



SCHOOL OF  
MEDICINE

DEPARTMENT OF  
ORTHOPAEDICS & REHABILITATION

# **Orthopaedic Hand Surgery Fellowship Program**



<https://orthopaedics.unm.edu/fellowship/hand/index.html>



## UNM ORTHOPAEDIC HAND SURGERY FELLOWSHIP

**Thank you** for your interest in the Orthopaedic Hand and Upper Extremity Fellowship Program at the [University of New Mexico](#).

UNM's division of hand surgery was founded in 1970 by one of the nation's most accomplished orthopaedic surgeons, Dr. George Omer, becoming the first academic division of hand surgery in the nation. In 1976, Dr. Moheb Moneim joined the department, and New Mexico's first microsurgery service was established. Extremity replantation was offered, and the first surgery on a severed hand was performed in 1977. The microsurgery teaching lab was developed at UNM's School of Medicine and is now an integral part of its training programs, helping fellows and the Department's [25 residents](#) hone basic skills for clinical microvascular surgery through a number of microsurgical exercises and providing a broad foundation in microdexterity.

The mission of the orthopaedic Hand and Upper Extremity Fellowship Program is to provide the foundation for a lifetime of learning and practice of orthopaedic hand and upper extremity surgery, and to produce graduates who exemplify the highest ideals of our profession. It is our purpose to excel in clinical service, education, and research while maintaining the highest ethical standards, providing compassionate healthcare services, and contributing toward improvement of the healthcare delivery system.





## UNM ORTHOPAEDIC HAND SURGERY FELLOWSHIP

### **Building a Hand Surgery Practice**

We offer our fellows full exposure to a well-balanced variety of hand and upper extremity cases, including congenital problems, arthritis, trauma and microsurgery. We treat a large volume of peripheral nerve injuries presenting both acute and late. The replantation service is moderately busy with about two to three cases a month. A pediatric upper extremity clinic is held weekly at Carrie Tingley Hospital. Free flaps are also covered during the fellowship. As a result, our hand fellows are well prepared to treat those conditions at the completion of their training.

Our educational approach stresses both the technical execution of advanced surgical procedures as well as surgical indications and strategy that precede the operation. Additionally, UNM's role as the state's tertiary care provider provides our graduates with valuable skills in treating community patients once they embark upon their own practices.



We offer an active microsurgery teaching and research laboratory with a full-time technician and three microscopes available at all times for weekly practice, teaching and research.

In addition to clinical, surgical and research activities, our fellows participate in two conferences every week that are devoted solely to the Hand Fellowship Program. Fellows also participate in the hand curriculum of UNM's Orthopaedic Residency Program, and have access to an active biomechanics research laboratory.



## UNM ORTHOPAEDIC HAND SURGERY FELLOWSHIP

### Hand Faculty

Our fellowship faculty includes four hand fellowship-trained surgeons, one upper extremity fellowship-trained surgeon and two midlevels with whom our fellows work closely.

**Name:** [Deana Mercer, MD, MSCR](#)

**Title:** Associate Professor and Fellowship Program Director

**Specialty:** Hand Microvascular Surgery:

**Medical School:** University of New Mexico

**Residency:** University of New Mexico

**Fellowship:** Shoulder and Elbow; University of Washington

**Fellowship:** Hand; University of New Mexico



Dr. Mercer is an Associate Professor in the Department of Orthopaedics at UNM. She received a B.S. degree in Biochemistry and Chemistry from New Mexico State University, and an M.D. from the University of New Mexico. She received fellowship training at the University of Washington in Seattle in shoulder and elbow surgery followed by a second fellowship in hand and microvascular surgery at UNM. She earned a Masters of Science in Clinical Research. Her research interests include arthroscopy, pathology of the shoulder, elbow and hand and biomechanical research addressing orthopaedic musculoskeletal problems, including arthritis, trauma, chronic problems and osteoporosis, and works closely with the engineering group in her efforts.

Dr. Mercer is certified by the American Board of Orthopaedic Surgeons and belongs to numerous professional societies, including the American Orthopaedic Association's Emerging Leaders Program, American Academy of Orthopaedic Surgeons (Member), American Society for Surgery of the Hand (Member), American Medical Association, Association of Bone and Joint Surgeons and Alpha Omega Alpha. Dr. Mercer has also earned her Subspecialty of The Hand certification.



## UNM ORTHOPAEDIC HAND SURGERY FELLOWSHIP

**Name:** [Moheb S. Moneim, MD](#)

**Title:** Professor & Chair Emeritus

**Specialty:** Reconstructive hand surgery & peripheral nerve problems

**Residency:** Duke University of North Carolina

**Fellowship:** Hospital for Special Surgery, Cornell Medical School, New York City



Dr. Moneim joined UNM in 1976 as a faculty member in the Department of Orthopaedics & Rehabilitation. He completed an orthopaedic surgery residency at Duke University in North Carolina and hand surgery fellowship at the Hospital for Special Surgery, which is affiliated with Cornell Medical School in New York City.

