

CURRICULUM VITAE

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EDUCATION

Undergraduate: State University of New York at Stony Brook
Combined Degree Program, Tau Beta Pi

B.E. in Engineering Science (1980 - 1984)
B.S. in Biochemistry (1980 - 1984)

Medical School: State University of New York at Stony Brook
M.D.* in Medical Sciences (1984 - 1990)

Graduate School: State University of New York at Stony Brook
Ph.D.* in Experimental Pathology (1984 - 1990)

* Medical Scientist Training Program National Institutes of Health Training Grant #GM08444

POSTGRADUATE TRAINING

University of Massachusetts Medical Center
Emergency Medicine Residency (1990 - 1993)
New England Life Flight Physician (1991 - 1993)

POSTGRADUATE HONORS AND AWARDS

McCutchen Foundation Graduate Fellowship (1987 – 1988)
Society for Academic Emergency Medicine 1999 Annual Scientific Meeting: Best Basic Science Poster
Society for Academic Emergency Medicine 2000 Annual Scientific Meeting: Young Investigator Award
Hospital Association of Rhode Island Public Service Award 2001 Bruce Selya Young Investigator Award 2004
Society for Academic Emergency Medicine 2011: Best Innovation in Medical Education Award (Shared with Esther Choo MD- Presenter)

Clinical Orthopaedics and Related Research ORS Richard A. Brand Award for Outstanding Orthopaedic Research. March 2014. Co-Recipient. The Association of Bone and Joint Surgeons and the Orthopaedic Research Society. [PMCID: PMC4117902]

MILITARY SERVICE

United States Air Force/Air National Guard

Medical Service Corp: Medical Student Early Commissioning (1986 - 1990)

Medical Corp: Flight Surgeon (1990 - 1997)

106th Aerospace Rescue and Recovery Group

Westhampton Beach, NY (1986 - 1994)

143rd Tactical Airlift Wing

North Kingston, RI (1995 - 1997)

Inactive Ready Reserve (1998 – 2007)

Honorable Discharge Rank: Major

Decorations:

National Defense Medal (Operation Desert Storm) Longevity Award (1st

MD-PhD student in ANG)

Air Force Achievement Medal (with 1st device)

Small Arms Expert (9mm Beretta)

Coast Guard Outstanding Unit Award (rescue efforts on 30 Oct 91 during the “No Name Hurricane”-aka “The Perfect Storm”)

Air Force Outstanding Unit Award (143rd TAW ORI)

Training Completed:

Aerospace Medicine Primary (USAFSAM, Brooks AFB, TX)

Top Knife F16 (Fighter Surgeon School, Kingsley Field, OR)

G-TIP Centrifuge Training (USN, Warminster, PA)

Altitude Chamber (Brooks AFB, TX, Plattsburgh AFB, NY, and JSC, TX)

Diving Medical Officer (NOAA, Ft. Eustis, VA)

Flight Operations: C130, F-16, Pavehawk UH60, KC135

PROFESSIONAL LICENSES AND BOARD CERTIFICATION

Licenses:

State of Massachusetts Board of Medicine (#74624) - active

State of Rhode Island Board of Medicine (#8395) – active

State of Hawaii Board of Medicine (#8066) - inactive

Drug Enforcement Agency - active

Certifications:

Fellow, American Academy of Emergency Medicine (7/2009 – Present)

Diplomate, American Board of Emergency Medicine (exp. 31 Dec 2024)

Diplomate, National Board of Medical Examiners

Advanced Trauma Life Support (1993 and 1999)

Instructor, Advanced Cardiac Life Support (4/2019)

ACADEMIC APPOINTMENTS

Brown University

John and Mary Panton and Emergency Medicine Professorship in Translational Sciences (2021)

Professor in Emergency Medicine (Research Scholar) (2008 - Present)

Professor in Medicine (Research Scholar) (2008 - Present)

Professor in Engineering (Research) (2008 - Present)

Vice Chair for Research, Emergency Medicine (2006 - 2022)

Professor in Orthopaedics (2020 - Present)

Associate Professor in Emergency Medicine (2005 - 2008)

Associate Professor in Medicine (Research Scholar) (2002 - 2008)

Associate Professor in Engineering (Research) (2002 – 2008)

Director, Emergency Medicine Research (1995 – 2006)

Assistant Professor in Medicine (Research Scholar) (2000 – 2001)

Assistant Professor in Engineering (2001)

Assistant Professor in Medicine (Research) (1993 – 2000)

Director, Emergency Medicine Research Fellowship (1997- Present)

University of Rhode Island

Adjunct Assistant Professor of Biomedical Sciences (2001 – 2002)

Adjunct Associate Professor of Biomedical Sciences (2003 –2007)

HOSPITAL APPOINTMENTS

Attending Physician Emergency Medicine at Rhode Island Hospital: 1993 – Present	Designated Regional Level 1 Trauma Center Tertiary Referral Central 110,000/yr Visits
Miriam Hospital: 2000 - Present	70,000/yr Visits
Hasbro Children's Hospital: 1994 – 2000	50,000/yr Visits
Attending Physician Emergency Physician Nantucket Cottage Hospital 1998 – 2013	Summer visiting ED physician for 1 week 15,000/yr visit adult and pediatric community ED
Attending Physician Emergency Physician Norwood Community Hospital 1997 – 2005	55,000/yr combined adult and pediatric visit ED 10 clinical hours per month

CONSULTANT

Purdue Pharma (Expert consultant on synovial biomechanics) (1997 – 1998)

Bretton Industries (Expert consultant on portable hyperbaric oxygen systems) (1993 – 2001)

Dynamics Research Corporation (Expert consultant on application of crew resource management systems from aviation to medicine) (1994 – 1996)

Arthur D. Little (Expert consultant on synovial biomechanics) (1993 – 1994)

Voluntary Hospital Association of America (Patient safety systems) (2001 – 2002)
American Institutes for Research (AIR)/Agency for Healthcare Research and Quality (2003)
Anteon (Army SBIR Review Program: 72 hr Field Blood Storage Containers) (2003-2004)
American Institutes for Research (AIR)/Office Naval Research (2007)

OTHER APPOINTMENTS & COMMITTEE WORK

Society for Academic Emergency Medicine-

New England Research Directors, Founding Member (1995 – Present) Co-Chair, 1st New England Regional SAEM Scientific Meeting (1997), Chair, 9th New England Regional SAEM Scientific Meeting (2005), Co-Chair 25th New England Regional SAEM Scientific Meeting
Patient Safety Task Force (2000 – 2003)
Research Fellowship Grant Selection Committee (2001 - 2003)
SAEM Research Fellowship Director at Brown (2011 – Present)

American College of Emergency Physicians-

Patient Safety in the ED Environment Task Force (2002 - 2003)

Journal Reviewer-

Annals of Biomedical Engineering (ad hoc Reviewer) (1998 – Present)
Obstetrics and Gynecology (ad hoc Reviewer) (1998 – 2004)
Annals of Emergency Medicine (ad hoc Reviewer) (1998- Present)
Arthritis and Rheumatology (Reviewer) (2002 – Present)
Journal of Orthopaedic Research (Reviewer) (2002 – Present)
Clinical Sciences Monitor (Reviewer) (2001 - 2005)
International Journal of Cell Biology (Reviewer) (2001 - 2004)

Grant Reviewer-

American Institute of Biological Sciences (Grant Reviewer) (1995 – 2004)
State of Rhode Island Attorney General's Quality Institute (2002)
Spectra Research Inc. (Scientific Advisory Board) (2002)
Arthritis Research Campaign, United Kingdom (Reviewer) (2005 & 2016)
Covidien Corp (Medical Advisory Board Member) (2010-2014)
ProThera Therapeutics Scientific Advisory Board (2017-Present)
National Institutes of Health Bioengineering Study Section ZRG1 SSS-M01 & 02 (2001-2002)
National Institutes of Health Bioengineering Study Section ZRG1 SSS-M03 (2002)
National Institutes of Health Bioengineering Study Section ZRG1 SSS-M53 (2003-2004)
National Institutes of Health Bioengineering Study Section ZRG1 SBIB-G (2004)
National Institutes of Health Musculoskeletal Study Section MOSS G 52 (2009)
NIH Biomedical Imaging & Bioengineering Study Section ZEB1 OSR (2010)
NIH Biomedical Imaging and Bioengineering Study Section ZEB1 OSR (2011)
NIH Biomedical Imaging and Bioengineering Study Section ZEB1 OSR (2012)
NIH Biomedical Imaging and Bioengineering Study Section ZRG1 MOSS-T (2013)
NIH Biomedical Imaging and Bioengineering Study Section ZEB1 OSR-E J1 S (2014)
NIH Biomedical Imaging and Bioengineering Study Section ZEB1 OSR-E J1 S (2015)
NIH Biomedical Imaging and Bioengineering Study Section ZEB1 OSR-B (J1) S(2016)

NIH National Institute of Arthritis and Musculoskeletal and Skin Diseases SS for K08/23/99 Grants (Feb 24-25, 2022)

HOSPITAL COMMITTEES

Lifespan Research Celebration Committee (1994 - 2003)
Lifespan Research Advisory Committee (1999 – Present)
Lifespan Conflict of Interest Committee (2007 – Present)
Emergency Medicine Advisory Chair Search Committee (2005 & 2017)
Founder of RIH Medical Simulation Center (2002)

