

University of Central Florida
College of Medicine
AcCOMplishments



April—June 2020 Edition

Brought to you by the Faculty Life Office

Inside this issue:

Featured Article	1-2
Faculty Publications	3-5
Faculty Presentations	6-7
Awards & Service	8-9

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



Amber Southwell, PhD
received an NIH R01 grant for
her research in Huntington's
Disease.

Dr. Amber Southwell, an Assistant Professor at the Burnett School of Biomedical Sciences, was recently recognized for her research in Huntington disease (HD) with the awarding of a prominent NIH R01 grant "*Decoding cerebrospinal fluid huntingtin biomarkers*".

The lack of quantitative, robust, and reliable biomarkers for use in early subclinical diagnosis is a major obstacle for development of disease modifying therapies for HD. Such markers are needed to assist in monitoring disease progression, patient stratification, and evaluating efficacy of therapeutics in the clinic.

Dr. Southwell's research team has previously developed a technique to measure mutant huntingtin, the disease-causing protein for Huntington disease, in HD mouse and patient cerebrospinal fluid. Dr. Southwell comments on her research, "Our research showed that gene silencing therapies that reduce this toxic protein in the brain also reduce it in the CSF, which is the fluid that bathes the brain, in HD mice, suggesting that changes in CSF huntingtin could be used in turn to assess changes in brain huntingtin, which is critical for the multiple ongoing and upcoming clinical trials of experimental therapies aimed at reducing the disease causing protein in brain."

This work, “*Ultrasensitive measurement of huntingtin protein in cerebrospinal fluid demonstrates increase with Huntington disease stage and decrease following brain huntingtin suppression*” was recognized by the Huntington Study Group, the US clinical trials working group for HD, as the ‘Most influential HD paper of the year’.

Based on these findings, Roche and Wave Life Sciences have both used the measure of CSF huntingtin in clinical trials of huntingtin gene silencing therapies to determine whether they could actually reduce the disease-causing protein in HD patient CSF. It worked. Both companies observed dose-dependent reduction in CSF huntingtin following treatment. This is very encouraging, and suggests that the therapies are reducing the toxic protein in the brains of patients, which should greatly mitigate disease. However, since we don't know where this protein in the CSF comes from or how it enters CSF from the cells of origin, we can't really say what is being measured in these clinical trials and what it might mean about how these therapies change patient's brains.”

The R01 grant awarded for her project is to use their specialized technique for measuring huntingtin in CSF to answer these questions: Where huntingtin in CSF originates, how it enters the CSF, and ultimately, what therapy-induced changes in CSF huntingtin mean. With this information, her team will be able to tell how these very promising gene therapy approaches are changing patient's brains, which should allow us to determine early on whether an experimental therapy is likely to provide benefit to patients. Dr. Southwell’s research team will be working on this project for the next few years, aiming to support development of an effective treatment for Huntington disease.



