

# ATSU RESEARCH

A newsletter produced by Research Support

Image (nerve fibers near a putative muscle spindle) courtesy of Dr. Keith Elmslie and Dr. Ranuka Ramachandra

*“If a scientist is not befuddled by what they’re looking at, then they’re not a research scientist.” ~Neil deGrasse Tyson*

## Publications

Bayome M, Kook YA [adjunct], Kim Y, Lee CW, **Park JH**. Implants for orthodontic patients with missing anterior teeth: placement in growing patients—immediate loading. *Semin Orthod*. 2016;22(1):64-74. [Link](#).

Carter BU, Kaylor MB [adjunct]. The use of ambulatory blood pressure monitoring to confirm a diagnosis of high blood pressure by primary-care physicians in Oregon. *Blood Press Monit*. 2016;21(2):95-102. [Link](#).

Chang NY, **Park JH**, Lee MY, Cho JW, Cho JH, An KY, Chae JM [visiting scholar]. Orthodontic treatment of maxillary incisors with severe root resorption caused by bilateral canine impaction in a Class II division 1 patient. *J Clin Pediatr Dent*. 2016;40(2):161-168. [Link](#).

Colletti TP [alum], **Salisbury H**, Hertelendy AJ [adjunct], Tseng T. Relationship between physician assistant program length and Physician Assistant National Certifying Examination pass rates. *J Physician Assist Educ*. 2016;27(1):3-6. [Link](#).

**Cox JL**, McIntire S [student]. The effects of cystatin C construct clones on B16F10 in vitro cell behavior. *J Mol Biochem*. 2016;5(1):4-11. [Link](#).

**Ewing H, Anast A, Roehling T**. Addressing plagiarism in online programmes at a health sciences university: a case study. *Assess Eval High Educ*. 2016;41(4):575-585. [Link](#).

**Gold J**. Consumption of xylitol gummy bears may not provide additional caries prevention for school children. *J Evid Based Dent Pract*. 2016;16(1):70-72. [Link](#).

**Goldstein LB**. My opinion: information somewhat biased and incomplete. *Pract Pain Manag*. 2016;16(3):70. [Link](#).

**Goldstein LB**. Gilbert S. Acupuncture: new approach for temporomandibular disorders. *Pract Pain Manag*. 2016;16(2):70-75. [Link](#).

## **Publications, continued**

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Jones E [alum], **Mathieson K**. Radiation safety among workers in health services. *Health Phys*. 2016;110(5 suppl 2):S52-58. [Link](#).

Kaplan S, Tilson J, Levine D, George S, **Fay D**, Hack L, Jewell D, Wainner R. Strategies for using the APTA Section on Research Evidence-based Practice Curriculum Guidelines. *J Phys Ther Educ*. 2016;30(2). [Link](#).

Kibrik P, **Goldstein LB**, Futterman B. Achilles tendon injuries: a look at conservative therapy to reduce pain and improve function. *Pract Pain Manag*. 2016;16(4):45-55. [Link](#).

Kothari H [alum], **Pruzansky DP**, **Park JH**. What influences a pediatric dentist to refer to a particular orthodontist? *J Clin Orthod*. 2016;50(4):231-238. [Link](#).

Lapinski J [student], Hassan S. Burnout, depression, non-modifiable factors, and work environment in osteopathic family medicine residents. *Osteopath Fam Physician*. 2016;8(2):12-17. [Link](#).

Long DM, **Matthews E**. Evidence-based practice knowledge and perfusionists' clinical behavior. *Perfusion*. 2016;31(2):119-124. [Link](#).

Mann JB, Ivey PA, Mayhew JL, Schumacher RM, **Brechue WF**. Relationship between agility tests and short sprints: reliability and smallest worthwhile difference in National Collegiate Athletic Association Division-I football players. *J Strength Cond Res*. 2016;30(4):893-900. [Link](#).

**Motahari M**. Effect of a pilot program in business and legal healthcare management designed for third and fourth year dental students. *J Dent Oral Health*. 2016;2(2):30. [Link](#).