UNIVERSITY COMMITTEES

Brown Medical School, MD-PhD Program Admissions Committee (2003-2005)
Brown Medical School, EM Chair Search Committee (2005-2006)
Brown Medical School, EM Search Advisory Committee (2005-2006)
(CHAIR) Brown Medical School, EM Promotions Committee (2005-Present)
Brown Medical School, EM Research Committee (2004-Present) (CHAIR)
Brown Medical School, Univ. EM Foundation, Nominating & Governance Committee (2007 - 2010) (CHAIR)
Brown Medical School, Univ. EM Foundation, Board of Directors (2001 – 2003, 2005 – 2010)
Executive Masters in Science and Technology Leadership Advisory Committee (2015 – 2017)
Brown Biomedical Innovations Incorporated Selection Committee (2016 – 2017)
CTR: Clinical Research Resources and Facilities KCA Advisory Committee (2016 – Present)
Brown Physicians Incorporated Research Committee (2017 - Present)

MEMBERSHIP IN SOCIETIES

American Association for the Advancement of Science (1984 - Present)
American College of Emergency Physicians (1993 - 2009)
Society for Academic Emergency Medicine (1993 – 2008 and 2010 – Present)
Orthopaedic Research Society (2004 – Present)
Aerospace Medical Association (1984 – Present)
Association of Military Surgeons of the United States (1989 - 1994)
Undersea and Hyperbaric Medical Society (1994 - 2007)
American College of Forensic Examiners (1998 - 2004)
Institute of Electrical and Electronics Engineers (2007 - Present)
American Academy of Emergency Medicine (2009- Present)

COMMERCIALIZATION EFFORTS

Chief Medical Advisor and Co-Founder of Lubris, LLC. Framingham, MA (2011 – Present);
Responsible for drug and device target identification and validation for recombinant human proteoglycan 4 (rhPRG4)

ORIGINAL PUBLICATIONS IN PEER REVIEWED JOURNALS

1. **Jay GD**, Ross FL, Mason RA and Giron, F. Clinical and chemical characterization of an adventitial popliteal cyst. *J Vasc Surg*. 1989;9:448-451. [PMID: 2921793]

2. **Jay GD**, Culp DJ and Jahnke, MR. Silver-staining of extensively glycosylated proteins on SDS-polyacrylamide gels: Enhancement by carbohydrate-binding dyes. *Anal Biochem.* 1990;185(2):324-330. [PMID: 1692672]
3. **Jay GD**, Drummond E and Lane B. Altered surface characteristics of stretched condom latex. *Contraception.* 1992;45:105-110.
4. **Jay GD** and Renzi FP. Evaluation of pulse oximetry in anemia from hemoglobin-H disease: A case report. *Ann Emerg Med.* 1992;21:572-574. [PMID: 1570917]
5. **Jay GD**. Characterization of a lubricating fraction of bovine synovial fluid I. Chemical and lubricating properties. *Conn Tiss Res.* 1992;28:71-88.[PMID: 1628491]
6. **Jay GD** and Hong B. Characterization of a lubricating fraction of bovine synovial fluid II. Comparison with salivary and ocular mucin. *Conn Tiss Res.* 1992;28:89-98.[PMID: 1628492]
7. **Jay GD**, Lane B, and Sokoloff L. Characterization of a lubricating fraction of bovine synovial fluid III. The interaction with hyaluronic acid. *Conn Tis Res.* 1992; 28:245-256.[PMID: 1304440]
8. **Jay GD**, Kinkead T, Hopkins T and Wollin M. Obstructive uropathy from uterine prolapse: A preventable problem in the elderly. *J Am Geriatr Soc.* 1992; 40:1156-1160. [PMID: 1401703]
9. Pires LA and **Jay GD**. Upper extremity deep vein thrombosis: Thrombolytic therapy with anistreplase (APSAC). *Ann Emerg Med* 1993; 22:748-750. [PMID: 8457110]
10. **Jay GD**, Hughes L and Renzi FP. Pulse oximetry is accurate in anemia from acute hemorrhage. *Ann Emerg Med* 1994; 24:32-35. [PMID: 8010546]
11. **Jay GD** and Woolard RH. Physician awareness of hyperbaric oxygen in a large tertiary care hospital. *Undersea Hyper Med* 1994; 21:477-479. [PMID: 8000287]
12. Wright RO, **Jay GD**, Becker BM, Linakis JG. Use of infrared thermometry to measure intravenous fluid temperature. *Amer J Emerg Med* 1995; 13:281-284. [PMID: 7755818]
13. **Jay GD**, Tetz DJ, Hartigan CF, Aghababian RV. Portable hyperbaric oxygen therapy in the Emergency Department with the modified Gamow bag. *Ann Emerg Med* 1995; 26:707-711. [PMID: 7492041]
14. Steele DW, Wright RO, Lee C, **Jay GD**. Methods for continuous non-invasive determination of pulsus paradoxus. *Acad Emerg Med* 1995; 2:894-900.
15. Wright RO, Steele DW, Santucci K, Natarajan R, **Jay GD**. Continuous, non-invasive measurement of pulsus paradoxus in acute asthma. *Arch Ped Adol Med* 1996; 150:914-

918.[PMID: 8790120]

16. Wright RO, Santucci KA, **Jay GD**, Steele DW. Evaluation of pre- and post-treatment pulse oximetry in acute childhood asthma. *Acad Emerg Med* 1997; 4:14-117. [PMID: 9043537]
17. Mehta S, **Jay GD**, Woolard RH, Hipona RA, Connolly EM, Cimini DM, Drinkwine JH, Hill NS. Randomized, prospective trial of bilevel versus continuous positive airway pressure in acute pulmonary edema. *Crit Care Med* 1997; 25:620-628. [PMID: 9142026]
18. Wright RO, Handrigan M, Becker BM, Linakis JG, **Jay GD**. Factors and methodology in achieving ideal delivery temperatures for intravenous and lavage fluids in hypothermia. *Amer J Emerg Med* 1997; 15:350-353. [PMID: 9217522]
19. **Jay GD**, McKindley D. Alterations in pharmacokinetics of carboxyhemoglobin produced by oxygen under pressure. *Undersea Hyper Med*. 1997; 24:165-173. [PMID: 9308139]
20. Shapiro M and **Jay GD**. 1st annual New England regional society of academic emergency medicine symposium. *Acad Emerg Med* 1997; 4:1162-1167.
21. Steele DW, Santucci KA, Wright RO, McQuillen KK, **Jay GD**. Pulsus paradoxus: An objective measure of severity in croup. *Am J Resp Crit Care Med* 1998; 157:331-334.[PMID: 9445317]
22. **Jay GD**, Cha CJ, Haberstroh K, Shaw R. Comparison of the boundary lubricating ability of bovine synovial fluid, lubricin and Healon. *J Biomed Mater Res* 1998; 40:414-418. [PMID: 9570073]
23. **Jay GD**, McKindley D, Klasner AE, Smith SR, Thompson MW, Scalzo AJ. Carboxyhemoglobin toxicokinetics. *Acad Emerg Med* 1999; 6:766-768. [PMID: 10433544]
24. Risser DT, Rice M, Salisbury M, Simon R, **Jay GD**, Berns SD and the MedTeams Investigation Group. The potential for improved teamwork to reduce medical errors in the ED. *Ann Emerg Med* 1999; 34:373-383. [PMID: 10459096]
25. **Jay GD** and Cha CJ. The effect of phospholipase digestion upon the boundary lubricating ability of synovial fluid. *J Rheumatol* 1999; 26:2454-2457. [PMID: 10555909]
26. **Jay GD**, Britt DE and Cha CJ. Lubricin is a product of megakaryocyte stimulating factor gene expression by human synovial fibroblasts. *J Rheumatol* 2000; 27:594-600. [PMID: 10743795]
27. **Jay GD**, Onuma K, Davis R, Mansell A, Steele D. Analysis of physician ability in the measurement of pulsus paradoxus by sphygmomanometry. *Chest* 2000; 118:348-352. [PMID: 10936123]
28. **Jay GD**, Tantravahi U, Britt D, Barrach HJ, Cha, CJ. Homology of lubricin and superficial zone protein (SZP): Products of megakaryocyte stimulating factor (MSF) gene expression

