellows which cover topics including research ethics/IRB training, statistics/research design, journal article and grant writing, presentation development, and critical examination of current research trends in the field. Fellows are expected to share research ideas and current projects, and will receive feedback from both peers and supervisors.

Monthly Journal Club – Discussion of timely articles and topics related to the clinical care of patients with concussion and cutting-edge research on concussion and TBI.

Mentored Research Opportunities in the Concussion Research Lab – Participation in mentored research activities, including subject recruitment and consent, data collection, entry and analysis, study design, and development of papers and presentations. In Year 1 of the fellowship, fellows will lead one or more research projects involving pre-existing data, culminating in professional presentations and peer-reviewed manuscript submissions. In Year 2, fellows will lead an original, prospective research project for which they will propose a study design; complete University of Pittsburgh IRB approval; collect/enter/analyze data; present and write a manuscript for publication in a peer-reviewed journal.

CITI IRB and COI Training – All fellows will complete University of Pittsburgh CITI human subjects IRB and COI training modules prior to being involved in research.

Clinical Translational Science Institute (CTSI) – Fellows will have the opportunity to attend training, seminars, and courses in clinical and translational research through the University of Pittsburgh's CTSI programs.

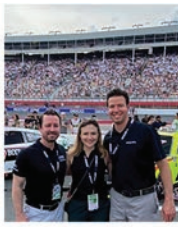
Research Readings – Fellows will be assigned a comprehensive digital packet of current, peer-reviewed readings at the start of their fellowship. The readings are designed to orient fellows to the current state of research and clinical practice in the field with an emphasis on our clinical profiles model and targeted, active treatment approach that forms the basis for their clinical work during the fellowship.

Journal Reviews – Fellows will have the opportunity to serve as mentored reviewers with faculty for approximately three to four peer-review journal submissions in sports medicine, psychology, neurology, and related fields per year. At the conclusion of the two-year fellowship, fellows will typically have completed four to eight mentored reviews.

Professional Presentations – Fellows are encouraged to participate in the development and delivery of professional research presentations at national, regional, and local conferences. As a goal, fellows are encouraged to participate in two to four presentations per year, with at least one as the primary presenter. Support is provided for fellows to attend and present at one national conference each year of their fellowship. Fellows present annually at our Concussion Lightning Grand Rounds each May, as well as at department and college symposia, and national conferences. Our fellows have won numerous awards for the presentations at local and national conferences. At the conclusion of the two-year fellowship, fellows will typically have completed four to eight professional presentations.

Professional Publications – Fellows are encouraged to participate in the development of professional research papers, chapters, and review articles. As a goal, fellows are encouraged to participate in two to four papers per year, with at least one as the first author. At the conclusion of the two-year fellowship, fellows will typically have co-authored four to eight peer-reviewed publications.

Relationship with NASCAR


The UPMC Sports Medicine Concussion Program has developed a growing relationship with NASCAR through frequent evaluation of some of the sport's most prominent drivers. Fellows will have the opportunity to participate in the evaluation of drivers under the supervision of Dr. Collins. In addition, opportunities may be available to evaluate drivers using a state of the art driving simulator in the Concussion Research Lab, and travel to NASCAR events to represent the UPMC Sports Medicine Concussion Program.

UPMC Concussion Network in Ireland


In 2017, our program launched the UPMC Concussion Network, expanding our clinical model on the international stage by establishing six clinic locations and a research presence in Ireland. Drs. Collins and Kontos provide regular supervision and trainings to the lead healthcare professionals for each of the Ireland locations. In 2022, Drs. Collins and Kontos and other members of our team presented multiple invited lectures across Ireland including keynote lectures for the Concussion in Sport National Conversation meeting in Dublin. We followed up these efforts with a series of presentations and symposia highlighting our clinical profiles and targeted treatment model at the 2023 meeting of the International Brain Injury Association in Dublin. Future plans include launching a similar network of clinics in other countries.

