

ATSU RESEARCH

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Image (lumbar spine models) courtesy of Dr. Brian Degenhardt, Dr. Eric Snider, Ken Pamperin, and Kelly Rogers



“Individually, we are one drop. Together, we are an ocean.” ~Ryunosuke Satoro

2019 A.T. Still University research symposiums

Several research symposiums were held at A.T. Still University (ATSU) this year. On the Mesa, Arizona, campus, the Arizona School of Dentistry & Oral Health (ATSU-ASDOH) and two departments from the Arizona School of Health Sciences (ATSU-ASHS) hosted symposiums. In Missouri, the Missouri School of Dentistry & Oral Health (ATSU-MOSDOH) held a research day at its St. Louis clinic, and the A.T. Still Research Institute (ATSRI) hosted its annual symposium in Kirksville.

ATSU-ASDOH Student Research Day

Twenty third-year and fourth-year students presented results of their research at the 12th annual ATSU-ASDOH Student Research Day on Feb. 15. Eight oral presentations and 10 posters were presented on the day. Over 150 students and faculty from ATSU attended the presentations. Rachael Maddox, D3, was selected as the winner of the ATSU-ASDOH Student Research Day and will represent ATSU-ASDOH at the upcoming Dentsply Sirona Student Clinician Research Competition at the International Association for Dental Research (IADR) meeting in Washington, DC, in March 2020. Emily Bujnoski, D3, won a \$500 research travel award from the American Association for Dental Research, which will be used to present her research at the IADR meeting in March 2020. ATSU-ASDOH student participation in Washington, DC, is particularly noteworthy in 2020 because the IADR Centennial will be celebrated at the meeting.

2019 ATSU-ASDOH Research Day student oral presentations

*indicates presenter

Agee T*, Spolarich A, Patel S, Koskan A, Perry M, Flood T. Assessing Arizona orthodontists' knowledge and attitudes about HPV vaccine promotion.

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Presentations, continued

Bach Q*, Maddox R*, Kim YS, Kim DY, Seo J, Chun KC, Kim YA, Won HD. Effects of the ketogenic diet and ketones on metabolic sensors and inflammation: implications for the epileptic brain and ovarian cancer cell.

Bujnoski E*, Patel S. Investigating the prevalence of treatment-induced trismus in head and neck cancer patients: a retrospective chart review.

Chaudhry U*, Cohen JR, Al-Samawi Y. Use of CBCT imaging for airway measurement to predict obstructive sleep apnea.

Choi L*, Chokdee D*, Perry M. Measuring the effects of didactic and clinical environments of behavioral intent among dental students in special care dentistry.

Chukwu C*, Hanley J*, Patel S, Spolarich A. Direct oral anticoagulants (DOACs) and postoperative bleeding complications after dental extractions.

Dugum A*, Patel S, Spolarich A, Perry M. Impact of compliance with fluoride therapy on caries incidence after cancer therapy.

Ray C*, Creech J, Spolarich A. Influence of parental anxiety and expectations on child self-reported dental anxiety, expectations, and dental services utilization.

2019 ATSU-ASDOH Research Day poster presentations

*indicates presenter for student posters

Chhea N*, Duong ML, Nguyen E, Haynie A, Rawcliffe M. Prevention and management of medical emergencies within the dental office.

Choi A*, Spolarich A, Tomeh C. Assessing patient referral patterns for HPV related oropharyngeal cancers.

Ghattan S*, Boguspour N*, Jensby A. Robo graders in dental school: the use of analytical software in preparation evaluation.

Heal M*, Spolarich A. Stimulant medication-induced hyposalivation in adolescents.

Hezarkhani A*, Shlossman M, Spolarich A. Dental students' perceived knowledge pertaining to e-cigarette oral health effects.

Kendall K, Pedapati C, Makin IR, Huxel Bliven KC. Clinical observations of the wrist and hand in dental professionals.

Pedapati C, Makin IR, Kendall K, Huxel Bliven KC. Median nerve blood flow in dental professionals.

Tsang C*, Spolarich A. Redundant prescriptions and drug misuse among older adults.

Velasquez T*, Spolarich A, Perry M. Recall of oral hygiene education among patients with special needs.

Yen A*, Chu K*, Duong ML, Brennan J, Kahn M, Chen C. Transforming oral healthcare delivery to underserved adults with digital dentistry: a pilot study.