FACULTY PUBLICATIONS

- ◆ Jayakumar JM[#], Balasubramanian D[^], Reddi G[#], **Almagro-Moreno S*** (2020) Synergistic role of abiotic factors driving viable but non-culturable *Vibrio cholerae*. *Environmental Microbiology Reports* (In press)
- ◆ Jayakumar JM[#], Shapiro OH, **Almagro-Moreno S*** (2020) Improved method for transformation of *Vibrio vulnificus* by electroporation. *Current Protocols in Microbiology Reports* (In press)
- ◆ Farmer SM, **Andl CD**. Computational modeling of transforming growth factor β and activin a receptor complex formation in the context of promiscuous signaling regulation. *J Biomol Struct Dyn*. 2020 June 27;1-16. doi: 10.1080/07391102.2020.1785330. Online ahead of print.PMID: 32597324
- ◆ Mavian C, Paisie TK, Alam MT, Browne C, Beau De Rochars VM, Nembrini S, Cash MN, Nelson EJ, **Azarian T**, Ali A, Morris JG Jr, Salemi M. Toxigenic *Vibrio cholerae* evolution and establishment of reservoirs in aquatic ecosystems. *Proc Natl Acad Sci U S A*. 2020 Apr 7;117(14):7897-7904. doi: 10.1073/pnas.1918763117. Epub 2020 Mar 30.PMID: 32229557. Free PMC article.
- ◆ Sarah B Gitto, Jordan M Beardsley, Sai Preethi Nakkina, Jeremiah L Oyer, Kathryn A Cline, Sally A Litherland, Alicja J Copik, Amr S Khaled, Na'im Fanaian, J Pablo Arnoletti, **D Altomare**. Identification of a Novel IL-5 Signaling Pathway in Chronic Pancreatitis and Crosstalk With Pancreatic Tumor Cells. *Cell Commun Signal*. 2020 Jun 17;18(1):95. doi: 10.1186/s12964-020-00594-x.
- ◆ Kong, S.S., Azarfar, A. & **Bhanusali, N**. Sneddon syndrome: under diagnosed disease, complex clinical manifestations and challenging diagnosis. A case-based review. *Rheumatol Int* (2020). <https://doi.org/10.1007/s00296-020-04625-1>.
- ◆ Achanta S, Gorky J, Leung C, Moss A, Robbins S, Eisenman L, Chen J, Tappan S, Heal M, Farahani N, Huffman T, England S, **Cheng ZJ**, Vadigepalli R, Schwaber. A Comprehensive Integrated Anatomical and Molecular Atlas of Rat Intrinsic Cardiac Nervous System. *JS.iScience*. 2020 Jun 26;23(6):101140. doi: 10.1016/j.isci.2020.101140. Epub 2020 May 26.PMID: 32460006 Free article.
- ◆ St. Onge JE, **Davey D**, Levine R, Littles A. Speaking with one voice in Florida: A GME statewide collaboration. *J Grad Med Educ* 2020;12:135-7 (April). PMID: 32322341 DOI:<http://dx.doi.org/10.4300/JGME-D-19-00665.1>.
- ◆ **Davidson, V** (May 2020) Protein-derived Cofactors. *Encyclopedia of Life Sciences* (eLS). John Wiley & Sons, Ltd: Chichester. DOI: 10.1002/9780470015902.a0000664.pub4.
- ◆ Dil S, **Dil N**, Maken Z H (June 12, 2020) COVID-19 Trends and Forecast in the Eastern Mediterranean Region With a Particular Focus on Pakistan. *Cureus* 12(6): e8582. doi:10.7759/cureus.8582
- ◆ Dinh CT, Nisenbaum E, Chyou D, Misztal C, Yan D, Mittal R, Young J, Tekin M, Telischi F, **Fernandez-Valle C**, Liu XZ. Genomics, Epigenetics, and Hearing Loss in Neurofibromatosis Type 2. *Otol Neurotol*. 2020 Jun;41(5):e529-e537. doi: 10.1097/MAO.0000000000002613.PMID: 32150022
- ◆ **Garbayo, L** (June 2020) Policy Briefing Covid-19 ICU beds: Shortcomings, inconsistencies, and disparities in federal and state government data impair the assessment and evaluation of policies. The Solidarity Research Network, University of São Paulo, Brazil. *Public Policies and Societal Responses, Bulletin 9*. https://redepesquisasolidaria.org/wp-content/uploads/2020/06/boletimpps_9_5junho_ingles.pdf

