

University at Buffalo Department of Orthopaedics



**RESEARCH NEWSLETTER**



***Volume 5, December 2016***

***June A. and Eugene R. Mindell, MD Professor and Chair****: Leslie J. Bisson, MD*

***Director of Clinical Research****: John Leddy, MD*

***Director, Kenneth A Krackow Orthopedic Research Lab****: Mark Ehrensberger, PhD*

***Editors****: Melissa Kluczynski, MS; Sonja Pavlesen, MD, MS*



# **Introduction**

At the close of 2016, we’d like to recognize the many achievements in

research at UBMD Orthopaedics and Sports Medicine. A list of the numerous presentations and publications that have been produced this year is summarized in this newsletter. We



would especially like to thank the Chair of our department, Dr. Leslie Bisson, and the Research Directors, Drs. Mark Ehrensberger and John Leddy for their continued support and leadership in research. **We would also like to thank all** **of the faculty, research staff, office staff, residents, and students who conducted and assisted with various on-going research projects throughout the year!**

Melissa Kluczynski, MS & Sonja Pavlesen, MD, MS, Editors



**Happy Holidays to everyone and**

**best of luck in 2017!**

**Inside this issue**



**Research Team**

**Recently Funded Study**

**Study Title**: " A prospective, single blinded, multi-center, random-ized, controlled, pivotal study to assess the safety and effectiveness of the InSpaceTM device for treatment of full thickness Massive Rota-tor Cuff Tears"

**Investigator**: Dr. DiPaola

**Sponsor**: Ortho-Space Ltd.



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**Upcoming Research Grant Deadlines**

**AOSSM/Sanofi Osteoarthri s Grant**

* p://www.sportsmed.org/aossmimis/Members/Research Osteoarthri s\_Grant.aspx

Deadline: January 1, 2017

**Arthri s Na onal Research Founda on**

**Arthri s and Aging Research Grant**

* p://www.curearthri s.org/arthri s-aging-research-grant/ Deadline: January 13, 2017

**OREF/Stryker Robo c-Assisted Surgery for Primary Total Knee Arthroplasty Prospec ve Clinical Research Grant**

* p://www.oref.org/grants-and-awards/grant-programs/research-specific-grants Deadline: February 2, 2017

**AMSSM-ACSM Clinical Research Grant Award ($20,000)**

* p://www.amssm.org/Research.html Deadline: February 10, 2017

**North American Spine Society**

* ps://www.spine.org/Portals/0/Documents/ResearchClinicalCare/ResearchFundingApp17.pdf Deadlines: February 13, 2017 (le er of proposal), May 15, 2017 (by invita on only)

**Recent Publications**

**Congratula ons to all authors! A list of publica ons since the last volume of the research newsle er can be found here and see the Appendix for a complete lis ng of 2016 publica ons.**

**Peer-Reviewed Ar cles:**

Bisson, L.B., Kluczynski, M.A., Wind, W.M., Fineberg, M.S., Rauh, M.A., Bernas, G.A., Marzo, J.M., Zhou, Z., Jiwei, Z. (in press). Pa ent Outcomes a er Debridement of Unstable Chondral Lesions During Par al Meniscectomy: The Chondral Lesions and Meniscus Procedures (ChAMP) Randomized Trial. *Journal of Bone and Joint Surgery*.

Brooks, E.K., Brooks, R.P., Ehrensberger, M.T. (in press). Eﬀects of Simulated Inflamma on on the Corrosion of 316L Stainless Steel. *Materials Science and Engineering: C, Materials for Biological Applica ons*.

Browning, W., Kluczynski, M.A., Marzo, J.M. (in press). Suspensory versus aperture fixa on of hamstring tendon autogra ACL reconstruc on: a meta-analysis. *American Journal of Sports Medicine*.

