

Department of Biomedical Sciences Newsletter

Congratulations to the following faculty that were nominated and/or won faculty awards this year!

- Dr. Geoffrey McCullen who won the OMS1 Faculty of the Year award
 - Dr. Kyle Scully was nominated for the OMS1 Faculty of the Year award
- Dr. Kyle Scully who won the OMS2 Faculty of the Year award
- Dr. Rebecca Rowe was nominated for the staff award

DBMS Faculty meeting dates:

- July 23, 2026; 11am – 12pm
- August 27, 2026; 11am - 12pm
- September 24, 2026; 11am - 12pm

Feel free to send any agenda items for discussion at our faculty meeting to Angela Morse.

2026 UNE COM Seminars:

All seminars hosted by the department will be posted on our seminar link on our site: <https://sites.une.edu/biomedicalsciences/seminar-series/>

Shared Governance Meetings:

COMFA

Wednesday, August 5
11:30 pm -12:30 pm

Wednesday, September 2
11:30 pm -12:30 pm

Wednesday, October 7
11:30 am -12:30 pm

NOTE: Publication costs for papers which have COM students as authors are eligible to be considered for up to \$250/student by the [SGA's educational enhancement fund](#) (link enabled). These requests are vetted by the finance committee of the SGA and processed by RSAS.

New Peer-Reviewed Publications (from PubMed (links enabled below))

[Pharmacological inhibition of transforming growth factor- \$\beta\$ activated kinase 1 \(TAK1\) prevents chemotherapy induced peripheral neuropathy \(CIPN\).](#)

Haystead T, Giuvelis D, Freeze R, Hughes P, **King T**, Scarneo S.
J Pain. 2026 Mar 31;106277.
doi: 10.1016/j.jpain.2026.106277.

[Exploring chronic pain: demographic and social determinants of health insights in Maine.](#)

Ou P, Bean EN, **Cao L**.
Front Pain Res (Lausanne). 2026 Apr 13;7:1763519.
doi: 10.3389/fpain.2026.1763519.

[Delayed Abdominal Pain Following Botox® Bladder Injection Mimics Exercise-Induced Transient Abdominal Pain: A Case Report.](#)

Molkentin JD, **Queme LF**, Rubinstein J.
Pain Med Case Rep. 2026 Apr;10(2):187-189.

[Acoltremon Ophthalmic Solution 0.003% for Signs and Symptoms of Dry Eye Disease: Results of Phase 3 Pivotal COMET-2 and COMET-3 Studies.](#)

Pattar GR, Wirta D, Jerkins G, Paauw J, McLaurin EB, Liu A, Evans DG, Kenyon K, Cline N, Gupta PK, **Meng I**, Senchyna M; COMET-2 and COMET-3 Study Groups.
Ophthalmology. 2026 May;133(5):563-574.
doi: 10.1016/j.opthta.2025.09.018.

[Corneal Innervation Research at a Crossroads: A Tool-Driven Roadmap for the Future.](#)

Matynia A, **Meng ID**, Davis BM, Pflugfelder SC, Galor A, Perez VL, Felix ER, Hamrah P, Rompolas P, Ruiz-Lozano RE, Bhuiyan SA, Moghbeli K, Semizoglou E, Renthal W, Singh H, Das J, Golczak M, Stepp MA, Morgans CW, de Paiva CS, Saab CY, Spigelman I, Sayegh RR, Largent-Milnes TM, Wu H, Luo W, Mitra S, Yoo H, Farsiu S, Littleton S, Jacob E, McPheeters MT, Lapierre-Landry M, Smith JJ, Wang X, Florea R, Widjaja-Adhi MAK, Holmes S, Zemborain Z, Laise KET, Pondelis NJ, Jeong KS, Chen R, Jenkins MW, Lee V, Moulton EA, Jacobs DS, Aicher SA, St Leger AJ, Saban DR.
Invest Ophthalmol Vis Sci. 2026 Jun 1;67(6):25.
doi: 10.1167/iovs.67.6.25.

New Publications (from preprint servers (links enabled in blue below)) – a preprint, a preliminary version of a manuscript that has not completed peer review at a journal.

