

Department of Biomedical Sciences Newsletter

From the Chair:

Welcome to Kyle Scully and Joel Talsma, who joined our Department in January. Kyle joined us from the Lake Erie College of Osteopathic Medicine, where he was an Assistant Professor in Pharmacology. Joel joined us from the Touro College of Osteopathic Medicine, where he was an Assistant Professor in Anatomy.

Newsletter

Please let me know, via email, accomplishments, publications, presentations, awards, grants, seminars, study section service, etc. for you and your laboratory. Send them to Russ as they happen, so you do not forget.

Reminders

Please remember to update your UNE personal websites.

Faculty meeting dates:

- February 25, 2020; 9:30-11; Pickus 214
- March 24, 2020; 9:30-11; Pickus 214
- April 28, 2020; 9:30-11; Pickus 214

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

January 28, 2020 - Gordon Smith, Esq., Maine’s Director of Opioid Response in Governor Mills’ administration, spoke to the medical students, faculty and staff of the College of Osteopathic Medicine, while students in UNE’s nursing and physician assistant programs watched, via live video stream on the Portland Campus. Mr. Smith’s message was to recount Governor Mills’ and Mr. Smith’s strategy to deal with the opiate crisis in Maine, in addition to discussing opiate prescribing by medical professionals in the wake of the opioid crisis. Mr. Smith’s talk was sponsored by UNE’s Office of Research and Scholarship.

Photograph of Gordon Smith, Esq.



Spring 2020 UNE COM Seminars (to date):

Tuesday, February 18

Leonard Hall, Noon (12 pm)

Ben Harrison, PhD

Assistant Professor

UNE COM; Biomed Sci

“Molecular Systems of Neuroplasticity”

Spring 2020 Events (to date):

Friday, February 7

Maine Osteopathic Association (MOA) Medical Student Research & Scholarship Forum

Holiday Day by the Bay, Portland, ME

Spring 2020 Shared Governance

UFA

Wednesday, February 19

Bush Ctr. Board Room*, 12-2pm

Wednesday, March 25

Bush Ctr. Board Room*, 12-2pm

Wednesday, April 15

Bush Ctr. Board Room*, 12-2pm

* Location subject to change

Tuesday, March 3

Leonard Hall, Noon (12 pm)

Geoffrey Ganter, PhD

Professor

UNE CAS; Biology

*TBD***Tuesday, March 10**

Leonard Hall*, Noon (12 pm)

Marc Ebenfield, PhD, MSDirector, UNE Center for Excellence in
Teaching and Learning*"Inclusivity in teaching"***Tuesday, March 24**

Leonard Hall, Noon (12 pm)

Michael Davidson, DO

Wentworth-Douglass Hospital

*TBD***Tuesday, March 31**

Leonard Hall*, Noon (12 pm)

Brandy Brown, LCSWMaine Medical Center Psychiatry
Department*"Affirming healthcare to
LGBTQI+, transgender, and
gender diverse patients"***Tuesday, April 7**

Leonard Hall, Noon (12 pm)

Michael Burman, PhD

Associate Professor

UNE CAS; Psychology

TBD

* Location subject to change

Wednesday, February 26**Kathryn Brandt, DO, MS, MEdL** Chair

&

Victoria Stacey Thieme, DO

Associate Clinical Professor

UNE COM Primary Care Department

*"Awareness in relational
professionalism"***Thursday, May 14**NEOMEN Research &
Scholarship Forum**Saturday, May 16**University Commencement
Ceremony

Cross Insurance Arena

10:00 a.m.

College of Osteopathic Medicine

Graduation Ceremony Merrill

Auditorium

3:00 p.m.

COMFA**Thursday, February 20**

St. Francis*, 12-1:30pm

Thursday, March 19

St. Francis*, 12-1:30pm

Thursday, April 16

St. Francis*, 12-1:30pm

* Location subject to change

[Faculty / Student / Staff Highlights:](#)

[New Publications \(from PubMed \(links enabled\)\)](#)

[TIMP-1 Attenuates the Development of Inflammatory Pain Through MMP-Dependent and Receptor-Mediated Cell Signaling Mechanisms.](#)

Knight BE, Kozlowski N, Havelin J, **King T**, Crocker SJ, Young EE, Baumbauer KM.
Front Mol Neurosci. 2019 Sep 20;12:220. doi: 10.3389/fnmol.2019.00220.

[Phenotypic diversity in an emerging mycoplasmal disease.](#)

Perez K, Mullen N, Canter JA, Ley DH, **May M**.