- by human synovial fibroblasts and articular chondrocytes localized to chromosome 1q25. *J Orthop Res* 2001;19(4):9-19. [PMID: 11518279]
29. Suner S, **Jay GD**, Kleinman GJ, Woolard RH, Jagminas L, Becker BM. Cardiopulmonary resuscitation using the cardio vent device in a resuscitation model. *J Emerg Med* 2002; 22(4):335 - 340. [PMID: 12113840]
 30. Brand TM, Brand ME, **Jay GD**. Enamel nail polish does not interfere with pulse oximetry among normoxic volunteers. *J Clin Monit* 2002; 17(2):93-96. [PMID: 12212998]
 31. **Jay GD**, Harris DA, Cha CJ. Boundary lubrication by lubricin is mediated by O-linked (1-3) Gal-GalNAc oligosaccharides. *Glycoconjugate Journal* 2002; 18, 807-815. [PMID: 12441670]
 32. Morey J, Simon R, **Jay GD**, Wears RL, Salisbury M, Berns SD and the MedTeams Research Consortium. Error reduction and performance improvement in the Emergency Department through teamwork training: Validation results of the MedTeams Project. *Health Services Research* 37(6):1553-1581, 2002. [PMID: 12546286] [PMCID: PMC1464040]
 33. Elsaid KA, **Jay GD**, Chichester CO. Detection of collagen type II and proteoglycans in the synovial fluids of patients diagnosed with non-Infectious knee joint synovitis indicates early damage to the articular cartilage matrix. *Osteoarthritis Cartilage*. 11:673- 680, 2003. [PMID: 12954238]
 34. **Jay, GD**, Battat, J, Goldsmith, H, Cohen, H, Mauer, J, Lee, P: CPR effectiveness in microgravity: comparison of three positions and a mechanical device. *Aviat Space Environ Med* 74:1183-1189, 2003. [PMID: 14620476]
 35. **Jay, GD**, Khaled, EA, Zack, J, Robinson K, Trespalacios, F, Cha, CJ, Chichester, CO: Lack of chondroprotection occurs among emergency department patients with knee joint synovitis. *JRheumatol* 31(3):557-564, 2004.
 36. **Jay, GD**: Current thinking on viscosupplementation in osteoarthritis. *RI Med J* 87(7):213-215, 2004. [PMID: 15354797]
 37. Schäfer,DB, Wendt, D, Moretti, M, Jakob, M, **Jay, GD**, Heberer, M, Martin, I: Lubricin reduces cartilage-cartilage integration. *Biorheology* 41:503-508, 2004. [PMID: 15299281]
 38. **Jay, GD**: Lubricin and surfacing of articular joints. *Curr Opinion Orthop* 15(5):355-359, 2004.
 39. Shapiro, MJ, Small, SD, Langford, V, Kaylor, CJ, , Jagminas, L, Suner, S, Morey, J, Salisbury, ML, Simon, R, **Jay, GD**: Simulation-based teamwork training for emergency department staff: Does it improve clinical team performance when added to an existing didactic teamwork curriculum? *Qual Saf Health Care* 13(6):417-421, 2004. [PMID: 15576702] [PMCID: PMC1743923]

40. Benz, M, Chen, C, **Jay, GD**, Israelachvili, J: Static forces, structure and flow properties of complex fluids in highly confined geometries. *Ann Biomed Eng* 33(1):39-51, 2005. [PMID: 15709704]
41. Overly FL, Wright RO, Connor FA Jr, Fontaine B, **Jay GD**, Linakis JG. Bispectral analysis during pediatric procedural sedation. *Pediatric Emergency Care* 21(1):6-11, 2005. [PMID: 15643316]
42. Overly FL, Wright RO, Connor FA, **Jay GD**, Linakis JG. Bispectral analysis during deep sedation of pediatric oral surgery patients. *Journal of Oral & Maxillofacial Surgery* 63(2):215-9, 2005. [PMID: 15690290]
43. Marcelino, J, Rhee, DK, Brown, M, Gong, Y, Smits, P, Lefebvre, V, **Jay, GD**, Stewart, M, Warman, ML, Carpten, JD: The secreted protein lubricin protects cartilage surfaces and inhibits synovial cell adhesion. *J Clin Investigation* 115(3): 622–631, 2005. [PMID: 15719068] [PMCID: PMC548698]
44. Elsaid, KA, **Jay, GD**, Warman, ML, Rhee, DK, Chichester, CO: Association of articular cartilage degradation and loss of synovial fluid boundary lubricating ability following injury and inflammatory arthritis. *Arthritis Rheum* 52: 1746-1755, 2005. [PMID: 15934070]
45. Demelis, M, Durfey, N, Sidman, R, Spitalnic, S, **Jay, GD**. Xanthochromia? By what method? A comparison of visual and spectrophotometric xanthochromia. *Ann Emerg Med* 46: 51-55, 2005.[PMID: 15988426]
46. Sucov, A, Proano, C, **Jay, GD**. Peer review and feedback can modify pain treatment patterns for emergency department patients with fractures. *Am J Med Qual* 20(3):138- 143, 2005. [PMID: 15951519]
47. McMurdy, JW, **Jay, GD**, Suner, S, Crawford, GP. Diffuse reflectance spectra of the palpebral conjunctiva and its utility as a non-invasive indicator of total hemoglobin. *Journal of Biomedical Optics* 6177:375-384, 2006. [PMID: 16526896]
48. Kobayashi L, Shapiro MJ, Sucov A, Woolard R, Boss RM, Dunbar J, Sciamacco R, Karpik K, **Jay GD**. Portable advanced medical simulation for new Emergency Department testing and orientation. *Acad Emerg Med* 13(6): 691-695, 2006. [PMID: 16636356]
49. Kobayashi L, Suner S, Shapiro MJ, **Jay G**, Sullivan F, Overly F, Seekell C, Hill A, Williams KA. Advanced medical simulation evaluation of prehospital disaster medical response paradigms. *Simulation in Healthcare*1(2): 72-78, 2006.
50. Sun Y, Berger EJ, Zhao C, **Jay GD**, An KN, Amadio P. Mapping lubricin in canine musculoskeletal tissues. *J Orthop Res* 24(9): 1861-1868, 2006. [PMID: 16987753]
51. McMurdy, JW, Crawford, GP and **Jay, GD**. Monolithic microspectrometer using tunable

ferroelectric liquid crystals. *Appl Phys Letts* 89:081105, 2006.

52. Rayner J, Trespalacios F, Machan J, Potluri V, Brown G, Quattrucci LM, **Jay, GD**. Continuous non-invasive measurement of pulsus paradoxus complements medical decision making of acute asthma severity. *Chest* 130:754-765, 2006. [PMID: 16963672]
53. Ranney, M, Partridge, R, **Jay, GD**, Eastman Rozzoli, D, Pandey, P: Rabies antibody seroconversion rates among travelers in Nepal. *J Travel Med* 13(6):329-333, 2006. [PMID: 17107424]
54. Sun, Y, Berger, EJ, Zhao, C, An, KN, Amadio, PC, **Jay, GD**. Mapping lubricin in canine musculoskeletal tissues. *Conn Tiss Res* 47:215-221, 2006.[PMID: 16987753]
55. Teeple, E, Fleming, BC, Mechrefe, AP, Crisco, JJ, Brady, MF, **Jay, GD**: Frictional properties of Hartley guinea pig knees with and without proteolytic disruption of the articular surface. *Osteoarth Cartilag* 15:309-315, 2007. [PMID: 17010648] [PMCID: PMC1994930]
56. Elsaid, KA, **Jay, GD**, Chichester, CO. Reduced expression and proteolytic susceptibility of lubricin/superficial zone protein may explain early elevation in the coefficient of friction in the joints of rats with antigen-induced arthritis. *Arthritis Rheumatism* 56(1):108-116, 2007. [PMID: 17195213]
57. Zappone, B, Marina, R, Greene, GW, **Jay, GD**, Israelachvili, JN: Adsorption, lubrication and wear of lubricin on model surfaces: Polymer brush-like behavior of a glycoprotein. *Biophys J* 92:1693-1708, 2007. [PMID: 17142292] [PMCID: PMC1796837]
58. **Jay, GD**, Torres, R, Warman, ML, Laxer, RM, Laderer, M, Breuer, KS: The role of lubricin in the mechanical behavior of synovial fluid. *PNAS* 104(15):6194-6199, 2007. [PMID: 17404241] [PMCID: PMC1851076]
59. Rucevic, M, Fast, LD, **Jay GD**, Trespalacios, FM, Sucov, S, Siryaporn, E, Yow-Pin Lim. Altered levels and molecular forms of granzyme K in plasma from septic patients. *Shock* 29(5):488-493, 2007. [PMID: 17438453]
60. Crisco, JJ, Blume, J, Teeple, E, Fleming, BC, **Jay, GD**. Assuming exponential decay by incorporating viscous damping improves the prediction of the coefficient of friction in pendulum tests of whole articular joints. *J Eng Med* 221 PartH:325-333, 2007. [PMID: 17539587]
61. Suner, S, Crawford, McMurdy, J, **Jay, GD**. Non-invasive determination of hemoglobin by digital photography of palpebral conjunctiva. *J Emerg Med* 33(2):105-111, 2007. [PMID: 17692757]
62. Suner, S, McMurdy, J, **Jay, GD**, Crawford, G. Digital imaging, spectroscopy, and liquid crystals in a handheld noninvasive device to determine hemoglobin concentration. *J Soc Information Display* 15(6):399-407, 2007. doi.org/10.1889/1.2749326