ATSU-MOSDOH inaugural Research Day

ATSU-MOSDOH held its inaugural Research Day at the St. Louis Dental Center in St. Louis on May 7. The research day was the result of ATSU-MOSDOH's new D3 Research Project, which involves all full-time clinical faculty acting as faculty mentors for groups of two or three third-year dental students over two semesters. These research teams conduct clinical research projects culminating in a professional poster presentation on Research Day. Fourteen posters were presented from the work of 42 students and 14 faculty. The project from the research team mentored by Susan Adams, DMD, MS, was selected as the winner of the ATSU-MOSDOH Research Day. A student from that team, Matthew McClement, D4, will represent ATSU-MOSDOH at the Dentsply Sirona Student Clinician Research Competition at the IADR meeting in Washington, DC, in March 2020.

2019 ATSU-MOSDOH inaugural Research Day posters

*indicates poster competition winner

Barrett T, Leach K, Pinkston T. Baseline assessment of public health placement following graduation from a dental school embedded at a federally qualified health center. Faculty mentor: Greaves M.

Besancenez B, Carroll C. Dental student perceptions of experiential learning in clinical training of N₂O anxiolysis. Faculty mentor: Crivello B.

Greene K, Augustine A, White K. Magnification loupes and musculoskeletal discomfort. Faculty mentor: Abels M.

Immel J, Parker R, Mopps A. Treatment of xerostomia and hyposalivation in elderly patients: will it work for Missouri School of Dentistry & Oral Health patients? Faculty mentor: Vargo R.

*McClement M, Knable T, Allen S. Completion of definitive restoration following endodontic treatment at St. Louis Dental Center. Faculty mentor: Adams S.

Nguyen C, Joseph R, Betancourt M. Salivary flow in children residing in households with smokers and non-smokers. Faculty mentors: Reddy A, Marden M.

Nguyen T, Nguyen N. Evaluation of the impact of bilingual oral health educational brochures on the oral health literacy (OHL) of Vietnamese individuals residing in St. Louis. Faculty mentor: Muller R.

Norvell L, Hernandez S, Ghazal J. Oral hygiene protocol alterations. Faculty mentor: Dunivan S.

Pham D, Pham K, Nguyen D. Secondary caries with composite restorations: a clinical review. Faculty mentor: Kosel E.

Pyle J, Chon M, Rash H. Predicting cooperation of adult autistic patients in the dental clinic. Faculty mentor: Shanker K.

Salar E, Kasisa M, VanWinkle E. Evaluating accuracy of intraoral scanners. Faculty mentor: Vij A.

Sanders JL, John P, Langston B. Conventional restorations vs. crowns for root canaled teeth. Faculty mentor: Krueger G.

Shakiba S, Rohani S. Impact of an outreach program on utilization of dental school services by Persian speaking population. Faculty mentor: Muller R.

Posters, continued

Zeng R, Kang D, Williams M. Assessing the possible correlation between tactile sensation and CBCT software evaluation of bone density for edentulous dental implant patients. Faculty mentor: Abdulkarim H.

ATSU-ASHS Occupational Therapy Research Day

The Occupational Therapy department held its student research day on May 29. Seven presentations resulting from the department's faculty-directed research experience were given by third-year occupational therapy students. About 40 occupational therapy students and faculty attended the research day.

2019 Occupational Therapy Research Day presentations

Bautista S. Use of a sensory room at an emergency children's shelter: program outcomes. Faculty advisor: Diamant R.

Broussard A, Sankey C, Smith L. Trauma-informed approaches in child serving settings: a scoping review. Faculty advisor: Petrenchik T.

Crockett C, Warner H. Parent reported concerns and major life changes in a clinical sample of school aged children with neurodevelopmental conditions: a qualitative study. Faculty advisor: Petrenchik T.

Ghushchyan G, Wolf B. An examination of roles in theory and practice. Faculty advisor: Bonsall A.

Holmes K, Ruiz H. The relationships between sensory processing behaviors, temperament characteristics for effortful control, and executive functioning in school-age children: preliminary outcomes. Faculty advisor: Diamant R.

Knowles R. A scoping review of preventative psychosocial interventions for stress in the workplace. Faculty advisor: Gupta J.

