

# Department of Biomedical Sciences Newsletter

**Congratulations to the following faculty with service recognition:**

Joel Talsma, MS; 5 years of service  
Kyle Scully, PhD; 5 years of service

**Congratulations to Joel Talsma (right) in winning the 2025 International Pain & Spine Intervention Society Research Abstract Award in the Basic Science category with his paper titled “Basivertebral Foramen and Nerve Characterization (S1)”**



**Congratulations to Tamara King (below) on being appointed and installed as the Chair of the NIH Neurobiology of Pain and Itch (NPI) study section.**



**Congratulations to all the DBMS faculty (and their students) that had posters/talks and won awards at the 2025 COM Fall Research Forum (see details inside).**

**DBMS Faculty meeting dates:**

- December, 2025; cancelled
- January 22, 2026; 11am - 12pm
- February 26, 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, January 7  
11:30 pm -12:30 pm

February, cancelled -  
COCA

Wednesay, March 4  
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 \(links enabled below\)\)](#)

### [Tailored Education: Helping Every Student Across the Finish Line.](#)

Ausel EL, Brenneman A, Ely S, Garwood S, Gathu C, Hernandez M, Ikonne U, **Ly K**, McKell D, Naik A, **Rowe R**, Taylor TAH, Thesen T.

Med Sci Educ. 2025 Apr 26;35(4):2257-2261

doi: 10.1007/s40670-025-02397-6

### [Tissue damage-induced axon injury-associated responses in sensory neurons: requirements, prevention, and potential role in persistent post-surgical pain.](#)

Rau KK, **Harrison BJ**, Venkat G, Donahue RR, Petruska SE, Hill CE, Taylor BK, Petruska JC.

Front Pain Res (Lausanne). 2025 Nov 14;6:1573501

doi: 10.3389/fpain.2025.1573501

### [Developing an Artificial Synovial Membrane Model Using Hyaluronic Acid-Binding Peptides.](#)

Mao M, Thompson F, Ballard K, Mirazi H, Terkildsen N, Shchepin R, **Wood S**, Ozdemir T.

ACS Appl Bio Mater. 2025 Nov 17;8(11):9854-9863

doi: 10.1021/acsabm.5c01205

## [Regional/National/International Presentations](#)

### [Oral Presentations:](#)

**Dr. Kerry Tucker** presented a seminar at the University of New Hampshire on the work from his lab in November, 2025.

The following DBMS faculty presented at the 2025 Statewide Biomedical Science and Engineering Research Symposium (September 24-25, 2025):

**Mathew Havrda** with a presentation titled “Neuroinflammation in Aging and Disease”

**Karen Houseknecht** with a presentation titled “Factors Leading to Metabolic Associated Steatotic Liver Disease (MASLD) in Aging”

**Scott Wood** with a presentation titled “Stiffness-Mediated in-vitro Model of aging Cartilage”

**Benjamin Harrison** with a presentation titled “The Alzheimer Susceptibility CD2AP in Aging and Alzheimer’s”

## Poster Presentations:

**Dr. Kin Ly** presented her poster "The fight isn't over until it's over: Addressing racism through an interprofessional healthcare lens" at the *Nexus Summit 2025: Staying True to our North Star - Advancing Health in the Nexus* at the virtual summit in September, 2025.

## UNE COM Research and Scholarship Fall Forum - Friday, October 3, 2025 UNE Portland Campus

### Selected Oral Presentations

In Basic Science Research Category:

Emily Corkery, OMS IV

Computer Vision-assisted Analysis of Mouse Pain-Related Behaviors Reveals Unique Behavioral Signals Not Detected by Experimenter Observation

Mentor: **Luis Queme**

### Poster Presentations

Aerobic Exercise and Seizure Control in Epilepsy: A Systematic Review of Current Evidence and Implications for Future Research

Adarme VP, Fakharizadeh D, Dhillon H, Mercado J, **McCullen G**

The Efficacy of Platelet Rich Plasma for Treating Inflammation Caused by Autoimmune Conditions

