

University of Central Florida

College of Medicine

AcCOMplishments



October - December 2019

Brought to you by the Faculty Life Office

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Welcome to this quarter's edition of UCF College of Medicine's Faculty AcCOMplishments! This newsletter is designed to highlight our faculty's hard work and dedication to the medical field and the value it adds to our university and community. In addition to highlighting these endeavors, the content also acts as a resource for research collaborations and interests among fellow faculty members. Take a few moments to discover the amazing contributions that our faculty have accomplished.

FEATURED ARTICLE



*Magdalena Pasarica, MD
Received \$250,000 Extramural
Grant from Florida Department
of Children & Families for Opioid
Education Intervention*

UCF College of Medicine's opioid education curriculum is being enhanced thanks to a funding boost from the Florida Department of Children and Families. The college recently received \$250,000 from the DCF's State Opioid Response Grant which is given to medical schools to strengthen opioid education in a bid to stem the epidemic in Florida.

In response to Florida's opioid problem, the College of Medicine created an innovative and diverse opioid curriculum that spans all four years of medical school. The grant will fund a project to review and further enhance the curriculum.

Associate professor of medicine at UCF, Dr. Magdalena Pasarica is the principal investigator on the project and will be working with faculty members Dr. Denise Kay, assistant professor and Dr. Martin Klapheke, psychiatry professor to expand the medical education curricula. The improved curricula will include coverage of pain assessment and management to ensure integration of substance use disorders with a focus on opioid use disorders and misuse.

Dr. Pasarica said all four years of the curriculum will be reviewed. "We plan to use a systematic approach, which begins with a needs assessment and mapping of current curriculum according to the opioid epidemic educational competencies as recommended by the Association of American Medical Colleges."

"Our students will have access to an enhanced and updated curriculum for opioid use disorder and opioid misuse."

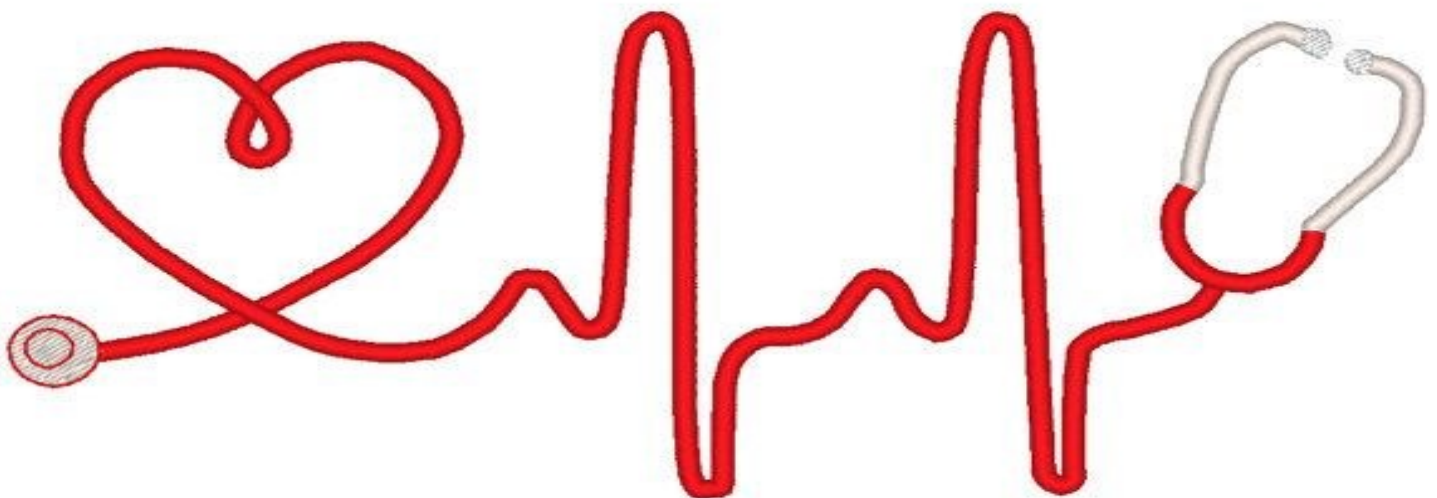
The grant will also be used to employ the services of an instructional designer who will help plan additional instructional technology educational materials for use in the program. New self-learning modules and simulation encounters for medical students will also be developed to fill gaps identified in the curriculum.