63. **Jay, GD**, Torres, JR, Rhee, DK, Helminen, HJ, Hytinen, MM, Cha, CJ, Elsaid, K, Kim, KS, Cui, Y, Warman, ML: The association between friction and wear in diarthrodial joints lacking lubricin. *Arthritis Rheum* 56(11):3662-9, 2007. [PMID: 17968947] [PMCID: PMC2688668]
64. Kobayashi, L, Shapiro, MJ, Gutman, DC, **Jay, GD**: Multiple encounter simulation scenario (MESS) for clinical skills and patient safety training of personnel working in high-acuity multi-patient medical environments. *Acad Emerg Med* 14(12):1141-8, 2007. [PMID: 18045888]
65. Plante, T, Harris, D, Savitt, J, Akhlaghi, F, Monti, J, **Jay, GD**. Carboxyhemoglobin monitored by bedside continuous co-oximetry. *J Trauma* 63(5):1187-1190, 2007. [PMID: 17993970]
66. Woltman, SJ, **Jay, GD**, Crawford, GP. Liquid-crystal materials find a new order in biomedical applications. *Nature Materials* 6:929-938, 2007. [PMID: 18026108]
67. Zappone B, Greene GW, Oroudjev E, **Jay, GD**, Israelachvili JN: Molecular aspects of the boundary lubrication by human lubricin: Effect of disulphide bonds and enzymatic digestion. *Langmuir* 2008; 24(4):1495-1508. [PMID: 18067335]
68. Chang DP, Abu-Lail NI, Guilak F, **Jay, GD**, Zauscher S: Conformational Mechanics, Adsorption, and Normal Force Interactions of Lubricin and Hyaluronic Acid on Model Surfaces. *Langmuir* 2008; 24(4):1183-1193. [PMID: 18181652]
69. Suner, S, Partridge, R, Sucov, A, Valente, J, Chee, Kerlen, **Jay, GD**. Non-invasive pulse CO-oximetry for carboxyhemoglobin screening in the emergency department: Identifying occult carbon monoxide toxicity. *J Emerg Med* 2008; May;34(4):441-50 [PMID: 18226877]
70. Suner S, **Jay, GD**. Carbon monoxide has direct toxicity on the myocardium distinct from effects of hypoxia in an *ex vivo* rat heart model. *Acad Emerg Med* 15(1):59-65, 2008. [PMID: 18211315]
71. Teeple E, Elsaid KA, Fleming BC, **Jay GD**, Aslani K, Crisco JJ, Mechrefe AP Coefficients of friction, lubricin and cartilage damage in the anterior cruciate ligament- deficient guinea pig knee. *J Orthop Res* 2008; 26:231-237. [PMID: 17868097] [PMCID: PMC2792715]
72. Taguchi, M, Sun, YL, Zhao, C, Zobitz, ME, **Jay, GD**, Ann, KN, Amadio, PC. Lubricin surface modification improves extrasynovial tendon gliding in a canine model *in vitro*. *J Bone Joint Surgery* 2008; 90:128-135. [PMID 18171967]
73. Elsaid, KA, Fleming, BC, Oksendahl HL, Fadale, PD, Hulstyn, MJ, Shalvoy, R, Machan, J, **Jay, GD**. Decreased lubricin concentrations and markers of joint inflammation in synovial fluids from patients with anterior cruciate ligament injury. *Arthritis Rheum* 2008; 58(6):1707-1715. [PMID: 18512776] [PMCID: PMC2789974]

74. Coles J, Blum J, **Jay GD**, Darling E, Guilak F, Zauscher S. *In situ* frictional measurement on murine cartilage by atomic force microscopy. *J Biomech* 2008; 41:541-548. [PMID: 18054362] [PMCID: PMC2274896]
75. Chee K, Nilson D, Partridge R, Hughes A, Suner, S, Sucov, A, **Jay, GD**. Finding needles in a haystack: A case series of carbon monoxide poisoning detected using new technology in the emergency department. *Clin Tox* 2008; 46(5):461-469. [PMID: 18568803]
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- 41) **Jay, GD** and Cha, CJ. Homology of lubricin and superficial zone protein (SZP) Products of megakaryocyte stimulating factor (MSF) gene expression by human synovial fibroblasts and articular chondrocytes localized to chromosome 1q25. Orthopaedic Research Society, San Francisco, CA, February 2001.
- 42) Sucov, A, Shapiro, M, **Jay, GD**, Suner, S, Simon, R, Kaylor, C. Anonymous error reporting as an adjunct to traditional incident reporting improves error detection. Society for Academic Emergency Medicine, Atlanta, GA, May 2001.
- 43) Sucov, A, Nathanson, A, Proano, L, **Jay, GD**. An educational program can increase the likelihood of fracture patients receiving analgesia in the ED. Society for Academic Emergency Medicine, Atlanta, GA, May 2001.
- 44) Ernsting, K, Suner, S, **Jay, GD**. Use of digital imaging of conjunctiva to predict hemoglobin concentrations. Society for Academic Emergency Medicine, Atlanta, GA, May 2001.
- 45) Eastman, D, Pandey, P, **Jay, GD**. Prevalence of immunity to rabies among travelers in Nepal following standard prophylaxis with HDCV or PVRV. Society for Academic Emergency Medicine, Atlanta, GA, May 2001.
- 46) Ernsting, K, Suner, S, **Jay, GD**. Noninvasive determination of hemoglobin by digital photography of palpebral conjunctiva. British Society for Haematology 41st Annual Meeting, London, UK, April 2001. NOMINATED FOR BEST POSTER PRESENTATION BY A YOUNG INVESTIGATOR.
- 47) Simmons, W, Shapiro, M, **Jay, G**, Sucov, A, Suner, S, Kaylor, C, Simon, R. Anonymous error reporting is an important adjunct to traditional incident reporting. Partnership Symposium 2001 Patient Safety, San Antonio, TX, October 10, 2001.
- 48) **Jay, GD** and Cha, C. Impact of sequential O-linked deglycosylation upon boundary lubrication by human lubricin. #0272 Orthopaedic Research Society, Dallas, TX, February 2002.
- 49) **Jay, GD** and Cha, C. Identification of a Novel N-link glycoylation on human lubricin. #0383 Orthopaedic Research Society, Dallas, TX, February 2002.
- 50) Lee, P and **Jay, GD**. Evaluation of the Kendall cardiovent device for improved cardiopulmonary resuscitation in microgravity. Aerospace Medicine Association, Montreal, Canada, May 2002.
- 51) Lee, P and **Jay, GD**. Determination of the optimal rescuer position for cardiopulmonary resuscitation in a reduced gravity environment. Aerospace Medicine Association, Montreal, Canada, May 2002.
- 52) Lee, P and **Jay, GD**. Comparison of endotracheal intubation and the combitube for emergency

airway management in microgravity by novice intubationists. Aerospace Medicine Association, Montreal, Canada, May 2002.

- 53) Overly, FL, Fontaine, B, Wright, RO, **Jay, GD** and Linakis, JG. Bispectral analysis in the pediatric emergency department during conscious sedation. Ambulatory Pediatric Association. May 2002.
- 54) Overly, FL, Fontaine, B, Wright, RO, **Jay, GD** and Linakis, JG. Bispectral analysis in the pediatric emergency department during conscious sedation. Society for Academic Emergency Medicine Annual Meeting, St. Louis, MO, May 2002.
- 55) Suner, S, Ciottone, G, **Jay, GD**, Anderson, P, Gum, R. Injuries among workers during the 2001 world trade center rescue and recovery mission. Society for Academic Emergency Medicine Annual Meeting, St. Louis, MO, May 2002.
- 56) Babu, K, Lee, P, Goldsmith, H, Maurer, J, Spaulding, D, Ernst, C, Weinstein, R, Ramchandani, S, **Jay, GD**. CPR positioning for microgravity. Society for Academic Emergency Medicine Annual Meeting, St. Louis, MO May 2002.
- 57) Cahill, J, Schuur, J, Kaylor, C, Trespalacios, F, **Jay, GD**. Cerebrospinal fluid analysis with urinary reagent strips. Society for Academic Emergency Medicine Annual Meeting, St. Louis, MO, May 2002.
- 58) Shapiro, M, Simmons, W, Wright, R, Linakis, J, Trespalacios, F, **Jay, GD**. Can medical errors and near misses reported to an emergency department anonymous error reporting system be identified through chart review? Society for Academic Emergency Medicine Annual Meeting, St. Louis, MO, May 2002.
- 59) Nam, D, **Jay, GD**. Safety history in portable hyperbaric technology. Undersea and Hyperbaric Medical Society Annual Meeting, San Diego, CA, June 2002.
- 60) Simon, R, Rice, M, **Jay, GD**, Morey, JA. transition from aviation crew resource management to hospital emergency medical departments: The MedTeams Story. 12th International Symposium on Aviation Psychology. Dayton, OH, April 14, 2003.
- 61) **Jay, GD**, Rhee, DK, Torres, JR, Marcelino, J, Carpten, JD, Warman, ML. Analysis of the frictional characteristics of CACP knockout mice joints with the modified Stanton pendulum technique. Orthopaedic Research Society. New Orleans, LO, February 3, 2003.
- 62) **Jay GD**, Marcelino J, Al-mayouf S, Laxer, R, Rhee, DK, Cha, CJ, Warman, ML. Synovial fluid from patients with camptodactyly-arthritis-coxa vara-pericarditis syndrome (CACP) lacks boundary lubricating ability. Orthopaedic Research Society. New Orleans, LO, February 3, 2003.
- 63) Elsaid KA, **Jay GD**, Chichester CO. Detection of collagen type II and proteoglycans in the synovial fluids of patients diagnosed with non-infectious knee joint synovitis indicates early damage to the articular cartilage matrix. Orthopaedic Research Society. New Orleans, LO,

February 3, 2003.