CONCUSSION CLINICAL RESEARCH OPPORTUNITIES

Overview and Resources – The mission of our clinical research is to "use research to inform a more effective clinical approach to assessing and treating concussion using targeted treatment and rehabilitation strategies based on evolving clinical profiles and comprehensive assessments." In support of this mission, the Concussion Research Laboratory (CRL) is led by Research Director Dr. Anthony Kontos. The CRL is located close to the main clinic at UPMC Sports Medicine at the Rivertech offices in Pittsburgh's Southside neighborhood, and consists of 2800 square feet of dedicated research, meeting, laboratory testing, and office space. The CRL houses advanced testing equipment including a certified blood collection and processing room, a minus 80 freezer for biospecimen storage, exertion testing apparatus, a NASCAR driving simulator functional near-infrared spectroscopy (fNIRS) and EEG imaging equipment, a retinal eye tracking scanning laser ophthalmoscope, vestibulo-ocular goggles, and a portable force platform, as well as multiple computer testing stations with software for a comprehensive battery of neuropsychological, neuromotor, and psychological health assessments; MatLab; and other analytical tools. We also have strong collaborative relationships with the University of Pittsburgh's Magnetic Resonance Research Center (MRRC), which provides us with access to 3T and 7T MRI scanners for neuroimaging studies. Research staff includes a lab coordinator, research project coordinators, research assistants, phlebotomists, a post-doctoral research fellow, master's and doctoral-level biostatisticians, as well as doctoral, resident, medical, and undergraduate student interns. The CRL and its staff support our research program's commitment to be at the leading edge of concussion clinical research by translating research into better clinical care for our patients.

Fellow Immersion in Clinical Research – Neuropsychology fellows are actively involved in grant-funded and faculty-led clinical research, and are encouraged and mentored to pursue their own research interests using existing data and prospectively collected data. Fellows are expected to spend their weekly "research day" at the CRL, where they have dedicated workspace and access to the CRL's equipment and software including statistical programs such as SPSS and MatLab, to support their research.

Access to Clinical Research Data – An exciting aspect of the CRL is the ongoing access to multiple large clinical trials, as well as clinical research databases from our clinics in Pittsburgh and Ireland, which provide access to data on thousands of patients for clinical research projects. These databases provide many opportunities to collaborate with our research partners at the University of Pittsburgh from the MRI Research Center, and Departments of Neurosurgery, Otolaryngology, Psychology, and Physical Therapy, and the Eye and Ear Institute, as well as external national and international partners from academe, military, and sport organizations.

Strong Record of Research Funding and Publications – Our research has been funded by the Centers for Disease Control and Prevention (CDC), National Institutes for Health (NIH), Department of Defense (DoD), the National Football League (NFL), and the Chuck Noll Foundation for Brain Injury Research, as well as foundations, corporate sponsors, and individual sponsors. Our faculty publish an average of 40 impactful and innovative research articles each year in high-impact journals including *JAMA Neurology*, *Pediatrics*, *Sports Medicine*, *American Journal of Sports Medicine*, and *Journal of Neurotrauma*. Below is a summary of select funded research projects fellows may be involved in.

Concussion Clinical Trials: Enhancing Clinical Care through Research

During the past couple of years we have enrolled several hundred pediatric patients from UPMC Pittsburgh Children's Hospital and Children's Wisconsin into our recently concluded Centers for Disease Control and Prevention (CDC)-funded Active Injury Management (AIM) randomized controlled trial (RCT) of active treatments in this at-risk population. We also just concluded enrolling over 120 military service members and civilians into our Department of Defense-funded Targeted Rehabilitation Exercises for Vestibular (T-REV) RCT, and we are developing clinical guidelines for prescribing vestibular rehabilitation in military service members and civilians following concussion. We have also enrolled over 160 patients into our Department of Defense-funded Targeted Multidomain (T-MD) RCT, a multisite study with Inova Sports Medicine Concussion Program (Fairfax, VA) of the effectiveness of targeted treatments

in military-aged civilians. We also have a new DoD-funded clinical trial starting enrollment in fall 2024 called the Acceptance and Commitment Therapy Integrated Vestibular Rehabilitation (ACTIVE) for mTBI: A Targeted, Randomized, Controlled. Of note, in 2023–24, we began enrolling patients into the first-ever RCT of concussion treatment in older adults.