FACULTY PUBLICATIONS

- **Garbayo, L** (June 2020) Policy Briefing Note 13: Differentiated Strategies and Lack of Testing Benchmarks Hinder Pandemic Response, Undermine Social Distancing Decisions and Further Increase Insecurity, The Solidarity Research Network, University of São Paulo, Brazil. *Public Policies and Societal Responses, Bulletin 13*.
- ♦ De La Mora, E. & **Hirumi, A.** (2020). The Effects of Background Music in Learning: A Systematic Review of Literature to Guide Future Research and Practice. *Educational Technology Research and Development*. <https://doi.org/10.1007/s11423-020-09783-3>.
- ♦ **Hirumi, A., Kay, D.,** Baines, B.*, Nedimyer, J.*, **Cendan, J.** (2020). What do instructional designers and educational psychologists need to know to work effectively in medical education. *Journal of Applied Instructional Design*, 9(1), 3-19.
- ♦ Valenzuela Scheker E, **Kathuria A,** Esnakula A, et al. Expression of Key Androgen-Activating Enzymes in Ovarian Steroid Cell Tumor, Not Otherwise Specified. *J Investig Med High Impact Case Rep*. 2020;8:2324709620933416. doi:10.1177/2324709620933416
- ♦ Wiesenborn DS, Gálvez EJC, Spinel L, Victoria B, Allen B, Schneider A, Gesing A, Al-Regaiey KA, Strowig T, Schäfer KH, **Masternak MM.** J Gerontol . The Role of Ames Dwarfism and Calorie Restriction on Gut Microbiota. *A Biol Sci Med Sci*. 2020 Jun 18;75(7):e1-e8. doi: 10.1093/gerona/glz236.PMID: 31665244
- ♦ Saccon TD, Rovani MT, Garcia DN, Mondadori RG, Cruz LAX, Barros CC, Bartke A, **Masternak MM,** Schneider A. Primordial follicle reserve, DNA damage and macrophage infiltration in the ovaries of the long-living Ames dwarf mice. *Exp Gerontol*. 2020 Apr;132:110851. doi: 10.1016/j.exger.2020.110851. Epub 2020 Jan 25.PMID: 31987917
- ♦ Binobaid L, **Masternak MM.** Molecular targets for NF1-associated malignant peripheral nerve sheath tumor. *Rep Pract Oncol Radiother*. 2020 Jul-Aug;25(4):556-561. doi: 10.1016/j.rpor.2020.04.010. Epub 2020 Apr 27.PMID: 32494228 Review.
- ♦ AlQasrawi D, Abdelli LS, **Naser SA.** Mystery Solved: Why Smoke Extract Worsens Disease in Smokers with Crohn's Disease and Not Ulcerative Colitis? Gut MAP! *Microorganisms*. 2020 May 2;8(5):666. doi: 10.3390/microorganisms8050666.PMID: 32370298 Free PMC article.
- ♦ Lee E, **Pasarica M,** St. Onge E – Updated in Diabetes. *Family Practice Essentials* (accepted in April 2020, to be published in 2021).
- ♦ Burger M, Taddeo M S, Hushla D, **Pasarica M@.** Interventions for Increasing the Quality of Preventive Care at a Free Clinic. *Cureus*. 4;12(1):e6562. (2020).
- ♦ Lessans S, Vega X , Foley B, Bossan A, Baker A, McElroy M, Crouse E, **Pasarica M@.** A patient-centeredness improvement study for efficacy of behavior change for healthy lifestyle and weight loss in a student-run free clinic. Accepted at Family Practice on May 19, 2020.
- ♦ C Massaro, J Thomas, H Ikhlef, S Dinara, S Cronk, H Moots, **O Phanstiel IV,** Serendipitous Discovery of Leucine and Methionine Depletion Agents during the Search for Polyamine Transport Inhibitors. *J. Med. Chem*. 2020, 63, 2814-2832. <https://pubs.acs.org/doi/abs/10.1021/acs.jmedchem.9b00568>

