

# Research Report

LECOM

2017

PREPARED BY:

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ASSISTANT DEAN OF RESEARCH AND SCHOLARSHIP  
L E C O M

## JOURNAL ARTICLES

### Published articles

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1. Felix Lam, PharmD, Marcus Kaplan, PharmD, Nicholas Gazda, PharmD, Megan Shah, PharmD, John Toler, PharmD, Kelly Scolaro, PharmD Assessing Medication Pick-Up Rates at a Student-Run Free Health Clinic *Journal of Student-Run Clinics* 3 1 5 10/3/2017
2. Francisco MA, Brunt VE, Jensen KN, **Lorenzo S** and Minson, CT (2017). Ten days of repeated local forearm heating does not affect cutaneous vascular function. *Journal of Applied Physiology*. 2017 May, 123:310-316.
3. Spencer JM OMS-IV. A student's musing on addiction. *Journal of POMA*, September 2017 p. 8.
4. Labranche L, Quinette J, Hendryx JT, and Kulesza RJ. Dissection of spinalis capitis and implications for osteopathic treatment. *International Journal of Anatomical Variations*. 2017, 10(4):73-4.
5. Fech T, Calderón-Garcidueñas L, and **Kulesza RJ**. Characterization of the superior olivary complex of *Canis lupus domesticus*. *Hearing Research*. 2017 August, 351:130-140.
6. Leary PF, Zamfirova I, Au J, and McCracken WH. Effect of latitude on vitamin D levels. *Journal of the American Osteopathic Association*. 2017 July, 117:433-439.
7. Seitz SD, Dinh TN, Yoon TY. Melanotic Macule in Conjunction with a Giant Cell Fibroma. *J Contemp Dent Pract*. 2017 Oct 1;18(10):981-985.
8. Vinh N, Cody N, Joel F, Carolyn P. Potassium Iodide. The Solution to Silver Diamine Fluoride Discoloration?. *Adv Dent Oral Health*. 2017; 5(3): 555655. DOI: 10.19080/ADOH.2017.05.555655
9. **Ha D, Yang N**, and Nadithe V Exosomes as therapeutic drug carriers and delivery vehicles across biological membranes: current perspectives and future challenges *Acta Pharmaceutica Sinica B* Volume 6, Issue 4, July 2016, Pages 287–296
10. Francisco MA, Brunt VE, Jensen KN, **Lorenzo S** and Minson, CT (2017). Ten days of repeated local forearm heating does not affect cutaneous vascular function. *Journal of Applied Physiology*. 2017 May, 123:310-316.
11. Calderón-Garcidueñas L, González-González LO, **Kulesza RJ**, Fech TM, Pérez-Guillé G, Luna MAJ, Soriano-Rosales RE, Solorio E, Miramontes-Higuera JJ, Gómez-Maqueo Chew A, Bernal-Morúa AF, Mukherjee PS, Torres-Jardón R, Mills PC, Wilson WJ, Pérez-Guillé B, D'Angiulli A. Exposures to fine particulate matter (PM2.5) and ozone above USA standards are associated with auditory brainstem dysmorphology and abnormal auditory brainstem evoked potentials in healthy young dogs. *Environ. Res*. 2017 158:324-332.
12. Niu LN, Watson D, Thames K, **Primus CM**, Bergeron BE, Jiao K, Bortoluzzi EA, Cutler CW, Chen JH, Pashley DH, Tay FR. Effects of a discoloration-resistant

- calcium aluminosilicate cement on the viability and proliferation of undifferentiated human dental pulp stem cells. *Nature Sci Rep.* 2015 Nov 30;5:171-77. 5 171 177
13. McMichael GE, **Primus CM**, Opperman LA. Dentinal Tubule Penetration of Tricalcium Silicate Sealers. *Journal of Endodontics* 42 632 636
  14. Janine E. Curcio, DO; Matthew J. Grana, DO; **Stacey England, DO, Paige M. Banyas, OMS IV; Benjamin D. Palmer, OMS IV; Arielle E. Placke, OMS IV; William A. Rieck Jr, OMS IV; and Amber M. Eade, PhD.** Use of the Spencer Technique on Collegiate Baseball Players: Effect on Physical Performance and Self-Report Measures. *The Journal of American Osteopathic Association*, March 2017, Vol. 117, 166-175.
  15. Suprit D. Saoji, Vivek S. Dave, Pradip W. Dhore, Yamini S. Bobde, Connor Mack, **Deepak Gupta**, Nishikant A. Raut; The role of phospholipid as a solubility- and permeability-enhancing excipient for the improved delivery of the bioactive phytoconstituents of *Bacopa monnieri*, *in press. Eur J Pharm Sci.* For SPECIAL ISSUE: Phospholipid Drug Delivery 2017]
  16. Pradip W. Dhore, Vivek S. Dave, Suprit D. Saoji, Deepak Gupta, Nishikant A. Raut. Influence of Carrier (Polymer) Type and Drug-Carrier Ratio in the Development of Amorphous Dispersions for Solubility and Permeability Enhancement of Ritonavir. *Journal of Excipients and Food Chemicals* 8 (3) 2017: 75-92
  17. **Main S, Kulesza R.** Repeated prenatal exposure to VPA results in cerebellar hypoplasia and ataxia. *Neuroscience.* 2017 340(34-47)
  18. **Blackburn J**, LeMay J, Dale G, Calderon-Garciduenas L, **Kulesza R.** Identification of aberrant white matter bundles entering the inferior cerebellar peduncle. *Neurology.* 2017 88(1):106-107.
  19. **Foran L, Blackburn K, Kulesza R.** Auditory hindbrain atrophy and anomalous calcium binding protein expression after neonatal exposure to MSG. *Neuroscience,* 2017 344:406-17.
  20. **Lowe E and Lim S.** Black Dermographism. *JAMA Dermatol.* 2017 153(3):352-3.
  21. **Moscattello K, Kalmey JK, Keller CC.** Ten-Year Comparison of a Traditional Lecture Curriculum with an Independent Study Curriculum on COMPLEX Performance. *Medical Science Educator.* Volume 27, Issue 3, pp 447–449.
  22. **Thomas Yoon**, Mitesh Patel, Richard Michaud, **Alexandra Manibo.** Cone Beam Computerized Tomography Analysis of the Posterior and Anterior Mandibular Lingual Concavity for Dental Implant Patients. *Journal of Oral Implantology.* 2017. 43(1):12-18.
  23. **Allen Itkin, Tanya Sehgal.** Review of Phineas Gage’s Oral and Maxillofacial Injuries. *J Oral Biol*, March 2017, Volume4, Issue 1.
  24. David Gelbart, **John Gallagher**; Michael Hauk. Abdominal trauma in an adolescent. *JAAPA Journal of the American Academy of Physician Assistants.* 2017 30(5):52-53.
  25. Shaw, G and **Coffman, J.** Components of an Evidence-Based Analytic Rubric for Use in Medical School Admissions. *JAPMA* 2017, Vol. 107, No. 1, pp. 65-71.