The Biology of Brain Injury: Applying Cutting-Edge Biomarkers to Concussion

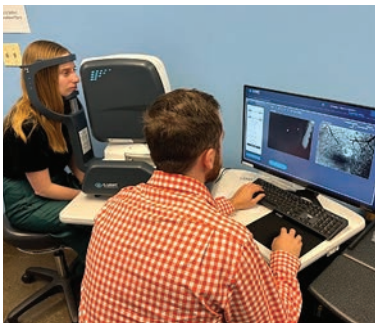
During FY 2022–23 our program led multiple projects involving state-of-the-art biological markers to inform concussion clinical assessment and treatments. We are current enrolling patients into a study examining the role of hypothalamic pituitary axis interleukin markers of neuroinflammation funded by the Department of Defense (DoD). Through the support of the Chuck Noll Foundation, we are conducting a multisite (with Children's Hospital of Philadelphia) study of saliva-based neuroinflammatory and other markers of concussion clinical profiles in children. We also just concluded enrolling adolescent athletes into a saliva neuroinflammatory biomarker study to identify persistent post-concussion symptoms (PPCS) funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development. Drs. Collins and Kontos also serve as primary investigators for a ground-breaking National Football League-funded study of clinical and biological markers of long term brain health in former professional football players, referred to as the Brain Health Initiative (BHI). Beginning in August 2024 we are expanding our BHI work and leading a large, four-project DoD-funded program award, *Brain Risk Assessment for Individual Neurological (BRAIN) Health: Understanding/Preventing Consequences from Repetitive mTBI and Head Impact (RHI) Exposures*, which will examine the intersection of mTBI and RHI in over 700 military service members and civilians. These studies provide rich databases for both biomarker and clinical outcomes, and are ideal for fellows to use in their own research projects.

Focusing on Concussion in Women and Girls

We are in the second year of a first of its kind, multi-year, multisite study of Women's Multidomain Evaluation of Neurobiological Health following Concussion (WOMEN's Health Concussion) funded by the Chuck Noll Foundation for Brain Injury Research and Magee Women's Research Institute. This study involves a comprehensive, prospective study comparing the effects of concussion to orthopaedic injury on women and adolescent girls' menstrual cycle function, psychological health, and other health outcomes at both Pitt/UPMC and Inova.

Setting the Standard with Impactful Publications

Our clinical research team continues to lead the way in the field of sports-related concussion. In fact, Dr. Kontos and Dr. Collins were the #1 and #4 ranked researchers in the field of sports-related concussion (Tang et al., World Neurosurg; 2022). Since 2020, our faculty and trainees have published 150 peer-reviewed papers and been cited over 8,000 times in the literature. During this time, we have averaged nearly 40 publications and 2,000 citations annually, or a publication every 10 days and over five citations per day. In the past year, our publications appeared in high impact journals including S*ports Medicine* (Impact Factor [IF]= 11.93), *Journal of American Journal of Sports Medicine* (IF= 6.1), and *Journal of Neurotrauma* (IF= 4.2). Below are highlights from several impactful papers with recent fellows as first author during the previous year.



Measuring Changes in the Retina following Concussion *(Albrecht et al., J Neurotraum; 2023)* – The purpose of this study was to evaluate changes in fixational eye movements (FEMs) as measured in the retina using a tracking scanning laser ophthalmoscope (TSLO) and their association with clinical outcomes including recovery time and symptoms. The findings provide preliminary evidence for improvements in FEMs across recovery, and highlight the clinical utility of a TSLO-based assessment of the retina to augment current tools with a more objective evaluation of eye function following concussion. This research was supported by a grant from the National Institute of Neurological Disorders and Stroke (R44NS095090) to C. Light Technologies and the University of Pittsburgh.

Connecting the Concussion Symptom Dots: Using Network Analysis to Better Understand Concussion Symptoms *(Preszler et al., App Neuropsyc Child; 2023)* – The purpose of this study was to examine — using a sophisticated statistical approach called network analysis — the interrelationships among clinical assessments and multidomain symptoms in a large (326 patients) sample of adolescent patients following a concussion. The findings suggest a more direct focus on symptom interrelationships, such as how dizziness contributes to emotional symptoms, may help guide and better direct targeted treatments for patients.

The Dynamic Exertion (EXiT) Test: A More Effective Exercise Assessment for Concussion *(Sinnott et al., J Sci Med Sport; 2023)* –

The purpose of this study was to compare physiological outcomes like heart (HR) and blood pressure (BP) during the EXiT test between recently concussed athletes at medical clearance for return to activity with healthy control athletes. As expected, the two groups performed similarly during the EXiT test, suggesting that the assessment of physiological outcomes following this unique test is an effective approach to inform better clinical decision making for return to sport following a concussion.

For more information about the UPMC Sports Medicine Concussion Research Lab visit our website at: orthoresearch.pitt.edu/concussion-research-laboratory.

