



A Decade-long Journey to the Gender Tipping Point and Beyond in the Penn Orthopaedic Program

Kristy Weber, MD

The Department of Orthopaedic Surgery at the University of Pennsylvania (Penn Ortho) has a long history of women as clinical and scientific faculty, residents and leaders. However, until recently, it has not achieved a critical tipping point of female faculty and residents. Thirty percent is the number generally agreed at which an underrepresented group changes the conversation in a department or organization. With our 2022 resident class, including five women of eight residents, we are incredibly proud to have reached 38% (16 of 42) female and SGM residents at Penn Ortho (Figure 1). As a department, we value diverse voices and consider ourselves a leader in gender diversity in the areas of clinical practice, basic science research, and residency training.

Dr. Mary Ann Keenan (Chief - Neuro-Orthopaedics-retired 2012) was the only female clinical faculty at Penn during this millennium until Dr. Wen Chao (Foot/Ankle) was recruited to the practice in 2012 and Dr. Kristy Weber (Orthopaedic Oncology) was recruited as Vice Chair of Faculty Affairs in 2013. Since that time, Dr. Marlene DeMaio (VA chief) and Dr. Kate O'Connor (Foot/Ankle) were recruited and subsequently moved to other cities. More recently, seven women have been recruited to the clinical faculty at Penn and the Children's Hospital of Philadelphia (CHOP) including Dr. Susan Harding (Trauma-2019), Dr. Kathleen Maguire (CHOP Sports-019), Dr. Hannah Lee (Hand-2020), Dr. Casey Humbyrd (Chief, Foot/Ankle-2021), Dr. Cara Cipriano (Chief, Orthopaedic Oncology-2021), Dr. Christine Goodbody (CHOP Deformity-2022), and Dr. Lorraine Boakye (Foot/Ankle-2022). (Figure 1).

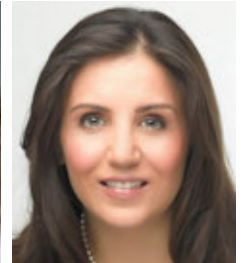
Growth of research faculty has been steady over time with six funded faculty members leading robust musculoskeletal research programs including Dr. Sarah Gullbrand (degenerative disc disease), Dr. Sherry Liu (bone aging, diseases and therapies), Dr. Foteini Mourkioti (muscle homeostasis and regeneration), Dr. Ling Qin (skeletal development, homeostasis, aging, and disease), Dr. Ernestina Schipani (cartilage and bone development, hypoxia) and Dr. Eileen Shore (rare genetic diseases of heterotopic ossification) (Figure 1).



Christine Goodbody, MD
Assistant Professor
Pediatric Orthopaedics



Susan Harding, MD
Penn Medicine Clinician
Orthopaedic Trauma



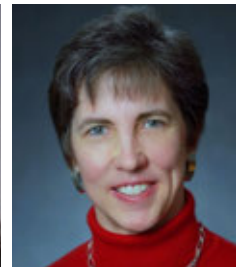
Casey Jo Humbyrd, MD, MBE
Chief, Foot & Ankle Surgery
Associate Professor



Hannah Lee, MD, PhD
Assistant Professor
Hand Surgery



Kathleen Maguire, MD
Assistant Professor
Pediatric Orthopaedics



Kristy Weber, MD
Vice Chair,
Faculty Affairs Professor
Orthopaedic Oncology

Laboratory Faculty



Sarah Gullbrand, PhD
Assistant Professor

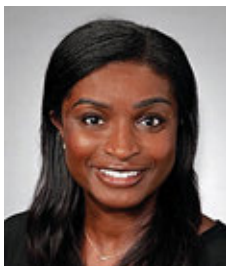


X. Sherry Liu, PhD
Associate Professor



Foteini Mourkioti, PhD
Assistant Professor

Clinical Faculty



Lorraine Boakye, MD
Assistant Professor
Foot & Ankle Surgery



Wen Chao, MD
Penn Medicine Clinician
Foot & Ankle Surgery



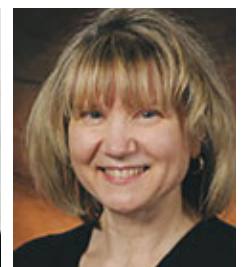
Cara Cipriano, MD, MSc
Chief, Ortho Oncology
Associate Professor