McFadden E, Ryan B. A mapping of evidence-informed interventions for UE rehabilitation post-stroke: a scoping review. Faculty advisor: Gupta J.

ATSU-ASHS Occupational Therapy Poster Presentation Day

The Occupational Therapy department held a poster presentation day on June 5. Thirteen posters were presented by occupational therapy doctoral students. The research presented arose from a 14-week experiential component of the program, where students gain advanced practice experience in the community while implementing their innovative projects. Sixty people attended, including students, faculty, community partners, and family members from the Occupational Therapy department and professionals from the community.

2019 Occupational Therapy Poster Presentation Day posters

Bautista S. Use of the Alert Program in a sensory room at an emergency children's shelter. Faculty advisor: Diamant R. Community mentor: Rzewnicki D.

Broussard AK. Occupational therapy and veterans' resiliency post-amputation: addressing psychosocial needs. Faculty advisor: Gupta J. Community mentor: Kienzle K.

Connolly C. Exploring the refugee occupational experience across the socioecological model. Faculty advisor: Gupta J. Community mentor: Smith YJ.

Ghushchyan-Tigranyan G. An examination of mothering occupations in the context of spinal cord injury. Faculty advisor: Bonsall A.

Holmes K. Resiliency and proactive coping methods targeting perceived stress levels in older adults. Faculty advisor: Bonsall A. Community mentor: Meyer J.

Knowles R. The occupation of sleep: promoting health and well-being of hospital shift workers. Faculty advisor: Wolf R. Community mentor: Bignoli K.

McFadden E. A dual-tasking study in Parkinson's disease. Faculty advisor: Gupta J. Community mentor: McIsaac T.

Ruiz H. "We don't like talking about toileting issues in front of everyone": Parents' reflections on family-centered care. Faculty advisor: Bonsall A. Community mentor: Wienke A.

Ryan B. Case report: a modified early passive mobilization protocol for a zone II flexor pollicis longus repair. Faculty advisor: Gerg MJ. Community mentor: Kremer S.

Sankey C. Occupational therapy in community corrections and reentry: program implementation for adult males with addiction. Faculty advisor: Wolf R. Community mentors: Barnhart P, Zimmerman J.

Smith SL. Resiliency in school experiences: a dropout prevention initiative. Faculty advisor: Gupta J. Community mentors: Colby A, Tauiliili B.

Warner H. Healthy brains, healthy bodies: addressing mealtime routines and self-regulation in children with dual diagnosis. Faculty advisor: Diamant R. Community mentors: Coates R, Lozano S.

Wolf B. Board games for kids: reducing stress and learning through play. Faculty advisor: Bonsall A. Community mentor: Billingsley C.

ATSU-ASHS Physical Therapy Poster Day

This year, the Physical Therapy department held a student poster day on June 5. Twenty-five posters were presented, involving 61 students. Poster topics arose from student capstone projects that are mentored by faculty, and the posters covered a variety of physical therapy topics. The poster day was attended by students and faculty from ATSU, alumni, and community-based clinicians.

2019 Physical Therapy Poster Day posters

*indicates poster competition winners

Bejarano G. The efficacy of physical therapy intervention in the treatment of male urinary incontinence: a pilot study. Faculty mentor: Roehling T.

Blauenstein A, Schlosser S. Factors associated with upper extremity recovery in chronic stroke survivors in an outpatient neurological rehabilitation facility. Faculty mentor: Lynskey J.

Childs A, Conger C, Aldava E, Hewett R, Hennessey L, Koerselmann H. Reliability of measuring glenohumeral abduction range of motion with a goniometer and a digital inclinometer. Faculty mentor: Manton C.

Colon S, Coffman K. Impact of A Matter of Balance falls prevention outreach on student coaches. Faculty mentor: Bordenave L.

Cooney R, Lee B. Effectiveness of various manual therapy techniques for common shoulder conditions. Faculty mentor: Young J.

Donaldson S, Diaz M, Khan Q. Predicting discharge destination from an acute in-patient rehabilitation setting for persons with a hip fracture: the Continuity Assessment Record and Evaluation (CARE) item set and fracture-related variables. Faculty mentor: Glittenberg C.

Eurek D, Hawk T, Kiflu D, Wallis A. The agreement in walking speed measured using four different outcome measures: 6-meter walk test, 10-meter walk test, 2-minute walk test, and 6-minute walk test. Faculty mentor: Roush J.