COMMUNITY OUTREACH

All neuropsychology fellows are encouraged to participate in ongoing community outreach. UPMC Sports Medicine partners with over 60 area high schools and universities to offer both on-field and in-office management of sports injuries including concussion. As such, neuropsychology fellows are often asked to educate school professionals, coaches, student-athletes, and parent groups on concussion basics and the importance of proper post-injury management.

In addition to education, the UPMC Sports Medicine Concussion Program is proud to partner with the Pittsburgh Penguins Foundation to offer the Heads UP Pittsburgh program. Heads UP Pittsburgh provides free neurocognitive baseline testing for athletes ages 7 to 14 in western Pennsylvania. Athletes 15 and older are offered baseline testing for a nominal fee as well. Neuropsychology fellows are welcome to learn more about and become involved with this program.

For a closer look at the UPMC Sports Medicine Concussion Program's treatment approach, multidisciplinary team, research updates, and patient stories, please visit our website at UPMC.com/Concussion.

Follow us on X (formerly Twitter): @**UPMC_Concussion**.

FELLOWSHIP APPLICATION AND SELECTION PROCEDURES

The UPMC Sports Medicine Concussion Program seeks qualified applicants from doctoral training programs in psychology. Applicants to the two-year clinical neuropsychology specialty program are required to demonstrate academic and clinical experience in neuropsychology, conveyed through formal coursework, clinical experience, and letters of recommendation. The fellowship position includes an annual salary of $50,000 with full medical benefits. Fellows are also provided with a travel budget of $1000 per year.

Applicants must have completed all requirements for their doctoral degree, which includes the successful defense of their dissertation prior to starting the postdoctoral fellowship. In order for the program to make an offer to an applicant who has not yet completed their dissertation defense, a letter from the chair attesting that the dissertation will be completed prior to the start of the fellowship is required. In addition, candidates' doctoral program and internship must be accredited by the American Psychological Association or Canadian Psychological Association.

Postdoctoral fellows are selected on the basis of academic excellence, clinical experience, research experience, recommendations of professors and supervisors, interview, and interests. Given the work environment and primary population served, consideration is given to certain aspects of life experience, particularly experience with sports. There are currently three anticipated openings for 2025–2027. Application deadline is December 1, 2024. Applications are reviewed once complete. Interviews will be offered as completed applications are reviewed. There will be an on-site interview day in mid-December. Offers may be extended to qualified candidates prior to the application deadline.

APPLICATION PROCEDURE

All application materials are to be submitted by **December 1, 2024**. Interviews will be offered as applications are received. Materials can be submitted via the UPMC Careers website at careers.upmc.com (Job Title: Neuropsychology Fellow) or emailed directly to Dr. Nathan Kegel at kegelne@upmc.edu.

The following materials are required:

1. Statement of goals and interests
2. CV
3. Three letters of recommendation (at least one from an internship supervisor). If submitting electronically, it is preferred that all three letters are scanned into one PDF document. If this is not possible, references may also email letters to the Fellowship Director at the email address below.

For application questions:

Dr. Nathan Kegel
kegelne@upmc.edu

LOCAL INFORMATION

The UPMC Sports Medicine Concussion Program is affiliated with the University of Pittsburgh. Founded in 1787, the University is one of the oldest higher education institutions in the United States and one of the most respected and productive research centers. Pitt's main campus is in Oakland, only five minutes from the UPMC Rooney Sports Complex, opening much of the city to affordable living options and plentiful cultural opportunities.

Pittsburgh is known both for its livability and affordability, consistently ranking among the most livable cities in the United States. The city boasts a number of museums, including the Carnegie Museums of Art, Natural History, and Science; the Andy Warhol Museum; the Mattress Factory Art Museum; Phipps Conservatory and Botanical Gardens; Senator John Heinz Pittsburgh Regional History Center; and the Soldiers and Sailors Memorial Hall and Museum. Pittsburgh's theater district is a short bus ride away and includes a number of active theaters with top acts in musical theater. In addition, Pittsburgh is home to a vibrant sports scene, including professional football, baseball, and hockey teams, as well as a full range of collegiate athletics through Pitt and other local universities. Please visit the following links for more information regarding moving to Pittsburgh and exploring the city:

