

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF ORTHOPAEDIC SURGERY

Michelle S. Caird, M.D., assistant professor of orthopaedic surgery, Department of Orthopaedic Surgery, Medical School, is recommended for promotion to associate professor of orthopaedic surgery, with tenure, Department of Orthopaedic Surgery, Medical School.

Academic Degrees:

M.D.	1998	University of Michigan
B.S.E.	1993	University of Michigan

Professional Record:

2007-present	Assistant Professor of Orthopaedic Surgery, University of Michigan
2004-2007	Lecturer, Department of Orthopaedic Surgery, University of Michigan

Summary of Evaluation:

Teaching: Dr. Caird's unwavering devotion to teaching is apparent on many levels. She teaches in the classroom, in the clinic, at local lectures, and at formal national and international conferences. She has a unique mentorship style and effective teaching technique as reflected in comments received by her students, including, "...impressed and humbled by her ability to make significant improvements in patients' lives," "uncanny ability of focusing a resident on the objective at hand and guiding them to the solution without taking over the situation," "Dr. Caird loves to teach, and this love was plainly visible day in and day out," and "She has the ability to teach and inspire all levels of individuals...a true accomplishment and gift." Dr. Caird is the Orthopaedic Surgery assistant residency director for research, serves on the Department of Orthopaedic Surgery Education Committee, and chairs the Orthopaedic Surgery Journal Club. Since 2005, she has co-taught a three session elective course to the second-year medical students entitled "Gettysburg, Osteomyelitis, and Orthopaedic Surgery." In 2010, Dr. Caird organized and hosted the Orthopaedic Research and Education Foundation - Orthopaedic Research Society Annual Midwest Resident Research Symposium. In 2011, she joined the Student Biomedical Research Program Committee for the Medical School. In 2012, she was awarded the prestigious traveling fellowship partnered between the Pediatric Orthopaedic Society of North American (POSNA) and the European Pediatric Orthopaedic Society to travel and lecture around the European Union which serves as international recognition as a top member in her field. These efforts in education and orthopaedic leadership were most recently recognized when Dr. Caird was selected as a member of the American Orthopaedic Association.

Research: Dr. Caird's research interests in pediatric low bone mass include disorders such as osteogenesis imperfecta, Vitamin D deficiency, and disuse osteopenia in non-ambulatory patients

(cerebral palsy, myelomeningocele, and muscular dystrophy) and have both a laboratory and a translational clinical component. This research has received funding through the NIH, POSNA/Orthopaedic Research and Education Foundation (OREF), and the Scoliosis Research Society (SRS). Her group has received awards and recognition for their investigations from the International Congress on Osteogenesis Imperfecta, the Orthopaedic Research Society, POSNA, and the American Society for Bone and Mineral Research; and this work has resulted in publications in the *Journal of Bone and Mineral Research*, *Journal of Bone & Joint Surgery*, *Spine*, *Journal of Pediatric Orthopaedics*, and *Bone*. Dr. Caird has authored over 30 peer-reviewed publications while in rank as assistant professor. She participates as a reviewer for the *Journal of Bone & Joint Surgery*, *Journal of Pediatric Orthopaedics*, *Bone*, *Pediatrics*, and *Journal of the American Medical Association* and reviews abstracts for the POSNA annual meeting and grant applications for the SRS, OREF, and the UM Student Biomedical Research Program. In addition, Dr. Caird leads the pediatric orthopaedic research efforts at the University of Michigan, a highly demanding responsibility that she navigates with ease. She has a brilliant mind for research questions and is a true physician scientist through her investigations in both clinical science and basic science research.

Recent and Significant Publications:

Caird MS, Palanca AA, Garton H, Hensinger RN, Ayyangar RN, Drongowski A, Farley FA: Outcomes of posterior spinal fusion and instrumentation in patients with continuous intrathecal baclofen infusion pumps. *Spine* 33:E94-99, 2008.

Kozloff KM, Volakis LI, Marini JC, Caird MS: Near-infrared fluorescent probe traces bisphosphonate delivery and retention in vivo. *Journal of Bone and Mineral Research* 25:1748-1758, 2010.

Farley FA, Vander Have KL, Hensinger RN, Streit J, Zhang L, Caird MS: Outcomes after spinal fusion for congenital scoliosis: Instrumented versus uninstrumented spinal fusion. *Spine* 36:E112-122, 2011.