**Park JH**, **Papademetriou M**, Kwon YD. Orthodontic considerations in orthognathic surgery: who does what, when, where and how? *Semin Orthod*. 2016;22(1):2-11. [Link](#).

**Patel S**, **Perry MM**, **Spolarich AE**. Oral surgery in a patient with cirrhosis and thrombocytopenia: a case report. *Spec Care Dentist*. 2016;36(2):93-98. [Link](#).

Reyes U, **Spolarich AE**, Han PP. A comprehensive oral preventive care protocol for caring for the renal transplant population. *J Dent Hyg*. 2016;90(2):88-99. [Link](#).

Vandenberg R [resident], **Schneider R**. Osteopathic family medicine residents' knowledge, views, and management of natural family planning. *Osteopath Fam Physician*. 2016;8(2):18-21. [Link](#).

Wahlsten O, Skiba JB, **Makin IRS**, Apell SP. Electrical field landscape of two electroceuticals. *J Electr Bioimp*. 2016;7:13-19. [Link](#).

Weber ML [alum], **Lam KC**, **Valovich McLeod TC**. The effectiveness of injury prevention programs for youth and adolescent athletes. *Int J Athl Ther Train*. 2016;21(2):25-31. [Link](#).

Yang AJ, Gromoske AN, Olson MA, **Chaffin JG**. Single and cumulative relations of social risk factors with children's dental health and care-utilization within regions of the United States. *Matern Child Health J*. 2016;20(3):495-506. [Link](#).

## Presentations and abstracts

\* indicates presenter

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**Ahmad Z\***. Peptide-induced inhibition of ATP synthase as an alternative approach to combat microbial infections. Poster presented at: Experimental Biology 2016; April 2-6, 2016; San Diego, CA. Abstract published in: FASEB J. 2016;30(1 suppl):606.1.

Aksu M\*, Zarkowski P\*, **Trombly R\***. Navigating the financial, business and legal landmines in dental education. Presented at: 2016 American Dental Education Association Annual Session; March 12-15, 2016; Denver, CO.

Batten SM [student]\*, Dobard SE [student], Buell JH [alum], Cammack SA [student], **Sexton WL**. Oxygen kinetics and muscle twitch tension in the rat extensor digitorum longus muscle after creatine kinase inhibition. Poster presented at: Experimental Biology 2016; April 2-6, 2016; San Diego, CA.

Brogis R [student]\*, Chang J. Cameron ulcer: a curious case of GI bleeding. Presented at: Uniformed Services Academy of Family Physicians 2016 Annual Meeting; March 18-22, 2016; Denver, CO.

Caputo A [adjunct]\*. Patients with conditions commonly treated with anesthesia including unwanted behavior. Presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL.

**Chu K\***, **Duong ML\***. Strategies for the first-time denture wearer: emphasis on special care patients. Presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL.

Cohen R [adjunct]\*. Orofacial pain management; diagnosing common clinical problems and illustrating these problems with case scenarios; challenges going forward. Presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL.

**Dishman L\***. Do US for-profit hospitals outperform non-for-profit and governmental hospitals in revenue cycle management? Presented at: 2016 Industry Studies Conference; May 24-26, 2016; Minneapolis, MN.

**Dishman L\***. Does size matter? A quantitative study of patient experience self-reported by US for-profit, non-profit, and governmental hospitals from 2009 to 2012. Presented at: Michigan Academy of Science Arts and Letters 2016 Conference; March 4, 2016; University Center, MI.

**Dishman L\***. Reinventing customer service in healthcare: lessons learned from the best. Presented at: 2016 Spring Conference of the Michigan Society for Healthcare Planning and Marketing and the Midwest Chapter of the American College of Healthcare Executives; May 6, 2016; Livonia, MI.

**Dishman L\***. Why does improving patient experience and hospital financial performance begin with strategic and leadership development? Presented at: 2016 Spring Conference of the Michigan Society for Healthcare Planning and Marketing and the Midwest Chapter of the American College of Healthcare Executives; May 6, 2016; Livonia, MI.