coolpgh.pitt.edu
visitpittsburgh.com

UPMC SPORTS MEDICINE CONCUSSION PROGRAM FACULTY

Michael "Micky" Collins, PhD

Executive and Clinical Director

Professor and Arthur J. Rooney, Sr. Chair in Sports Medicine

Michael "Micky" Collins, PhD, is an internationally renowned expert in sports related concussion. A leading clinician and researcher, Dr. Collins serves as director and a founding member of the UPMC Sports Medicine Concussion Program. Established in 2000, it was the first program of its kind; more than a decade later, it remains the largest research and clinical program focused on the assessment, treatment, rehabilitation, research, and education of sports-related mild traumatic brain injury in athletes of all levels. Dr. Collins' expertise attracts elite and professional athletes from around the world seeking the comprehensive care he provides and the multidisciplinary approach he helped to introduce. The program has roughly 20,000 patient visits annually at seven different locations across Pittsburgh. Dr. Collins and his UPMC program colleagues attract patients embodying youth, high school, collegiate, and pro athletes with concerns about safe return to play and clinical management and treatment of sports concussion.

Besides his extensive clinical experience, Dr. Collins also has been a lead author and investigator on numerous groundbreaking studies of high school and college athletes published in *JAMA*, *Neurosurgery*, *American Journal of Sports Medicine*, and *Pediatrics*, among many others. He has been the lead author or co-author on over 200 peer-reviewed research articles and has delivered more than 550 presentations at national and international scientific meetings. Dr. Collins currently has upward of $19 million in funding for his research efforts from entities including the NFL-GE Head Health Challenge, National Institute of Health, Major League Baseball, and the United States Army Special Operations Command. National and local media frequently interview him as an expert source.

Dr. Collins has been an instrumental source across the nation in developing concussion-management policy in youth sports, state legislation on youth safety, the Centers for Disease Control's concussion toolkit, and pioneering targeted treatment pathways for his patients. He is a co-founder of ImPACT (Immediate Post-Concussion Assessment and Cognitive Testing), the most widely used computerized sports-concussion evaluation system that has become a standard of care in nearly all organized sports at all levels. As a result, he is a leader in educating and implementing the proper usage of such baseline and post-injury neurocognitive testing as one tool to help determine an injury's severity and recovery for safe return to play. More recently, Dr. Collins was the Meeting Chairman for the Targeted Evaluation and Active Management (TEAM) Approach to Treating Concussion. This meeting was held in Pittsburgh in October 2015 and was the first focused meeting regarding treatment of sports-related concussion. Underwritten by the NFL, this meeting resulted in the first published white paper on treatment of concussion, published in *Neurosurgery*.

In addition to training thousands of physicians and certified athletic trainers in the diagnosis, management, and treatment of sports-related concussion, he advises and is a consultant to numerous athletic organizations and teams, including the NFL Steelers, the NHL Penguins, other NFL teams, numerous MLB clubs, several NCAA programs, USA Rugby and many international sports affiliations. He serves as an Associate Editor of the *Journal of Neurosurgery* and the *Journal of Sports Neurology*. Dr. Collins is also on the editorial board of such publications as *Brain Injury Professional* and the *Journal of Athletic Training*.

A graduate of the University of Southern Maine with a bachelor's degree in psychology and biology in 1991, Dr. Collins earned a master's degree in psychology in 1995 and a doctorate degree in clinical psychology in 1998 at Michigan State University.

Among numerous national and international honors over the past decade, in 2022, Dr. Collins earned the title of Professor and the Arthur J Rooney, Sr. Chair in Sports Medicine. He has also been named an Irish America Healthcare and Life Sciences Top 50 Honoree. In 2010, he received the National Council on Brain Injury annual award for outstanding research and advocacy. In 2009, he was awarded the Kenneth L. Knight Award for outstanding research. In 2007, the National Academy of Neuropsychology honored him with the Annual Butters Award. An athlete himself, Dr. Collins played in the 1989 NCAA Baseball College World Series for the University of Southern Maine.

Anthony Kontos, PhD

Research Director

Dr. Kontos is Professor and Vice-Chair of Clinical Research in the Department of Orthopaedic Surgery at the University of Pittsburgh, and Research Director of the Concussion Research Laboratory and UPMC Sports Medicine Concussion Program. He received his doctoral degree in kinesiology/sport psychology from Michigan State University where he received master's degrees in counseling psychology and exercise science and completed an internship in counseling psychology. He completed his B.A. in psychology and business administration at Adrian College (Adrian, MI), where he was a four-year starter on the men's soccer team.

