

# Department of Biomedical Sciences Newsletter

As we begin to wind down on another successful year in the department and academic year, I wanted to thank everyone for their dedication to the mission of our department, particularly during this difficult year with COVID and in dealing with all of the obstacles you had to navigate. THANK YOU ALL!

The Department of Biomedical Sciences/COM Fall seminar series is open for scheduling speakers. The seminars will continue to be on Fridays from 12-1 via Zoom. Please consider being a speaker, or inviting one, to present a seminar to the UNE community in the next academic semester. Our students are required to attend two seminars in the first semester.

The seminar schedule is kept up-to-date and can be found here: <https://sites.une.edu/biomedicalsciences/seminar-series/>.

**Congratulations to Dr. Tamara King on her promotion to Professor!!!**

## Faculty meeting dates:

- April 27, 2021; 9:30-11; Zoom
- May 25, 2021; 9:30-11; Zoom
- June 22, 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/>

## **Spring 2021 Events (to date) via Zoom:**

**Friday, April 2; 12-1pm**

Seminar by Dr. Lisa Robison, Stetson University  
"Sex differences in vascular and metabolic contributions to dementia"

**Friday, April 9; 12-1pm**

Seminar by Dr. Justin Bourgeois, Albany Medical College  
"Sex-dependent critical periods influence adult thermal nociceptive response"

**Friday, April 30; 12-1pm**

Seminar by Dr. Kristine Wylie, Washington University  
"The Human Virome/Microbiome and Reproductive Outcomes"

**Friday, May 21; 12-1pm**

Seminar by Dr. Abbey Hughes, Johns Hopkins University  
"Integrating psychological science into multiple sclerosis rehabilitation: cognitive behavioral interventions for symptom management"

**Friday, May 21; 12-1pm**

Seminar by Dr. Mehreen Arshad, Northwestern University  
"Gut colonization with ESBL E.coli in healthy individuals: an overlooked community reservoir"

## **Spring 2021 Shared Governance:**

UFA

**Wednesday, April 21**

Via Zoom, 12-2pm

**Wednesday, May 19**

Via Zoom, 12-2pm

All faculty meeting with President Herbert

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COMFA

**Wednesday, April 28**

Via Zoom, 12-1pm

**Thursday, May 20**

Via Zoom, 12-1pm

## Faculty / Student / Staff Highlights:

### New Publications (from PubMed (links enabled))

#### [Fine-tuning the cardiac O-GlcNAcylation regulatory enzymes governs the functional and structural phenotype of the diabetic heart.](#)

Prakoso D, Lim SY, Erickson JR, Wallace RS, Lees JG, Tate M, Kiriazis H, Donner DG, Henstridge DC, Davey JR, Qian H, Deo M, Parry LJ, **Davidoff AJ**, Gregorevic P, Chatham JC, De Blasio MJ, Ritchie RH.

Cardiovasc Res. 2021 Feb 8:cvab043.

doi: 10.1093/cvr/cvab043.

#### [Regulation of mitochondrial function by Epac2 contributes to acute inflammatory hyperalgesia.](#)

**Goode DJ, Molliver DC.**

J Neurosci. 2021 Feb 12:JN-RM-2368-20.

doi: 10.1523/JNEUROSCI.2368-20.2021.

#### [Admissions During the COVID-19 Pandemic: Navigating an Altered Landscape for Successful Selection of Future Healthcare Providers.](#)

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

Med Sci Educ. 2021 Feb 23:1-4.

doi: 10.1007/s40670-021-01246-6.

#### [Emerging Infectious Diseases at the Clinic-Clinical Lab-Research Lab Interface.](#)

Anastasio N\*, Green E\*, Pettit S\*, **May M.**

Annals of Pub Health Rep., 5(1):142-145, 2021.

\* denotes student author

### Books and Book Chapters

**Dr. Frank Willard** was a contributing author to the 42nd edition (2021) of the English version of Gray's Anatomy entitled "Gray's Anatomy: The Anatomical Basis of Clinical Practice" published by Elsevier.

R.E. Rohde, **M. May**. "*Francisella*", in Bailey & Scott's Diagnostic Microbiology, 15<sup>th</sup> edition (P. Tille, ed.) Mosby (Elsevier), Maryland Heights, MO. Publication Date: February 2021.

R.E. Rohde, S. Weigum, **M. May**. "Cell Wall Deficient Bacteria: *Mycoplasma* and *Ureaplasma*", in Bailey & Scott's Diagnostic Microbiology, 15<sup>th</sup> edition (P. Tille, ed.) Mosby (Elsevier), Maryland Heights, MO. Publication Date: February 2021.

(\* Bailey & Scott's is the gold-standard textbook for clinical microbiology in Medical Laboratory Science programs)

## Regional/National/International Presentations

**Dr. Hwya Arafat** gave a presentation entitled "Covid-19 Impact on the Cardiovascular System" at the International Symposium for the Egyptian Society of Clinical Histology and Cytology Virtual Conference on December 7, 2020.

**Dr. Hwya Arafat** gave a presentation entitled "Providing Care for Muslim Patients" at the Maine Osteopathic Association Midwinter Symposium Virtual meeting on February 13, 2021.