[Paclitaxel Dosing Regimens Drive Differential CD4⁺ T Cell Responses in the Dorsal Root Ganglia and Modulate Neuropathic Pain Severity.](#)

Kenyah G.N. Ferreira, Moriah E. Weese-Myers, Leslie S. Bradford, **Diana J. Goode**
bioRxiv 2026.06.05.730418
doi: <https://doi.org/10.64898/2026.06.05.730418>

[Analysis of Flurothyl-induced Seizures and Epileptogenesis in Mice with Targeted Deletions of Exons 3 and 4 in Dock7.](#)

Russell J Ferland, Talia Lizotte, **Kathleen A Becker**

bioRxiv 2026.04.22.720243

doi: <https://doi.org/10.64898/2026.04.22.720243>

[Microfluidic Osteoarthritis-on-a-Chip: Modeling Human Joint Inflammation.](#)

Hosein Mirazi, **Scott T. Wood**

bioRxiv 2026.02.06.704398

doi: <https://doi.org/10.64898/2026.02.06.704398>

Grants awarded

Congratulations to **Dr. Ben Harrison**, who was awarded a 2026-2027 UNE Minigrant award titled “Establishing the feasibility of a novel mechanism regulating de novo protein synthesis in sensory neurons.”

2026-2027 Peter Morgane Fellowship Awardees and Mentors:

Samantha Ansart, OMS II; Kerrigan Goudreau, OMS II

Spatiotemporal Trends in Adolescent Risk Profiles and Health Disparities by Rurality

Mentor: **Dr. Tyler Redway**

Dalton Canonico, OMS III

Healthcare access and age-related disparities in colorectal cancer screening rates

Mentor: **Dr. Ling Cao**

Jina Chung, OMS I

Impact of Real-Time Data Analytics on Diabetes and Hypertension Outcomes in a Financially Incentivized Accountable Care Organization

Mentor: **Dr. Geoffrey McCullen**

Chantal Lewis, OMS I

An Exploration of Incorporating Disability Frameworks into Health Professions Education

Mentor: **Dr. Kin Ly**

Sydney Mason, OMS I; Bethany Sargent, OMS I ; Morgan Griffin, OMS II ; Suzanne Ellis, OMS II ; Sandhya Vellayappan, OMS III

Food Insecurity in University of New England Graduate Health Professional Students

Mentor: **Dr. Kyle Scully**

2026-2027 Kahn Foundation Fellowship Awardees and Mentors:

Meghan Boure, OMS II

Analysis of sex differences in temporomandibular joint pain in a mouse model of temporomandibular joint osteoarthritis

Mentor: **Dr. Tamara King**

Tiffany Chin, OMS II

Determining Mechanistically Distinct Brain Regions Mediating Movement-Evoked and Ongoing Pain in Osteoarthritis

Mentor: **Dr. Tamara King**

Alicia Muench, OMS III; Halina Shatravka, OMS III

Dexmedetomidine to Clonidine Weaning in ICU Patients with Established Opioid Use: An Observational Study

Mentor: **Dr. Luis Queme Cobar**

Hassan Nasser, OMS II

Characterizing Differences in Neural Activation across Anatomically Defined Dorsal Horn Regions in a Mouse Model of Knee Joint Osteoarthritis Pain

Mentor: **Dr. Tamara King**

Khushbu Patel, OMS I

The effect of increased CELF4 expression on corneal sensitivity and innervation

Mentor: **Dr. Ian Meng**

Lan Phung, OMS I

The effect of CELF4 knockout in corneal projecting neurons on corneal sensitivity and innervation

Mentor: **Dr. Ian Meng**

Suraj Pullapantula, OMS I

Investigating Neuroimmune Interactions in CIPN following PTX Therapy

Mentor: **Dr. Diana Goode**

SungJin Shin, OMS II

Association Between TOLLIP Variants and Neuropathic Pain

Mentor: **Dr. Ling Cao**

Stephanie Testa, OMS I

Insurance Coverage, Cost Barriers, and Patient-Reported Health: Associations with Pain Interference, Physical Function, and Related Outcomes

Mentor: **Dr. Ling Cao**

2026-2027 Carmen Pettapiece Fellowship Awardees and Mentors:

Chase Sisk, OMS II

A Scoping Review of Behavioral and Psychiatric Interventions for Suicidal Ideation in Youth with Autism or Intellectual Disability: An Introduction Toward Guideline Development for Primary Care Providers

Mentor: **Dr. Kyle Scully**

Jacob Smith, OMS I

Characterizing and Enhancing Osteocyte Dendrite Growth Using Long-Term Observation