Dr. Kontos has specialized in concussion research for 19 years with 260+ peer-reviewed publications. He has received approximately $43 million in research funding for over 40 grants focused on concussion, brain health, and related areas of research. Dr. Kontos has been the principal investigator for grants from the Centers for Disease Control and Prevention (CDC), National Institutes of Health (NIH), Department of Defense (DoD), U.S. Special Operations Command, National Collegiate Athletic Association (NCAA), National Football League (NFL), Chuck Noll Foundation for Brain Injury Research, and National Operating Committee of Standards for Athletic Equipment. His research focuses on concussion including clinical trials of active, precision treatments; risk factors; neurocognitive and neuromotor effects; psychological issues; and concussion in military, pediatric, and sport populations. Dr. Kontos is an Editorial Board Member of

the *Journal of Neurotrauma*, and a frequent reviewer for journals including the *New England Journal of Medicine*, *Journal of the American Medical Association*, and *American Journal of Sports Medicine and Pediatrics*. He is also an invited reviewer of grants for the NIH, DoD, NCAA Grand Challenge, National Athletic Trainers Association, Walter Reed Army Institute for Research, and U.S. Army Medical Research and Materiel Command. He served as chair on the sub-acute working group of the NIH Sports Concussion Common Data Elements statement and paper and was a member and co-author of the 2019 American Medical Society for Sports Medicine's (AMSSM) position statement on concussion in sport.

Prior to coming to UPitt/UPMC, Dr. Kontos was a professor and chair-elect at California State University- Humboldt and director of the North Coast Sports Concussion Program in northern California, and an associate professor with tenure and associate chair of the IRB at the University of New Orleans, where he directed its sport concussion testing program. While in New Orleans, Dr. Kontos also was an Adjunct Professor in the Sports Medicine Fellowship at Louisiana State University-Health Sciences Center.

Dr. Kontos has received numerous honors for his work in the field including the 2023 Society for Sport, Exercise, & Performance Psychology (American Psychological Association) Distinguished Scientific and Research Contributions to Sport, Exercise, and Performance Psychology Award and the 2022 Michigan State University Department of Kinesiology Professional Achievement Award. Dr. Kontos is fellow of the Society for Sport, Exercise, & Performance Psychology of the American Psychological Association, National Academy of Kinesiology, American College of Sports Medicine, Association for Applied Sport Psychology, and Eastern Psychological Association. He is also co-author of *Concussion: A Clinical Profile Based Approach to Assessment and Treatment*.

Nathan Kegel, PhD

Fellowship Director

Dr. Kegel is a clinical neuropsychologist with the UPMC Sports Medicine Concussion Program and assistant professor in the Department of Orthopaedic Surgery at the University of Pittsburgh. He earned a bachelor's degree in psychology from the University of Pittsburgh and a master's degree in child psychology from Duquesne University. He completed an APA-accredited doctoral program in school psychology at Duquesne University, as well as an APA-accredited internship in pediatric neuropsychology at The Watson Institute in Sewickley, Pa. Dr. Kegel has been a part of the UPMC Sports Medicine Concussion Program since 2009, first completing a two-year fellowship program in sports neuropsychology. He was hired as full-time clinical faculty in 2011.

Dr. Kegel has been fellowship director for the UPMC Sports Medicine Concussion Program since 2017. He is responsible for nationwide recruitment of post-doctoral fellowship candidates, and development of training material for current fellows. He has taught several semester-long child neuropsychology classes as an adjunct professor at Duquesne University, and frequently conducts lectures and workshops related to sports concussion on a local and national level. Dr. Kegel's current research interests center around assessment and management of pediatric concussion.

Alicia Trbovich, PhD

Fellowship Research Coordinator

Dr. Trbovich is a clinical neuropsychologist with the UPMC Sports Medicine Concussion Program and Assistant Professor in the Department of Orthopaedic Surgery. She completed her undergraduate degree at Marquette University, with concentrations in psychology and biological sciences. She then earned a doctorate in clinical health psychology with an emphasis in neuropsychology at East Carolina University. Dr. Trbovich completed her predoctoral internship in neuropsychology at the University of Florida/Shands Hospital and a two-year postdoctoral fellowship with the UPMC Sports Medicine Concussion Program. She has been part of the UPMC Concussion Program faculty since 2015. She sees a broad range of patients, ages five and up, with a primary interest in sports-related concussion. She serves as the Fellowship Research Coordinator and has published over 60 peer-reviewed articles in concussion evaluation and management. She has lectured across the country and internationally on topics related to concussion, with a primary interest in progressing and improving clinical care through evidence-based treatment.