Falconer C, Horner J. Review of manual therapy interventions for cervicothoracic conditions amongst different medical providers: a systematic review. Faculty mentor: Young J.

*Fritcher C. The lived experience of the PWR! Retreat for people with Parkinson's disease. Faculty mentors: Bordenave L, McIsaac T. *Outstanding Capstone Project Award*

Fritz B, Kuczyc B, Li S, Nelson D. Do specific manual therapy dosing variables impact the outcomes for individuals with cervicogenic headaches? Faculty mentor: Young J.

Fujan L, Pathak M. Factors associated with recovery of balance and locomotor function in chronic stroke survivors in an outpatient neurological rehabilitation facility. Faculty mentor: Lynskey J.

*Harpham O, Erickson N. Effects of hippotherapy on axial rigidity and functional mobility in an individual with Parkinson's disease: a case study. Faculty mentor: McIsaac T. *Outstanding Capstone Project Award*

Hoppa L, Tarling M. Test-retest reliability of quantitative electroencephalography (qEEG) during four conditions in healthy individuals. Faculty mentor: Lynskey J.

Kennedy J, Orrell B. Utilization of manual therapy interventions in the treatment of common knee conditions. Faculty mentor: Young J.

Kimbrough M, Vierra A. Performance of Arizona Special Olympics athletes on the FUNfitness battery of tests. Faculty mentor: Farris J.

Lemery D, Tomich M. Providers of manual therapy interventions for the lumbar spine: a systematic review. Faculty mentor: Young J.

Posters, continued

McGinn W, Wilms H. CSM attendance: influence on DPT students' professional growth. Faculty mentors: Bordenave L, Wilkinson T.

Meza A, Conley R. The validity and reliability of the 4-step stair climb power test compared to the 10-step stair climb power test. Faculty mentor: Roush J.

Nwambuonwo U, Hatton B. The effect of high-intensity interval training (HIIT) on weight loss, pain, fatigue, and function for a person with multiple sclerosis: a case report. Faculty mentor: Glittenberg C.

Painter M, Reed W, Figueroa R, Powell J. Trends in the PT/PTA patient care management model. Faculty mentor: Imundi J.

Sanderson J, Schroeder B, Watson W. The six-minute walk test for people with Parkinson's disease: should I be concerned with configuration? Faculty mentors: Kuettel J, McIsaac T.

Schwarze D, Eversman C. The effects of hand dominance, age, and sex on grip strength in subjects ages 65 to 89 years. Faculty mentor: Roush J.

Van As S, Oswald E, Kyman D. The relationship between motor capacity and motor performance in children with cerebral palsy: a systematic review. Faculty mentor: Fay D.

Weng C, Zupko R. Scenario development of implicit and explicit cueing effects on simulated driving performance in Parkinson's disease. Faculty mentor: McIsaac T.

*Yu D, Lefebvre J. Is the MusicGlove a feasible and effective home-based treatment device for hand function in patients with Parkinson's disease? Faculty mentor: Kuettel J. *Honorable Mention*

2019 ATSU-ASDOH Fall Research Day

On Sept. 18, ATSU-ASDOH held a fall research day. This dedicated scientific poster session included 18 posters presented by ATSU-ASDOH student and faculty research teams. Fifteen students, four orthodontic residents, and 16 faculty participated in the research teams. Two hundred students and faculty from ATSU attended the event.

2019 ATSU-ASDOH Fall Research Day posters

Chae JM, Gousman J, Park JH. The relationship between the mandibular symphysis bone density and mandibular growth direction using CBCT.

Choi A, Bayarsaikhan Z, Kaleinikova Z, Hernandez A. Fabrication of anterior FPD utilizing CAD/CAM technology.

Finor M, McArthur B, Kaleinikova Z, Kumar S, Hernandez A. Utilization of CAD/CAM technology for fabrication of immediate dentures.

Gill N, Kalamchi S. Electric scooter-related craniofacial trauma: injury prevalence.

Gohlke E, Fallone K, Spolarich A. Training dental hygiene students to treat individuals with special needs.

Posters, continued

Halim I, Park JH, Liou EJ, Zeinelddin M, Al Samawi YS. Preliminary study evaluating the accuracy and reliability of CBCT images for tongue space measurement in the field of orthodontics.