FACULTY PUBLICATIONS

- ◆ Dhar BC, Reed AJ, Mitra S, Sanchez PR, Nedorezova DD, Connelly RP, **Rohde KH**, Gerasimova YV. “Cascade of deoxyribozymes for the colorimetric analysis of drug resistance in *Mycobacterium tuberculosis*”. *Biosensors and Bioelectronics*. June 13,2020 (online access). <https://doi.org/10.1016/j.bios.2020.112385>.
- ◆ Yakobov N, Fischer F, Mahmoudi N, Saga Y, Grube CD, **Roy H**, Senger B, Grob G, Tatematsu S, Yokokawa D, Mouyna I, Latgé JP, Nakajima H, Kushiuro T, Becker HD. RNA-dependent sterol aspartylation in fungi. *Proc Natl Acad Sci U S A*. 2020 Jun 30;117(26):14948-14957. doi: 10.1073/pnas.2003266117. Epub 2020 Jun 15.PMID: 32541034. Free article.
- ◆ **Santos RM** †, **Moreno C** †, Zhang WC. Non-Coding RNAs in Lung Tumor Initiation and Progression. *Int J Mol Sci*. 2020 Apr 16;21(8):2774. doi: 10.3390/ijms21082774. PMID: 32316322; PMCID: PMC7215285. († These authors contributed equally to this work. Undergraduate students: Santos R.M. and Morena C.) [View PDF](#)
- ◆ Valente, P. K., **Schrimshaw, E. W.**, Dolezal, C., LeBlanc, A. J., Singh, A. A., & Bockting, W. O. (in press). Stigmatization, resilience, and mental health among a diverse community sample of transgender and gender nonbinary individuals in the U.S. *Archives of Sexual Behavior*. <https://doi.org/10.1007/s10508-020-01761-4>
- ◆ Lampe, T. M., Reisner, S. L., **Schrimshaw, E. W.**, Radix, A., Mallick, R., Harry-Hernandez, S., Dubin, S., Khan, A., & Duncan, D. T. (In press). Navigating stigma in neighborhoods and public spaces among transgender and nonbinary adults in New York City. *Stigma and Health*. <https://doi.org/10.1037/sah0000219>
- ◆ Diaz, J. E., **Schrimshaw, E. W.**, Van Tieu, H., Nandi, V., Koblin, B., & Frye, V. (2020). Acculturation as a mediator of HIV risk behavior correlates among Latino gay/bisexual men. *Archives of Sexual Behavior*, 49, 2029-2043. <https://doi.org/10.1007/s10508-019-01604-x>
- ◆ **Soulakova, J.N.**, Su, L.-C., and Crockett, L.J. (2020). Smokers’ Reports on Receiving a Doctor’s Advice to Quit Smoking: Receiving the Advice is More Prevalent Among Smokers with Crohn’s Disease Relative to Smokers with Ulcerative Colitis. *Preventive Medicine Reports*, doi:[10.1016/j.pmedr.2020.101091](https://doi.org/10.1016/j.pmedr.2020.101091).
- ◆ Bartl, Stefan; Oueslati, Abid; **Southwell, Amber**; Siddu, Alberto; Parth, Michela; David, Linda; Maxan, Alexander; Salhat, Nina; Burkert, Markus; Mairhofer, Andreas; Pankevych, Halyna; Balazs, Katja; Staffler, Guenther; Hayden, Michael; Cicchetti, Francesca; Smrzka, Oskar. (2020). Inhibiting cellular uptake of mutant huntingtin using a monoclonal antibody: Implications for the treatment of Huntington's disease. *Neurobiology of Disease*. 141. 104943. 10.1016/j.nbd.2020.104943.
- ◆ Machiela, Emily and **Southwell, Amber L.** ‘Biological Aging and the Cellular Pathogenesis of Huntington’s Disease’. 1 Jan. 2020 : 115 – 128.
- ◆ Nagarajan MB, Tentori AM, **Zhang WC**, Slack FJ, Doyle PS. Spatially resolved and multiplexed MicroRNA quantification from tissue using nanoliter well arrays. *Microsyst Nanoeng*. 2020 May 9;6:51. doi: 10.1038/s41378-020-0169-8. PMID: 32419951; PMCID: PMC7211184. [View PDF](#);
- ◆ Non-Coding RNAs in Lung Tumor Initiation and Progression. Santos RM, Moreno C, **Zhang WC**. *Int J Mol Sci*. 2020 Apr 16;21(8):2774. doi: 10.3390/ijms21082774.PMID: 32316322 Free PMC