Gordon A, LaChance B, Greenfield M, **McCullen G**

Identifying a Gold Standard Joint-sparing Treatment for Hallux Rigidus: Comparing Longterm Pain Relief, Functional Outcomes, Revision Rates and Patient Satisfaction

Greenfield M, LaChance B, Gordon A, **McCullen G**

Quality of Life Change Following Arthroscopic Shoulder Surgery Repair of the Rotator Cuff and Influence on Retear Rate

LaChance B, Greenfield M, Gordon A, **McCullen G**

Long-Term Outcomes of Robotic Arm-Assisted Total Knee Arthroplasty (RATKA)

Marcin J, Atif H, **McCullen G**

Identifying Geographic Differences in Sexual Activity and Behaviors in Maine Adolescents

Ansart S, Goudreau K, Blackburn J, **Redway T**

Impacts of Anatomy Outreach for Research and Teaching Advancement (AORTA) Program on High School Students' Career Interests

Marino RS, Lopez J, Tomasetti GE, Walter A, **Redway TH**

Piloting a Survey to Evaluate the Impacts of the AORTA Program on Osteopathic Medical Student Facilitators

Thomas KS, Tomasetti GE, **Redway TH**

The Role of Dock7 in Wnt/ $\beta$ -Catenin Signaling and Osteoblast Function

Blau S, Lizotte T, Ahmida Z, Caradonna P, Long P, Sampson W, **Becker K**

The Role of DOCK7 in Osteoclast Differentiation and Bone Resorption

Kim A, Lizotte T, Porter S, Blau S, Mann A, Watson A, **Becker K**

A Comparison of AI Platforms for Effectiveness in Addressing Frequently Asked Patient Questions about Anesthesia

Stevens S, Cama K, Pham L, Quaye A, **Scully KR**

Food Insecurity in University of New England Medical Students

Cheney M, Ellis S, Vellayappan S, **Scully KR**

Cannabis Use Across U.S. States and Territories: A Cross-Sectional Analysis of Legalization Type, Duration, and Demographic Trends

Chen S, **Cao L**

Analyzing the Relationship Between EPG5 Mutations and the Risk of Chronic Pain-Related Diagnoses

Shin S, Bean E, **Harrison B, Grlickova-Duzevik E, Cao L**

Evaluating the Impact of the PHIT Program on Interprofessional Competencies and Social Determinants of Health Awareness

Varghesec S, **Ly K, Cao L**

Sex Differences in Ascending Nociceptive Signals in Rats with Temporomandibular Joint Osteoarthritis

Chin T, Howard J, Flanagan T, Del Greco A, **King T**

Computer Vision-assisted Analysis of Mouse Pain-Related Behaviors Reveals Unique Behavioral Signals Not Detected by Experimenter Observation

Corkery E, French A, **Queme L**

Seizure Network Reorganization in the Repeated Flurothyl Model: The Ventromedial Hypothalamus (VMH) as a Critical Gate

Farag M, Igot MI, McLaughlin K, **Ferland RJ**

Correlating D8-BPA Retention and Deleterious Phenotypic Effects on Regenerating Planaria

Flood B, Mass S, **Spicer D**

Angiomyolipoma-associated Metabolic Reprogramming in TSC: Insights from Serum Metabolomics

Gray J, Gray E, **Filippakis H**

Investigating NAD<sup>+</sup> Metabolism as a New Frontier for Tuberous Sclerosis Complex Therapy

Medidi V, Moyet M, **Filippakis H**

Cardiac Neural Crest Cells and *Ift88* Mutants in Myocardial Development and Integrity  
Karpe DA, **Fitzsimons LA**, **Tucker KL**

Loss of CELF4 from renal DRG neurons (RDN) results in a reduction in glomerular podocytes, sex specific changes in expression of TRPV1 and clinically significant vascular/glomerular injury.  
Kernstine C, Freemont OT, Akom MC, Oakley GB, Balog ER, **Harrison BJ**, **Fitzsimons LA**

Labeling Neurons Receiving Direct Input from Corneal Primary Afferents in Mouse  
Savoy S, Niyonkuru K, Reynolds S, **Meng I**