Heal M, Spolarich A. Stimulant medication-induced hyposalivation in adolescents.

Howell S. Using teledentistry to evaluate oral health of youth in detention.

Kaleinikova Z, San Diego E, Hernandez A, Narendran S. Patients' awareness and perception about dental implant therapy.

Kleutsch K, Abdelrahim A, Shimpi N. Feasibility assessment of a teledentistry approach to address non-traumatic dental condition (NTDC) visits in emergency departments (EDs).

Leibow W, Chandok N. Location of the MB2 canal in relation to MB1 in maxillary first molars using CBCT imaging.

Makin I, Akintorin Y, Suhardjo J, Lawler C, Kaur H, Cohen J. Deployment of high-resolution ultrasound for oral musculoskeletal structures.

Nenad MW, Harper H. Assessing dental hygiene applicant "soft skills" through a multiple mini-interview (MMI).

Patel S, Koskan A, Spolarich A, Perry M. Dental professionals' knowledge and attitudes about HPV vaccine promotion.

Patel S, Spolarich A, Perry M. Impact of compliance with fluoride therapy on caries incidence after cancer therapy.

Roth-Garcia A, Shlossman M, Keleinikova Z. Case study: restoration of dental root caries.

Tse C, Spolarich A, Perry M. Recall of oral hygiene education among patients with IDD.

Williams A, Spolarich A. Direct to consumer orthodontics.

Eleventh annual Interdisciplinary Biomedical Research Symposium

On Nov. 2, the 11th annual Interdisciplinary Biomedical Research Symposium was held on the Kirksville, Missouri, campus. Hosted by ATSRI and sponsored by Still OPTI, the symposium included 10 oral presentations given by students, faculty, and staff from ATSU, Northeast Regional Medical Center, and Truman State University and a poster session that included 77 poster presentations by faculty, staff, residents, and students from the three institutions. One hundred seventy people attended the symposium.

Eleventh annual Interdisciplinary Biomedical Research Symposium oral presentations

* indicates presenter

Fulton C*, Clouse K*, Brechue W. Identifying physical deficiency and balance with a step-in-place test.

Golden K*, Curry EC*, Geisbuhler TP, Chamberlain N. Purification of persistence inducing factor for *Staphylococcus aureus* SH1000.

Presentations, continued

King AA*, Cox J, Bhatia S, Snider K. Characteristics and management of geriatric patients for a neuromusculoskeletal medicine/osteopathic manipulative medicine clinic.

Needham N*, Schrant B, Easterwood J. Discovery of pleuritic pericardial effusion through arterial line waveforms.

Udinyiwe JB*, Udinyiwe PV*, Starks Z, Corrick J, Degenhardt B. Contributions to posture alterations from a controlled ankle motion (CAM) walker boot.

Woods L*, Low D, Ferguson M, Brechue W, Kondrashova T. Relationship between cardiac structure and blood pressure response to isometric contractions in men and women.

Eleventh annual Interdisciplinary Biomedical Research Symposium posters

*indicates poster competition winners

*Arnold MF, Cleaver DW, Cleaver NJ. Cutaneous metastatic clear cell renal cell carcinoma: a report and discussion. *Still OPTI Award for Best Resident Research*

Baghat S, Siress ZT, Phillips P, Chamberlain NR. Surface sampling of mannequin simulators: are simulators contaminated by human pathogens?

Barrett S, McGonagill P, Wood D, Hubbard BL, Brechue WF. Nonconscious priming of motor performance through stereotype activation.

Bowers AN, Ebel DL, Ciesemier LL. Cold urticaria and hymenoptera stings: a case report.

Bradbury M. Algorithms and assumptions dilute DNA database information integrity.

Bray P, Han BH. Role of the orphan nuclear receptor NR4A-1 in neuroprotection from cytotoxic insults on neuronal N2A cells.

Conrad C, Kinney KE, Novinger JW, Brechue WF. Muscle fatigue associated with carbonic anhydrase inhibition is related to altered central command during sustained submaximal voluntary isometric contractions.

Cooper T, Brechue WF. Inconsistency of bilateral asymmetry between leg dominance, balance and jump performance.

Cox JL. Treatment of B16 melanoma cells with quercetin and an autophagy inhibitor.

Curry E, Jafari C, Thomas M, Houser J. The effectiveness of lecture prior to a skills lab for learning the cricothyrotomy procedure.