Mentor: **Dr. Eben Estell**

Suzanne Jalbert Jones, OMS I

Niacin-Dependent NAD Synthesis via the Preiss–Handler Pathway Supports Macropinocytosis in mTORC1-Hyperactive TSC2-Deficient Cells

Mentor: **Dr. Harry Filippakis**

Sophia Moschella, OMS II; Dawson Turcotte, OMS III; Kevin Reale, OMS II; Luu Pham, OMS III

Optimizing and Validation of Intraoperative Fresh Gas Flow and Delivered Anesthetic Concentration in a Pediatric Population to Enhance Cost Efficiency and Environmental Sustainability Using Gas Man® Simulation

Mentors: Dr. Chris Abruzzese; **Dr. Kyle Scully**

Catherine McDonough, OMS I

Parkinson's Disease Risk Factors and Interactions with Inflammatory Indicators in a Rural New England Population

Mentor: **Dr. Matt Havrda**

Alexandra Dunstan, OMS I

Targeting NAD-dependent macropinocytosis in a mouse model of Tuberous Sclerosis Complex

Mentor: **Dr. Harry Filippakis**

Regional/National/International Presentations

Invited Seminar

Dr. Tamara King gave an invited talk titled “*Exploration of peripheral neural mechanisms mediating ongoing joint pain*” at the University of Cincinnati College of Medicine in March 2026.

Symposium Presentation at the Maine Biological and Medical Sciences Symposium

Dr. Scott Wood gave an invited talk, *Microfluidic Osteoarthritis-on-a-Chip*, at the Maine Biological and Medical Sciences Symposium (MBMSS) at MDIBL in Bar Harbor.

Minisymposium Accepted

Dr. Matt Havrda had his minisymposium proposal, *Immune mechanisms in Parkinson's disease*, accepted for presentation at Neuroscience 2026, taking place in Washington, D.C., November 14–18, 2026.

2026 Microphysiological Systems (MPS) World Congress & Expo in Washington, D.C. (May 26-29)

Dr. Scott Wood's lab presented two posters at the MPS World Congress & Expo:

- Mirazi H, **Wood S**. *Microfluidic Osteoarthritis-on-a-Chip: Modeling Human Joint Inflammation*.
- Mirazi H, **Wood S**. *Microfluidic Osteoarthritis-on-a-Chip for Evaluating Joint-Cell Responses to Tanezumab, a Humanized Anti-NGF Monoclonal Antibody*.

UNE COM Spring Research Bulletin (published May 2026)

Oral Presentation (April 10, 2026) and Abstract:

Characterizing Neurons Receiving Direct Input from Corneal Primary Afferents in Mouse
Savoy, S, MS, OMS II; Niyonkuru, K; Reynolds, S; **Meng, I, PhD**

Situs inversus totalis in an 86-year-old male cadaver: Vascular Anomalies in the Gastrointestinal System.

Daniel, J, OMS-IV; Du, D, OMS-IV; Gammaitoni, N, OMS-IV; Isaac, A, OMS-IV; **Talsma, J, MS**

Inhibiting Macropinocytosis to Suppress Tumor Growth in Tuberous Sclerosis Complex

Patel, V, OMS III; Rosenberg, C, OMS III; Moyet, M, PhD; Lafleur, S, OMS IV; Cox, W, OMS IV; McGrath-Conwell, A, BS; Henske, EP, MD; **Filippakis, H, PhD**

Patterns of Hospital Closure and Service Loss Following Private Equity Acquisition in U.S. Acute Care Hospitals

Rodriguez, K, OMS I; Elzey, A, OMS I; **McCullen, G, MD, MS**

Loss of *Vglut2* in the Ventromedial Nucleus of the Hypothalamus Prevents Tonic Seizure Expression and SUDEP in a Mouse Model of Epileptogenesis

McLaughlin K, OMS2; Igot MI, BS; Nalwalk JW, MSc; **Ferland RJ, PhD**

Abstract:

Situs inversus totalis in an 86-year-old male cadaver: Vascular Anomalies in the Gastrointestinal System.