Canty, M.K., Luke-Marshall, N.R., Campagnari, A.A., Ehrensberger, M.T. (in press). Cathodic voltage-controlled electrical s mula on of tanium for preven on of methicillin-resistant Staphylococcus aureus and Acinetobacter

baumannii biofilm infec ons. *Acta Biomaterialia*

Ciolko, A.A., Tobias, M.E., Ehrensberger, M.T. (2016). The Eﬀect of Fre ng Associated Poten al Shi s on The Elec-trochemistry and In Vitro Biocompa bility of Titanium. *Journal of Biomedical Materials Research, Part B.,* 104 (8):1591-1601*.*

Clausen, M., Pendergast, D.R., Willer, B., Leddy, JJ. (2016). Cerebral Blood Flow during Treadmill Exercise is a Marker of Physiological Post-Concussion Syndrome in Female Athletes. *Journal of Head Trauma Rehabilita on* 31 (3):215-24.

Ellis, M.J., Leddy, J., and Willer, B. Mul -disciplinary management of athletes with post-concussion syndrome: an evolving pathophysiological approach. *Fron ers in Neurology*, 24 August 2016 | h p://dx.doi.org/10.3389/



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**Recent Publications (continued)**

Hinds, A., Jungquist, C.R., Leddy, J., Seemant, F., Baker, J., & Willer, B. (in press). Sleep disturbance in pa ents with chronic concussive eﬀects. *Concussion*.

Hinds, A., Leddy, J., Freitas, M., and Willer, B. Heart Rate in Response to Exer on a er Concussion. (2016). *Journal* *of Neurology and Neurophysiology*. 7:4.

Leddy, J., Hinds, A.L., Miecznikowski, J., Darling, S., Matuszak, J., Baker, J.G., Picano, J., and Willer, B. (in press). Safety and Prognos c U lity of Provoca ve Exercise Tes ng in Acutely Concussed Adolescents: A Randomized Tri-al. *Clinical Journal of Sports Medicine.*

Marzo, J.M. (in press). The value of weight-bearing “func onal” CT scans. *AAOS Now*.

Marzo, J.M., Kluczynski, M.A., No no, A., Bisson, L.J. (2016). Comparison of a novel weight bearing cone beam computed tomography (CT) scanner versus a conven onal CT scanner for measuring patellar instability. *Ortho-paedic Journal of Sports Medicine*. 4(12): DOI: 10.1177/2325967116673560.

Tokarz, E., Ablove, R. (September 2016). Wrist pain in primary caregivers of post-partum caregivers. Poster pre-sented at the American Society for Surgery of the Hand annual mee ng, Aus n, TX.

Wright, T.E., Boyle, K.K., Duquin, T.R., Crane, J.K. (2016). Propionibacterium acnes suscep bility and correla on with hemoly c phenotype. Infec ous Diseases: Research and Treatment, 9: 39-44.



**Recent Presentations**

**Congratula ons to all presenters! A list of presenta ons since the last volume of the research newsle er can be found here and see the Appendix for a complete lis ng of 2016 publica ons.**

**Posters:**

Bayers-Thering, M.T., MS, MBA, Brown, M.J., MD, Ma hews, J., MD, Phillips, M. J. P., MD (September 2016) *Low* *Incidence of Postopera ve Complica ons with Navigated Total Knee Arthroplasty.* Poster presented at the Inter-

na onal Society of Technology in Arthroplasty Annual Mee ng, Boston, MA.

Ehrensberger, M.T., Canty, M.K., Tobias, M.E., Ahn, R., Luke, N.R., Howard, C.S., Wild, L.M., Hansen, L.A., Campa-gnari, A.A. *Cathodic Voltage Controlled Electrical S mula on for Preven on and Eradica on of Acinetobacter* *baumannii Implant Associated Infec ons*. Accepted for 2016 Interna onal State-of-the-Science Mee ng on Mini-mizing the Impact of Wound Infec ons Following Blast-Related Injuries. Poster presenta on

Ferraro, J., Ablove, R., Tue ng, J., Lee, K. *Thumb to spinous process is a false metric for glenohumeral internal* *rota on measurement*. Clinical Orthopaedic Society annual mee ng, New Orleans, LA.