26. **Quinn, Thomas A.**, “Mother Still”, Journal of the American Osteopathic Association, Accepted for publication, in press.
27. **Quinn, Thomas A.** , “Opening the Doors of Medicine to Women”, Journal of the American Osteopathic Association, Vol. 117, No. 3, March 2017, page 149
28. Peppers, BP, Varma, P, Kim, YM, Hostoffer, RW, Rowane, MP. The Scholar 7: The Development of the Regional Community Hospitals Scholastic Environment. J Am Osteopath Assoc. 2017 Oct 1;117(10):643-650.
29. Cevallos CG, Jones LR, Pando MA, Carr JK, Avila MM, Quarleri J. Genomic characterization and molecular evolution analysis of subtype B and BF recombinant HIV-1 strains among Argentinean men who have sex with men reveal a complex scenario. PLoS One. 2017 Dec 15;12(12):e0189705. doi: 10.1371/journal.pone.0189705. PMID: 29244833
30. Ray A, Cleary MP. The potential role of leptin in tumor invasion and metastasis. Cytokine Growth Factor Rev. 2017 Dec;38:80-97. doi: 10.1016/j.cytogfr.2017.11.002. PMID: 29158066
31. Ray A. Tumor-linked HER2 expression: association with obesity and lipid-related microenvironment. Horm Mol Biol Clin Investig. 2017 Oct 31;32(3). pii: /j/hmbci.2017.32.issue-3/hmbci-2017-0020/hmbci-2017-0020.xml. doi: 10.1515/hmbci-2017-0020. PMID: 29087955
32. Dong S, Maniar S\*, Manole MD, Sun D. Cerebral hypoperfusion and other shared brain pathologies in ischemic stroke and Alzheimer's disease. Transl Stroke Res. 2017 Oct 2. doi: 10.1007/s12975-017-0570-2. [Epub ahead of print]. PMID: 28971348
33. Smith, Lindsey PharmD; Samai, Kathryn PharmD, BCPS; Peshek, Stephanie PharmD, FASHP; Kimbrell, Brian MD, FACS. Impact of Pharmacy Students on a Level II Trauma Center. Journal of Trauma Nursing: July/August 2017 - Volume 24 - Issue 4 - p 231–235
34. Cintia G. Cevallos, Leandro R. Jones, Maria A. Pando, Jean K. Carr, Maria M. Avila, Jorge Quarleri. Genomic characterization and molecular evolution analysis of subtype B and BF recombinant HIV-1 strains among Argentinean men who have sex with men reveal a complex scenario. Research Article | published 15 Dec 2017 PLOS ONE.
35. **Jonathan Callegary DO.** A retrospective analysis of the possible cardiac complications associated with the use of transexamic acid on patients who have underlying cardiac disease and have undergone total joint replacement. Journal of POMA, December issue, pp13-16.
36. **Jordan R. Bonier DO.** Postoperative surgical site infection rates in orthopedic procedures before and after use of silver-impregnated occlusive dressing in a community hospital setting. Journal of POMA, December issue, pp17-20.

**Quinn, Thomas A.:** “The Feminine Touch: The Struggle for Equality in Medicine”, a One-hour PBS Documentary, produced by WEDU-TV, Tampa, Florida. Documentary premiered in Florida in April 2017 and will be released nationally August 2017.

The link to watch the PBS documentary is:  
<http://www.wedu.org/thefemininetouch/>

PBS Documentary, based on Dr. Quinn’s book, is the first and only documentary ever produced about the osteopathic medical profession.

## Accepted Articles

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- **Moscatello K, Kalmey JK, Keller CC.** MULTIPLE PATHWAYS – ONE GOAL: How different learning pathways lead to medical student success at LECOM. Medical Educator. Accepted with minor revisions.
- **Thomas YH Yoon DDS, MS** Dylan Tagg Nathan Estrin Douglas Robinson Richard A Michaud DMD Utilization of Cone Beam Computer Tomography to Determine the Prevalence and Anatomical Characteristics of Bifurcated Inferior Alveolar Nerves. Oral Radiology.
- Elizabeth Harrington, **Kristen Gawronski** An Advanced Pharmacy Practice Experience in Academia: More Benefit than Burden! Currents in Pharmacy Teaching and Learning.
- **Foran L,** Kupelian C, Loaria S, **Esper J, Kulesza R.** Neonatal exposure to monosodium glutamate results in dysmorphology of orofacial lower motor neurons Folia Morphologica. 2017 doi:10.5603/FM.a2017.0052.
- Anne Marie Uwitonze, Peace Uwambaye, Moses Isyagi1, Chrispinus H. Mumena, **Alice Hudder,** Afrozul Haq, Kamrun Nessa, Mohammed S. Razzaque. Periodontal diseases and adverse pregnancy outcomes: is there a role for vitamin D? Journal of Steroid Biochemistry & Molecular Biology.