UCF is one of 60 medical schools in the nation – and the only one in Florida – that made a pledge in 2015 to teach medical students, in all years, about the dangers of prescribing opioids in an effort to curb the growing epidemic of prescription opioid and heroin abuse.

UCF's opioid education curriculum has been recognized nationally for its approach and last fall was one of four medical schools in the nation invited to a listening session with White House representatives to share how its curriculum is addressing the opioid epidemic.

The four-year curriculum covers screening, diagnosis, treatment, and referral needs for patients with substance use disorders. In the first and second years, students are taught about pain management and the risks of prescribing opioids. They also gain experience evaluating patient-actors with substance use disorders, using screening tools and interview questions. They also learn to treat computerized mannequins who present with symptoms of an overdose. In the third and fourth years, students get direct clinical experience working with patients in hospitals and clinics with substance use disorders, including diagnosis, treatment and referral.

"The benefits of this grant are far-reaching," Dr. Pasarica said. "Our students will have access to an enhanced and updated curriculum for opioid use disorder and opioid misuse. And in the long term we will have more physicians armed with knowledge on opioids misuse prevention and how to treat overdoses— and that's one of the best ways to tackle the epidemic."



FACULTY PUBLICATIONS

- ♦ Roudebush C, Catala-Valentin A, **Andl T**, Le Bras GF, **Andl CD**. (Nov 2019). [Activin A-Mediated Epithelial De-Differentiation Contributes to Injury Repair in an Invitro Gastrointestinal Reflux Model](#). *Cytokine*. 123:154782. doi: 10.1016/j.cyto.2019.154782. Epub 2019 Jul 29.
- ♦ Xu K, Ganapathy K, **Andl T**, Wang Z, Copland JA, Chakrabarti R, Florczyk SJ. (Oct 2019). [3D porous chitosan-alginate scaffold stiffness promotes differential responses in prostate cancer cell lines](#). *Biomaterials*. 217:119311. doi: 10.1016/j.biomaterials.2019.119311. Epub 2019 Jun 28.
- ♦ Shahid M, George TB, Saller J, Haija M, Sayegh Z, Boulware D, Strosberg J, **Chakrabarti R**, Coppola D. (Nov/Dec 2019). [FGD4 \(Frabin\) Overexpression in Pancreatic Neuroendocrine Neoplasms](#). *Pancreas*. 48(10):1307-1311. doi: 10.1097/MPA.0000000000001422.
- ♦ **Crimi, E.**, Cirri S, Beninasa G, Napoli, C. (2019). Epigenetics Mechanisms in Multiorgan Dysfunction Syndrome. *Anesth Analg*, 129(5), 1422-1432. doi: 10.1213/ANE.0000000000004331.
- ♦ Daines, B., Berry, A., **Daroowalla, F.**, **Hirumi, A.**, **Harris, D.** (2019). The Use of the 5E Instructional Design Strategy to Teach Respiratory Physiology to First-Year Medical Students. *Advances in Physiology Education*, 546-552. <https://doi.org/10.1152/advan.00116.2019> .
- ♦ Staats PN, Souers RJ, Nunez AL, Li A, Kurtycz DFI, Goodrich K, Witt BL, **Davey DD**, Booth CN. (2019). The Differential Diagnosis of Reparative Changes and Malignancy: Performance in the College of American Pathologists PAP Education and Proficiency Testing Programs. *Arch Pathol Lab Med* 2020 PMID: 31755780.
- ♦ Mamounis KJ, Avalos D, Yukl ET, **Davidson VL**. (Nov 2019). [Kinetic and structural evidence that Asp-678 plays multiple roles in catalysis by the quinoprotein glycine oxidase](#). *J Biol Chem*. 15;294(46):17463-17470. doi: 10.1074/jbc.RA119.011255. Epub 2019 Oct 15.
- ♦ Mamounis KJ, Ma Z, Sanchez-Amat A, **Davidson VL**. (Oct 2019). [Characterization of PlGoxB, a Flavoprotein Required for Cysteine Tryptophylquinone Biosynthesis in Glycine Oxidase from Pseudoalteromonas Luteoviolacea](#). *Arch Biochem Biophys*. 674:108110. doi: 10.1016/j.ab.2019.108110. Epub 2019 Sep 18.
- ♦ Baill IC, Khallouq BB, Joleto O, Jacobs A, Larkin R, **Dil N**. (2019). How Postbaccalaureate Career Changer and Traditional Medical Students Differ Academically. *South Med Journal*, 112 (12):610-616. DOI: 10.14423/SMJ.0000000000001044.
- ♦ Ein L, Bracho O, Mei C, Patel J, Boyle T, Monje P, **Fernandez-Valle C**, Bas E, Thomas G, Weed D, Sargi Z, Dinh C. (Dec 2019). [Inhibition of Tropomyosine Receptor Kinase B on the Migration of Human Schwann Cell and Dispersion of Oral Tongue Squamous Cell Carcinoma in Vitro](#). *Head Neck*. 41(12):4069-4075. doi: 10.1002/hed.25956. Epub 2019 Sep 9.
- ♦ Li X, Saadat S, **Hu H**. (Nov 2019). [BHap: a Novel Approach for Bacterial Haplotype Reconstruction](#). *Bioinformatics*. 35(22):4624-4631. doi: 10.1093/bioinformatics/btz280.
- ♦ **Kay D**, **Pasarica M**. (Sept 2019). Using Technology to Increase Student (and Faculty Satisfaction With) Engagement in Medical Education. *Adv Physiol Educ*. 1;43(3):408-413. doi: 10.1152/advan.00033.2019.
- ♦ Talukder A, Saadat S, **Li X**, **Hu H**. (Oct 2019). [EPIP: a Novel Approach for Condition-Specific Enhancer-Promoter Interaction Prediction](#). *Bioinformatics*. 35(20):3877-3883. doi: 10.1093/bioinformatics/btz641.

