

# Department of Biomedical Sciences Newsletter

The Department of Biomedical Sciences has launched a WordPress website allowing people inside and outside of UNE to see the work that is being conducted in the department as well as serving as a place for posting information, such as seminars, breaking news, etc. The website can be found here: <https://sites.une.edu/biomedicalsciences/>.

Send any update requests or additions for the site to Russ for posting.

Given restrictions with COVID19, the Department of Biomedical Sciences opened its seminar schedule for selected student presentations. We recently finished these presentations allowing 34 COM students to present their research findings to the COM. The students' presentations were excellent resulting in a very successful Fall/Winter seminar series. Congratulations to our COM students! Given this success, we hope to continue this new tradition, in a limited manner, in subsequent years.

## Faculty meeting dates:

- January 26, 2021; 9:30-11; Zoom
- February 23, 2021; 9:30-11; Zoom
- March 23, 2021; 9:30-11; Zoom

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

## **2021 UNE COM Seminars:**

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

**Congratulations to Jack Williams, PhD on his retirement! Thank you, Jack, for all you have done for UNE and the COM!**

### **Winter 2021 Events (to date):**

**Friday, January 29; 12-1**

**Seminar:** Rare New England Honors Rare Disease Day: An Annual Presentation  
**Via Zoom**

**Friday, February 5; 12-1**

Faculty Development Session - TBD  
**Via Zoom**

**Friday, March 5; 12-1**

Faculty Development Session- TBD  
**Via Zoom**

### **Winter/Spring 2021 Shared Governance:**

**UFA**

**Wednesday, February 17**  
Via Zoom, 12-2pm

**Wednesday, March 24**  
Via Zoom, 12-2pm

**Wednesday, April 21**  
Via Zoom, 12-2pm

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**COMFA**

**Wednesday, February 24**  
Via Zoom, 12-1pm

**Thursday, March 18**  
Via Zoom, 12-1pm

### **CALL FOR SEMINAR SPEAKERS:**

Please consider being a speaker, or inviting one, to present a research seminar to the UNE community through Zoom in the next academic semester. Our students are still required to fulfill their seminar attendance requirement.

**Congratulations to Bradley Best for 5 years of service to UNE! Thank you for all of your hard work and dedication!**

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

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

[Association of Beta Blocker Use with Bone Mineral Density in the Framingham Osteoporosis Study: A Cross-Sectional Study.](#)

Lary CW, Hinton AC, Nevola KT, Shireman TI, Motyl KJ, **Houseknecht KL**, Lucas FL, Hallen S, Zullo AR, Berry SD, Kiel DP.

JBMR Plus. 2020 Jul 30;4(9):e10388.

doi: 10.1002/jbm4.10388.

[The antinociceptive properties of an isoform-selective inhibitor of Nav1.7 derived from saxitoxin in mouse models of pain.](#)

Beckley JT, Pajouhesh H, Luu G, Klas S, Delwig A, Monteleone D, Zhou X, [Giuvelis D](#), **Meng ID**, Yeomans DC, Hunter JC, Mulcahy JV.

Pain. 2020 Oct 15.

doi: 10.1097/j.pain.0000000000002112.

[Evolution and Revolution in Medical Education: Health System Sciences \(HSS\).](#)

**Rowe RJ**, Bahner I, Belovich AN, Bonaminio G, Brennenman A, Brooks WS, Chinn C, El-Sawi N, Haudek SB, Haight M, McAuley R, Slivkoff MD, Vari RC.

Med Sci Educ. 2020 Nov 16:1-6.

doi: 10.1007/s40670-020-01166-x.

[Effects of the Covid-19 Pandemic on "The Big Three": HIV, Tuberculosis, and Malaria.](#)

**May M**

Annals of Public Health Reports. 2020 Nov 13; 4(1)

doi: 10.36959/856/503

[Understanding Mechanisms Underlying Non-Alcoholic Fatty Liver Disease \(NAFLD\) in Mental Illness: Risperidone and Olanzapine Alter the Hepatic Proteomic Signature in Mice.](#)

[Rostama B](#), [Beauchemin M](#), Bouchard C, Bernier E, Vary CPH, **May M**, **Houseknecht KL**.

Int J Mol Sci. 2020 Dec 8;21(24):E9362.

doi: 10.3390/ijms21249362.

[The enduring effect of prenatal protein malnutrition on brain anatomy, physiology and behavior.](#)

Rushmore RJ, McGaughy JA, **Mokler DJ**, Rosene DL.

Nutr Neurosci. 2020 Dec 14:1-8.

doi: 10.1080/1028415X.2020.1859730.

### [The neural basis of attentional alterations in prenatally protein malnourished rats.](#)

Rushmore RJ, McGaughy JA, Amaral AC, **Mokler DJ**, Morgane PJ, Galler JR, Rosene DL. Cereb Cortex. 2021 Jan 1;31(1):497-512.

doi: 10.1093/cercor/bhaa239.PMID: 33099611

*This paper looks at the differences in the neuronal networks used by rats exposed to prenatal protein malnutrition and well-nourished rats during an attentional task in adulthood. Dr. Mokler has worked with this group of researchers for the past 25 years.*

### [Effectiveness of Educating Health Care Professionals in Managing Chronic Pain Patients Through a Supervised Student Inter-professional Pain Clinic.](#)

**Cao L**, Hull SZ.

Med Sci Educ. 2021 Jan 13.