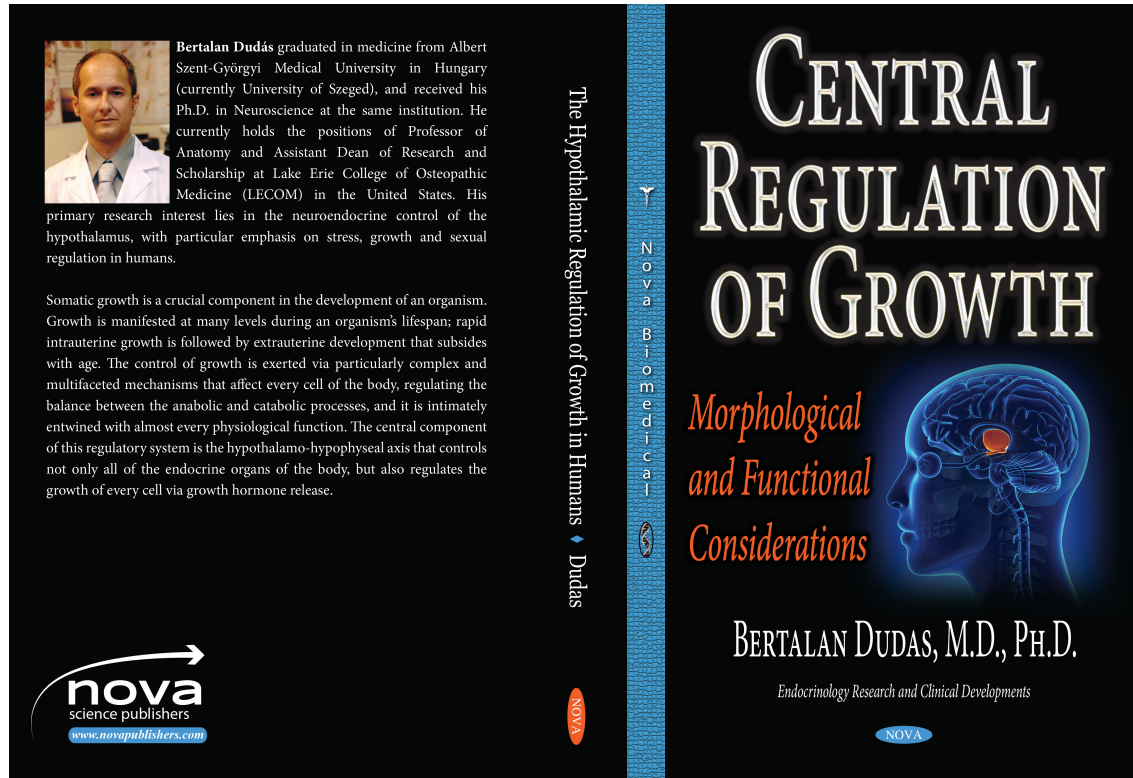
## Submitted Articles

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- Brian L. Risavi, Barrett McLaughlin, Dustin Stuart, Donald L. Holsten, **Mark A. Terrell**. Effectiveness of a Formal Curriculum in Teaching Mass Casualty Management. Rejected by Prehospital Emergency care; under resubmission to a different journal.
- **Patrick Leary DO, Mark Kauffman DO**. Comparing Vitamin D3 Levels of our LECOM students from Erie, Pennsylvania and Bradenton, Florida. JAOA.
- Curran R, **Kauffman M**, Ortoski R. Addressing the Impending Primary Care Shortage: How to Increase Interest and Participation in the Three-Year Accelerated Primary Care Scholars Pathway. Academic Medicine.
- **Patricio Bruno, DO**. Combat-driven TACEVAC- FEVER Operations- a synopsis. Journal of Special Operations Medicine.
- Dr. Habusta has two submissions to peer reviewed journals
- Kevin Keith, DO, MS Molly Johannessen, PhD, MSc, MEd Danielle Hansen, DO, MS, MHSA. Perceived value of virtual simulator training in arthroscopy: an osteopathic orthopedic surgery resident survey. JAOA7/13/2016
- **Patricio Bruno, DO**. Alignment of Graduate Medical Education Accreditation- what about the details? Academic Medicine.
- Shah AB, Nivar I, and **Speelman DL**. Elevated androstenedione in young adult but not pubertal androgenized rats. Submitted to PLoS One on November 7, 2017.
- Davis SE, Hendryx J, Menezes C, Menezes H, Patel V, Riffle S, Smith C, and **Speelman DL**. Correlation between physiologic and osteopathic measures of sympathetic activity in women with polycystic ovary syndrome. In preparation, plan to submit to Journal of the American Osteopathic Association on August 18, 2017.
- **Kevin Keith, DO, MS Molly Johannessen, PhD, MSc, MEd Danielle Hansen, DO, MS, MHSA**. Perceived value of virtual simulator training in arthroscopy: an osteopathic orthopedic surgery resident survey. Resubmitted with requested changes to JAOA.
- Curran R, **Kauffman M**, Ortoski R. Addressing the Impending Primary Care Shortage: How to Increase Interest and Participation in the Three-Year Accelerated Primary Care Scholars Pathway. Academic Medicine.
- Dexter Jordan Witchey, Nichole Brianne Witchey, Michele Marie Roth-Kauffman, Mark Kevin Kauffman. Plantar Warts: Highlighting the Relationship Between Epidemiology, Pathophysiology, and Adequate Clinical Management. JAOA.
- **Hershey Bell**, Abbey Krysiak Stephen Carfangia Nam Kar Sean Bogart. The Use of A Professor's Blog in a Drug Literature Information Course Series Am J Pharm Educ 10/2/2017.

- Damarys Padilla, **Hershey Bell**. Letter to the Editor - Flexner, Educational Reform, Social Accountability and Meta-Curriculum Am J Pharm Educ 10/2/2017.
- Patel V, Bouwer S, Menezes C, Menezes H, Smith C, and **Speelman DL**. Regular yoga practice as a method to improve androgen levels in women with polycystic ovary syndrome: a randomized, controlled trial. Submitted to BMC Complementary and Alternative Medicine on December 28, 2017.
- **Kulesza R**. Repeated prenatal exposure to valproic acid results in auditory brainstem hypoplasia and reduced expression of calcium binding proteins. Neuroscience.
- **Kulesza R**. Identification of an aberrant testicular vein draining the right kidney. International Journal of Anatomical Variation
- **Kulesza R**. Structural and functional aberrations of the auditory brainstem in ASD. JAOA
- **Kulesza R**. Alzheimer disease is evolving in Metropolitan Mexico City children and young adults: early onset of a brainstem tauopathy. Environmental Research
- **Hudder, A. Tackett, S. and Moscatello, K**. First-year experience implementing an adaptive learning platform for first and second year medical students at Lake Erie College of Osteopathic Medicine. Submitted to JAOA Dec 2017.
- Carter, S., Terrell, M., Stevich-Heemer, B., and **Hudder, A**. Evaluation of Delivering Genomic and Pharmacogenomic Sessions in an Interprofessional Setting. Submitted to JAOA Dec 2017.
- Mark A.W. Andrews, Ph.D., FNAOME. The Stretch Receptor and Somatic Dysfunction, a Narrative Review. Full manuscript, Submitted: JAOA 12/2017.

## BOOKS/BOOK CHAPTERS



**Author: Bertalan Dudás MD, PhD**

**NOVA Science Publishers, ISBN:**

**Available at Barnes & Noble, Amazon.com, Google books, etc.**

- Chapter 1 The Somatotropic Axis
- Chapter 2 Catecholamines
- Chapter 3 Neuropeptide Y (NPY)
- Chapter 4 Galanin
- Chapter 5 Opioid Peptides
- Chapter 6 Substance P
- Chapter 7 Thyrotropic axis
- Chapter 8 Corticotropic Axis
- Chapter 9 Oxytocin and Vasopressin
- Chapter 10 Other Neurotransmitters and Neuromodulators



**Editors:** K. L. Mittal, **F.M Etzler**  
**Publisher:** Wiley  
**Pages:** 432  
**Format:** hardback  
**Publication Date:** 2017  
**ISBN:** 1119323509