FACULTY PUBLICATIONS

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- ♦ Rupar MJ, Golusinski P, Golusinski W, **Masternak MM**. (Sept 2019). [Human Papillomavirus and the use of nanoparticles for immunotherapy in HPV-related cancer: A review](#). *Rep Pract Oncol Radiother*. 2019 Nov-Dec;24(6):544-550. doi: 10.1016/j.rpor.2019.08.006. Epub.Review.
- ♦ Colon G, Saccon T, Schneider A, Cavalcante MB, Huffman DM, Berryman D, List E, Ikeno Y, Musi N, Bartke A, Kopchick J, Kirkland JL, Tchkonja T, **Masternak MM**. (Dec 2019). [The Enigmatic Role of Growth Hormone in Age-Related Diseases, Cognition, and Longevity](#). *Geroscience*. 41(6):759-774. doi: 10.1007/s11357-019-00096-w. Epub 2019 Sep 4. Review.
- ♦ Smith AM, Costello MS, Kettring AH, Wingo RJ, **Moore SD**. (Oct 2019). [Ribosome Collisions Alter Frameshifting at Translational Reprogramming Motifs in Bacterial mRNAs](#). *Proc Natl Acad Sci U S A*. 2019 Oct 22;116(43):21769-21779. doi: 10.1073/pnas.1910613116. Epub.
- ♦ Naser A, Odeh AK, Sharp RC, Qasem A, Beg S, **Naser SA**. (2019). [Polymorphisms in TNF Receptor Superfamily 1B \(TNFRSF1B:rs3397\) Are Linked to Mycobacterium Avium Paratuberculosis Infection and Osteoporosis in Rheumatoid Arthritis](#). *Microorganisms*. Dec 4;7(12). pii: E646. doi: 10.3390/microorganisms7120646.
- ♦ Jayaraj P, Narasimhulu CA, Maisseyu A, Durairaj R, Rao S, Rajagopalan S, **Parthasarathy S**, Desikan R. (2019). [Methoxyphenol Derivatives as Reversible Inhibitors of Myeloperoxidase as Potential Antiatherosclerotic Agents](#). *Future Med Chem*. Nov 26. doi: 10.4155/fmc-2019-0080. [Epub ahead of print].
- ♦ Li X, Jiang M, Tan T, Narasimhulu CA, Xiao Y, Hao H, Cui Y, Zhang J, Liu L, Yang C, Li Y, Ma J, Verfaillie CM, **Parthasarathy S**, Zhu H, Liu Z. (Nov 2019). [Acetylcysteine Prevents Oxidized Low-Density Lipoprotein-Induced Reduction of MG53 and Enhances MG53 Protective Effect on Bone Marrow Stem Cells](#). *J Cell Mol Med*. 2020 Jan;24(1):886-898. doi: 10.1111/jcmm.14798. Epub 2.
- ♦ Sairenji T, Stumbar S, Clark K, Watson KH, Bienz D, Scott S, Keyhani J, Minor S, Babb F, **Pasarica M**, Savi C. (Sept 2019). Lessons from a Symposium on Incorporating Entrustable Professional Activities into Medical School Curricula. *Society for Teachers of Family Medicine Education Column*. <https://www.stfm.org/publicationsresearch/publications/educationcolumns/2019/september/>.
- ♦ Burger M, Taddeo M S, Hushla D, **Pasarica M** (January 2020) Interventions for Increasing the Quality of Preventive Care at a Free Clinic. *Cureus* 12(1): e6562. DOI 10.7759/cureus.6562
- ♦ **Robinson, M.** (2019). Training Methods That Improve MD-PhD Student Self-Efficacy for Clinical Research Skills. *Online Publication by Cambridge University Press*. DOI: <https://doi.org/10.1017/cts.2019.419>.
- ♦ Cruz-Munoz, M., Munoz-Beristain, A., Petrone, J.R., **Robinson, M.**, Triplett, E. (2019). Growth Parameters of *Liberibacter crescens* Suggest Ammonium and Phosphate as Essential Molecules in the *Liberibacter*-Plant Host Interface. *BMC Microbiol* 19, 222. <https://doi.org/10.1186/s12866-019-1599-z>.