FACULTY PRESENTATIONS

- ◆ **Almagro-Moreno, Salvador**
 - ◇ **Interamerican University of Puerto Rico.** Climate change and the emergence of pathogenic bacteria Aguadilla PR, USA
 - ◇ **University of South Florida.** Evolutionary Approaches to unravel the emergence of pathogenic Vibrios Tampa Bay FL, USA
- ◆ **Castiglioni, Analia; Kauffman, Christine; Hernandez, Caridad.** Presented a national webinar for Directors of Clinical Skills Courses, “Creating Virtual OSCES (Training SPs and Students, Grading, and Support: A Showcase in Flipped Classroom Format, June 26, 2020
- ◆ **Garbayo, Luciana.** Invited Presentation (Zoom): A Few Puzzles on Network Medicine and Biomedical Data, Rensselaer Polytechnic Institute, June 17, 2020.
- ◆ **Gorman, Laurel**
 - ◇ **Gorman, L.** Dufflourc, M., Theobald, R. "Scaling Barriers": Tools to vertically integrate foundational sciences into clerkship years” Focus group workshop accepted for the 2020 IAMSE meeting in June 2020 in Denver, Co. – accepted for the 6/20 meeting but post-phoned for presentation due to IAMSE getting converted into a virtual meeting.
 - ◇ **Gorman, L.** Flipping the Class Promotes Second Medical Student Pharmacology Learning in an Integrated Curriculum. Accepted for the April 2020 EB ASPET meeting in April, 2020. *To be published in the The FASEB Journal (2020), Volume 34(1), May 2020.*
 - ◇ **Gorman, L.,** Berry, A., Dangiolo, M. Comparison of Educational and Perceptual Outcomes for Academic vs Clinical Tracks of a Fourth Year Geriatric Pharmacotherapy Elective. Accepted for the June 2020 IAMSE meeting in Denver, Co.
 - ◇ **Gorman, L.** Daroowalla F. Using Real Patient Encounters to Enhance Preclinical Pathophysiology and Pharmacology Education. Accepted for the June 2020 IAMSE meeting.
- ◆ **Hines RB,** Jiban MJH, Lee E, Odahowski C, Wallace A, Adams SJE, Rahman S, Zhang S. Characteristics Associated with Nonreceipt of Surveillance Testing and the Relationship with Survival in Stage II and III Colon Cancer. American Association of Cancer Research Annual Meeting. San Diego, CA. June 27-28, 2020 (virtual due to COVID-19).
- ◆ **Hirumi, Atsusi.** Invited speaker for three-part webinar series on Re-envisioning Medical Education
- ◆ **Hitchcock, Dorilyn; Riding, Kyle:** “A Competency-Based Assessment Model in an Accelerated Immunohematology Laboratory Course”, American Society for Clinical Laboratory Sciences Joint Annual Meeting abstract poster,
- ◆ **Periasamy, Muthu.** Invited to speak at American Diabetes Association, “The Impact of Environmental Temperature on Metabolic Regulation”, June 13, 2020.
- ◆ *Tobacco Use Disparities by Sexual and Gender Minority Status Among UCF Students.* Patel, P., Schrimshaw, E.W., Schmidt-Owens, M. and Soulakova, J.N., UCF, April 2020 (the poster was presented via Zoom and is available at <https://stars.library.ucf.edu/sure/2020/posters/4/> 2020. (Conference canceled due to COVID-19)

FACULTY PRESENTATIONS

◆ **Taliaferro, Lindsay**

- ◇ **Taliaferro L.** with Green A, Shelton J. Invited Panel – Suicidal behaviors among sexual and gender minority youth. Youth Suicide Research Consortium First National Conference. New York, New York, June 12, 2020. (Conference online due to COVID-19)
- ◇ Sanchez K, Lampe N, Carter SK, Nowakowski A, **Taliaferro L.** Understanding intersections between racial bias and transphobia in health care. LGBT Health Workforce Annual Conference. New York, NY, June 2020. (Conference online due to COVID-19)
- ◇ Middleton T, Mishtal J, Acevedo M, Chulani V, Eisenberg M, **Taliaferro L.** Training priorities for healthcare providers working with sexual minority youth: perspectives of pediatric and family medicine providers. LGBT Health Workforce Annual Conference. New York, NY, June 2020. (Conference online due to COVID-19)
- ◇ Khallouq B, Carter JS, Carter SK, **Taliaferro L.** Health and healthcare utilization among TGNC Black and Latinx adolescents. Southern Sociological Society Annual Meeting. Jacksonville, FL, April 2020. (Conference canceled due to COVID-19)
- ◇ Nam E, Haynes J, Rodriguez C, DeCant T, **Taliaferro L.**, Gryglewicz K. A systematic review of emergency department-based mental health interventions: implications for young adults visiting the emergency department for mental health reasons. Annual Research and Policy Conference on Child, Adolescent, and Young Adult Behavioral Health. Tampa, FL, March