**Dr. Kathleen Becker** presented an invited talk entitled "Dock7 controls bone density directly in the osteoblast" on March 5, 2021 at the Maine Medical Center Research Institute as part of their Bone Interest Group.

**Dr. Tamara King** presented an invited virtual lecture entitled "Interaction of Pain and Exercise" at the University of Connecticut on March 9, 2021.

**Dr. Tamara King** was an invited panel member at the virtual Orthopaedic Research Society Meeting for their research interest group focused on "Bridging Disciplines to Find Solutions for Osteoarthritis", February 8-11, 2021.

**Dr. Meghan May** served as the convener and as a panelist for "The Need, Design, and Logistics for a Vaccine against *Mycoplasma genitalium*" at the 6<sup>th</sup> Biennial/1<sup>st</sup> Virtual United States Organization for Mycoplasma Congress in December, 2020.

## COM Student Fellowships Awarded (and their departmental mentors):

Congratulations to the following COM students (and their faculty mentors from the Department of Biomedical Sciences) for receiving a 2021-2022 Carmen Pettapiece Student Research Fellowship:

Paige Ahlholm (Class of 2024)

Project title: The role of CD2AP scaffold protein in Alzheimer's disease

Mentor: **Benjamin Harrison, PhD**

Marah Alian (Class of 2024)

Project title: Contribution of Bone Morphogenic Protein Signaling in Ultraviolet Irradiation Induced Corneal Nerve Sensitization

Mentor: **Ian Meng, PhD**

Stephen Cheng (Class of 2023)

Project title: Rat Sex Dependent Immune Cells Differences in Synovial Fluid of Monosodium Iodoacetate-Induced Knee Osteoarthritis

Mentors: **Tamara King, PhD** and **Diana Goode, PhD**

Hsin I Chu & Rushi Shah (Class of 2022)

Project title: Trending chief complaints among COVID-19 positive patients of the Eastern Connecticut Health Network healthcare system

Mentor: **Hwya Arafat, MD, PhD**

Nora Connors (Class of 2024)

Project title: Inflammatory responses within lumbar dorsal root ganglia following sciatic nerve crush in microglial CD137L conditional knockout mice.

Mentor: **Ling Cao, MD, PhD**

Connor Devoe (Class of 2024)

Project title: Determining the Role of the Transcriptional Regulatory Protein CELF4 on Pro-Nociceptive Protein Expression in Dorsal Root Ganglion Neurons

Mentors: **Benjamin Harrison, PhD** and **Diana Goode, PhD**

Bruno Sousa DiNucci (Class of 2024)

Project title: Sciatic nerve responses in CD137L knockout mice following sciatic nerve crush-induced neuropathic pain

Mentor: **Ling Cao, MD, PhD**

Kimberly Drago (Class of 2024)

Project title: The Role of Spinal Cord Processing of Sensory Input in Maintaining Movement Evoked Breakthrough Pain

Mentor: **Tamara King, PhD**

Siobhan Fennel (Class of 2024)

Project title: Neuronal major histocompatibility complex II and the regulation of antiinflammatory CD4+ T cells in chemotherapy-induced peripheral neuropathy

Mentor: **Diana Goode, PhD**

Daniel Gehan (Class of 2024)

Project title: Building a Fiber Photo-Optometry Set-Up to Measure in vivo Acetylcholine Levels in Mouse Nucleus Accumbens in the Context of Pain Chronification

Mentor: **Christoph Straub, PhD**

Giesel Henderson (Class of 2024)

Project title: Investigating the effects of saphenous nerve transection on early tibia bone remodeling

Mentor: **Kathleen Becker, PhD** and **Tamara King, PhD**

Conner Lajoie (Class of 2024)

Project title: Elucidating the role of Dock7 in osteoblast differentiation in a novel knockout mouse model

Mentor: **Kathleen Becker, PhD**

Kaitlyn Lavarney (Class of 2023)

Project title: The Utility of Student Lead Medical Education During a Pandemic

Mentor: **Carol Brenner, PhD**

Shana Morel (Class of 2024)

Project title: Quantitative Examination of Hedgehog Signaling in Primary Cilia of Neural Crest Cells in A Mouse Model of Congenital Heart Disease

Mentor: **Kerry Tucker, PhD**

Also, a big thank you to **Dr. Hwya Arafat** (the faculty advisor for the Pettapiece Research Fellowships).

Dr. Arafat and myself would also like to acknowledge and extend gratitude to the COM faculty who reviewed the applications and served as mentors for the first- and second-year students that reviewed the Pettapiece Research Fellowship applications:

**Drs. Kathleen Becker, Carol Brenner, Mark Brezinski, Marilynn Gugliucci, Tamara King, Kyle Scully, and Chris Straub.**

### Grant (study section) Reviewers

**Derek Molliver, PhD** was a study section member and reviewed grants for NIH's *Neurobiology of Pain and Itch (NPI)* study section in February, 2021.

**Russell Ferland, PhD** was a study section member and reviewed grants for NIH's *Developmental Brain Disorders (DBD)* study section in February, 2021.

### Other News:

**Dr. Meghan May** was recently elected the chair of the International Organization for Mycoplasmaology and will assume her role of chair-elect in July.