Dobard SE [student]\*, Batten SM [student], Cammack SA [student], Buell JH [alum], Ware AL [alum], **Sexton WL**. Measurement of myocardial microvascular PO<sub>2</sub>: impact of sumatriptan. Poster presented at: Experimental Biology 2016; April 2-6, 2016; San Diego, CA.

## **Presentations and abstracts, continued**

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**Duong ML\***. The past, current and future state of e-cigarettes. Presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL.

**Duong ML\***, **Gohlke E\***. Tools for successful special patient care for students and new dentists. Presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL.

**Duong ML\***, **Perry M\***. Using Laerdal SimMan 3G to train dental health professionals. Presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL.

**Fallone K\***, **Gohlke E\***. Exposing and integrating dental hygiene students into special care dentistry. Presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL.

**Gold J\***, Fontana M\*. Silver diamine fluoride for caries control in dental public health settings. Presented at: 2016 National Oral Health Conference; April 18-20, 2016; Cincinnati, OH.

**Goldstein LB\***, **Heath DM\***. Improving whole person healthcare through IPE. Presented at: 2016 American Association of Colleges of Osteopathic Medicine Annual Conference; April 6-9, 2016; Washington, DC.

**Halupa C\***. The changing roles of online program chairs in small private universities. Presented at: Distance Education Association of New Zealand Conference 2016; April 17-20, 2016; Hamilton, New Zealand.

**Hansen JL\***, Thiyagarajan T, Larson AK, Rideout A, Hansen DT. Expression and assembly of active human telomerase in *Escherichia coli*. Poster presented at: Experimental Biology 2016; April 2-6, 2016; San Diego, CA. Abstract published in: FASEB J. 2016;30(1 suppl):1051.5.

Hartsell Z [student], Opok-Amoabeng B [student], Thomas M [student]\*, **Dishman L**. A comparative analysis of financial performance: key attributes as evidenced from three biopharmaceutical firms. Presented at: 2016 Industry Studies Conference; May 24-26, 2016; Minneapolis, MN.

**Hassan SMS\***, **Thomann C\***, **Bhatia S**, **Theobald R**. A comparison of three neuroscience curriculum models in an osteopathic medical school. Poster presented at: Experimental Biology 2016; April 2-6, 2016; San Diego, CA. Abstract published in: FASEB J. 2016;30(1 suppl):786.2.

**Heath DM\***, **Makin IRS\***. Enhancing osteopathic palpatory diagnosis and treatment of shoulder pain through the use of ultrasound imaging. Presented at: Arizona Osteopathic Medical Association 94th Annual Convention; April 13-17, 2016; Scottsdale, AZ.

**Heick JD\***, **Valovich McLeod TC**, **Bay RC**, Dompier T. Concurrent validity of the King-Devick, sensory organization test, head shake-sensory organization test, and dynamic visual acuity test in healthy individuals. Poster presented at: 9th World Congress for Neurorehabilitation; May 10-13, 2016; Philadelphia, PA.

## Presentations and abstracts, continued

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Hirschbaum J [student]\*, Adams J [student], Ebbs D [student], Jasicki S [student], Lovato J [student], Matsushita S [student], Waggoner S [resident], **Lewis J, Heath D**. Developing osteopathic manipulative medicine as an adjunct tool for community health workers in four remote underserved Peruvian Amazon communities. Poster presented at: Arizona Osteopathic Medical Association 94th Annual Convention; April 13-17, 2016; Scottsdale, AZ. *First place student poster award winner*.

Hohenbery T [student]\*, Joshi K, **Ramaraj P**. In-vitro determination of differential roles of androgens (androstenedione and testosterone) and progesterone in increased male mortality in melanoma using a human melanoma (BLM) cell model. Poster presented at: Endocrine Society 2016 Annual Meeting; April 1-4, 2016; Boston, MA. Abstract published in: *Endocr Rev.* 2016;37(2 suppl):SUN-233.