Chris Burley, PhD

Dr. Burley is a clinical neuropsychologist with the UPMC Sports Medicine Concussion Program and assistant professor in the Department of Orthopaedic Surgery at the University of Pittsburgh. He completed his undergraduate degree in psychology at Villanova University where he was a walk-on wide receiver for the Wildcats football team. He then earned a doctorate in clinical psychology with a neuropsychology major area of study at Nova Southeastern University in 2022. Dr. Burley completed his predoctoral internship in neuropsychology at the Memphis VA Medical Center in collaboration with St. Jude Children's Research Hospital and Semmes-Murphey Clinic. He was hired as a clinical faculty member in September 2024 after completing a two-year postdoctoral fellowship with the UPMC Concussion Program. Dr. Burley is trained in lifespan neuropsychology, and he sees a broad range of patients, with a primary interest in sports-related concussion. He has published multiple peer-reviewed articles related to concussion and has lectured at various national conferences. Dr. Burley's clinical and research interests include active treatments for concussion, psychological issues in concussion recovery, and long-term brain health.

Vanessa Fazio-Sumrok, PhD

Dr. Fazio-Sumrok is a clinical neuropsychologist with the UPMC Sports Medicine Concussion Program and assistant professor in the Department of Orthopaedic Surgery. Dr. Fazio-Sumrok earned a doctoral degree in clinical psychology from Suffolk University, with a concentration in neuropsychology. She completed an APA-accredited clinical internship in neuropsychology at Allegheny General Hospital in Pittsburgh. Dr. Fazio-Sumrok joined the faculty in 2008 after completing a two-year post-doctoral fellowship with the UPMC Sports Medicine Concussion Program, and her clinical specialty is pediatric concussion.

Jonathan French, PsyD

Dr. French is a clinical neuropsychologist with the UPMC Sports Medicine Concussion Program and assistant professor in the Department of Orthopaedic Surgery. He graduated from Widener University in 2010 with his doctorate in clinical psychology and concentrations in forensics and neuropsychology. He completed his internship in the neuropsychology division of Delaware Youth and Family Services. Dr. French focused his research at Widener on traumatic brain injury, as well as the evaluation of malingering in neuropsychological testing. His dissertation examined personality characteristics of individuals engaging in malingering during neuropsychology assessment. Upon completion of his doctorate, Dr. French completed a post-doctoral fellowship at the UPMC Sports Medicine Concussion Program. His current clinical interests include working with school districts in the area to provide the proper accommodations to individuals who have suffered a concussion.

CURRENT FELLOWS

Nacona Bunker, PsyD

Dr. Bunker joined the UPMC Sports Medicine Concussion Program as a postdoctoral fellow in September 2023. She earned her doctoral degree in clinical psychology from Midwestern University, with an emphasis in neuropsychology. Dr. Bunker completed an APA-accredited internship in neuropsychology at Barrow Neurological Institute at Phoenix Children's in 2023. Previously, she earned her bachelor's degree in psychology at Arizona State University. Dr. Bunker's clinical and research interests include recovery patterns following sports-related concussion, performance validity testing with athletes following concussion, and psychological factors associated with concussion. When she is not working, she enjoys spending time with her fiancé and son, reading, and watching sports.

Heather Guercio, PsyD

Dr. Guercio joined the UPMC Sports Medicine Concussion Program as a postdoctoral fellow in August 2023 and has since been appointed the NASCAR fellow. She earned her doctoral degree in clinical psychology from Midwestern University, with an emphasis on clinical neuropsychology. Dr. Guercio completed an APA-accredited internship at Rochester Institute of Technology in 2023. Previously, she earned a Bachelor of Science degree in psychology from Clemson University. Dr. Guercio's clinical and research interests include investigating tools for efficient assessment and targeted treatment protocols for concussions. She has specific interests in the impact of ADHD and other developmental diagnoses on the development and treatment of sports-related head injury. When Dr. Guercio is not working, she enjoys watching Formula 1, spending time outdoors, golfing, baking, and traveling.