- Chapter in the book: **F.M. Etzler**, Tablet Tensile Strength: Role of Surface Free Energy, in Adhesion in Pharmaceutical, Biomedical and Dental Fields, K.L. Mittal and F.M.Etzler, Eds., Wiley-Scrivener, June 2017, pp.53-74.
- FULL BOOK: **Farr WD.** The Death of the Global War on Terrorism’s “Golden Hour” and the Return of the Future Guerrilla Hospital: A History of Special Operations Medicine and Surgery. The Joint Special Operations University Press: MacDill Air Force Base, FL, 2017.
- BOOKLET: **Quinn, T.A.,** Cocozza, V., Lang, D., Ramchander, N.: “Osteopathic Manipulative Techniques as taught at the American School of Osteopathy, 1893 - 1895”, 40 pages, May 2017
- **Kelly Scolaro.** Chapter 11: Disorders Related to Cold and Allergy. 19<sup>th</sup>. 2018 APhA. Accepted Book Chapter.
- **Hendryx, JT.** (2017) Dynamic Strain-Vector Release. Accepted chapter in upcoming Foundations of Osteopathic Medicine, 4th edition. In press.
- Vandermark LW, Lorenzo S and Chapman RF (2017). Altitude Training and Considerations for Performance in the Heat. In: Sport an Physical Activity in the Heat: Maximizing Performance and Safety. Ed. Casa DJ. Springer Nature. Berlin, Germany.
- **Deepak Gupta** Nano-Bio-Materials for Ophthalmic Drug Delivery. Springer 2017.
- **Prasad Dalvi** Sayeeda Rahman, Anwarul Azim Majumder, Russell Kabir, Mainul Haque, Subir Gupta, Sana Mohammad Yasir Arafat, Nkemcho Ojeh and Prasad Dalvi. Cardiovascular Disease and Diabetes: Two Sides of the Same Coin! Intechopen, 2017.

## ABSTRACTS

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1. Li Yujie, John A. Johnson, Chelsea Michaud, Haig Tcheurekdjian, and Robert Hostoffer. Common Variable Immunodeficiency with Angiosarcoma Associated with Hyperammonia Secondary to High Dose IVIG Infusion. #72 in *J Allergy Clin Immunol*, Volume 139, Number 2. American Academy of Allergy, Asthma and Immunology (AAAAI) 2017 Annual Meeting in Atlanta.
2. Blasius K, Durham CF, Joyner Jr BL, Alderman JT, Scolaro KL Heart of the matter: improve collaboration and communication through IPE International Meeting for Simulation in Healthcare (IMSH) Orlando, FL 1/29/2017. Oral Presentation
3. Granger A, Ortiz A, **Terrell M**, Loukas M, **Schober J**. The anatomy of free fibula osteoseptocutaneous flap in neophalloplasty. Poster presentation at the 2017 American Association of Clinical Anatomists Annual Meeting, The Anatomy of Gender Transition, San Francisco, CA, June 17, 2017.
4. Roberts W, Price CW, **Terrell M**, Loukas M, **Schober J**. Anatomy of the pedicled anterolateral thigh flap for phalloplasty in transitioning-males. Poster presentation at the 2017 American Association of Clinical Anatomists Annual Meeting, The Anatomy of Gender Transition, San Francisco, CA, June 17, 2017.
5. Kim S, Shah Y, Holland J, **Terrell M**, Loukas M, **Schober J**. The anatomy of forearm free flap phalloplasty. Poster presentation at the 2017 American Association of Clinical Anatomists Annual Meeting, The Anatomy of Gender Transition, San Francisco, CA, June 17, 2017.
6. Granger A, Ortiz A, **Terrell M**, Loukas M, **Schober J**. The anatomy of musculocutaneous latissimus dorsi flap in neophalloplasty. Poster presentation at the 2017 American Association of Clinical Anatomists Annual Meeting, The Anatomy of Gender Transition, San Francisco, CA, June 17, 2017.
7. Bernard S, Vinaja X, Loukas M, **Terrell M**, **Schober J**. Genital reaffirmation surgery (male-to-female): vaginoplasty using penile skin graft with scrotal flaps. American Association of Clinical Anatomists Annual Meeting, Minneapolis, MN, July 17-21, 2017.
8. **Terrell M**, **Kulesza R**. Preparing Scholar Educator Leaders—Curriculum Development of a New PhD Program in Anatomy Education. Department of Anatomy. Oral presentation at the 2017 American Association of Clinical Anatomists Annual Meeting. 2017.
9. Kim S, Holland J, **Terrell M**, Loukas M, **Schober J**. The anatomy of abdominal flap phalloplasty. Poster presentation at the 2017 American Association of Clinical Anatomists Annual Meeting, The Anatomy of Gender Transition, San Francisco, CA, June 17, 2017.
10. **Seth H. Carter, D.O., Bojana Stevich-Heemer, Pharm. D., and Alice Hudder, Ph. D.** Evaluation of Delivering Genomics and Pharmacogenomics Sessions in an

Interprofessional Setting Association of Professor of Human and Medical Genetics  
Clearwater, FL 5/9/2017

11. **Alice Hudder, PhD, Kim Moscatello, PhD, Sean Tackett, MD** Investigating Adoption of a New Technology in Medical Education Association of Professors of Human and Medical Genetics Clearwater, FL 5/9/2017
12. **Tracey Weil, Alice Hudder, Brian Hill, Shoumita Dasgupta, Everett Roark, Jon Bernstein, Mahendran Mahadevan, Mariluz Henshaw, Andrew Sobering** Hereditary Breast and Ovarian Cancer Online Interactive Case Module Association of Professors of Human and Medical Genetics Clearwater FL 5/9/2017
13. **Molly Oberdoerster**, OMS-III, Anthony Miniaci, OMS-III (LECOM), James Cappello, DO, **Michael Rowane, DO**. Role of Osteopathic Manipulative Medicine in Treatment of Headaches: Review of Literature.
14. Close M (MMS student), **Best M**. Radiology Reporting and Follow-up, and the Impact on Patient Care. LECOM Research Day, Bradenton, FL, April 20, 2017.
15. Stokes JR, Abney C, Deak M, McKenzie SC, **Stevens L, Kulesza R**. An enigmatic tumor-like structure in a dinosaur bone. The Geological Society of North America Annual Meeting in Denver, CO.
16. **Blackburn K, Stevens LV, Calderon-Garciduenas L, Kulesza R**. Dymorphology in the Human Medial Superior Olive after Environmental Exposure to Pollution. American Academy of Neurology 69th Annual Meeting, Boston, MA.
17. **Speelman DL**. "PCOS: Effective Identification, Education and Treatment of Patients to Improve Quality of Life." 2017 POFPS CME Conference, August 6, 2017 in Hershey, PA. Oral Presentation.
18. Dilello TF, Shah AB, and **Speelman DL**. Altered lipid storage and adiponectin expression in 3T3 adipocytes exposed to androstenedione at levels comparable to those in women with PCOS. 2017 Endocrine Society Annual Meeting, April 1, 2017 in Orlando, FL.
19. Kristen Gawronski Patricia Railing, PharmD Candidate Daniel Austin, PharmD, MS Kristen Gawronski, PharmD Drug Safety Labeling Changes of the Top 300 Drugs American Pharmacists' Association Annual Meeting Nashville, TN 3/17/2018 N 10/2/2017
20. Tarun Ahuja, Nancy Carty, Christopher C. Keller. The Effect of Essential Plant Oils and Antibiotics on Growth Inhibition of *Streptococcus mutans*. Poster Presentation at the Erie Regional Science Consortium 13th Annual Research Symposium 2017.
21. Scott Schmalzried, Nancy Carty, Christopher C. Keller. The Effect of Essential Cinnamon Oils and Cinnamaldehyde on Growth Inhibition of *Pseudomonas aeruginosa* and *Staphylococcus aureus*. Poster Presentation at the Erie Regional Science Consortium 13th Annual Research Symposium 2017.
22. Adriani Cherico, Michael Khoury, Robert Waters, Nancy Carty, Christopher C. Keller. Surveillance of Actively Questing Ticks throughout Erie County. Poster Presentation at the Erie Regional Science Consortium 13th Annual Research Symposium 2017.