AWARDS, SERVICE & RECOGNITION

- ◆ **Bradshaw, Emily.** Recipient: UCF Teaching Incentive Program (TIP) award
- ◆ **Chakrabarti, Debopam.** Awarded NIH R01 Grant for “Novel Antimalarials from Fungi”.
- ◆ **Chen, Limei.** Received research award from FDOH Live Like Bella Initiative, “Exosome-mediated activation of matriptase targeting B cell lymphoma”.
- ◆ **Cheng, Jack.** Promoted to Full Professor in BSBS
- ◆ **Cole, Alex.** Received NIH R21 grant, “ Bacterial vaginosis induces matrix metalloproteinases that enhance HIV infection in women”.
- ◆ **Fernandez-Valle, Christina**
 - ◇ Received research award from FDOH Live Like Bella Initiative, “Development of an Early Diagnostic Test for Malignant Tumors in Children with NF1”
 - ◇ Recipient: UCF Research Incentive Award
- ◆ **Garbayo, Luciana.** Named 2020 Florida Undergraduate Research Association Mentor of the Year
- ◆ **Gorman, Laurel**
 - ◇ Recipient: UCF COM Teaching Incentive and Performance (TIP) Award
 - ◇ Recipient: Captain M2 Professor of the Year Award (Student’s Choice Award)
 - ◇ Chair, ASPET Division of Pharmacology Education
- ◆ **Gupta, Rashmi.** Awarded Cystic Fibrosis Foundation Grant for project, “High-Throughput Discovery of Mycobacterium Abscessus Drug Resistance Genes”.
- ◆ **Hines, Robin**
 - ◇ Grant Recipient: Florida Breast Cancer Foundation, “Causes of Racial/Ethnic Disparities in Breast Cancer Outcomes in Florida”.
 - ◇ Grant Recipient: NIH R03 grant, “Prevention and Treatment of Oxaliplatin-Induced Peripheral Neuropathy”.
- ◆ **Hirumi, Atsusi**
 - ◇ Invited as Plenary Speaker for 2021 IAMSE Conference in Cancun, Mexico
 - ◇ Guest Editor: Journal of Applied Instructional Design on Medical and Healthcare Education
- ◆ **Hitchcock, Dorilyn.** The UCF MLS program received reaccreditation for the next 10 years (for which she is the Director)
- ◆ **Husain, Mujtaba.** Promoted to Professor Emeritus and Retired from UCF COM
- ◆ **Kean, Thomas.** Two of his students were awarded Summer Undergraduate Research Fellowships
- ◆ **Lopez, Genaro.** Retired from Professor
- ◆ **Pasarica, Magdalena**
 - ◇ Grant Reviewer for International Grant Agency: Netherlands Organization for Health Research and Development– Lifestyle Medicine Grants

AWARDS, SERVICE & RECOGNITION

- ◇ Co-Chair of Research Committee for the Student-Run Free Clinic Faculty Advisors Association
- ◆ **Self, William**
 - ◇ Elected as Chair of Florida's Advisory Council of Faculty Senates
 - ◇ Promoted to Full Professor in BSBS
- ◆ **Soulakova, Julia**
 - ◇ Served as a Mentor for UCF Office of Research NSF Pitch Circle Initiative
 - ◇ Served as a Mentor for the Society for Research on Nicotine and Tobacco Trainee Network's Mentored Poster Program
 - ◇ Served as Competition Judge for the Outstanding Section Service Competition Award
- ◆ **Southwell, Amber.** Received NIH R01 Grant, "Decoding Cerebrospinal Fluid Huntington Biomarkers"
- ◆ **Teter, Kenneth.** Received UCF's Research Incentive Award
- ◆ **Verduin, Marcy.** Named Chair of the AAMC SGSA
- ◆ **Zhang, Wencai.** His lab was granted the International Lung Cancer Foundation Young Investigator Award