Microb Pathog. 2019 Oct 19:103798. doi: 10.1016/j.micpath.2019.103798.

[Polymicrobial abscess following ovariectomy in a mouse.](#)

Eaton VE, Pettit S, Elkinson A, **Houseknecht KL**, **King TE**, **May M**.
BMC Vet Res. 2019 Oct 24;15(1):364. doi: 10.1186/s12917-019-2125-0.

[Advancing Nutrition Education, Training, and Research for Medical Students, Residents, Fellows, Attending Physicians, and Other Clinicians: Building Competencies and Interdisciplinary Coordination.](#)

Van Horn L, Lenders CM, Pratt CA, Beech B, Carney PA, Dietz W, DiMaria-Ghalili R, Harlan T, Hash R, Kohlmeier M, Kolasa K, Krebs NF, Kushner RF, Lieh-Lai M, Lindsley J, Meacham S, Nicastro H, Nowson C, Palmer C, Paniagua M, Philips E, Ray S, Rose S, Salive M, Schofield M, **Thompson K**, Trilk JL, Twillman G, White JD, Zappalà G, Vargas A, Lynch C.
Adv Nutr. 2019 Nov 1;10(6): 1181-1200. doi: 10.1093/advances/nmz083.

[A Novel Mechanism for Zika Virus Host-Cell Binding.](#)

Rieder CA, Rieder J, Sannajust S, **Goode D**, **Geguchadze R**, Relich RF, **Molliver DC**, **King TE**, **Vaughn J**, **May M**.
Viruses. 2019 Nov 28;11(12). pii: E1101. doi: 10.3390/v11121101.

[Inadequate Intimal Angiogenesis as a Source of Coronary Plaque Instability: Implications for Healing.](#)

Brezinski M, **Willard F**, Rupnick M.
Circulation. 2019 Dec 3;140(23):1857-1859. doi: 10.1161/CIRCULATIONAHA.119.042192.

[Transcriptional and pathological host responses to co-infection with virulent or attenuated *Mycoplasma gallisepticum* and low pathogenic avian influenza A virus in chickens.](#)

Canter JA, Tulman ER, Beaudet J, Lee D, **May M**, Szczepanek SM, Geary SJ.
Infect Immun. 2019 Dec 17;88(1) pii: e00607-19. doi: 10.1128/IAI.00607-19. Print 2019 Dec 17.

[Targeted Depletion of Primary Cilia in Dopaminergic Neurons in a Preclinical Mouse Model of Huntington's Disease.](#)

Mustafa R, Kreiner G, Kamińska K, Wood AJ, Kirsch J, **Tucker KL**, Parlato R.
Front Cell Neurosci. 2019 Dec 20;13:565. doi: 10.3389/fncel.2019.00565.

[RglA4 Accelerates Recovery from Paclitaxel-Induced Neuropathic Pain in Rats.](#)

Huynh PN, Giuvelis D, Christensen S, **Tucker KL**, McIntosh JM.
Mar Drugs. 2019 Dec 21;18(1). pii: E12. doi: 10.3390/md18010012.

[Exploring mechanisms of increased cardiovascular disease risk with antipsychotic medications: Risperidone alters the cardiac proteomic signature in mice.](#)

Beauchemin M, **Geguchadze R**, Guntur AR, Nevola K, Le PT, Barlow D, Rue M, Vary CPH, Lary CW, Motyl KJ, **Houseknecht KL**.
Pharmacol Res. 2019 Dec 23;152:104589. doi: 10.1016/j.phrs.2019.104589.

[Characterizing the Mechanical Properties of Ectopic Axonal Receptive Fields in Inflamed Nerves and Following Axonal Transport Disruption.](#)

Goodwin G, **Bove GM**, Dayment B, Dilley A.
Neuroscience. 2019 Dec 23. pii: S0306-4522(19)30832-2. doi: 10.1016/j.neuroscience.2019.11.042.

[Potent, Efficacious, and Stable Cyclic Opioid Peptides with Long Lasting Antinociceptive Effect after Peripheral Administration.](#)

Stefanucci A, Dimmito MP, Macedonio G, Ciarlo L, Pieretti S, Novellino E, Lei W, Barlow D, **Houseknecht KL**, Streicher JM, Mollica A.
J Med Chem. 2019 Dec 27. doi: 10.1021/acs.jmedchem.9b01963.

[AutoSholl allows for automation of Sholl analysis independent of user tracing.](#)

Srinivasan A, Srinivasan A, **Ferland RJ**.

J Neurosci Methods. 2020 Feb 1;331:108529. doi: 10.1016/j.jneumeth.2019.108529.