23. Kaylin Strauser, Robert Waters, MS., Christopher Keller, Nancy Carty, Kyle Scully, Erika Allen. The Effect of Blueberry Fruit Extract on Growth Inhibition of *Staphylococcus aureus*. Poster Presentation at the Erie Regional Science Consortium 13th Annual Research Symposium 2017.
24. Weam Altaher, Randy Kulesza. Impact of neonatal excitotoxicity on vestibulocochlear afferents. Poster Presentation at the Erie Regional Science Consortium 13th Annual Research Symposium 2017.
25. Ryan S. Zimmerman, Randy Kulesza. Repeated prenatal VPA exposure results in marked deficits in development of sensory systems and the Superior Olivary Complex. 2nd place Graduate Oral Presentation at the Erie Regional Science Consortium 13th Annual Research Symposium.
26. Calderón-Garcidueñas L, González-González LO, Kulesza RJ, Fech TM, Pérez-Guillé G, Luna MAJ, Soriano-Rosales RE, Solorio E, Miramontes-Higuera JJ, Gómez-Maqueo Chew A, Bernal-Morúa AF, Mukherjee PS, Torres-Jardón R, Mills PC, Wilson WJ, Pérez-Guillé B, D'Angiulli A. Exposures to fine particulate matter and ozone is associated with auditory brainstem dysmorphology and abnormal auditory brainstem evoked potentials in healthy young dogs. Submitted to Audiology Australia's 23rd National Conference, Sydney AU May 2018.
27. Thanhphuong N. Dinh DMD; Mathew J. Bateman PhD., DHed. Integration of Clinical Rotation to an Interprofessional Education Curriculum for Dental, Medical and Pharmacy Students. 2017 Association for Dental Education in Europe / American Dental Education Association Joint Meeting – London, England (May 2017).
28. Thomas YH. Yoon, DDS, MS; Sable A. Muntean; Richard A. Michaud, DMD; Thanhphuong N. Dinh, DMD. Investigation of Dental Implant Referral Patterns Among General Dentists and Dental Specialists: A Survey Approach. 2017 Academy of General Dentistry Annual Meeting – Las Vegas, NV (July 2017).
29. Jonathan Coffman PhD., MBA; Robert Reid; Amber Dubiel; Eric Ho DMD; Thomas YH. Yoon DDS, MS. Isolation and Genomic Sequencing of a Drug Resistant Enterococci from Avian Excreta. 2017 American Society of Microbiology Florida Branch Meeting – Clearwater, FL (October 2017).
30. Thomas YH. Yoon DDS, MS; Alexander G. Ahmadi; Nathaniel Saed; Nathan E. Estrin; Don E. Milner DDS. Cone beam CT Analysis of Accessory Mental Foramen Occurrence. 2017 American Society of Microbiology Florida Branch Meeting – Clearwater, FL (October 2017).
31. **Scolaro KL**, Yero T, Bell H. Cultivating self-awareness through multiple reflection experiences. Poster Presentation: American Association of Colleges of Pharmacy Annual Meeting, Nashville, TN, July 15, 2017.
32. Sanchez-Gonzalez, M., **Novak, T.** and **Coffman, J.** NGS and Selective Culture: Isolation and Quantification of *Enterococci* in Avian Excreta. Poster presentation at the 2<sup>nd</sup> ASM conference on Rapid Applied Microbial Next-generation Sequencing and Bioinformatics Pipelines. Washington, DC, Oct 8-11, 2017.

33. Bo Park, Wesley Budd, Julie Brown, Donald Simpson, James Gnarra. Incomplete Pregnancies in von Hippel Lindau disease and other Hereditary Renal Cancer Syndromes. Cleveland Academy of Osteopathic Medicine

## Workshops

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- N. Zaveri, T. Nolan, J. Keys, S. Nath, D. McMahon, and C. Hutak. 2017. Preparing Students to Integrate Basic Sciences into the Clinical Clerkship Years. AACOM 2017, Baltimore, MD.
- T. Nolan, N. Zaveri, D. McMahon, C. Hutak, and S. Nath. 2017. Evidence-Based Active Learning: How to Create Engaging, Interactive Cases in the Basic Sciences. IAMSE 2017, Burlington, VT.

## GRANTS

### 2017 – 2018 LECOMT Grants

	Investigator(s)	Institution	Program	Research Title	Amount Awarded
1	Kulesza, PhD	LECOM	Pre-Clinical	"The Impact of Maternal Inflammator Responses on Structure and Function of the Cerebellum"	4,874.40
2	Leininger, DO	MCH	Orthopedic Surgery Residency	"Cadaveric Study of Barbed Suture Achilles Tendon Repair"	2,020.00
3	Macabobby, MD, FAAFP	St. Elizabeth Boardman	Family Medicine Residency	"Facilitating Formal Transitions of Care Through the Use of Multimedia Equipment"	2,001.86
4	McCarthy, DO	Allegheny Health Network-St. Vincent Health Center	Emergency Medicine	"Improving Resident Understanding of Evidence Based Medicine"	4,875.00
5	McLean, MS, MA	Niagara Falls Memorial Medical Center	Family Medicine Residency	"Stethoscope Upgrade Facilitation Cardiologists Referrals"	1,692.00
6	Morgan, DO	St. Elizabeth Boardman	Emergency Medicine	"The Effectiveness of Analgesia in the Elderly After Fracture in the Emergency Department and the Impact of Type of Analgesia and Time-To-Administration"	100.00
7	Peppers, DO, PhD	University Hospitals Regional Hospitals Campus at Richmond	Allergy and Immunology	"Thermal Imaging of Inflammatory Processes for Use in Determining Biphasic and Uniphasic Anaphylactic Peanut Allergic Murine Models"	5,000.00
8	Romanello, DO	University Hospitals St. John Medical Center	Emergency Medicine	"Use of Epinephrine for Anaphylaxis in a Large Hospital System"	4,500.00
9	Silvis, DO	Conemaugh Health System	General Surgery Residency	"The effect of intravenous versus enteral acetaminophen on opioid usage for isolated hip fractures in the geriatric population"	5,000.00
10	Speelman, PhD	LECOM	Research	"Assessment of Parametrial Fat Structure and Function as a Function of Estrous Phase in Female Rats"	5,000.00
11	Thimmapuram, MD	York Hospital (Wellspan Health)	Internal Medicine	"Impact of Meditation on Sleep in Residents During Outpatient Rotation"	5,000.00
12	Turgeon, DO	Arnot Ogden Medical Center	Geriatrics	"Association Between Jefferson Empathy Score and Chosen Specialty Among Residents"	2,700.00
13	Tynski, MD, FCAP	Clarion Hospital	Pathology	"Three Publications of the Following Case Reports: Inguinal PEComa Metastatic to the Orbit and Brain; Primary Peritoneal Angiosarcoma Metastatic to the Liver; Primary Pleomorphic Hyalinizing Angiectatic Tumor in Gluteal Region: A Potential Pitfall"	3,276.00
14	Ward, DO	LECOM/MCH	Orthopedic Surgery Residency	"Distal Femoral Cut Divergence with Cutting Saw Held at Variable Angles"	2,250.00
15	Watkins, DO, MS	MCH	Orthopedic Surgery Residency	"A New Look at the Digital Tourniquet: Minimal Occlusive Pressurs Utilizing a Novel Design and Technique"	909.00
16	Wentz, MD	Conemaugh Health System	Family Medicine	"Benefits of a Resident-led School Health Education Program"	500.00
17				<b>Total:</b>	<b>70,888.26</b>