Dr. Moneim continues to maintain a busy clinical practice that is directed toward hand surgery. He has performed thousands of operations for more than 30 years that include microsurgery and peripheral nerve problems, plus various types of injuries, and arthritis for both children and adults.

He has held numerous administrative positions at UNM's School of Medicine and served as Professor and Chairman of the Department of Orthopaedics & Rehabilitation and Chief of Hand Surgery from 1990 to 2006. He continues to be active in research and teaching. He sees patients and performs surgery two days each week. Dr. Moneim is board certified in Orthopaedic Surgery and has a Certificate of Added Qualifications in Hand Surgery. He has published extensively in the field of hand surgery. Dr. Moneim is a member of national and international orthopaedic and hand surgery organizations.





## UNM ORTHOPAEDIC HAND SURGERY FELLOWSHIP

**Name:** [Elizabeth A. Mikola, MD](#)

**Title:** Professor and Chief, Hand and Microvascular Surgery  
Division

**Specialty:** Hand and Microvascular Surgeon

**Medical School:** University of Missouri - Kansas City

**Residency:** University of Texas - Houston

**Fellowship:** University of New Mexico

Dr. Mikola specializes in orthopaedic hand and micro-vascular surgery in children and adults. She treats disorders of the hand, wrist, forearm, and elbow. She also treats patients with arthritis, carpal tunnel syndrome, fractures, tendon and nerve injuries, as well as congenital hand anomalies. Additionally, she utilizes wrist arthroscopy to diagnose and treat many wrist disorders.



Dr. Mikola completed her medical education at the University of Missouri - Kansas City and residency at the University of Texas - Houston. She completed her hand and microvascular fellowship at the University of New Mexico.



Dr. Mikola is a member of the American Society for Surgery of the Hand and the American Academy of Orthopaedic Surgeons. She is board certified by the American Board of Orthopaedic Surgery, and holds a Subspecialty of the Hand certification.



## UNM ORTHOPAEDIC HAND SURGERY FELLOWSHIP

**Name:** [Nathan T. Morrell, MD](#)

**Title:** Assistant Professor and Associate Program Director

**Specialty:** Hand, Upper Extremity & Microsurgery Surgery

**Medical School:** Stanford University

**Residency:** University of New Mexico

**Fellowship:** Hand, Upper Extremity, & Microvascular Surgery—  
Brown University



Dr. Morrell is a board certified Orthopaedic Surgeon with a Sub-Specialty Certificate in Surgery of the Hand from the American Board of Orthopaedic Surgery. His clinical interests include complex upper extremity trauma (especially the elbow, wrist, and hand), brachial plexus injuries, carpal instability, and peripheral nerve disorders. His research interests mirror his clinical interests. He sees referrals from throughout New Mexico as well as bordering states.

He was previously an attending at the University of Vermont before returning to New Mexico. He is an active member of the American Society for Surgery of the Hand. He is also a frequent participant in surgical mission work, providing complex congenital and post-traumatic reconstruction to patients in underserved communities.

Dr. Morrell is also passionate about resident and fellow education. He is currently the UNM Hand Surgery Fellowship Associate Director, and Director of Education. He has received multiple teaching awards.







## UNM ORTHOPAEDIC HAND SURGERY FELLOWSHIP

### **Program Structure and Education**

The UNM Orthopaedic Hand and Upper Extremity Fellowship is accredited by the ACGME and adheres to all rules and regulations of that organization. Graduated fellows are eligible to sit for the Hand Surgery Sub-Specialty Examination once practice criteria are met. We are accredited for two fellows per year..

The fellowship faculty is currently divided into two teams. Each fellow spends a total of six months with each team, alternating between each at three-month intervals. Weekly schedules include two days of outpatient clinics and a minimum of two days in the operating room. This structure provides balanced exposure to the entire UNM hand practice, and the three-month intervals allow for optimal continuity of care during the year. Fellows work one-on-one with attending surgeons in the operating room and clinic. Preoperative planning is stressed along with technical approaches and pearls. Operative independence is encouraged and progresses in accordance with the skill and confidence of the individual fellow. In addition to regular clinical responsibilities, the hand fellows alternate coverage for microsurgery and complex hand call throughout the year.

All clinical responsibilities occur within the Albuquerque metro area. Clinical and operative sites include the University of New Mexico Hospital (UNMH), which contains the General Orthopaedic Clinic (GOC), Outpatient Surgery and Imaging Services (OSIS), Orthopaedic Faculty Clinic (OFC), UNM Carrie Tingley Hospital (Pediatric Orthopaedic Clinics), and rarely Sandoval Regional Medical Center (SRMC).