Kakish, S., MD, Bayers-Thering, M.T., MS, MBA, Krackow, KA., MD, McGrath, BE., MD, Pavlesen, S., MD, MS, Phil-lips, M. J., MD (November 2016) *Genu Recurvatum Analysis in the Context of Computer Assisted Total Knee Ar-throplasty: A 14 –Year Retrospec ve Study.* Poster presented at the American Associa on of Hip and Knee Sur-

geons Annual Mee ng, Dallas, TX.

Lesh, K., Baker, J., Hinds, A., Czuczman, N., Willer, B., and Leddy, J. (April 2016). *Comparison of Physical Examina-on Findings in Acute Sport Related Concussion and Among Normal Adolescents*. Poster presented at the Ameri-

can Medical Society for Sports Medicine annual mee ng, Dallas, TX.

Lesh, K., Jain, R. and Leddy, J. (April 2016). *A 31-year-old Male with Destruc ve Spondyloarthropathy.* Poster pre-sented at the American Medical Society for Sports Medicine annual mee ng, Dallas, TX.

Siddiqui, A., Darling, S. and Leddy, J. (April 2016). *Hard Lumps for a So ball Player*. Poster presented at the American Medical Society for Sports Medicine annual mee ng, Dallas, TX.

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**Recent Presentations (continued)**



**Posters (continued):**

Willer, B.S., Baker, J.G., Hinds, A., Miecznikowski, J.C., Czuczman, N., Lesh, K. and Leddy, J. (October 2016). *Physical Exam*

*elements that should be including in the diagnosis and prognosis of concussion in adolescents*. Poster presented at the Fi hInterna onal Consensus Conference on Concussion in Sport, Berlin, Germany.

Tokarz, E., Ablove, R. (September 2016). Wrist pain in primary caregivers of post-partum caregivers. Poster presented at the American Society for Surgery of the Hand annual mee ng, Aus n, TX.

**Podium Presentations:**

Ablove, R., Zmich, Z., Dodge, N. (September 2016). La ssimus dorsi transfer for rotator cuﬀ insuﬃciency. Clinical Orthopae-dics Society annual mee ng, New Orleans, LA.

Leddy JJ. “Exercise and Recovery in Concussion”. American Academy of Neurology Sports Concussion Conference. Chicago, IL. July 8-10, 2016.

Leddy, JJ. Expert Panel for the Fi h Interna onal Consensus Conference on Concussion in Sport. Berlin, Germany. Oct. 26-29,

2016. What tests and measures should be added to the SCAT3 and related tests to improve their reliability, sensi vity and/or specificity in sideline concussion diagnosis?

Leddy, JJ. Expert Panel for the Fi h Interna onal Consensus Conference on Concussion in Sport. Berlin, Germany. Oct. 26-29, 2016. What is the evidence for and eﬃcacy of specific treatment interven ons?

Leddy, JJ. Expert Panel for the Fi h Interna onal Consensus Conference on Concussion in Sport. Berlin, Germany. Oct. 26-29, 2016. What is the me course of physiological recovery a er sports concussion?

Leddy, JJ. Expert Panel for the Fi h Interna onal Consensus Conference on Concussion in Sport. Berlin, Germany. Oct. 26-29, 2016. What is the best approach to inves ga on and treatment of persistent post-concussive symptoms?

Leddy JJ and Putukian M. “Collegiate Team Medical Care”. American Academy of Neurology Sports Concussion Conference.

Chicago, IL. July 8-10, 2016.

**Invited Talks:**

Ablove, R. Elbow arthroplasty: history and recent innova ons. 16th Annual New Technology in Upper Extremity Surgery: The Cu ng Edge with Advancing Transla onal Research. Castele Learning Center, Lutheran Hospital, a Cleveland Clinic Hospital, June 2016.

