PROMOTION RECOMMENDATION The University of Michigan School of Kinesiology

Steven P. Broglio, associate professor of kinesiology, with tenure, School of Kinesiology, is recommended for promotion to professor of kinesiology, with tenure, School of Kinesiology.

Academic Degrees:

Ph.D.	2006	University of Georgia, Athens, Georgia
M.S.	2002	University of Pittsburgh, Pittsburgh, Pennsylvania
B.A.	2000	University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

Professional Record:

2013 – present	Associate Professor, School of Kinesiology, University of Michigan
2011 - 2013	Assistant Professor, School of Kinesiology, University of Michigan
2006 - 2011	Assistant Professor, Department of Kinesiology and Community Health,
	University of Illinois at Urbana-Champaign
2003 - 2006	Clinical Coordinator, Department of Kinesiology, University of Georgia

Summary of Evaluation:

<u>Teaching:</u> Professor Broglio's teaching and mentorship record since 2013 has been excellent. He has taught three different courses during this period and all of the course evaluations ranged between 4.0 and 4.9 (out of 5), with most scores greater than 4.5. He participated in the "Transforming Learning for a Third Century Grant" (2015-2017) in which he developed and refined MVS413 ("Mild traumatic brain injury in sport").

He has been the primary faculty advisor for one Ph.D. graduate since 2013 and the primary co-advisor for one other student. He currently is the primary advisor for two Ph.D. students. He has served as member of six Ph.D. committees since 2013 (three at Illinois; one New Zealand; one Australia; and one UM Engineering). He is also currently the primary advisor for two Master's students in kinesiology.

Research: Professor Broglio has authored or co-authored 93 manuscripts in print or press, with 45 manuscripts in print or press as associate professor (2013 to present). Of these, 19 are original research with Professor Broglio as the lead or senior author indicative of his leadership role in the research. These works have been supported by over \$30.5 million in funding to multiple universities, including the University of Michigan, as a primary or co-investigator from internal and external sources (e.g. National Institutes of Health, Department of Defense, National Collegiate Athletic Association, National Athletic Trainers' Association Foundation, and others), with another \$25 million currently in review.

The Web of Science lists 41 publications since 2013, and among these 13 had a JCR One Year Impact Factor of >5.00 (including two >10.00). In addition, 14 of these publications have received at least 10 citations, and of these nine have been cited at least 20 times (including The NATA Position Stand on Management of Concussion by Broglio et al. 2014 that received 140.

Professor Broglio has the ability to maintain a scholarly focus on concussion and brain trauma research and consistently extending the scope of his work within this area of study; from concussion management, to concussion biomechanics, to the persistent effects of concussions. The work in all of these areas has been considered to be of very high quality. Furthermore, the research focuses on applied clinical topics

and has leant itself towards applied uses such as to inform policy, training strategies and protective equipment designs.

He has a very strong record of securing external funding both as a leader and as a collaborator. Some of the grants received since being promoted to associate professor in 2013 include awards from the NCAA Department of Defense (co-Pl), NFL/Under Arbor/GE (co-Pl), American Association of Neurological Surgeons (co-Pl), and a supplement to his R15 award from the NIH (Pl).

Recent and Significant Publications:

- Broglio SP, Williams RM, O'Connor KL, Goldstick J, Football head-impact exposure after limiting full contact practices, Journal of Athletic Training, 51(7):511-518, 2016.
- Broglio SP, Collins MW, Mayfield RM, Mucha A, Kontos A, Current and emerging rehabilitation for concussion: A review of the evidence, Clinics in Sports Medicine, 34:213-231, 2015 (invited).
- Broglio SP (chair), Cantu RC, Gioia GA, Guskiewicz KM, Kutcher KS, Palm M, Valovich McLeod TC, National Athletic Trainers' Association position statement: Management of sport concussion, Journal of Athletic Training, 49(2):245-265, 2014.
- Broglio SP, Martini DN, Kasper L, Eckner JT, Kutcher JS, Estimation of head impact exposure in high school football: implications for regulating contact practices, American Journal of Sports Medicine, 41(12):2877-2884, 2013.
- Meehan SK, Mirdamadi JL, Martini DN, Broglio SP, Changes in cortical plasticity in relation to a history of concussion during adolescence., Frontiers in Human Neuroscience 11:5, 2017.