Dagat LA, Yusuf A, Zahriya Y, Staputyte K, Worley EL, Holt A, Chang Y. Vascular injury induces expression of β_3 -adrenergic receptors (β_3 -ARs) in neointima.

Demaree D, Blanke K, Danks R. Retrospective analysis of geriatric rib fracture management and 30 day complication in a rural hospital.

Demaree E, Cleaver DW, Cleaver L, Cleaver NJ, Cleaver JL. Granulomatous reaction to microneedling.

Posters, continued

Fong M, Cleaver L, Cleaver DW, Cleaver NJ. Borderline lepromatous leprosy: a case report and discussion.

Fulton C, Clouse K, Brechue W. Identifying physical deficiency and balance with a step-in-place test.

*Golden K, Curry EC, Geisbuhler TP, Chamberlain N. Purification of persistence inducing factor for *Staphylococcus aureus* SH1000. *Best Overall Research*

Goldenstein A, Troxell T, Kondrashov P, Cleaver DW. Confluent and reticulated papillomatosis (CARP): a case report and literature review.

Grider J, Frantzis A. Computed tomography visualization of a somatic reflex verified by osteopathic evaluation and treatment.

Hilton B, Cleaver DW, Cleaver L. Gorlin syndrome.

Holt A, Papadopoulos I, Licata M. Acute presentation of hepatoid carcinoma of the pancreatic head.

Howell WD, Shank SC, Sexton W. Dietary nitrate supplementation slows interstitial PO₂ on-kinetics, reduces twitch tension, and attenuates fatigue in the rat EDL muscle.

Hudman DA, Stuart M, Feldon L. Evidence of transovarial transmission of *Ehrlichia chaffeensis* in *Amblyomma americanum* (Acari: Ixodidae).

Hughes T, Steiner A, Ahmad Z. A connection between antimicrobial properties of dietary ginger phenolics and bacterial ATP synthase.

Humphrey CM, Ostrowski TD. Morphology and antioxidant status in the nucleus tractus solitarii of the brainstem in the Streptozotocin-induced rat model of Alzheimer's disease.

Jedlicka JD, Wresch D, Singh VK. How deletion of the *fakA*, *fakB1*, and *fakB2* genes affect membrane fluidity of *Staphylococcus aureus*.

Jepson L, Johnson KK, VanSickle C. Body size's bearing on the shape of the superior pubic ramus in adult males.

Johnson KK, Jepson L, VanSickle C. Influence of body size on the shape of the greater sciatic notch.

Jones JL, Cleaver DW, Cleaver JL, Cleaver NJ, Cleaver LJ. Cutaneous metastasis of urothelial origin: a case report and discussion.

Jones K, Howell M. Implementation of an endoscopic software program facilitates standardization for collecting quality data measures which will allow for hospital outcomes to be compared to the current standard of care. Documentation of and increased awareness of withdrawal times in screening colonoscopies will improve adenoma detection rates at Northeast Regional Medical Center and thereby decrease colon cancer risk within our patient population.

Kim-Han J, Elmslie K. Screening of cone snail venoms for Cav1.2 and Cav1.3 channel selective inhibitors.

King AA, Cox J, Bhatia S, Snider K. Characteristics and management of geriatric patients for a neuromusculoskeletal medicine/osteopathic manipulative medicine clinic.

Posters, continued

Klassen M, Adams J, Cramberg M, Knoche L, Young BA. Muscular control of the external nares of the American alligator (*Alligator mississippiensis*).

Kliethermes S, Jackson A, Roach M, Mayhew JL, Brechue WF. Relationship of regional and total lean masses to strength performance in college football players.

Kondrashova T, Blanchard J, Knoche L, Potter J, Young B. Intracranial pressure in the American alligator (*Alligator mississippiensis*): reptilian meninges and orthostatic gradients.

Lesh ER, Hackworth JJ, Buchan JM, Quebadeaux QA, Bruning G, Grider J, Webb K, Swisher D, Nichols E, Fajkus A, Nichols S, Gooch-Tharp J, Harding K. Northeast Regional Medical Center heart failure readmission reduction project.

Lesh M, Danks R. Abdominal evisceration following blunt trauma.

Lodato PB. Influence of ribonucleases E and G on the production of Shiga toxin and phages in enterohemorrhagic *Escherichia coli* (EHEC) O157:H7.