It's about Time: Addressing the Opioid Epidemic through Interprofessional Health Professions Education Events  
Sweeney M, Hall K, Cote Michelle, **Ly K**

Severe Traumatic Brain Injury: Non-Military Patients Essential Need for Behavioral Health Care  
Tolentino RH, Yeung M, Patel D, **Schuenke M**, Sholl M, Gugliucci M

Exploring Genetic Links Between Genomic Variants in the Adrenergic Receptor Gene and the Co-Occurrence of Takotsubo Cardiomyopathy with Generalized Anxiety Disorder: Insights for Further Investigation  
Tran D, Bean E, **Cao L**, **Glickova-Duzevik E**, **Harrison B**



## 2025 COM Research Forum Award Winners

### Educational and Social Category:

1st place

Samantha Ansart; Kerrigan Goudreau

Identifying Geographic Differences in Sexual Activity and Behaviors in Maine Adolescents

Mentor: **Tyler Redway**

2nd place

Shama Varghese

Evaluating the Impact of the PHIT Program on Interprofessional Competencies and Social Determinants of Health Awareness

Mentor: **Ling Cao** and **Kin Ly**

### Clinical Category:

1st place (tie)

James Gray

Angiomyolipoma-associated Metabolic Reprogramming in TSC: Insights from Serum Metabolomics

Mentor: **Harry Filippakis**

**Basic Science Category:**

2nd place

Tiffany Chin

Sex Differences in Ascending Nociceptive Signals in Rats with Temporomandibular Joint Osteoarthritis

Mentor: **Tamara King**

3rd place

Brianna Flood

Correlating D8-BPA Retention and Deleterious Phenotypic Effects on Regenerating Planaria

Mentor: **Douglas Spicer**

[Society for Neuroscience Annual Meeting \(11/15/25 – 11/19/25; San Diego, CA; links enabled below\)](#)

[PSTR167.14 / L2 - Behavioral characterization of a rat model of chronic discogenic low back pain](#)

A. DEL GRECO, G. C. ALLISON, E. REDDICK, S. M. CAPARASO, P. CARADONNA, R. WACHS, **T. E. KING**

[PSTR167.15 / L3 - Sex differences in emergence of nerve injury and ongoing joint pain in a mouse model of knee joint arthritis pain](#)

M. MUETH, A. DEL GRECO, P. CARADONNA, **B. J. HARRISON, T. E. KING**

[PSTR167.28 / L15 - Mitochondrial uncoupling drugs induce AMP kinase-dependent metabolic flexibility in a human dorsal root ganglion-derived neuronal cell line](#)

J. J. AMES, E. ADDLESON, **D. C. MOLLIVER**

<sup>1</sup>Ctr. for Cell Signaling Res., <sup>2</sup>Dept. of Biomed. Sci., Univ. of New England, Biddeford, ME

[PSTR219.03 / J10 - Comprehensive labeling of corneal afferent neurons in mice using intrastromal AAV delivery and Cre-reporter lines](#)