Nathan R. Ramirez, PsyD

Dr. Ramirez joined the UPMC Sports Medicine Concussion Program as a postdoctoral fellow in August 2023. He earned his doctoral degree in clinical psychology from Alliant International University, Fresno, and completed an APA-accredited dual-track internship at CoxHealth Medical Center and Burrell Behavioral Health in 2023. Previously, he earned his bachelor's degree in psychology at California State University, Fresno. Dr. Ramirez's clinical and research interests include sports-related and non-sports-related concussions, repetitive transcranial magnetic stimulation, and multicultural aspects of neuropsychological assessment. In his free time, he enjoys backpacking, practicing Brazilian jiu-jitsu, and traveling.

Aamir Laique, PhD

Dr. Laique joined the UPMC Sports Medicine Concussion Program as a postdoctoral fellow in September 2024. He earned his doctoral degree in clinical psychology from Illinois Institute of Technology, with an emphasis in rehabilitation psychology. Dr. Laique completed an APA-accredited internship in neuropsychology at the James J. Peters VA Medical Center in Bronx, NY. Previously, he earned a Bachelor of Arts degree in psychology from University of California, San Diego and a Master of Science degree in clinical psychology from Notre Dame de Namur University. Dr. Laique's clinical and research interests include psychosocial factors associated with concussions and recovery patterns following sports-related and non-sports-related concussions. When Dr. Laique is not working, he enjoys playing sports, traveling, cooking, and exploring the city.

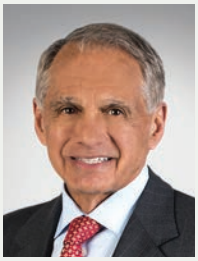
Tori Togashi, PhD

Dr. Togashi joined the UPMC Sports Medicine Concussion Program as a postdoctoral fellow in September 2024. She earned her doctoral degree in clinical psychology from Loma Linda University, with an emphasis on clinical neuropsychology. Dr. Togashi completed an APA-accredited internship in neuropsychology at the Phoenix VA Medical Center in 2024. Previously, she earned her bachelor's degree in human development with an emphasis on behavioral neuroscience from Cornell University, where she was a member of the Big Red softball team. Dr. Togashi's clinical and research interests include utilization of dietary interventions to improve outcomes after central nervous system injury and improving psychological outcomes after sports-related concussions. In her free time, she enjoys skiing, hiking, and spending time with her dog.

Aaron J. Zynda, PhD, CCRP

Dr. Zynda is a Post-Doctoral Research Associate with the UPMC Sports Medicine Concussion Program and the Concussion Research Laboratory in the Department of Orthopaedic Surgery at the University of Pittsburgh. His research interests include using clinical profiles to inform multidomain assessment of concussion and targeted, active interventions and rehabilitation programs to improve recovery outcomes and mitigate long-term morbidity. Dr. Zynda is the first or contributing author on 35 peer-reviewed publications and 100+ professional presentations. He has received funding from the Blue Cross Blue Shield of Michigan, and his work has been featured in reputable journals, including the *American Journal of Sports Medicine* and the *Journal of Pediatrics*. Dr. Zynda received his Doctoral degree in Kinesiology from Michigan State University in 2023 and his Bachelor of Science in Movement Science from the University of Michigan in 2015. Last year, he was awarded the National Doctoral Scholar Award by the American Kinesiology Association, which is given annually to the Kinesiology doctoral student with the most distinguished academic and leadership record nationwide. When he is not working, Dr. Zynda enjoys spending time with his wife and golden retriever, watching and playing sports, reading science fiction, and traveling the world with friends.

MEDICAL DIRECTOR



Joseph C. Maroon, MD

Dr. Maroon is clinical professor of neurological surgery and the Heindl Scholar in Neuroscience at the University of Pittsburgh School of Medicine. He received his medical and neurosurgical training at Indiana University, Georgetown University, Oxford University in England, and the University of Vermont. He is board-certified in neurological surgery.

Dr. Maroon's clinical and research interests are in the development of minimally invasive surgical procedures for the brain and spine; the prevention and treatment of traumatic injuries to the central nervous system; innovative approaches to pituitary and brain tumors; and complementary approaches to inflammatory diseases of aging. A lifelong athlete, Dr. Maroon has served as team neurosurgeon for the Pittsburgh Steelers for more than 25 years.

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