- 64) Lee P, **Jay GD**. Comparison of combitube and ILMA for unrestrained emergency airway management in microgravity by novice intubationists. Aerospace Medical Association. San Antonio, TX, May 5, 2003.
- 65) **Jay GD**, Elsaid KA, Chichester CO. Early damage to the articular cartilage matrix occurs following traumatic knee Injuries without fracture. Society for Academic Emergency Medicine. Boston, MA, May 30, 2003.
- 66) Rayner, J and **Jay, GD**. Continuous and non-invasive pulsus paradoxus monitoring. Society for Academic Emergency Medicine. Boston, MA, June 1, 2003.
- 67) Lagwinski, M, Rhee, DK, **Jay, GD**, Warman, ML. Acquired alterations in lubricant degradation patterns within synovial fluid from patients with common joint diseases. American College of Rheumatology. Orlando, FL, October 26, 2003.
- 68) **Jay, GD**, Elsaid, KA, Chichester, CO. The loss of synovial fluid boundary lubrication and articular cartilage degradation in a rabbit injury model. #P46. Osteoarthritis and Arthritis Research Society, Hamburg, Germany, October 12, 2003.
- 69) Kutsumi, K, Zobitz, M, Zhao, C, Kai-Nan, A, Amadio, P, **Jay, GD**, Tsubone, T. Can lubricant reduce the gliding resistance of extrasynovial tendon? A preliminary study. Orthopaedic Research Society, San Francisco, March 7-10, 2004.
- 70) Lee, P, Garcia, M, Hwang, P, Kang, L, Ramachandran, M, **Jay, GD**, Fisher, J, Shapiro, M. Evaluation of an unrestrained CPR method in microgravity. Aerospace Medical Association, Anchorage, May 24, 2004.
- 71) Clyne, B, Gutman, D, Sutton, E, Kobayashi, L, Spitalnic, S, **Jay, GD**, Shapiro, M. Oral board versus high fidelity simulation for competency assessment: Senior emergency medicine resident management of an acute coronary syndrome. International Meeting on Medical Simulation. Society for Technology in Anaesthesia. Albuquerque/Santa Fe, NM. January 16-18, 2004.
- 72) Kobayashi, L, Shapiro, M, Sullivan, F, Clyne, B, Raveendra, M, **Jay, GD**. High fidelity medical simulation enhances housestaff satisfaction with ACLS certification and recertification training. 4th Annual International Meeting on Medical Simulation. Society for Technology in Anesthesia. Albuquerque/Santa Fe, NM. January 16-18, 2004.
- 73) Kutsumi, K, **Jay, GD**, Amadio, PC, Zhao, CF, Cha, CJ, Zobitz, ME, Tsubone, T, An, KN. Can lubricin reduce the gliding resistance of extrasynovial tendon? A preliminary study. Orthopaedic Research Society. San Francisco, CA, March 7, 2004.
- 74) Rayner, JR, Trespelacios, FM, Pelosi, S, Lapine, A, Steele, D, **Jay, GD**. Automated pulsus paradoxus: A noninvasive index of work of breathing that predicts admission in ED patients with respiratory complaints. Society for Academic Emergency Medicine. Orlando, FL, May

17, 2004.

- 75) Kobayashi, L, Shapiro, M, Sullivan, F, Clyne, B, Raveendra, M, **Jay, GD**. Multiple encounter simulation scenario for medical error reduction and enhanced medical education. Innovations in Medical Education Exhibit. Society for Academic Emergency Medicine. Orlando, FL, May 17, 2004.
- 76) Elsaid, KA, **Jay, GD**, Chichester, C. Inhibition of cathepsin B, and L retards the loss of Boundary lubrication of rheumatoid arthritis synovial fluid aspirates in vitro. Orthopaedic Research Society. Washington, DC, February 20 - 23, 2005.
- 77) Elsaid, KA, **Jay, GD**, Chichester, C. Cathepsin B and neutrophil elastase degrade lubricin and increase friction in excised murine joints. Orthopaedic Research Society, Washington, DC, February 20 – 23, 2005.
- 78) Torres, JR, **Jay, GD**, Warman, ML, Laxer, RM, Laderer M, Breuer, KS. Reduction of elastic and subdiffusive behavior of synovial fluid in the absence of lubricin. Orthopaedic Research Society, Washington, DC, February 20 – 23, 2005.
- 79) Torres, JR, **Jay, GD**, Warman, ML, Kim, KS Scale bridging model of adhesive force reduction and molecular aggregation on contacts coated by lubricin. Orthopaedic Research Society, Washington DC, February 20 – 23, 2005.
- 80) Lee, PH, Jajoo, R, Garcia, M, Lenehan, P, Hudak, D, Desir, C, Joseph, J, Tanheco, T, **Jay, GD**, Fisher, J, Shapiro, N. Evaluation of an automated compression device for CPR in microgravity. Aerospace Medical Association. March 9-12, 2005.
- 81) McMurdy, J, **Jay, GD**, Suner, S, Crawford, G A novel medical diagnostic tool for non-invasively measuring hemoglobin utilizing switchable H-PDLC display technology. Society for Information Display Technology, Boston, MA. March 10, 2005.
- 82) Kobayashi L, Shapiro MJ, Sucov A, Woolard R, **Jay GD**. Transportable enhanced simulation technologies for pre-implementation limited operations testing (TESTPILOT) program in new emergency departments. Presented at the SAEM conference, New York, NY, May 2005.
- 83) Mason-Plunkett, J, **Jay, GD**, Sidman, R. Lack of MRSA colonization among ED healthcare workers. American College of Emergency Physicians Research Forum. September 26-27, 2005.
- 84) **Jay, GD**, Torres, J, Kim, KS, Warman, M. Adhesive force reduction and molecular aggregation on lubricin-coated contacts. World Tribology Congress, American Society of Mechanical Engineers. Washington, DC, September 14-18, 2005.
- 85) Torres, JR, **Jay, GD**, Warman, ML, Laxer, R, Laderer, M, Breuer, KS. Lubricin interaction with hyaluronate promotes interchain association leading to network formation. World Tribology Congress, American Society of Mechanical Engineers. Washington, DC, September 14-18, 2005.

- 86) Elsaid, K, **Jay, GD**, Chichester, C. Temporal lubricin expression in synovial tissues following arthritis induction in antigen-induced rat arthritis model. 10th World Congress on Osteoarthritis, Boston, MA, December 8-11, 2005.
- 87) McMurdy, JW, **Jay, GD**, Crawford, GP. Anemia detection utilizing diffuse reflectance spectra from the palpebral conjunctiva and tunable liquid crystal filter technology” SPIE Conference on Nondestructive Evaluation for Health Monitoring, San Diego, CA. February 2006.
- 88) Torres, JR, Kim, KS, Warman, ML, **Jay, GD**. Lubricin network deposition is concentration dependent and follows the effective contact boundary length model. Orthopaedic Research Society, Chicago, IL. March 20, 2006.
- 89) Teeple, E, Fleming, BC, Mechrefe, AP, Brady, MF, **Jay, GD**, Crisco, JJ, Gomez, N The frictional properties of Hartley guinea pig knees with and without simulated osteoarthritis using a modified Stanton pendulum technique. Orthopaedic Research Society, Chicago, IL. March 20, 2006.
- 90) Elsaid, KA, **Jay, GD**, Chichester, C Joint lubrication is compromised following onset of arthritis and is associated with cartilage damage in arthritic rat model. Orthopaedic Research Society. Chicago, IL, March 20, 2006.
- 91) Shapiro, MJ, Williams, KA, Kobayashi, L, Morey, JC; Counihan, T, Overly, F Sullivan, F, Suner, S, **Jay, GD** Civilian medical simulation centers as a regional resource for training and skill sustainment of reserve component medical personnel in combat casualty care. IMMS San Diego, CA. 2006.
- 92) Kobayashi, L, Nagdev, A, Clyne, B, Gibbs, F, **Jay, GD** Integration of ultrasound simulation (U/S) into advanced medical simulation for emergency medicine resident training. Society for Academic Emergency Medicine, San Francisco, CA. 2006.
- 93) Abu-Lail, N, **Jay, GD**, Guilak, F, Zauscher, S The effect of glycoproteins on friction in diarthroidal joints and between model surfaces measured with lateral force microscopy. American Chemical Society Annual Meeting. 2006.
- 94) Abu-Lai, N, Chang, D, Coles, J, Guilak, F, **Jay, GD**, Zauscher, S Nano-tribological studies on the mechanisms of O-linked glycosylated proteins in the boundary-lubrication of articular cartilage. Vacuum Society. 2006.
- 95) Coles, J, Abu-Lail, N, Chang, D, Warman, ML, Cha, CJ, Guilak, F, **Jay, GD**, Zauscher, S. The role of PRG4 in joint lubrication and chondroprotection. World Tribology Congress, American Society of Mechanical Engineers. 2006.
- 96) Abu-Lail, N, Coles, J, Guilak, F, **Jay, GD**. Nano-tribological studies on the mechanisms of O-linked glycosylated proteins in the boundary-lubrication of articular cartilage. Gordon

Conference. 2006.