## LECOM Intramural Seed grants 2017-18

Name	School	Project type	Project name	Amount requested	Awarded amount
McKay, Diane	COM	General Basic Science	Integration of Virtual Reality in Mindfulness Meditation for the Attenuation of Stress in Student Populations	\$19,875.00	Not funded
Critz, Stuart	COM	General Basic Science	Design of Small Molecule inhibitors of PCSK9 to Reduce LDL-c Levels	\$5,998.80	\$5,998.80
Quinn, Thomas	COM	Osteopathic Manipulative Medicine	Effect of osteopathic manipulative treatments on pulmonary function of chronic asthmatic patients in comparison to standard pulmonary rehabilitation techniques	\$7,200.00	\$7,200
Davis, Shannon	COM	Health Professions Education	Discerning the Outcomes of Self-Administered Reiki in the Relief of School Related Stress Among Medical Students of Lake Erie College of Osteopathic Medicine	\$3,564.85	Not funded
Davis, Shannon	COM	General Basic Science	Determining the Taxonomic Variation of Gut Microbiota Populations Comparing those Associated with Westernized Diet Consumption and Host Stress		
Allen, Erika	COM	Health Professions Education	Critical Thinking Skill Assessment and Development Through Post-Baccalaureate Medical Education	\$5,707.50	\$5,707.50
Falk, Karl	COM	Osteopathic Manipulative Medicine	The effects of cranial manipulation and its parallels with acupuncture	\$20,000.00	\$20,000
Simpson, Donald	COM	Health Professions Education	An Interprofessional Student-Led Pilot Project to Assess Mental Health and Wellness of Students Enrolled in Professional Programs at LECOM	\$7,836.00	Not funded
Gnarra, James	COM	Health Professions Education	LECOM GenOMeS program: molecular diagnostic education and training for OMS students	\$18,770.00	\$18,770
Gnarra, James	COM	General Basic Science	Prolyl isomerases as therapeutic targets for infection and cancer	\$11,200.00	\$11,200
Dalvi, Prasad	SDM	General Basic Science	Adipokine chemerin-induced inflammatory response and modulation of insulin sensitivity in the hypothalamic neurons	\$19,500.00	Not funded
Raja, Dewan	SDM	Health Professions Education	Participatory Action Research to Develop Dental Health Education Booklets for Elementary School Children	\$20,000.00	Not funded
Dalvi, Prasad	SDM	General Basic Science	Tea Time - A Possible Preventive Strategy for Oral Health	\$18,500.00	15,500.00
Zmiyiwsky, Mark	SDM	Health Professions Education	Testing the Integrity of Nitrile Examination Gloves After Use in a Dental School Clinic	\$5,250.00	4,450.00

Yoon, Thomas and Dihn, Katie	SDM	General Basic Science	The intervention of endo sealer in combination with curcumin produces a long term release of anti-bacterial activity against E. faecalis, which results in a better prognosis for root canal treated teeth than endo sealer alone	\$6,729.20	\$6,729.20
Brown, Julie	SDM	General Basic Science	Periodontitis and Inflammation: analysis of cytokines	\$20,000.00	\$20,000.00
Coffman, Jonathan	SDM	General Basic Science	Isolation and Characterization of Enterococci from Avian Excreta that bind to a Streptococcus mutans sucrose-induced Dextran Biofilm	\$19,457.63	10,457.63

### LECOM Intramural Seed grants 2016-17

Name	School	Project type	Project name	Amount requested	Awarded amount
Yoon, Thomas	SDM	General Basic Sciences	Nonpolar Solvents Inhibit Biofilm Formation and Growth of the Oral Microbe Streptococcus Mutans (YOON 1)	\$9,160.00	\$9,160.00
Yoon, Thomas	SDM	General Basic Sciences	Quantitative Analysis of Dental Implants: A Comparative Study (YOON 2)	\$19,000.00	\$19,000.00
Yoon, Thomas	SDM	General Basic Sciences	Analysis of CBCT Images for Virtual Implant Placement to Eliminate Violation of the Incisive Canal (YOON 3)	\$10,000.00	\$10,000.00
Yoon, Thomas and Coffman, Jonathan	SDM	General Basic Sciences	Efficacy of Antibiotic Therapy in Combination with Essential Oils Against Aggregatibacter Actinomycetemcomitans and Tannerella Forsythensis	\$12,637.45	\$12,637.45
Romer, Mark and Primus, Carolyn	SDM	General Basic Sciences	Dental Materials Research	\$15,555.00	\$15,500.00
Dr. Almada	SDM	?	?	?	?
Lee, Jack	COM	Neuro-Musculoskeletal	Examining the Cellular Mechanisms that Cause Cardiac and Smooth Muscle Hypertrophy to Explore Their Potential Role in the Treatment of Sarcopenia and Skeletal Muscle Atrophy	\$11,025.00	\$11,025.00
Kulesza, Randy	COM	General Basic Sciences	Auditory Brainstem Connectivity in an Animal Model of Autism Spectrum Disorder	\$13,302.84	\$13,302.84
Hudder, Alice and Moscatello, Kim	COM	Health Professions Education	Osmosis in Medical Education: Enhanced Outcomes Through Social Learning	\$20,000.00	\$20,000.00
Scully, Kyle	COM	General Basic Sciences	Natural Product Isolation and Characterization: An Examination of Natural Products Isolated from Grapes Grown and Processed in Lake Erie Wine Country	\$17,500.00	\$17,500.00