FACULTY PUBLICATIONS

- ◆ K. Dulany^{1*}, M. Bernier^{2*}, G. Finney⁴, R. Pereira³, P. Koehler^{3, 2}, **M. Robinson⁵**, C. Batich¹. (2019). Phytic Acid Improves Lifespan After Traumatic Brain Injury in a Drosophila Model. *ACS Neuroscience Journal*.
- ◆ Kellner A, Taylor M, Banerjee T, Britt CBT, **Teter K.** (Oct 2019). [A Binding Motif for Hsp90 in the A Chains of ADP-Ribosylating Toxins That Move from the Endoplasmic Reticulum to the Cytosol](#). *Cell Microbiol.* 21(10):e13074. doi: 10.1111/cmi.13074. Epub 2019 Jul 5.
- ◆ Rodrigues Felix C, Roberts JC, Winder PL, Gupta R, Diaz MC, Pomponi SA, Wright AE, **Rohde KH.** (2019). [Plakinamine P, A Steroidal Alkaloid with Bactericidal Activity Against Mycobacterium tuberculosis](#). *Mar Drugs*. 2019 Dec 16;17(12). pii: E707. doi: 10.3390/md17120707.
- ◆ Schneider A, Wood HN, Geden S, Greene CJ, Yates RM, Masternak MM, **Rohde KH.** (2019). [Growth Hormone-Mediated Reprogramming of Macrophage Transcriptome and Effector Functions](#). *Sci Rep*. Dec 18;9(1):19348. doi: 10.1038/s41598-019-56017-6.
- ◆ Singla R, Garner KH, Samsam M, Cheng Z, **Singla DK.** (2019 Dec). [Exosomes Derived from Cardiac Parasympathetic Ganglionic Neurons Inhibit Apoptosis in Hyperglycemic Cardiomyoblasts](#). *Mol Cell Biochem.* 462(1-2):1-10. doi: 10.1007/s11010-019-03604-w. Epub 2019 Aug 29.
- ◆ **Singla DK**, Johnson TA, Tavakoli Dargani Z. [Exosome Treatment Enhances Anti-Inflammatory M2 Macrophages and Reduces Inflammation-Induced Pyroptosis in Doxorubicin-Induced Cardiomyopathy](#). *Cells*. 2019 Oct 9;8(10). pii: E1224. doi: 10.3390/cells8101224.
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- ◆ Cherubin P, Fidler D, Quiñones B, **Teter K.** (Nov 2019) [Bimodal Response to Shiga Toxin 2 Subtypes Results from Relatively Weak Binding to the Target Cell](#). *Infect Immun.* 87(12). pii: e00428-19. doi: 10.1128/IAI.00428-19. Print 2019 Dec.
- ◆ **Zhang WC.** (2019). MicroRNAs Tune Oxidative Stress in Cancer Therapeutic Tolerance and Resistance. *Int J Mol Sci.*;20(23):6094. PMID: 31816897.
- ◆ **Zhang WC.** (Dec 2019). [MicroRNAs Tune Oxidative Stress in Cancer Therapeutic Tolerance and Resistance](#). *Int J Mol Sci.*;20(23). pii: E6094. doi: 10.3390/ijms20236094. Review.