- 97) Chee, KJ, Suner, S, Partridge, RA, Sucov, A, **Jay, GD**. Noninvasive carboxyhemoglobin monitoring: Screening emergency department patients for carbon monoxide exposure. Society for Academic Emergency Medicine, 2006.
- 98) Coles, JM, Zauscher, S, Guilak, F, Warman, ML, Cha, J, **Jay, GD**. Frictional, mechanical, and morphological differences between PRG4 (+/+) and (-/-) mice measured by atomic force microscopy (AFM). Orthopaedic Research Society 53rd Annual Meeting. 2007.
- 99) Elsaid, KA, Fleming, BC, Teeple E, Mechrefe, AP, **Jay, GD**. Decreased lubricin concentration in the synovial fluid lavages from guinea pig joints following anterior cruciate ligament transection is associated with increased cartilage damage. Orthopaedic Research Society 53rd Annual Meeting. 2007.
- 100) Elsaid, KA, Lau, A, Bao, B, Coles, JM, Zauscher, S, Warman, ML, Cha, J, **Jay, GD**. Age-dependant change in ex-vivo coefficient of friction of PRG4 -/- mice joints and its relationship to articular cartilage surface layer integrity. Orthopaedic Research Society 53rd Annual Meeting. 2007.
- 101) **Jay, GD**, Elsaid, KA, Cha, J. Lubricin purified from bovine synovial fluid and from articular cartilage exhibit similar binding affinities to cartilage matrix proteins. Orthopaedic Research Society 53rd Annual Meeting, 2007.
- 102) Elsaid, KA; Fleming, BC; Oksendahl HL; Fadale, PD; Hulstyn, MJ; Shalvoy, R; Warman, ML; **Jay, GD**. Synovial fluid lubricin concentrations are decreases following anterior cruciate ligament injury in humans and are associated with increased cartilage damage. Orthopaedic Research Society 53rd Annual Meeting, 2007.
- 103) Sun, Y, Berger, EJ, Zhao, C, **Jay, GD**, An, KN, Amadio, P. Immobilization down- regulates the expression of lubricin and TGF- β 1 in flexor tendon in vivo. Orthopaedic Research Society 53rd Annual Meeting, 2007.
- 104) Kobayashi, L, Overly, F, Shapiro, MJ, **Jay, GD**. Simulation proportional effort contribution tracking (SPECTra) system for data-driven determination of individual personnel time and effort contribution to simulation center activity. International Meeting on Simulation in Healthcare. Orlando, FL, 2007.
- 105) Duffy, S, McMurdy, J, Kollet, M, **Jay, GD**, Crawford, G. Using spectroscopy to assess the ages of bruises. Society for Academic Emergency Medicine. Chicago, IL, 2007.
- 106) Racht, J, McMurdy, J, Mathews, Z, Hughes, A, Crawford, G, **Jay, GD**, Suner, S. Noninvasive measurement of hemoglobin concentration in emergency department patients using fiber optic spectral analysis of the tarsal plate. Society for Academic Emergency Medicine. Chicago, IL, 2007.
- 107) **Jay, GD**, Elsaid, K, Fleming, B, Oksendahl, H, Fadale, P, Hulstyn, M, Shalvoy, R, Warman,

M. Anterior cruciate ligament injury is associated with lack of boundary lubrication by lubricin. Society for Academic Emergency Medicine. Chicago, IL, 2007.

- 108) **Jay, GD**, Racht, J, McCurdy, J, Mathews, Z, Hughes, A, Suner, S, Crawford, G. Point of care noninvasive hemoglobin determination using fiber optic reflectance spectrophotometry. IEEE & EMBC 2007. Lyon, FR, 2007.
- 109) Taguchi, M, Sun, Y-L, Zhao, C, Zobitz, ME, Cha, C-J, **Jay, GD**, An, K-N, Amadio, PC. Lubricin surface modification improves tendon gliding after tendon repair in a canine model in vitro. Orthopaedic Research Society 54th Annual Meeting, San Francisco, 2008.
- 110) Sun, Y-L, Omae, H, Zhao, C, **Jay, GD**, An, K-N, Amadio, PC. Reduction of lubricin expression with deprivation of mechanical loading in flexor tendon. Orthopaedic Research Society 54th Annual Meeting, San Francisco, 2008.
- 111) Elsaid, KA, Fleming, BC, Warman, ML, Raukar, N, **Jay, GD**. Inhibition of the effects of TNF- α by etanercept preserves joint lubrication and decreases cartilage damage following an ACL injury. Orthopaedic Research Society 54th Annual Meeting, San Francisco, 2008.
- 112) Elsaid, KA, Fleming, BC, Warman, ML, **Jay, GD**. Early changes in lubricin levels and its relationship to cartilage damage in an ACL-transection rat model. Orthopaedic Research Society 54th Annual Meeting, San Francisco, 2008.
- 113) Fleming, BC, Elsaid, KA, **Jay, GD**. Lubricin and Cartilage Metabolism are Altered Following Injury and Reconstruction of the Caprine Anterior Cruciate Ligament. Orthopaedic Research Society 54th Annual Meeting, San Francisco, 2008.
- 114) Fleming, BC, Teeple, E, **Jay, GD**, Crisco, JJ. Viscous Damping in a Loaded Joint Articular Pendulum May Explain Articular Degeneration in an ACL Transection Injury Model. Orthopaedic Research Society 54th Annual Meeting, San Francisco, 2008.
- 115) Drewniak, EI, **Jay, GD**, Fleming, BC, Cha, C-J, Warman, ML, and Crisco, JJ. Cartilage Wear Testing of Intact Mutant PRG4 Mouse Knees with a Pendulum System. Orthopaedic Research Society 54th Annual Meeting, San Francisco, 2008.
- 116) Wei, L, Fleming, BC, Sun, X, Teeple, E, Wu, W, **Jay, GD**, Elsaid, KA, Luo, J, Chen, Q. A comparison of differential biomarkers of osteoarthritis with and without post-traumatic injury in the Hartley guinea pig model. Orthopaedic Research Society, San Francisco, 2008.
- 117) Teeple, E, Fleming, BC, **Jay, GD**, Crisco, JJ. The Coefficient of Friction of the Articular Pendulum is not Independent of Mass. Orthopaedic Research Society, San Francisco, 2008.
- 118) **Jay, GD**, Elsaid, KA, Fleming, BC, Warman, ML. Inhibition of the effects of TNF- α by etanercept preserves joint lubrication and decreases cartilage damage following an ACL injury. Society for Academic Emergency Medicine Annual Meeting, Washington, DC, 2008.
- 119) Kobayashi, L, Overly, F, Cooper, M, **Jay, GD**. Comparison of Sudden Cardiac Arrest

Resuscitation Performance Data Obtained from In-Hospital Incident Chart review and In Situ High-Fidelity Medical Simulation. First Place Award @ 9th Annual International Meeting on Simulation in Healthcare, Lake Buena Vista, FL January 11 – 14, 2009.

- 120) Elsaid, K, **Jay, GD**, Fleming, B, Comparison of Early and Late Inhibition of TNF- α In Restoring Chondroprotection by Lubricin in the ACL Transection Injury Model. ORS 55th Annual Meeting, Las Vegas, NV February 22 – 25, 2009.
- 121) Coles, J, Cha, C-J, Blum, J, Cheng, A, Warman, M, **Jay, GD**, Guilak, F, Zauscher, S, Microscale Surface Properties of Prg4 Knockout Joints measured as a Function of Age. ORS 55th Annual Meeting, Las Vegas, NV February 22 – 25, 2009.
- 122) Drewniak, E, **Jay, GD**, Cha, C-J, Warman, M, Fleming, B, Crisco, J. Coefficient of Friction of Articular Cartilage of Intact Prg4 Mutant Mouse Knees Increases with Cyclic Loading. ORS 55th Annual Meeting, Las Vegas, NV February 22 – 25, 2009.
- 123) Chang, D, Abu-Lail, Coles, J, Guilak, F, **Jay, GD**, Zauscher, S. Friction Force Microscopy of Lubricin and Hyaluronic Acid on Hydrophobic and Hydrophilic Surfaces. ORS 55th Annual Meeting Las Vegas, NV February 22 – 25, 2009.
- 124) **Jay, GD**, Elsaid, K, Fleming, B. Comparison of Early and Late Inhibition of TNF- α in Restoring Chondroprotection by Lubricin in the ACL Transection Injury Model, SAEM Annual Meeting, New Orleans, LA, May 2009.
- 125) Kobayashi, L, Dunbar-Viveiros, J, Sheahan, B, Begnoche, M, Devine, J, Cooper, M, Martin, P, **Jay, GD**. In-Situ Intermediate-fidelity Medical Simulation for Comparison of In-Hospital First Responder Sudden Cardiac Arrest Resuscitation with Semi-Automated Defibrillators and with Automated External Defibrillators. Poster presentation AAEM/EuSEM Mediterranean Emergency Medicine Conference V in Valencia, Spain, September 2009.
- 126) Kobayashi L, Boss R, Gibbs F, Goldlust E, Hennedy M, Monti J, Siegel N, **Jay GD**. Human factors Engineering Intervention to Improve Emergency Department Physical Chart Location, Identification and Differentiation for Enhanced Patient Safety. Poster presentation AAEM/EuSEM Mediterranean Emergency Medicine Conference V in Valencia, Spain September 2009.
- 127) **Jay, GD**, Nir, R, Watkins, B, McHugh, K, Anderson, S, Fleming, BC, Zhang, LX, Teeple, E, Waller, K, Elsaid, K. Intra-Articular Injection (Tribosupplementation) with Native and Recombinant Lubricin (PRG4) Prevents Cartilage Degeneration in the Rat ACL Injury Model. Poster Presentation. American College of Rheumatology Annual Meeting, Philadelphia, PA, October 19th, 2009.
- 128) **Jay, GD**, Nir, R, Fey, T, Watkins, B, McHugh, K, Anderson, S, Fleming, B, Zhang, LX, Teeple, E, Elsaid, K, Tribosupplementation with Native Lubricins (Prg4) and Recombinant Lubricin Prevents Cartilage Degeneration and Lower Urinary CTXII in the Rat ACL Injury Model. 56th Annual Meeting of Orthopaedic Research Society, March 6– 9, 2010, New Orleans, LA.