<u>Service</u>: Professor Broglio's service activities have been commensurate with that expected for an associate professor. His professional service at the national and international-levels has been excellent, serving as an associate editor for the *Journal of Athletic Training*, editorial board *for Journal of Athletic Training*, *Concussion*, and *British Journal of Medicine*, ad hoc reviewer for many journals, research grants reviewer for NIH, NATA, U.S. Army (among several others), chair, co-chair, and participant in several Athletic Training and/or concussion-related committees. At the university and school level, he has served on several committees as a member.

External Reviewers:

Reviewer A: "From my perspective, Dr. Broglio is the leading top scientist-clinician within the field of athletic training/kinesiology and he surpasses the other scientists in his field who also have strong reputations for high impact, quality research. He has won numerous awards for his research, including an Early Career Award for Important Contributions to the Field of Brain Injury Science from the International Brain Injury Association in 2015."

Reviewer B: "By far the crowing jewel in Dr. Broglio's scholarly research efforts is his leadership at Co-PI in the NCAA-DOD Grand Alliance CARE consortium program. This \$22.6 million project has been the most impactful and significant research program in the field of concussion research. Dr. Broglio has provided brilliant leadership in this project that involves over 35 universities and service academies. He is also a Co-PI on the renewal, CARE 2.0, that should build upon the phase one groundbreaking project."

Reviewer C: "...His research in concussion is original, innovative, and has the potential for ground breaking advances in their field of study. Dr. Broglio has published a meritorious number of publications in peer-reviewed scientific journals (n>80) and peer- 2 reviewed abstracts (n>120) in strong field journals (impact factors ranging 1-4), 7 book chapters, and has delivered over 100 invited presentations. He ranks in the top 10 authors for publication in the field of concussion internationally."

Reviewer D: "...There are several critical elements that one would look for in the record of a successful scholar at a research-intensive university – programmatic focus, quality of the work and impact of publications, volume of the work, visibility, independence, and leadership as well as the ability to attract external support for the program of research for sustainability and support of his research and graduate students. I have no reservations in expressing a positive opinion for any of these categories of Dr. Broglio's work. In short, his record is outstanding..."

Reviewer E: "...His career demonstrates a progression of seminal work in concussion, from concussion management early on to biomechanics and now to the persistent effects of concussion with his leadership and efforts on the NCAA/DOD CARE project...."

Reviewer F: "...The work of this national, multi-site initiative is transforming the manner by which we think about sport-related concussion, and is an example of translational science at its best....I would assess Dr. Broglio as a leader among others in his peer group who are studying sport-related concussion."

Reviewer G: "...His contribution to understanding the mechanisms of concussive injury, establishing the standards for validation of neurocognitive and balance deficits, ongoing NCAA/DOD leadership on epidemiological studies is well-recognized by the National and International science community."

Reviewer H: "...This is the largest prospective, multi-modal, multi-site study of sport-related concussion ever undertaken. The results of this study will serve as the benchmark and gold standard for future research in this area. I suspect Dr. Broglio has few equals in the athletic training community nationally or internationally. I would consider Dr. Broglio to be in the top 1 percent of his peer group working in the same field."

<u>Summary of Recommendation:</u> Professor Broglio's aggregate achievements in research, teaching, and service have resulted in strong and enthusiastic support at all levels in our school and among the external reviewers, for his promotion to professor. It is with the support of the School of Kinesiology Executive Committee that I recommend Steven P. Broglio for promotion to professor of kinesiology, with tenure, School of Kinesiology.

Lori Ploutz-Snyder

Dean, School of Kinesiology