FACULTY PRESENTATIONS

- ♦ **Almagro-Moreno, S.** Keynote speaker on the XII International Scientific Congress organized by the *National Institute of Health* in Peru.
- ♦ **Davey, D.** “Leadership Lessons Learned” (Round table faculty). *American Society of Cytopathology Annual Meeting*, Salt Lake City, Utah, November 15, 2019.
- ♦ **Dow TL,**
 - ◇ “Understanding prolactin regulation and determining the efficacy of cabergoline and domperidone to mitigate prolactin-associated ovarian cycle problems in zoo African elephants (*Loxodonta africana*)”, *International Society of Wildlife Endocrinology meeting* at Kruger National Park, South Africa, October 2019.
 - ◇ “Understanding prolactin regulation and determining the efficacy of cabergoline and domperidone to mitigate prolactin-associated ovarian cycle problems in zoo African elephants (*Loxodonta africana*)”, *16th International Elephant Conservation and Research Symposium*, Limpopo, South Africa
- ♦ **Harris, D.** “Basic and Clinical Science Integration: Implications for Curriculum Renewal.” *Medical Education Grand Rounds*, December 13, 2019, University of Miami, FL.
- ♦ **Hirumi, A., Barbato, E.*, Horger, L.*, Harris, D., Dil, N., & Daroowalla, F.** “Integrating Clinical Cases with MedEd-COTS to Innovate Medical Education”. Concurrent session presented at the *Annual Association for Educational Communication and Technology conference*, Las Vegas, NV. Oct. 21-25, 2019.
- ♦ **Barbato, E.*, Hirumi, A., & Horger, L.*** “Investigating the Pedagogical Foundations of MedEd-COTS.” Roundtable session presented at the *Annual Association for Educational Communication and Technology Conference*, Las Vegas, NV. Oct. 21-25, 2019.
- ♦ **Horger, L.*, & Hirumi, A.** “Systematic Review of the Use and Integration of MedED-COTS”. Roundtable session presented at the *Annual Association for Educational Communication and Technology Conference*, Las Vegas, NV. Oct. 21-25, 2019.
- ♦ **Kean, T.** “Scaffold-free vs. Direct-write vs. Bioprinting of 3D Cartilage Constructs”. *Tissue Engineering and Regenerative Medicine Society Annual Meeting*, Orlando, FL, Dec, 2019.
- ♦ **Pasarica, M.** “Best Practices in Behavioral Health Curriculum in Medical Colleges”. *AAMC/ US Department of Health and Human Services Meeting*, Washington, DC, Oct 2019.

FACULTY AWARDS, SERVICE & RECOGNITION

- ♦ **Copik, A., Altomare, D.** Awarded grant from Florida Department of Health - Adoptive PM21-NK cells with PD-L1 blockade for treatment of lung cancer.
- ♦ **Dexter, Nadine; Lebowitz, David.** Awarded 2nd Place for Poster, “Shaping Wikipedia Editing as a Teaching and Learning Tool to Promote Deep Learning and Information Literacy” at the Annual SCMLA Conference.
- ♦ **Gotschall, Terri.** Named New Column Editor for the Journal of Electronic Resources in Medical Libraries.
- ♦ **Pasarica, M.**
 - ◇ Completed Gold Executive Leadership Track.
 - ◇ Member of the Editorial Board for Nutrition & Diabetes.
 - ◇ Received Extramural Grant from the Florida Department of Children and Families for \$250,000 as Principal Investigator. UCF Opioid Education Intervention.
- ♦ **Simms-Cendan, J.** Elected as Treasurer of the Federación Internacional de Ginecología Juvenil e Infantil. (International Peds Adol Gynecology Society), 12/1/2019.
- ♦ **Southwell, A.**
 - ◇ Joined the Huntington’s Disease Regulatory Science Consortium at the Critical Path Institute.
 - ◇ Awarded grant from Vaccinex, Inc for Preclinical assessment of combination anti-semaphorin 4D immunotherapy and huntingtin suppression; PI.
 - ◇ Awarded grant from Skyhawk Therapeutics for Comparison of oral gavage and medicated food delivery routes; PI.
- ♦ **Verduin, M.**
 - ◇ Appointed Vice Chair of the Addiction Psychiatry Article-Based Assessment Committee for the American Board of Psychiatry and Neurology (ABPN).