- 129) Teeple, E, Elsaid, K, **Jay, GD**, Zhang, L, Badger, G, Akelman, M, Bliss, T, Fleming, B, Supplemental Intra-Articular Lubricin with and without Hyaluronic Acid Delays the Progression of Post-Traumatic Arthritis in the Anterior Cruciate Ligament Deficient Rat Knee. 56th Annual Meeting of Orthopaedic Research Society, March 6 – 9, 2010, New Orleans, LA.
- 130) Drewniak, E, **Jay, GD**, Warman, M, Fleming, B, Crisco, J, Cyclic Loading Friction and Articular Cartilage Damage in Lubricin Deficient Mice. 56th Annual Meeting of Orthopaedic Research Society, March 6 – 9, 2010, New Orleans, LA.
- 131) Teeple, E, Aslani, K, Shalvoy, M, Brody, J, Zhang L, Fleming, B, **Jay, GD**, Intervertebral Disc Apparent Torsional Modulus is Elevated in Lubricin Knockout Mice. 56th Annual Meeting of Orthopaedic Research Society, March 6 – 9, 2010, New Orleans, LA.
- 132) Kohrs, R, Sun Y, **Jay, GD**, Zhang, L, Amadio, P, An, K, Zhao, C, The Effect of Lubricin on tendon Fascicle Gliding in Mice Tails. 56th Annual Meeting of Orthopaedic Research Society, March 6 – 9, 2010, New Orleans, LA.
- 133) Akelman, M, Teeple, E, Crisco, J, Fleming, B, **Jay, GD**, The Measurement of Coefficient of Friction in the Articular Pendulum: On the Effects of Mass. 56th Annual Meeting of Orthopaedic Research Society, March 6 – 9, 2010, New Orleans, LA.
- 134) Aninwene, GE Taylor, E, Webster, T, **Jay, GD**, Decreased Infection and Epithelial Cell Attachment to Lubricin Coated Intraocular Lenses, 2010 Annual Meeting of the Society for Biomaterials, April 21 – 24, 2010, Seattle, WA.
- 135) Elsaid, K, McHugh, K, Anderson, S, Fleming, B, **Jay, GD**, Disease Modifying Effects of Tribosupplementation with Synovocyte Lubricin Coupled with Inhibition of Tumor Necrosis Factor Alpha (TNF- α) in an ACL Injury Model, Annual European Congress of Rheumatology EULAR 2010, June 16 – 19, 2010, Rome, Italy (abstract number AB0082)
- 136) Kobayashi, L., Dunbar-Viveiros, J., Devine, J., Jones, M., Overly, F, **Jay, GD**. *In situ* Medical Simulation with Experimental Clinical Guidance Intervention from Emergency Department Procedural Sedation and Assessment. EuSEM 2010 Annual Meeting, Stockholm, Sweden October 2010.
- 137) Coles, M., Chang, D., Zhang, L., **Jay, GD**, Guilak, F., Zauscher, S. Lubricin Reduces Microscale Cartilage Wear. 75th Annual AVS meeting, October 20, 2010, Albuquerque, NM.
- 138) Elsaid, K., Zang, L., Fleming, B., Teeple, E., Waller, K., **Jay, GD**. Forced Joint Mobilization Reduces Lubricin Biosynthesis from Cartilage and Increases Cartilage Degeneration in the Rat ACL Injury Model. Annual Meeting of Orthopaedic Research Society, January 13-16, 2011, Long Beach, CA.
- 139) Drewniak, E., **Jay, GD**., Fleming, B., Zhang, L., Warman, M., Crisco, J. Prg4 +/- Mouse Knee Joints Show the Largest Response to Cyclic Loading when Compared to Prg4 +/- and -/- Joints. Annual Meeting of Orthopaedic Research Society, January 13- 16, 2011, Long

Beach, CA.

- 140) Waller, K., Elsaid, K., Warman, M., Aslani, K., Fleming, B., **Jay, GD**. Lubricin Reduces In Vitro Chondrocyte Apoptosis in Bovine Cartilage Bearings. Annual Meeting of Orthopaedic Research Society, January 13-16, 2011, Long Beach, CA.
- 141) **Jay, GD**., Zhang, L., Waller, K., McHugh, K., Anderson, S., Fleming, B., Elsaid, K. Single Dose Tribosupplementation with Human Synviocyte Lubricin Lowers Urinary CTXII and Preserves Symmetric Weightbearing in the Rat ACL Transection OA Model. Annual Meeting of Orthopaedic Research Society, January 13-16, 2011, Long Beach, CA.
- 142) Waller, K., Darling, E., **Jay, GD**. The Effect of TNF- α Inhibition on Micro- and Nano-Cartilage Stiffness in a Rat ACL Transection OA Model. Annual Meeting of Orthopaedic Research Society, January 13-16, 2011, Long Beach, CA.
- 143) Kohn, M., Sun, YL, Zhao, C., **Jay, GD**, An, KN., Amadio, P. Human Synoviocyte Lubricin and Bovine Synovial Fluid Lubricin Equally Improve Gliding Resistance in a Canine Model In Vitro. Annual Meeting of Orthopaedic Research Society, January 13- 16, 2011, Long Beach, CA.
- 144) Reuvers, J., Thoreson, A., Zhao, C., Zhang, L., **Jay, GD**, Warman, M., Amadio, P. The Mechanical Properties of Tail Tendon Fascicles from Lubricin Knockout, Wild Type and Heterozygous Mice. Annual Meeting of Orthopaedic Research Society, January 13- 16, 2011, Long Beach, CA.
- 145) Choo, EK, Ranney, ML, **Jay, GD**. Educational Innovation to Improve K23 Grant writing Among Junior EM Faculty. Innovations in Emergency Medicine Education. Society of Academic Emergency Medicine, June 1, 2011, Boston, MA [AWARDED BEST INNOVATIVE EDUCATIONAL PRESENTATION]
- 146) **Jay, GD**, Zhang, L., Waller, K., McHugh, K., Anderson, S., Fleming, B., Elsaid, K. Single Dose Tribosupplementation with Human Synviocyte Lubricin Lowers Urinary CTXII and Preserves Symmetric Weightbearing in the Rat ACL Transection OA Model. Society for Academic Emergency Medicine, June 1, 2011, Boston, MA.
- 147) Elsaid, K., Zhang, L., Waller, K., Fleming, B., **Jay, GD**. The Chondroprotective Effect of a Single-Dose Lubricin Tribosupplementation Following ACL Transection and Strenuous Exercise in the Rat. ORS 2012 Annual Meeting, February 4-7, 2012, San Francisco, CA.
- 148) Waller, K., Zhang, L., Warman, M., **Jay, GD**. Lubricin Null Mouse Chondrocytes Undergo Apoptosis in the Presence of Increased Friction. ORS 2012 Annual Meeting, February 4-7, 2012, San Francisco, CA.
- 149) Zhao, C., Sun, YU., **Jay, GD**, Moran, S., An, KN., Amadio, P. Surface Modification Counteracts Adverse Effects of Repaired Tendon Immobilization. ORS 2012 Annual Meeting, February 4-7, 2012, San Francisco, CA.

- 150) Zhao, C., Hayashi, M., Sun, YL., Kirk, R., **Jay, GD.**, Moran, S., An, KN., Amadio, P. Surface Modification Combined Tissue Engineering Patch for Flexor Tendon Repair: A Short-Term In Vivo. ORS 2012 Annual Meeting, February 4-7, 2012, San Francisco, CA.
- 151) Hayashi, M., Thorenson, A., Zhao, C., An, KN., **Jay, GD.**, Warman, M., Chikenji, T., Amadio, P. The Role of Lubricin in Intrasynovial Tendon Gliding. ORS 2012 Annual Meeting, February 4-7, 2012, San Francisco, CA.
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ABSTRACTS

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- 1) Isolation of Lubricin from Human Synovial Fibroblasts and Development of Immunological Probes. *Principal Investigator*. **\$19,630** awarded by Rhode Island Hospital 12/1/95-1/30/96.
- 2) Medical Error Reduction: Emergency Medical Team Performance (MedTeams®) Phase I & II. *Co-Principal Investigator*. **\$855,533** awarded by Army Research Laboratory- Contract #DAAL01-96-C-0091, Aberdeen Proving Grounds subcontracted through Dynamics Research Corporation, Wilmington, MA 9/1/96 - 2/29/00.
- 3) Medical Error Reduction: Emergency Medical Team Performance (MedTeams®) Phase III. Development of the Emergency Team Coordination Course supported by High Fidelity Simulation Training to Improve Team Performance (ETCC-S). *Co-Principal Investigator*. **\$154,152** awarded by Army Research Laboratory-Contract #DAAL01-96- C-0091, Aberdeen Proving Grounds subcontracted through Dynamics Research Corporation, Wilmington, MA 3/1/00 - 3/1/01.
- 4) Immunoprobes for Human Lubricin from Human Synovial Fluid. Mentored Clinical Scientist Development Award. National Institutes of Health. National Institute on Aging, 1K08AG/AR01008-01 *Principal Investigator*. **\$386,553** awarded 8/1/00 – 8/1/04. Mentor: Douglas Hixson PHD
- 5) Study of Biological Boundary Lubrication Using Atomic Force Microscopy in the Pulsed Force Mode. McCutchen Foundation. *Principal Investigator*. **\$34,700** awarded 1/1/01 – 1/1/02.
- 6) Design and Construction of a High-Fidelity Medical Simulation Suite at Rhode Island Hospital. Champlin Foundation. *Co-Principal Investigator*. **\$100,000** awarded 12/1/00 – 12/1/01.
- 7) Developmental Center for Evaluation and Research in Patient Safety (DCERPS). Agency for Healthcare Research and Quality. P20HF11592 *Co-Investigator*. PI-Dr. Robert Wears, University of Florida. Co-PI-Dr. Marc Shapiro, Brown University School of Medicine. **\$100,135** awarded 9/01/01 – 8/31/04.