## Other Miscellaneous Intramural funding

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- Ningning Yang. The Application of Virtual Labs in the Pharmaceutical Compounding Curricula. LECOM 1 year grant, 2017. Funded, \$4,800.00
- **Corso T.** Investigation of the toxic properties of the Dopamine metabolite DOPAL and its role in the cause and progression of Parkinson's disease. Pharmacy School Intramural Grants, 2016-7. Funded, \$4,995.97.
- **Gawronski KM.** Rx LEADS: A Research Project: Pharmacy Leading Education Approaches in Disease Self-Management. Pharmacy School Intramural Grants, 2016. Funded, \$3,100.
- **McCarthy S.** Morphological Differences of Metatarsal and Metacarpal Bones. LECOM, March 13, 2012- March 13, 2013. Funded, \$3,000.00.
- **Terrell M.** Travel Grant for American Association of Anatomists, April 2011. Funded, \$1,500.
- **Keller CC.** LECOM Equipment Grant for purchase of a GeneAmp 2720 Thermal Cycler. 2011. Funded, \$3,983.
- **Saleh A.** LECOM Equipment Grant for purchase of a Cellometer Vision RF-150. 2011. Funded, \$18,180.
- **Saleh A.** Characterization the mechanisms of action of a novel cytotoxic nucleoside analogue and evaluation of its anti-tumor activity against leukemia cells from UAE patients. LECOM intramural grant, 2010. Funded, \$5,000.
- **Do D.** Histone deacetylase inhibitors for cancer epigenetic therapy. LECOM Intramural Grant, 2010. Funded, \$6,000.
- **Falter R.** Nutrition education for elementary students. LECOM Intramural Grant, 2010. Funded, \$3,500.
- **Devi S.** Serotherapy in acute liver failure. LECOM Intramural Grant, 2010. Funded, \$7,500.

## Submitted Extramural Grants

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- **Alice Hudder, Ph. D.** Evaluation of Osmosis™ in Medical Education: A Model System for Evaluation of the Effectiveness of Board Preparation Programs Kim Moscatello, Ph. D LECOM Mark Speicher, Ph. D. AZCOM AACOM 7/1/2017-12/31/2018 10000.00 2/9/2017
- **Shannon Davis, PhD.** Discerning the Outcomes of Self-Administered Reiki in the Relief of School Related Stress Among Medical Students of Lake Erie College of Osteopathic Medicine NA The American Association of Colleges of Osteopathic Medicine (AACOM) 2017-2018 5000.00 2/14/2017
- Sequential drawing tasks to improve understanding and retention of pharmacological concepts. **Christopher C. Keller**, Erika N. Allen, and Kyle R. Scully. Submitted to AACOM Research Grants. \$5,000.
- Submission Title: LEAP: LECOM Center of Excellence for Multicultural Advancement in Pharmacy. PI: Tatiana Yero. Granting Agency: HRSA. Opportunity Number: HRSA-17-065. Project Period: 07/01/17 - 06/30/22 (5 years). Amount Requested: \$2,304,932.21
- Kristen Gawronski Cardiovascular Disease Management Project Hershey Bell Erie Community Foundation 3 years 200000.00 4/28/2017
- **Evidence-Based Falls Prevention Programs Financed Solely by 2017 Prevention and Health Funds (PPHF-2017).** LECOM HHS-2017-ACL-AOA-FPSG-0206-Titzel.
- **James Gnarra, Ph. D.** Effects of prolyl isomerization on VHL protein activity. VHL Alliance 10/1/2017-09/30/2018 \$24,986.23. Submitted

## Funded Extramural Grants

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- **Hudder A, Moscatello K,** and Speicher. Evaluation of Osmosis in Medical Education: A Model System for Evaluation of the Effectiveness of Board Preparation Programs. AACOM, 2017. Funded, \$10,000.
- **Speelman D, Hendryx J, Smith C, and Davis S.** Use of Osteopathic Principles for Nonpharmacologic, Therapeutic Interventions in Obese Women with Polycystic Ovary Syndrome. AOA, 9/2016 - 2/2018. Funded, \$87,605.50. Year 2: \$43,802.75
- **Keller CC and Carty N.** Prevalence of Human Pathogens in *Ixodes scapularis* Ticks Collected from Erie County, Pennsylvania. Erie Regional Science Consortium, 2017. Funded, \$2,431.96.

- **Keller CC, Allen EN, and Scully KR.** Sequential Drawing Tasks to Improve Understanding and Retention of Pharmacological Concepts. AACOM, 2017. Submitted, not funded, \$5,000.
- **Davis SC.** Elucidating the Outcome of Self-administered Reiki in the Relief of School-Related Stress Among Medical Students. AACOM, 2017. Submitted, not funded, \$5,000.
- **Kristen Gawronski,** Victoria Reinhartz RxLEADS Hershey Bell LECOM Intramural Grant 1 year 3100.00 2/9/2017
- **Kristen Gawronski.** Pharmacist-Provided MTM Services in the Community Hershey Bell. Erie Community Foundation 18 months 100000.00 9/28/2017
- Ningning Yang The Application of Virtual Labs in the Pharmaceutical Compounding Curricula N/A LECOM 1 year 4800.00 2/13/2017
- **Thomas YH Yoon DDS, MS** The Significance of Environment Effects on Dental Implants for Forensic Science Victim Identification Barry Lipton DMD Evan Black Stephanie Vazana Alexander Ahmadi American Society of Forensic Odontologists 2-2017 to 2-2018 3000.00 2/13/2017
- **Thomas YH Yoon DDS, MS** Non polar Solvents Inhibit Biofilm Formation and Growth of the Oral Microbe Streptococcus Mutans Mark P. Zmiyiwsky DMD Austin Belknap James Gnarra PhD LECOM IPAAR 6-2016 to 6-2017 9160.00 2/13/2017
- **Thomas YH Yoon DDS, MS** Quantitative Analysis of Dental Implants: A Comparative Study Samantha Hirt Ankur Shah Aakash Mehandru Barry Lipton DMD LECOM IPAAR 6-1-2016 to 6-30-2017 19000.00 2/13/2017
- **Thomas YH Yoon DDS, MS** Jonathan Coffman PhD, MBA Efficacy of Antibiotic Therapy in Combination with Essential Oils Against Aggregatibacter Actinomycetemcomitans and Tannerella Forsythensis Eric Ho Robert Reid LECOM IPAAR 7-1-2016 to 6-30.2017 12637.45 2/13/2017
- **Thomas YH Yoon DDS, MS** Analysis of CBCT Images for Virtual Implant Placement to Eliminate Violation of the Incisive Canal Aakash Mehandru Ankur Shah Samantha Hirt LECOM IPAAR 7.1.2016 to 6.30.2016 10000.00 2/13/2017
- **Lin J and Hansen D.** Geriatrics Workforce Enhancement Program Funding Opportunity Number: HRSA-15-057, 2015-8. Funded, \$750,000/year for 3 years. Year 3: \$746,548.