McCluskey I, Brennan A, Deprospero D, Jorn L, Mayhew JL, Brechue WF. Comparison of selected bioelectrical impedance devices and skinfolds to dual-energy x-ray absorptiometry to estimate body fat in college male soccer players.

Michail A, Shivley M, Warlick C, Adewole A, Brechue WF. Nonconscious priming of muscle force and fatigue through stereotype activation.

Miller JR, Moody J, Runkle M, Kim-Han J, Elmslie KS. Differential opioid receptor expression in group IV axons.

*Morris D, Schrant B. Comparison of preemptive analgesia between acetaminophen and ibuprofen in pediatric patients undergoing outpatient surgery. *First Runner-Up*

*Motes HC, Stuart MK. Membrane array analysis of macrophage cytokines elicited by oral trichomonads. *Neil J. Sargentini, PhD, Award for Best Graduate Student Research*

Needham NJC, Schrant B, Easterwood J. Discovery of pleuritic pericardial effusion through arterial line waveforms.

Nesvik JM, Marshall L, Cleaver J, Cleaver D, Cleaver L. Apremilast in the management of generalized granuloma annulare.

Orf A, Young N, Jorn L, Mayhew JL, Brechue WF. Prediction accuracy of height and weight in college men and women.

Osmanski Z, Middlemas D. Is a brain derived neurotrophic factor (BDNF) mimetic a rapid acting antidepressant in juvenile rats?

Raheem S, Ahmad Z. Significance of the highly conserved α VISITDG sequence in the catalytic sites of ATP synthase.

Ramaraj P. Interleukin-8 (IL-8): a possible target for melanoma treatment? In-vitro studies based on steroids, IL-8, curcumin and active vitamin-D3 treatments of human melanoma cell models.

Rigby M, Brechue WF. Heart rate variability and blood pressure regulation over a 24-hour period.

Posters, continued

Roberts EM, Easterwood J. Management of post dural puncture headache with an epidural blood patch.

Scott K, Grindstaff AS, Staputyte K, Baer RW. Characterization of in vitro 3D spheroid growth and behavior in 4 melanoma cell lines.

Senger B, Ramaraj P. Is testosterone the male sex hormone responsible for increased male mortality in melanoma? Preliminary in-vitro studies based on progesterone, androstenedione and testosterone treatments of human melanoma (BLM) cells in the presence of endogenous IL-8 induced by endothelin.

Shank SC, Howell WD, Greer AM, Sexton WL. Short-term oral nitrate supplementation does not improve oxygen kinetics in skeletal muscle of diabetic rats.

Shtutman D, Kraft D, Cooper J, Blanke K. Urinary retention and a markedly distended bladder due to a likely malignant neoplasm.

Silvey E, Ball K, King A, Bruning G, Schneider R, Lam J, Orskog M. Establishment of a suboxone clinic in a family medicine residency.

Siress ZT, Phillips P. The expression of major fimbriae is secondary to other strain specific virulence factors that may contribute to *P. gingivalis*'s ability to invade and modulate the cytokine response in HVMFs.

Steiner A, Ahmad Z. Functional importance of L382 and S383 in the β DELSEED-motif of ATP synthase.

Stuart MK, Motes HC, Hudman DA. Effect of phytochemicals on the viability of the oral protozoan, *Trichomonas tenax*.

Syed H, Pathadan T, Balch W, Nguyen M, Hyde S, DeLeeuw J, Makar P, Pazdernik V. Comparison of rates of DEXA scans between gender and age groups among injured populations.

Troxell TN, Cleaver DW, Cleaver JL, Cleaver L. Malignant transformation in linear porokeratosis: a case report and discussion.

Tuia JZ, Assadi A, Brewer S, DeLeeuw GJM, Grider JH, Rickelman JH. Calciphylaxis: a study of two cases in a Northeast Missouri regional hospital.

Woods L, Low D, Ferguson M, Brechue W, Kondrashova T. Relationship between cardiac structure and blood pressure response to isometric contractions in men and women.

Yesudas RR, Young BA. Impact of nematodes on the gastric wall of the American alligator (*Alligator mississippiensis*).

Issues of *ATSU Research* can be found on iConnect, ATSU's e-news portal, under the [Academic Publishing News](#) tab.