Ling Qin, PhD
Associate Professor



Ernestina Schipani, MD, PhD
Professor



Eileen Shore, PhD
Professor

Current Orthopaedic Residents & Fellows



**Caroline Granruth, MD
PGY-1**

**Erin Kelly, MD
PGY-1**

**Sand Mastrangelo, MD
PGY-1**



**Ashleigh Bush, MD
PGY-2**

**Kathleen Collins, MD
PGY-2**

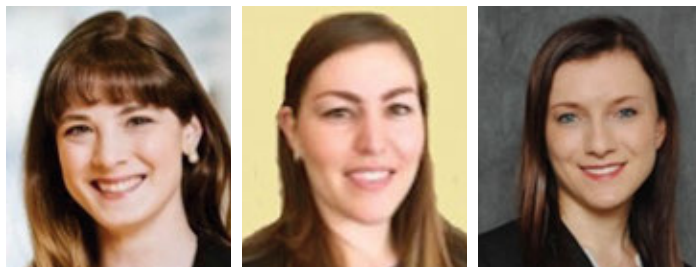
**Dainn Woo, MD
PGY-2**



**Kendall Masada, MD
Research Year**

**Kelsey Young, MD
PGY-3**

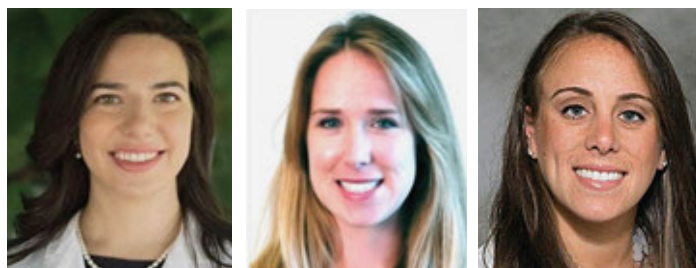
**Lauren Boden, MD
PGY-4**



**Kelsey Bonilla, MD
PGY-4**

**Viviana Serra Lopez, MD
PGY-4**

**Sarah Blumenthal, MD
PGY-5**



**Agnes Dardas, MD, MSc
PGY-5**

**Liane Miller, MD
PGY-5**

**Jamie Grossman, MD
Sports Fellow**

Incoming Orthopaedic Interns



Anna Blaeser, MD

Rachel Flaugh, MD

Lisa Friedman, MD



Emily Stabnick, MD

Alyssa Thorman, MD

Figure 1. Composite of the women and gender nonbinary residents and clinical/scientific faculty at Penn Ortho and the Children’s Hospital of Philadelphia (CHOP)

The female faculty and residents organize a regular “Ortho Gals Night Out” to gather socially and create an informal forum to discuss professional and personal topics as they relate to orthopaedic surgery (Figure 2). They will be welcoming the five new female interns in June 2022. Penn Ortho will wish the graduating class well as they move on to fellowship training. Of the chief residents in the graduating class, two of the three were female. Penn Ortho also supports the Perry Initiative (www.perryinitiative.org), regularly hosting programs for female/SGM high school and medical students interested in orthopaedic surgery. Our recent Spring 2022 Perry Initiative program hosted medical students from six surrounding medical schools (Figure 3).

There has been an intentional effort to recruit senior women clinical faculty leaders over the past decade. Creating a more gender diverse department benefits the care of patients, role modeling for residents and students, and recognition of Penn Orthopaedics within the institution as well as in national organizational arenas. Penn and CHOP Ortho boast the highest number of faculty over the years who have served as RJOS presidents (Figure 4). Dr. Casey Humbyrd serves as a Division Chief as well as being visible at the AMA, the AOFAS Board of Directors and directs the Penn Surgical Ethics and Health Policy program. Dr. Cara Cipriano serves as a Division Chief and is visible at AAHKS, MSTs and is transforming the experience of the Penn medical students as they rotate through the Department of Orthopaedics. Dr. Kristy Weber serves as Vice Chair of Faculty Affairs and has been visible as past president of AAOS, MSTs, RJOS and current president of the International Orthopaedic Diversity Alliance (IODA).

The faculty and leadership in Penn’s Department of Orthopaedic Surgery is committed to mentoring all residents



Figure 2. Ortho Gals Night Out 2022.



Figure 3. Perry Initiative Program at Penn (April, 2022) **3A.** Medical student program **3B.** Dr. Kendall Masada (R3) instructing on placement of a femoral nail.

and faculty and promoting their diverse careers. L. Scott Levin, MD, FACS, Chairman, Department of Orthopaedic Surgery, leads this commitment. He is visibly supportive of female and SGM members of the department and is a member of RJOS and IODA. The department's value of diversity, equity, and inclusion is reflected in the 5-year Penn Orthopaedics



Figure 4. Penn and CHOP past presidents of the Ruth Jackson Orthopaedic Society (RJOS). Dr. Mary Ann Keenan (1990), Dr. Helen Huntsman - CHOP (1988), Dr. Kristy Weber (2015) and Dr. Marlene DeMaio (2019).

Strategic Plan, which focuses on culture as it relates to these issues. We are proud of our reputation for gender diversity at Penn Ortho and acknowledge that we have more work to do to create an inclusive and equitable environment for everyone. My personal hope is that we intentionally make decisions over the next decade to create a culture of inclusion for every member of the Penn Ortho community; one where individuals have a sense of true belonging and being valued for their unique identities.