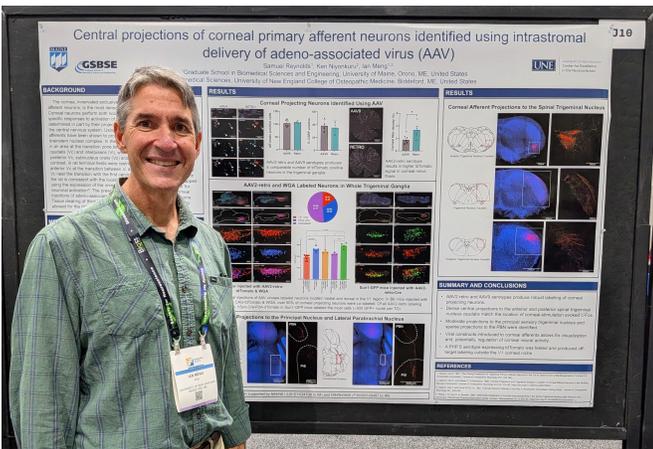
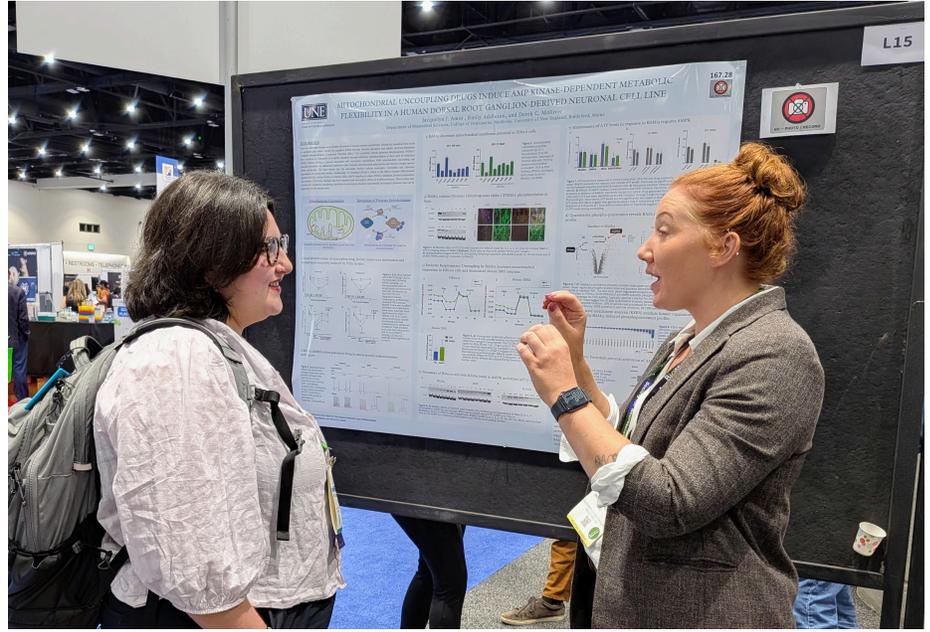
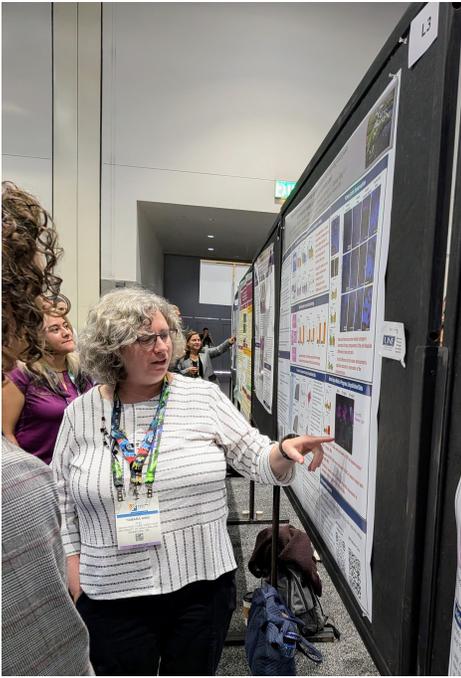
S. REYNOLDS, K. NIYONKURU, B. MERRILL, W. RENTHAL, **I. D. MENG**

Oral Presentation: [NANO044.08 - Post-transcriptional regulation of sensory neuron excitability and sensitivity by CELF4 RNA-binding protein](#)

M. MUETH, P. NEUFELD, **T. E. KING, B. J. HARRISON**



Graduate Student Madison Meuth presenting her work at SfN 2025 (mentor Ben Harrison)  
Photo courtesy of Derek Molliver



Photos courtesy of Derek Molliver

## Faculty Notes:

Congratulations to **Tamara King** (below) on being appointed and installed as the Chair of the NIH Neurobiology of Pain and Itch (NPI) study section.



Congratulations to **Joel Talsma** (bottom right) in winning the 2025 International Pain & Spine Intervention Society Research Abstract Award in the Basic Science category with his paper titled “Basivertebral Foramen and Nerve Characterization (S1)”



Congratulations to **Kathleen Becker** in being appointed chair of the “Image Analysis of Nerves in Bone” working group under the International Society of Bone Morphometry. The working group brings together scientists from around the world to establish standardized protocols and guidelines for imaging and quantifying nerves in bone.