## OTHER MISCELLANEOUS RESEARCH ACTIVITIES

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- **West Research Center:**
  - **Research equipment** has been moved from storage
  - **Unusable/broken equipment has been discarded**
  - We are at the process to move **equipment** from the Cappabianca Research Facility
  - **Laboratory stools and chairs** were ordered
  - **Final version of safety rules and regulations** are being prepared
  - The **card reader** is being programmed
  - Morphological studies have been started with collaboration of Drs. Dudas and Corso
- 2017 Research Budget has been prepared and approved by Dr Silvia and it was sent to Dick Olinger
- **2016 Research/Scholarship Report** is finished and posted on the portal. Responses were integrated into the final document.
- **2016 NSF Higher Education Research Survey** has been submitted
- **Kristen Gawronski** attended the American Society of Health-System Pharmacists Midyear Clinical Meeting 2017 and reviewed 4 Continuing Education/Board Certification training modules for American College of Clinical Pharmacy.
- **Dr. Speelman** has been promoted as the Director of Research of the Medical School.
- **Dr. Gnarra** has been promoted as the Director of Research of the Medical School, Bradenton.
- **Dr. Corso** has been promoted as the Director of Research of the Pharmacy School.
- **Dr Alice Hudder and Dr. Bojana Stevich** organized a **Genomics in Medicine Continuing Medical Education Workshop** in March 29 and April 5, 2017 at Millcreek Community Hospital Education Center. Associated Research Project Hypothesis: By learning and interacting in an interprofessional setting, attendees at the event will be able to grow in confidence and understanding of precision medicine and develop skills in collaborating their efforts to provide better patient-centered precision medicine. Educational research project that consists of a pre-intervention survey, an intervention, then a post-intervention survey will be implemented.
- 2nd place Graduate Oral Presentation at the Erie Regional Science Consortium 13th Annual Research Symposium: Repeated prenatal VPA exposure results in marked deficits in development of sensory systems and the Superior Olivary Complex. Ryan S. Zimmerman, Randy Kulesza.

**LECOM-Erie Research Council Meeting has been regularly held each month**

**Information was posted on the Portal:**

- Annual Research Reports
- IRB/IACUC forms, manuals
- Research Yearbooks/faculty's research activity
- Grants/funding (LECOM Grants 2010-17)
- LECOM Publications 2010-17
- Research Day
  - Erie Interprofessional Research day abstracts/prizes from 2008
  - Bradenton Interprofessional Research day abstracts/Schedule 2016-17
  - LECOM Health Orthopedic Research Day

**LECOM Research Day has been organized (SEE NEXT PAGES AND THE ABSTRACT BOOKLET)**

- Over 80 abstract submissions
- 15 oral presentations
- IPE Live Panel Discussion has been planned by Dr. Terrell
- Keynote speaker Irina Sorokulova's talk: "Gut and Health: Lessons From the Microbiota".

# LECOM INTERPROFESSIONAL RESEARCH DAY

2017

19<sup>TH</sup> OF OCTOBER, 2017

## STUDENT PRESENTATIONS PRIZES

### LECTURE SESSION

**1<sup>st</sup> Prize (\$500): Ryan S. Zimmerman**

Repeated prenatal VPA exposure results in marked deficits in development of sensory systems and the Superior Olivary Complex. Ryan S. Zimmerman\* and Randy Kulesza

**2<sup>nd</sup> Prize (\$250): Ami B. Shah**

Elevated androstenedione in young adult but not pubertal prenatally androgenized rats. Ami B. Shah\*, Diana L. Speelman and Issac Nivar

**3<sup>rd</sup> Prize (\$100): Cody R. Kilar**

Activation of the  $\beta$ -common receptor by erythropoietin impairs acetylcholine mediated vasodilation in mouse mesenteric arterioles. Cody R. Kilar\*, YanPeng Diao, Larysa Sautina, Sivakumar Sekharan, Shahar Keinan, Kirk P. Conrad, Rajesh Mohandas and Mark S. Segal.

### POSTER SESSION

**1<sup>st</sup> Prize (\$500): Scott Schmalzried**

The Effect of Essential Cinnamon Oils and Cinnamaldehyde on Growth Inhibition of *Pseudomonas aeruginosa* and *Staphylococcus aureus*  
Scott Schmalzried\*, Nancy Carty, Christopher C. Keller.

**2<sup>nd</sup> Prize (\$250): Philip Femano, OMS-IV**

A rare case of severe idiopathic Guyon canal syndrome treated with a Guyon canal decompression and supercharged end-to-side anterior interosseus to ulnar nerve transfer  
Philip Femano and Michael Rivlin.

**3<sup>rd</sup> Prize (\$100): Vishesha Patel**

Regular yoga improves hormone health in women with polycystic ovary syndrome  
Davis SE, Patel V, Bouwer S, Menezes C, Menezes H, Hendryx J, Smith CA, Speelman DL, and Ducato K

# LECOM INTERPROFESSIONAL RESEARCH DAY

2017

19<sup>TH</sup> OF OCTOBER, 2017

## RESIDENT PHYSICIAN PRESENTATIONS PRIZES

### LECTURE SESSION

**1<sup>st</sup> Prize (\$500): Gennaro Romanello**

Common Misconceptions in the Recognition and Treatment of Anaphylaxis in Community Hospital Based Medical Professionals. Johnson J., Abraham T., Sandhu M., Peppers B., Lyman B., Knozer K., Romanello G.\*, Hostoffer R., Bruggeman, C., Staggs, R., Mastriana, J.

**2<sup>nd</sup> Prize (\$250): Steven Ward**

The Use and Effectiveness of Texting in Healthcare: A Survey of Medical Professionals.  
Steven Ward\*

**3<sup>rd</sup> Prize (\$100): Andrew J. Chin**

The Effectiveness and Tolerance of Rib Raising in Hospitalized Patients. Andrew J. Chin\*, Ryan Shilian, Andrea D. Fischione, Lauren M. Walter, Susan M. Ratay, Tamar Y. Bejanishvili, Jonathan H. Wynbrandt, and Michael P. Rowane.

### POSTER SESSION

**1<sup>st</sup> Prize (\$500): Bhavesh Joshi**

Osteochondritis Dissecans in the NBA  
Bhavesh Joshi, Michael Knoll and Patrick Leary

**2<sup>nd</sup> Prize (\$250): Matthew L. Hintz**

Kirschner Wire Utilization as Flexible Intramedullary Construct for Management of Metacarpal Shaft Fracture  
Matthew L. Hintz

**3<sup>rd</sup> Prize (\$100): Kevin A. Hough**

Lake erie college of osteopathic medicine senior living center urinalysis protocol study using the McGeer criteria  
Kevin A. Hough, Nicholas Podhorniak and Brandon Intrieri