Daniel, J, OMS-IV; Du, D, OMS-IV; Gammaitoni, N, OMS-IV; Isaac, A, OMS-IV; **Talsma, J, MS**

Quantification of Force Applied During Osteopathic Manipulative Treatment: A Scoping Review

Flood, B, OMS II; **Wood, S, PhD; McCullen, G, MD; M.S., Yee, M, DO**

Histologic Mapping of Rami Communicantes at the T4–T5 Sympathetic Ganglia: Implications for Thoracoscopic Sympathectomy

Stilley, A, OMS II; Gray, J, OMS II; Miller, M, OMS II; Latif, T, OMS II; **Talsma, J, MS**

Oral Presentations:

2026 USASP Annual Scientific Meeting Symposium Participant (March 23-26, 2026)

Dr. Diana Goode participated in an oral presentation as part of a symposium titled, "*Sex-Specific Mechanisms of Central Sensitization, Opioid Use, and Placebo Analgesia in Chronic Postsurgical Pain.*"

Dr. Derek Molliver participated in an oral presentation as part of a symposium titled, "Bioenergetic Regulation of Nociceptive Signaling."

Poster Presentations:

2026 American Academy of Neurology

Dr. Ling Cao's student SungJin Shin, OMSII, submitted an abstract to the 2026 American Academy of Neurology (AAN) annual conference and was selected to receive the AAN 2026 Medical Student Scholarship to attend the annual meeting

- Association Between EPG5 Mutations and Diagnoses of Neurodegenerative Disorders: A Secondary Data Analysis Using the All of Us Database.
Shin, S, Bean, E, **Grlickova-Duzevik, E, Cao, L.**

Educating Leaders 2026, the AACOM Annual Conference

Drs. Ling Cao and Kin Ly's student, Shama Varghese, presented a poster at Educating Leaders 2026, the AACOM Annual Conference (EL26) with their poster titled, "*Evaluating the Impact of the PHIT Program on Interprofessional Competencies and SDOH Awareness*" in April 2026.

National IDeA Symposium of Biomedical Research Excellence

Maddy Moyet, PhD in the **Filippakis lab** presented a poster titled, "*Exploring NAD+ Metabolic Pathways as Therapeutic Targets in Tuberous Sclerosis Complex and Lymphangiomyomatosis*" at the Structural and Cell Biology session of the National IDeA Symposium of Biomedical Research Excellence (NISBRE) held in Washington, D.C. on June 15.

NEOMEN 2026 Poster Presentation

Flood B (OMS2); **Wood S, PhD; McCullen G, MD**; Yee M, DO. Quantification of Force Applied During Osteopathic Manipulative Treatment: A Review. NEOMEN poster.
5.5.26

2026 USASP Annual Scientific Meeting Poster Presentation (March 23-26, 2026)

Females Have Higher Susceptibility to Develop Nerve Injury and Joint Pain in a Mouse Model of Knee Joint Pain. Trevor Flanagan, Abigail Del Greco, Jessica Howard, Madison Mueth, Peter Caradonna, **Benjamin Harrison, Tamara King**

2026 Maine Society for Neuroscience Meeting Poster Presentation (March 28, 2026)

Females Have Higher Susceptibility to Develop Nerve Injury and Joint Pain in a Mouse Model of Knee Joint Pain. Trevor Flanagan, Jessica Howard, Abigail Del Greco, Peter Caradonna, **Tamara King**

Behavioral Characterization of a Rat Model of Chronic Discogenic Low Back Pain. Abigail Del Greco, Conner Allison, Peter Caradonna, Evie Reddick, Sydney Caparaso, Rebecca Wachs, **Tamara King**

Faculty Notes

Dr. Tyler Redway's AORTA program was featured on the UNE website. Link of the feature:

<https://www.une.edu/news/2026/une-offers-high-schoolers-insights-encouragement-stem-fields>

DBMS faculty members **Ian Meng, Derek Molliver, and Luis Queme Cobar** attended the National IDeA Symposium of Biomedical Research Excellence (NISBRE) held in Washington, D.C., from June 14 to 17.

- The biennial NISBRE symposium is organized by the National Institute of General Medical Sciences (NIGMS) to celebrate and showcase the training and scientific accomplishments of biomedical researchers within the organization's Institutional Development Award (IDeA) program, which builds research capacity in states that historically have had low levels of funding from the National Institutes of Health.

Dr. Scott Wood presented "*Cellular Engineering Learning Lab – Tensegrity Interactive Model Exploration (CELL-TIME)*" learning activity to 7th-grade students at Thornton Academy Middle School.