<table>
<thead>
<tr>
<th>Faculty</th>
<th>Research Interests</th>
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</table>
| Kathleen Becker, PhD  
Assistant Professor | • Bone formation and cross-talk between bone, fat, and the nervous system  
| | • Development and utilization of novel genetic models for the study of disease |
| Carol A. Brenner, PhD  
Clinical Prof.; Assoc. Dean, Research & Scholarship | • Mitochondrial biology  
| | • Clinical Research  
| | • Reproductive sciences  
| | • Infertility  
| | • Rural and underserved medicine  
| | • Public Health Research  
| | • Pregnancy and COVID-19 |
| Ling Cao, M.D., PhD  
Professor | • Neuroimmune mechanisms of chronic pain and HIV-associated neurological disorders  
| | • Chronic pain related clinical/population studies |
| Stuart N. Damon, DO, MS  
Assistant Clinical Professor | • Cognitive Load Theory applied to simulation  
| | • Asperger autism  
| | • Rural medicine |
| Russell J. Ferland, PhD,  
Professor; Chair, Dept. of Biomedical Sciences | • Primary cilia in developmental disorders  
| | • Genetics & mechanisms of epileptogenesis (epilepsy) |
| Charilaos (Harry) Filippakis, PhD  
Assistant Professor | • Mechanisms of aberrant mTORC1 activation  
| | • Macropinocytosis  
| | • Metabolic reprogramming in Tuberous Sclerosis Complex (TSC) and Lymphangioleiomyomatosis (LAM)  
| | • Cancer metabolism |
| Diana Goode, PhD  
Assistant Professor | • Neuro-immune interactions in pain  
| | • HIV pathogenesis & peripheral neuropathy |
| Eliza Grlickova-Duzevik, MD, PhD  
Assistant Clinical Prof. | • Bioinformatics  
| | • Neuroscience  
| | • Molecular and cellular biology  
| | • Culinary Medicine |
| Marilyn R. Gugliucci, MA, PhD,  
Professor; Dir. of Geriatrics Research | • 48 Hour Hospice Home Immersion Research  
| | • Balancing Act Falls Prevention Research  
| | • Virtual Reality Education Research  
| | • MMC Gender Institute Student Research Liaison |
| Benjamin Harrison, PhD  
Assistant Professor | • Neuroplasticity and Genomics |
| Selma C. Holden, MD, MPh, MS  
Clinical Associate Professor | • Ketamine Assisted Psychotherapy in the General Population  
| | • MDMA Assisted Psychotherapy for Post Traumatic Stress |
| Karen Houseknecht, PhD,  
Professor and  
Associate Provost | • To learn more about Dr. Houseknecht’s vast research interests, please visit:  
| | https://www.une.edu/people/karen-l-houseknecht |
| Tamara King, PhD  
Professor | • Mechanisms underlying cancer-induced bone pain  
| | • Mechanisms underlying advanced osteoarthritis induced pain |
| Meghan May, MS, PhD  
Professor | • Pathogen Evolution & Genomics; Emerging Infectious Diseases  
| | • Mechanisms of Infection-mediated Pain  
| | • Improved Clinical Diagnostics for Infections & Case Reports in Infectious Disease |

NOTE: The UNE COM faculty listed on this document are either conducting active research or, if not, are open to discussing their research interests with COM students as well as possibly directing students to someone who shares the student’s research interests.

(1) Additional research resources for UNE COM medical students:  
https://une1.sharepoint.com/teams/COM/Research/Resources/SitePages/Resources.aspx
(2) UNE has several centers and institutes in support of research & scholarship designed to promote interdisciplinary research:  
https://www.une.edu/research/centers

July 2022
## Faculty Research Interests

### Ian D. Meng, PhD, Prof.; Director of COBRE & Ctr for Excellence in Neuroscience

- Migraine headache; Medication overuse headache
- Transformation of migraine headache to chronic daily headache
- Chronic Dry Eye Syndrome

### Derek C. Molliver, PhD

- Signal transduction and proteomics in chronic pain
- G protein-coupled receptor signaling pathways
- Pain, metabolism and mitochondrial medicine

### Stacey Pierce-Talsma, DO, MS, FNAOME

- Osteopathic manipulative medicine
- Innovation in medical education
- Yoga

### Rebecca J. Rowe, PhD

- Medical Education Research

### Mark Schuenke, PhD

- Anatomical and biomechanical relationships related to lumbopelvic pain
- Peripheral nerve entrapment
- Countermeasures to age-related muscle atrophy and diabetes

### Kyle R. Scully, PhD

- Prehospital emergency medicine and natural products

### Ryan M. Smith, DO, MEd, PhD

- Medical student/resident physician mental health
- Electroconvulsive therapy
- Suicide/psychiatric disorders & treatment
- Standardized test assessment preparation methods

### Douglas Spicer, PhD, MMEdL

- Innovations in medical education
- Active learning pedagogies in medical education
- Clinical reasoning skills

### Joel M. Talsma, MS

- Surgical approaches in pediatric surgery
- Neurovascular anatomy of human joints
- Relationship of fascia and connective tissue in sports related injuries

### Kerry L. Tucker, PhD

- Primary cilia and pain processing
- Primary cilia and brain development and function
- Mouse models of congenital heart defects

### Susan Wehry, MD

- Resilience and Moral Distress Age-Friendly Health Systems
- Optimal Engagement of People Living with Dementia
- Apathy in dementia

### Frank Willard, PhD

- Neurovascular anatomy of the cervical & lumbosacral spine
- Myofascial & ligamentous support system of the lumbosacral spine & its dysfunction in patients with low back pain

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2. **UNE has several centers and institutes** in support of research and scholarship designed to promote interdisciplinary research: [https://www.une.edu/research/centers](https://www.une.edu/research/centers)

*July 2022*