**Ikonne S\*, Campbell A\*, Whelihan K, Lewis JH**. Lecture capture technology, student attendance and academic performance. Poster presented at: 2016 American Association of Colleges of Osteopathic Medicine Annual Conference; April 6-9, 2016; Washington, DC. *Outstanding medical education research award winner*.

**Lam KC\***. The simple act of counting: how characterizing routine athletic training clinical practice can improve the quality of patient care. Presented at: Rocky Mountain Athletic Trainers' Association Annual Clinical Symposium; April 7-10, 2016; Albuquerque, NM.

Lapinski J [student]\*. The role of personal and career satisfaction on burnout and depression in osteopathic FM residents. Presented at: American College of Osteopathic Family Physicians 53rd Annual Convention and Scientific Seminars; April 6-9, 2016; San Juan, Puerto Rico.

**Levine R\***, Vitruk P. Improved hemostasis and healing in CO<sub>2</sub> laser soft-tissue oral surgeries. Presented at: Academy of Laser Dentistry 23rd Annual Conference; April 14-16, 2016; Orlando, FL.

**Makin IRS\*, Heath D\***. Introduction to musculoskeletal ultrasound imaging. Presented at: Arizona Academy of Family Physicians Annual Clinical Education Conference; April 7-9, 2016; Phoenix, AZ.

**Makin IRS\***, Nooreydzan S, Chhabra C. Safe attainment of face and neck tissue lifting response in Fitzpatrick skin types II-VI, using a micro-focused ultrasound system with imaging (MFU-V): a clinical case study. Presented at: American Society for Laser Medicine and Surgery 36th Annual Conference; March 30-April 3, 2016; Boston, MA.

**Makin IRS\*, Pedapati C**, Parikh V [student], **Levine R, Shlossman M**. Output power and spatial beam distribution characterization of two dental diode laser systems. Presented at: American Society for Laser Medicine and Surgery 36th Annual Conference; March 30-April 3, 2016; Boston, MA.

Marolt C [student]\*, **Rachakatla RS**. Using rabbit umbilical cord stem cells as vehicle to deliver anti-cancer drugs to treat pancreatic cancer. Poster presented at: Experimental Biology 2016; April 2-6, 2016; San Diego, CA. Abstract published in: *FASEB J.* 2016;30(1 suppl):1036.6.

**McCoy L\*, Lewis JH, Bennett T, Allgood JA, Bay C, Schwartz FN**. Fostering service learning in medical students through a virtual community health center. Presented at: 2016 American Educational Research Association Annual Meeting; April 8-12, 2016; Washington, DC.

## **Presentations and abstracts, continued**

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**McCoy L\***, **Lewis JH**, Dalton D. Games, virtual simulations and apps for medical education. Presented at: 2016 American Association of Colleges of Osteopathic Medicine Annual Conference; April 6-9, 2016; Washington, DC.

McDaniel DJ [student]\*, Tilton EE [student]\*, Dominick KM [student]\*, Flory KM [student]\*, Ernest TL [student], **Johnson JC**, **Kondrashov P**. Histological characteristics of knee menisci in patients with osteoarthritis. Poster presented at: Experimental Biology 2016; April 2-6, 2016; San Diego, CA.

**McGarvey T**, **Ramaraj P**, **Hassan SS\***. Vitamin K2 prevents beta amyloid peptide and vitamin K3-induced cell death. Poster presented at: Experimental Biology 2016; April 2-6, 2016; San Diego, CA. Abstract published in: FASEB J. 2016;30(1 suppl):561.4.

**McWilliams TE\***, **Sealey J**, **Watts L\***. Residency training in community health centers: lessons learned and opportunities for the future. Presented at: 2016 Association of Osteopathic Directors and Medical Educators Annual Meeting; April 27-30, 2016; Portland, OR.

**Mehta Z\***, Garde N [student], **Hale T**. Somatic symptom disorder: a case study. Poster presented at: AudiologyNOW! 2016 Convention; April 13-16, 2016; Phoenix, AZ.