## UNM ORTHOPAEDIC HAND SURGERY FELLOWSHIP

We hold a weekly [teaching conference](#) on Wednesday morning prior to the Orthopaedic Department Grand Rounds. The conference is topic driven and uses classic and current literature to serve as a jump-off point for discussion. Additionally, we integrate musculoskeletal radiology faculty into the teaching schedule to discuss interpretation of advanced imaging and correlation of surgical findings. A monthly journal club focuses on current literature, and allows for discussion of ideas and treatment approaches outside of the UNM program.

Fellows are provided an opportunity to explore hand and upper extremity research and are supported by full-time research faculty within the department. Additionally, the Microsurgery Laboratory has been an asset to the training of our Hand Fellows since its inception in 1977. Hand Fellows will split scheduled time with 2nd and 4th year residents, having access to both basic and advanced curriculum blocks, with additional time available throughout the year.





## Microsurgery Laboratory

Training involves several microvascular anastomotic techniques, performed in the context of a live animal model, and emphasizes the development of a solid foundation in fundamental microsurgical technique.

The training process always begins with the same introductory session regardless of the background of participants. The exposure, vascular dissection and first half of the vascular repair are done by the instructor, and then the repair is finished by the participant. Subsequent sessions are begun by the participant, while the instructor offers advice, reminders and additional demonstrations as needed for clarification. The technique that is demonstrated and practiced is exclusively two-handed. Although some assistance, such as with cutting sutures and cauterization, is provided for the sake of expediency, the participant is learning to work unassisted from the outset.

Fellows are encouraged to work in the lab for a contiguous block of 10 or more weeks. They will progress to the back-wall-first, end-to-end anastomosis as well as be expected to complete at least one variant of the end-to-side anastomosis as part of their advanced training block. Hand Fellows will then be able to maintain their skills and address any weaknesses throughout the year.

*Dissection*—This introductory session begins with a demonstration of sharp dissection, plus a thorough explanation of the importance of developing the skills needed for sharp micro dissection, and how they can be practiced in congested areas. Exercises performed include mobilizing secondary branches of artery and vein that need to be cauterized, and dissection in a congested area such as a vascular plexus.

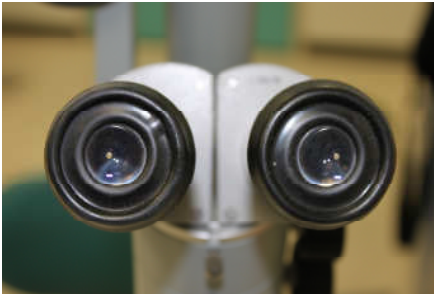
*Vessel Preparation*—The femoral and, occasionally, the epigastric blood vessels will be fully mobilized along a specified length with particular regard for minimizing dissection-induced vasospasm.



## UNM ORTHOPAEDIC SPORTS MEDICINE FELLOWSHIP

*Placing Stitches*—The advantages and disadvantages of alternative ways to grip the needle driver are explained. The participant is encouraged to experiment and become comfortable with a technique that is efficient and robust.

*Tying Knots*—The tying technique, resulting in square knots without the need for crossing the hands, is demonstrated. The importance of proceeding in a particular fashion and of not over tightening are explained.





## UNM ORTHOPAEDIC SPORTS MEDICINE FELLOWSHIP

### New Mexico and Albuquerque Living



To live in [Albuquerque](#) is to experience high desert living at its best. At over 5,000 feet of elevation, the city enjoys cool nights in the summer and mild winter days with more than 300 days of sunshine annually. Positioned at the base of the Sandia Mountains and with close proximity to multiple outdoor playgrounds, activities such as [hiking](#), [running](#), [golf](#), rock climbing, [mountain and road biking](#) are easily accessible throughout the year.

Additionally, with ski resorts such as [Taos](#), [Santa Fe](#), [Wolf Creek](#), and [Durango](#) (to name a few) in close proximity, day trips or weekend excursions for snow sports are easy during the winter.

During the summer and fall, multiple farmers markets sell local produce in [Albuquerque](#) and [Corrales](#), while the [International Balloon Fiesta](#) brings thousands of visitors to the city every October. Residents of the Duke City also enjoy spending time at the numerous museums and Albuquerque [Biopark](#).



The history of the Southwest is seen throughout New Mexico with the melding of [Native American](#) and [Hispanic](#) cultures. Day trips to [National Parks](#) and Pueblos plus visits to [Santa Fe](#) and [Taos](#) paint the picture of the diverse and complex story that New Mexico tells. It doesn't take long to see where the state nickname "The Land of Enchantment" comes from.



## UNM ORTHOPAEDIC SPORTS MEDICINE FELLOWSHIP

**Thank you** for taking the time to apply to our fellowship.

We believe that we can prepare fellows for a rewarding practice with a diverse and nuanced exposure to all levels of sports medicine practice. Our fellows receive exceptional training and gain access to complex cases in a collegial environment that cultivates relationships that last throughout a career. Visit [UNM GME](#) for further information regarding employment and benefits.

Please [contact](#) us with any questions regarding our program, and we look forward to meeting you soon.