Ablove, R. Management of thumb metacarpophalangeal instability, Instruc onal Course Lecture, American Society for Sur-gery of the Hand annual mee ng, Aus n, TX, September 2016.

Ablove, R. Reconstruc on of complex post-trauma c elbow instability, Wisconsin Orthopedic Society, October 2016.

Ehrensberger, M.T. Cathodic Voltage-Controlled Electrical S mula on as Treatment for Orthopaedic Implant Associated Bio-film Infec ons, U.S. Naval Research Laboratory (9/2016).

Ehrensberger, M.T. Cathodic Voltage-Controlled Electrical S mula on as Treatment for Orthopaedic Implant Associated Bio-film Infec ons, 2016 Technology Innova ons for Physicians and Surgeons Conference (10/2016).

Ehrensberger, M.T. Building a Successful Orthopaedic Research Program, West Virginia University-Department of Orthopae-dics Resident Conference (12/2016).

Ehrensberger, M.T. Cathodic Voltage-Controlled Electrical S mula on as Treatment for Orthopaedic Implant Associated Bio-film Infec ons, West Virginia Clinical and Transla onal Science Ins tute (12/2016).

Leddy JJ. “Neuro-medical Causes of Persistent Post-Concussive Symptoms: how to assess and intervene”. American Congress of Rehabilita on Medicine Annual Mee ng. November 3, 2016. Chicago, IL.



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**Call for Abstracts**

**European Society of Sports Traumatology, Knee Surgery and Ar-**

**throscopy (ESSKA) 2018 Congress in Glasgow, UK**



**Epidemiology Corner: Sta s cal Significance?**

**The *P* value** (probability value, observer significance value) is the probability of obtaining a result equal toor “more extreme” than what was actually observed, when the null hypothesis is true. In most health sci-

ence research, a study results whose p value is less than 5% (*p*<0.05) is considered sta s cally significant

(unlikely to have occurred by chance)

**Confidence Interval (CI)** A confidence interval is a range of values that includes a specified probability thatthe value of a parameter lies within it. If the underlining sta s cal model is correct and there is no BIAS, a CI derived from a valid analysis will, over unlimited repe ons of the study, contain the true parameter with a frequency no less than its confidence level (o en 95% is stated level, but other levels are also used). In other words, we’re 95% confident that the true value of the parameter is in our confidence interval. **Confidence Limits** are upper and lower boundaries of the CI

**The UB IRB requirements for Clinical Research**

**Every person involved in UB clinical research should complete the required CITI courses!**

**1. CITI (Collabora ve Ins tu onal Training Ini a ve) training**

The IRB required CITI courses for Clinical studies are:

* **CITI Biomedical Researchers**
* **Good Clinical Prac ce (GCP)/ unless they have taken the in-house GRP for clinical researchers, which is no longer oﬀered**

Please login with your UBIT name and UBIT password.

* p://www.research.buﬀalo.edu/compliance/coi/riskmanager.cfm

**Research Team Contact Information**

**Directors**

John Leddy, MD, (leddy@buffalo.edu) Mark Ehrensberger, PhD (mte@buffalo.edu)

Director of Clinical Research Director of the Kenneth A. Krackow Orthopaedic Research Laboratory

**Buffalo General Hospital/ECMC**

Sonja Pavlesen, MD, MS (pavlesen@buffalo.edu) Mary Bayers-Thering, MS, MBA (MBayers-Thering@KaleidaHealth.Org)

Research Assistant Professor Research Coordinator, Coordinator for Surgical Skills Training

Laura Ryan, MPH (laurabec@buffalo.edu)

Research Assistant

**Sports Medicine/Harlem Rd. office**

Melissa Kluczynski, MS (mk67@buffalo.edu) Kathleen Lafferty (klaffert@buffalo.edu)

Clinical Research Associate Research Assistant, Administrative Assistant



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