**Nenad M\***, Chu W. Current practices in new faculty orientation. Presented at: 2016 American Dental Education Association Annual Session; March 12-15, 2016; Denver, CO.

**Obadia S\***, **McCoy L\***. Best practices for effectively precepting osteopathic medical students. Presented at: Arizona Osteopathic Medical Association 94th Annual Convention; April 13-17, 2016; Scottsdale, AZ.

**Olsen LK\***, Peña De La Cruz A\*. The role of health education/promotion specialists in addressing human trafficking of youth. Poster presented at: 22nd International Union for Health Promotion and Education World Conference on Health Promotion; May 22-26, 2016; Curitiba, Brazil.

Pait MC\*, Elliott L, Hafner-Ruiz S, Mundell C, Patterson W, Romine H, **Ikonne U**, Bahr BA. Development of cathepsin B positive modulators to treat multi-proteinopathic dementias: exploiting the lysosomal avenue of protein clearance to promote synaptic recovery. Poster presented at: Experimental Biology 2016; April 2-6, 2016; San Diego, CA. Abstract published in: FASEB J. 2016;30(1 suppl):707.1.

**Park JH\***. Class III correction with conventional treatment and TADs. Presented at: Northern California Edward H. Angle Society of Orthodontists Meeting; April 15-16, 2016; Carmel, CA.

**Park JH\***. Clinical and biomechanical considerations of using TADs and novel appliances to correct challenging cases. Presented at: American Association of Orthodontists 2016 Annual Session; April 29-May 3, 2016; Orlando, FL.

**Patel S\***. Oral potentially malignant disorders. Presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL.

Peña De La Cruz G\*, **Olsen LK\***, Peña De La Cruz A\*. Adolescent pregnancy in Mexican high school youth. Poster presented at: 22nd International Union for Health Promotion and Education World Conference on Health Promotion; May 22-26, 2016; Curitiba, Brazil.

## Presentations and abstracts, continued

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Petty JL [student]\*, **Kondrashov P**, **Johnson JC**, **Kondrashova T**. Evaluating ultrasound practical examinations used to assess sonographic skills of medical students. Poster presented at: Experimental Biology 2016; April 2-6, 2016; San Diego, CA.

Ragasa R [resident]\*, Saravia S [resident]\*, Schneid P [resident]\*, Vogt M [resident]\*, **Navarro I**, **Lewis J**. A retrospective study of school based health centers on sexual health among adolescents in New York City. Poster presented at: NYU Lutheran Research Fair 2016; May 12, 2016; Brooklyn, NY. *Distinction award winner.*

**Razoky K\***, **Hendricks G\***, **Hanger T\***, **Hendricks C\***. Integrating technology to improve education: medical emergencies with simulation manikins. Presented at: 2016 American Dental Education Association Annual Session; March 12-15, 2016; Denver, CO.

Schaffer R [adjunct]\*. Everything you ever wanted to know about Von Willebrand's disease and oral health. Presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL.

Silverstein J [alum]\*, **Matthews E**. Causal factors for upper extremity positional nerve injuries as seen by somatosensory evoked potentials in patients undergoing thoracolumbar and lumbosacral spine surgery. Presented at: International Society for the Advancement of Spine Surgery Conference; April 6-8, 2016; Las Vegas, NV.

**Spolarich A\***. Assessing patients who take blood-altering medications. Presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL.

**Spolarich AE\***. Exploring the emerging science. Presented at: College of Registered Dental Hygienists of Alberta Annual Continuing Competence Event; April 28-30, 2016; Calgary, Canada.

**Spolarich AE\***. Interprofessional educational training improves pharmacists' ability to counsel older adults. Poster presented at: 2016 American Dental Education Association Annual Session; March 12-15, 2016; Denver, CO.

**Spolarich AE\***. The escalating problem of substance abuse: what your kids and patients aren't telling you. Presented at: College of Diplomates of the American Board of Pediatric Dentistry 2016 Annual Meeting and Symposium; May 28, 2016; San Antonio, TX.