Silva S, Nowicki P, Caird MS, Hurvitz EA, Ayyangar RN, Farley FA, VanderHave KL, Hensinger RN, Craig CL: A comparison of hip dislocation rates and hip containment procedures after selective dorsal rhizotomy versus intrathecal baclofen pump insertion in non-ambulatory cerebral palsy patients. *J Pediatr Orthop* 32:853-856, 2012.

Nowicki PD, VanderHave KL, Farley FA, Kuhns LR, Dahl W, Caird MS: Reliability of digital radiographs for pediatric lower extremity alignment. *J Pediatr Orthop* 32:631-635, 2012.

Service: Dr. Caird's dedication to service and patient care is impressive. Within the Department of Orthopaedic Surgery, she serves as assistant residency director for research, on the Research Advisory Council, the Resident Education Committee, the Patient Care Committee and chairs the journal club. For the university, she serves on the Student Biomedical Research Program Committee, the Child Abuse Review Committee, and sits on the University of Michigan Medical Center Alumni Society Board. Nationally, she is very active in the POSNA where she has been

a member or chair of several committees and was promoted to junior board member at large in 2012. Dr. Caird volunteers her surgical skills working with pediatric orthopaedic patients in Columbia, South America through the Silver Service Foundation. She maintains a large clinical pediatric orthopaedic surgery practice with approximately 3500 clinic visits per year; roughly the 75th percentile for orthopaedic surgeons. Her desire to cultivate close collaborations is reflected in her participation with other pediatric subspecialists in multidisciplinary clinics for complicated patients including the myelomeningocele clinic, the Vertical Expandable Prosthetic Titanium Rib (VEPTR) clinic, the Muscular Dystrophy Clinic, and the Prader Willi Clinic. Dr. Caird's commitment to providing excellence in patient care is unwavering and an invaluable resource to the department and university.

External Reviewers:

Reviewer A: "Her productivity has been above what I would expect for someone at her career stage. She has consistently published on pertinent topics in peer reviewed journals that are widely read by people in her field....she has selected topics for research that are of interest to the pediatric orthopaedic community and have the potential to impact patient care. She has been invited to present in multiple educational programs, which suggests that she is considered an effective educator by others in the field."

Reviewer B: "I believe that her scholarly and academic accomplishments to date are significant in the number of peer reviewed publications as well as podium presentations. I believe that places her in the highest ranking among her peers....she is a very well respected colleague and will have future leadership activities in the world of pediatric orthopaedics."

Reviewer C: "Dr. Caird has distinguished herself in two areas, treatment of pediatric scoliosis deformities and her clinical research into improving pediatric scoliosis care. This has resulted into numerous excellent and highly regarded publications in the best journals of orthopaedics. Dr. Caird is an excellent clinician and educator. She works at the highest levels of national orthopaedic organizations including serving on the board of the Pediatric Orthopaedic Society of North America....I want to emphasize that Michelle is nothing short of a standout across many domains."

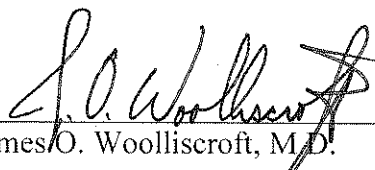
Reviewer D: "[Dr. Caird's] basic science research has focused on novel treatments of children with Osteogenesis Imperfecta, for which [she] is well known. This research has the potential to fundamentally change how we treat children with osteogenesis imperfect [sic] and other disorders of low bone density. She is in the top 2% of her peers for scholarly achievement."

Reviewer E: "Her investigations into Osteogenesis Imperfecta have been impactful and will lead to further understanding about how to best treat this disease. There are only a handful of orthopaedic surgeons in the US who pursue basic science activities and yet still take care of patients. In pediatric orthopaedics, that number is even fewer. Michelle's niche is one of [a] true clinical surgeon. It is these interactions that make her unique and allow her to rise above her peers within pediatric orthopaedic surgery....Michelle is a rising star and a future leader in pediatric orthopaedics."

Reviewer F: "She has contributed importantly in the pediatric spine field, not only in spinal deformity research but also in cervical spine problems....I would clearly rank her today in the top 5 of pediatric orthopaedists in the United States at her stage of career."

Summary of Recommendation:

Dr. Caird is an outstanding mentor, educator, and surgeon. She demonstrates a rare combination of intelligence, creativity, strong work ethic and compassion. I am pleased to recommend Michelle S. Caird, M.D. for promotion to associate professor of orthopaedic surgery, with tenure Department of Orthopaedic Surgery, Medical School.



James O. Woolliscroft, M.D.
Dean
Lyle C. Roll Professor of Medicine

May 2014