Regional/National/International Presentations

Mark Schuenke, PhD presented an invited talk entitled “External force on the lumbar myofascial ring: effects of hypaxial muscle contraction on the lumbar spine” at the 10th Interdisciplinary World Congress on Low Back & Pelvic Pain in Antwerp, Belgium (October 29, 2019). Co-authors were A. Vleeming and **F.H. Willard**.

Mark Schuenke, PhD presented an invited seminar entitled “Anatomy of DRG and Interface Between PNS/CNS” at the Association of Extremity Nerve Surgeons’ Annual Symposium in Atlanta, GA (November 9, 2019).

Hwyda Arafat, MD, PhD presented an invited seminar entitled “Tumor Microenvironment” to the Egyptian Society of Clinical Histology and Cell Biology at the National Research Institute in Cairo, Egypt (December 26 2019).

Meghan May, PhD presented a community lecture entitled “Emerging Infectious Diseases – an Opus in 3 Parts” as part of the “Science on Tap” Series (Maine Science Festival) on November 14, 2019 in Lewiston, ME.

Regional/National/International Poster Presentations

Goode, D.J. and **Molliver, D.C.** (2019) A novel mechanism for regulation of mitochondrial function by Epac2 contributes to acute hyperalgesia evoked by prostaglandin E2. Soc Neurosci Abstr 219.20.

Grlickova-Duzevik E, McCormac E, Michael M, Balog E, **Harrison B.** (2019, September). Targeting NGF-pathway signaling components using peptide aptamers. Poster presented at: Team Science Summit “Innovations in Alzheimer’s and Neurodegenerative Disease Research”, Tufts CTSI, Boston, MA.

McCormac E, **Grlickova-Duzevik E**, Michael M, Balog E, **Harrison B.** (2019, September). Optimization of a screening approach for Alzheimer’s Disease drug development. Poster presented at: Summer Undergraduate Research Experience Symposium, Biddeford, ME.

In the News

Meghan May, PhD was interviewed regarding coronavirus, influenza, and tickborne disease:

Coronavirus interviews - PPH, StandUp with Pete Dominick, WMTW

Flu interview - WMTW

Tickborne disease interview - WCSH

Grant (study section) reviewers

Derek Molliver, PhD served as a member of an NIH Special Emphasis Panel (ZRG1 IFCN-B 02 M Pain, Perception and Learning), November 20-21, 2019.

Derek Molliver, PhD served as a mail reviewer for a second NIH Special Emphasis Panel (ZRG1 BCMB-C (50) R) in October, 2019.

Russ Ferland, PhD served as a member of an NIH study section, Acute Neural Injury and Epilepsy Study Section, October 28-29, 2019.

Student Awards

Congratulations to student doctor David Nicholas (UNE COM 2022) who recently presented his research work at the Annual Eastern Pain Association (EPA) Fall Meeting on October 5, 2019 at NYU Langone, New York, NY and won the First Place prize in the Poster Competition. David's poster, titled "Spinal Cord Microglial Phenotypic Changes Following Sciatic Nerve Crush In CD137L KO Mice" represents his research work under the mentorship of **Ling Cao, MD, PhD**. EPA's winning poster abstracts are expected to be published in the Journal of Pain Research.

New Funding:

Congratulations to **Kathleen Becker, PhD** for being awarded an UNE mini-grant entitled "Investigating the Impact of Dock7 on Bone Formation Utilizing Novel Global Knockout and Conditional Deletion Models."

Congratulations to **Kathleen Becker, PhD** and **Tamara King, PhD** for obtaining an UNE RIF award for the purchase of a dual-energy X-ray absorptiometry (DXA) instrument for assessing bone mineral density, body composition and mineralized tissues.

Congratulations to **Kerry Tucker, PhD** for being awarded a Saving Tiny Hearts Society grant entitled "Extrinsic and Intrinsic Control of the Cardiac Conduction System in Primary Cilia-Mediated Congenital Heart Disease."

Congratulations to **Eliza Grlickova-Duzevik, MD, PhD** for being awarded a Maine INBRE Research Resource grant entitled " Nerve growth factor (NGF) regulation of 3'UTRs and RNA-binding protein."

Other News:

Derek Molliver, PhD attended NHLBI Mitochondrial Biology Symposium at the NIH, September 26-27, 2019

Derek Molliver, PhD was selected to attend the NIH IDeA Program Discovery-Phase Proteomics Workshop on February 27-28, 2020 at the University of Arkansas for Medical Sciences in Little Rock, AR.