Stone RM [student]\*, **Kinney MB**, Parks C [student], **Pettit RK**. A crowdsourced system for creating practice questions. Poster presented at: 16th Educational Strategies Workshop of the Association of Medical School Microbiology and Immunology Chairs; May 15-18, 2016; Palm Springs, CA.

**Stuart MK\***, **Chamberlain NR**, **Singh VK**, **Hudman DA**, **Phillips PL**, **Sargentini NJ**. The small-group clinical case presentation: an instrument for assessing interpersonal skills, critical thinking, and knowledge in medical microbiology, immunology, and infectious disease. Presented at: 16th Educational Strategies Workshop of the Association of Medical School Microbiology and Immunology Chairs; May 15-18, 2016; Palm Springs, CA.

## **Presentations and abstracts, continued**

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Taylor CA [student]\*, Patel VN, Smith SA, Hoffman MP. Heparan sulfate 3-O-sulfation increases progenitor cell expansion. Poster presented at: Western Regional Dental Convention; April 8-9, 2016; Phoenix, AZ. *Student poster competition winner.*

Troxell T [student]\*, Lanuza M [student], Drew D, Saile J. Pilot elective course: osteopathic primary care evaluation and diagnostics for the dentist. Poster presented at: 6th Annual Ohio Osteopathic Symposium; April 20-24, 2016; Columbus, OH.

Wachter B [student]\*, Arana E [student], **Duong ML**, Schaffer R [adjunct]. Access to dental care for people with bleeding disorders. Poster presented at: 23rd International Association for Disability and Oral Health Congress/Special Care Dentistry Association 28th Annual Meeting; April 14-17, 2016; Chicago, IL. And poster presented at: Western Regional Dental Convention; April 8-9, 2016; Phoenix, AZ.

Wilson D\*, Holmes D\*, Hinde T\*, **Trombly R\***. Shaping clinical learning together: synthesizing daily feedback into formative/summative assessments. Presented at: 2016 American Dental Education Association Annual Session; March 12-15, 2016; Denver, CO.

**Zhou GW\***. Protein expression and subcellular localization profiling by DAMA (dissociable antibody microarray) straining technology. Presented at: 6th International Conference and Expo on Proteomics; March 29-31, 2016; Atlanta, GA.

## **Sorry we missed you last time**

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**Crutchfield P**. The future of inductive risk for disorders of consciousness. *AJOB Neurosci.* 2016;7(1):56-57. [Link](#).

**Lam KC\***. Practice characterization: what is it, why is it important, and how you can accomplish it? Presented at: 39th Annual Arizona Athletic Trainers' Association Winter Symposium; January 23-24, 2016; Phoenix, AZ.

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Faculty and students from the Arizona campus conducted an all day workshop in conjunction with the AudiologyNOW! 2016 Convention in April in Phoenix, Arizona. The workshop, "Neuroanatomy Lab: Speed-dating style!", involved interprofessional education opportunities as the workshop presenters from A.T. Still University's Audiology and Physical Therapy departments and School of Osteopathic Medicine in Arizona worked with the practicing audiologist attendees. Workshop participants provided overwhelmingly positive feedback about the hands-on laboratory experiences and the professional presentations of our knowledgeable faculty and students. The following faculty presented the workshop: Tricia Dabrowski, Lesley Gilmer, Troy Hale, Zarin Mehta, John Olson, Tabitha Parent-Buck, William Robinson, and Henry Trahan. The following students presented the workshop: Jacob Ahn, Rachel Allgor, Neil Bhutwala, Patricia Bonilla, Spencer Eberhard, Dakota Fego, Caitlynn Gentry, Amanda Guzallis, Madeline Haharry, Kaitlyn Harvey, Garrick Jones, Ashley Kun, Shovna Mishra, Jordon Rosenberg, Sarah Schwegman, Aarshee Talwar, James Tan, Muhammad Ulhaque, Nancy Vickerson, and Kristina Weishar.