<https://doi.org/10.1007/s40670-020-01189-4>

## Book Chapters

Vossos, H. and **Mokler, D.J.** Chapter 8: Substance Use Disorder in Geropsychiatry. Handbook of Geropsychiatry for the Advanced Practice Nurse: Mental Health Care for the Older Adult, Springer Publishing, 2020 EISBN: 97808261575152020

Smith-East, M. and **Mokler, D.J.** Chapter 11: Medication Issues and Prescribing in Geropsychiatry. Handbook of Geropsychiatry for the Advanced Practice Nurse: Mental Health Care for the Older Adult, Springer Publishing, 2020. EISBN: 9780826157515

## Regional/National/International Presentations

**Dr. David Mokler** gave the plenary lecture on the “The Neuroscience of Psychedelic Medicine” at the Mushroom Conference this past November of 2020.

On December 10, **Dr. Tamara King** was an invited speaker at the US Association for the Study of Pain (US-ASP) inaugural conference. Dr. King discussed how her laboratory uses pain relief induced conditioned place preference to examine persistent ongoing or spontaneous pain in parallel with measures of evoked pain to explore similarities and differences between spontaneous and evoked pain.

On December 17, **Drs. Kathy Thompson** and **Douglas Spicer** presented a workshop at CUNY School of Medicine (through Zoom) on the use of concept mapping as a tool for integration in a medical school curriculum.

## Regional/National/International Abstracts

**Mokler, D.J.** The Peter J. Morgane Research Collection on the Cetacean Brain. Soc. Neurosci. Abstract, 2021.

## COM Student Presentations (and their departmental mentors) at the COM Seminar Series:

Bisher Sultan, OMS2 and Radwa Ibrahim, OMS2

Mentor: **Karen Houseknecht, PhD**

*“Mechanisms underlying antipsychotic associated metabolic side effects: Risperidone and Olanzapine alter hepatic and cardiac proteomic signature in mice”*

Laura Horowitz, OMS2

Mentor: **Douglas Spicer, PhD**

*“Analysis of Nutrition Attitude, Knowledge, and Education Satisfaction of Medical Residents”*

Cassandra Thorburn, OMS2

Mentor: **Benjamin Harrison, PhD**

*“Elucidating Chemotherapy-Induced Peripheral Neuropathy Mechanisms Using Transcriptome Analysis of Sensory Neurons”*

Kristen Kircher, OMS2 and Whitman Oehler-Marx, OMS2

Mentor: **Kathleen Becker, PhD**

*“Long-Term Cold Exposure Induces Bone and Fat Loss in Female C57BL/6J Mice”*

Christina Tsui, OMS4

Mentor: **Douglas Spicer, PhD**

*“Osteopathic Medical School Faculty and Student Perceptions of Pre-Clinical Curriculum Adaptation to an Online Format”*

Bryar Hansen, OMS3

Mentor: **Diana Goode, PhD**

*“CD4+ T cell and DRG Neuron Communication: An Investigation of Sex-dependent Functional T cell Changes in the Setting of Paclitaxel-Induced Peripheral Neuropathy”*

Bianca Thakkar, OMS2 and Bianca Zarrella, OMS2

Mentor: **Jack Williams, PhD**

*“Telemedicine: A Mixed-Model Approach Using Patient Perspectives to Decrease Barriers”*

## Grant (study section) Reviewers

**Tamara King, PhD** was a study section member and reviewed grants for NIH's *Sensory and Motor Neuroscience, Cognition and Perception Fellowship Study Section* [ZRG1 F02B-E] in December, 2020.

**Ling Cao, MD/PhD** was a study section member and reviewed grants for NIH's, *NIH Director's New Innovator DP2 Award* [ZRG1 CVRS-A (70)] in November/December, 2020.

**Christoph Straub, PhD** recently served as a grant reviewer and member of an NSF panel focused on reviewing neuroscience grant applications.

## New Funding:

**Tamara King, PhD** received a contract for an osteoarthritis research project from RAPT Therapeutics, a clinical-stage biopharmaceutical company, to study the immune factors involved in knee joint osteoarthritis. More information can be found here:

<https://www.une.edu/news/2020/center-excellence-neurosciences-receives-funding-new-project>

## Other News:

Congratulations to **Dr. Hwyla Arafat** on being invited to join the faculty advisors' team for the First Aid/USMLE-Rx review textbook.

See the article "Turning Medical Students into Medical Educators", a program that is facilitated in part by **Drs. Frank Willard** and **Frank Daly**. <https://www.emra.org/emresident/article/caap/>

**Dr. Carol Brenner** was interviewed by the press about mitochondrial transfer procedures and mitochondrial diseases.

**Dr. Meghan May** was featured in a number of interviews on COVID-19 in multiple publications listed here:

Reader's Digest interview:

<https://www.rd.com/list/things-you-need-to-clean-after-returning-from-outside/>

ABC News (Washington) interview:

<https://abc6onyourside.com/news/nation-world/schools-face-outbreaks-and-quarantines-as-challenges-of-reopening-emerge>

Self Magazine interview:

<https://www.self.com/story/coronavirus-pandemic-isnt-over>

PPH interview:

<https://www.pressherald.com/2020/06/17/quick-action-at-cape-memory-care-limited-covid-19-cases-in-community/>

AccuWeather Channel interview:

<https://www.accuweather.com/en/videos/can-covid-19-impact-air-conditioning/TzvloVu0>

The New Republic interview:

<https://newrepublic.com/article/159085/scientists-really-wish-trump-hadnt-made-covid-plasma-announcement>

The New Republic interview:

<https://newrepublic.com/article/159443/promising-new-covid-19-therapy-probably-havent-heard>

PPH interview:

<https://www.pressherald.com/2020/09/13/what-weve-learned-about-covid-19-so-far/>

PPH interview:

<https://www.pressherald.com/2020/09/03/maine-cdc-says-its-ready-if-covid-19-vaccine-sent-to-states-this-fall/>

Business Insider interview:

<https://www.businessinsider.com/should-businesses-turn-off-air-conditioning-during-the-pandemic-2020-4>