- 8) Pneumothorax Detection System (PDS). National Institutes of Health. National Heart, Lung and Blood Institute, R44 HL66126 Phase II-Small Business Innovation Research Award, *Co-Investigator*. PI-Dr. Ronald G. Riechers, Spectra Research Inc. **\$208,437** awarded 9/1/02 - 8/31/04.
- 9) Lubricin in Articulating Joints. National Institutes of Health. National Institute of Arthritis, Musculoskeletal and Skin Diseases, RO1 AR050180-01. *Co-Principal Investigator* with Matthew Warman MD at Children's Hospital Boston. **\$2,159,560** awarded 7/1/03 - 8/31/08.
- 10) Acquisition of a Nanoindentation System for Multi-Disciplinary Research and Education in Nano and Bio-mechanics of Materials. National Science Foundation CMS-0421199. *Co-Principal Investigator* with P.R. Guduru, B.W. Sheldon, R.F. Cooper and K-S. Kim. **\$249,515** awarded 7/15/04 – 6/30/05.
- 11) Pulsus Paradoxus Monitor. National Institutes of Health. National Institute of Heart, Lung and Blood, R41 HL74633-01. *Principal Investigator*. Small Business Technology Transfer Award. **\$298,776** awarded 9/1/04 – 3/31/07.
- 12) Non-invasive Device to Measure Hemoglobin Levels: Improving the Quality of Life of Persons with Life Altering Diseases. Culpepper Foundation. *Co-Principal Investigator* with G. Crawford. **\$25,000** awarded 10/1/04 – 9/30/06.
- 13) GlobaMED Devices: Global Anemia Detection & Treatment. NCIIA Advanced E-Team Grant #3289-06. *Co- Investigator and Mentor*. John McCurdy (recipient). **\$20,000**.
- 14) Lubricin in ACL Deficient Joints. Centers of Biomedical Research Excellence (COBRE) NCRR, 1P20RR024484-01. *Investigator*. **\$1,147,751** awarded 9/1/07 – 8/31/12. Department of Orthopaedics at Brown Medical School. Qian Chen PhD (Program Project PI).
- 15) Restitution of Lubrication in ACL Deficient Joints Preventing Wear. NIAMS, R21AR055937. *Principal Investigator*. **\$365,234** awarded 5/1/08 – 4/30/10.
- 16) Creating a Reliable, Fast and Affordable Way to Diagnose Anemia. Rhode Island Science & Technology Advisory Council Award. *Co-Principal Investigator*. **\$180,000** awarded 2/1/08 – 6/1/09.
- 17) Lubricin in Articulating Joints. National Institutes of Health. National Institute of Arthritis, Musculoskeletal and Skin Diseases, RO1 AR050180-01. *Co-Principal Investigator* with Matthew Warman MD at Boston Children's Hospital. **\$2,459,560** awarded 9/1/08 - 8/31/13.
- 18) Tribosupplementation of Injured Joints. National Institutes of Health National Institute of Arthritis and Musculoskeletal and Skin Diseases, 1R41AR057276-01. *Principal Investigator*. **\$284,758** awarded 09/30/2009 – 08/31/2011.
- 19) RCT of US versus CT for Patients in the ED with Suspected Renal Colic (STONE). AHRQ R01 HS019312. *Co-Investigator* with Rebecca Bindman at University of California at San Francisco. **\$601,552** awarded 9/30/2010 – 9/29/2013.

- 20) Improving Pediatric Resuscitation: A Simulation Program for the Community ED. AHRQ R18 HS20286. *Co-Investigator* with Linda Brown at Rhode Island Hospital. **\$937,978** awarded 2/1/2011 – 1/31/2014.
- 21) Tribosupplementation with Lubricin in Prevention of Post-Traumatic Arthritis. Department of Defense, Congressionally Directed Medical Research Program, PR110746, *Principal Investigator*. **\$2,219,221** awarded 10/1/2012 – 9/30/2015.
- 22) Tribosupplementation of Injured Joints. National Institutes of Health National Institute of Arthritis and Musculoskeletal and Skin Diseases, 1R42AR057276-03. *Principal Investigator*. **\$1,075,259** awarded 9/1/13/1/12 – 8/31/15.
- 23) Non-tribologic Bioactivity of Lubricin. National Institutes of Health National Institute of Arthritis and Musculoskeletal and Skin Diseases, 1R01AR067748. *Principal Investigator*. **\$2,190,726** awarded 5/10/16 – 4/30/21.
- 24) Centers of Biomedical Research Excellence (COBRE) NIGMS, 1P20RR024484. *Mentor*. Department of Orthopaedics at Brown Medical School. Qian Chen PhD (Program Project PI). **\$10,835,244** awarded 9/1/12 – 8/31/17.
- 25) Use of Multifunctional rhPRG4 Biologic for Treatment of Traumatic Brain Injuries. National Institute of Neurological Disorders and Stroke, 1R21NS099605-01. *Co-Investigator*. **\$429,330** awarded. 9/30/16-8/31/18.
- 26) Convalescent Plasma Randomized Clinical Trials for Early COVID-19 Treatment are Foundational for Subsequent Hyperimmune Globulin and Vaccines. US Department of Defense, W911QY2090012. Site-Co Investigator. (PI: Sullivan & Site PI: Levine) **\$1,087,436** total subaward 06/2020 – 05/2021.
- 27) A Master Protocol Assessing the Safety, Tolerability, and Efficacy of Anti-Spike (S) SARS-CoV-2 Monoclonal Antibodies for the Treatment of Ambulatory Patients with COVID-19. Regeneron Pharmaceuticals. Site PI: Mylonakis, Eleftherios, M.D., Ph.D., FIDSA, FAAM . 5% Effort in Enrollments
Trial # R10933-10987-COV-2067 or [NCT04426695](https://clinicaltrials.gov/ct2/show/study/NCT04426695)
- 28) National Institute on Drug Abuse Clinical Trial Network: New England Consortium Node: CTN-0099 ED-INNOVATION Trial: Emergency Department-INITiated buprenorphine and VALIDaTION Network Trial. Site PI: Elizabeth Samuels MD, MPH. 5% Effort in Enrollments

SUBMITTED GRANTS

- 1) “The PRG4 Signaling Axis and Synovial Homeostasis in Gout”. NIAMS. Review in Feb 2023.
- 2) “Prevention of Innate Inflammation by PRG4”. NIAMS. Feb 2023 Submitted.

UNIVERSITY TEACHING ROLES

BROWN UNIVERSITY

Course Title	Role	#Students/Session	#Sessions/Year	Academic Year	ENG
123	Lecturer	20	2	1993-1995	

Instrumentation Design

-Synovial Biomechanics

-Stethoscope Design

ENG 100	Advisor	5	8	1993-1995	
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Project in Engineering Design

-Design and Construction of a Pulsus Paradoxus Monitoring System Using Two Sensors

-Design and Construction of an ANR Enhanced Electronic Stethoscope

BIO 348	Lecturer	10	1	1999-Present	
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Nuclear, Biological, Chemical Weapons of Mass Destruction Domestic Preparedness

BIO 551	Co-Leader	8	20	2000-2001	
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GISP 0021

Aerospace Medicine Affinity Group

Brown Space Club & Rhode Island Space Foundation Grant Projects:

1)“Comparison of Endotracheal Intubation and the Combitube or Emergency Airway Management in Microgravity by Novice Intubationists”

Students (BIO 551): Butala, Pham, Sateesha, Vezeridis, Cheng, Nguyen, Rausch NASA KC135 Flight date 8/1/01 - 8/8/01

Funded by Rhode Island Space Grant Foundation

2) “Evaluation of the Kendall Cardiovent Device for Improved Cardiopulmonary Resuscitation in Microgravity”.

Advisor & Preceptor to Students (BIO 551): Battat, Cohen, Ghatan, Goldsmith, Mauer. NASA KC135 Flight date 2/22/00 - 3/1/00

Funded by Rhode Island Space Grant Foundation

3) “Determination of the Optimal Rescuer Position for Cardiopulmonary Resuscitation in a Reduced Gravity Environment”.

Advisor & Preceptor to Students (BIO 551): Mauer, Ernst, Spaulding, Brodsky, Ramchandani, Weinstein

NASA KC135 Flight date 8/1/01 - 8/8/01

Funded by Rhode Island Space Grant Foundation

4) “Comparison of LMA and Combitube in Emergent Airway Management in a Reduced Zero Gravity Environment”

Advisor & Preceptor to Students (BIO 551): Butala, Vivirdis NASA KC135 Flight date 3/21/02 – 3/30/02

Funded by Rhode Island Space Grant Foundation

ENG 193 Engineering Entrepreneurship	Mentor	7	10	2002-2005
ENG 195 Senior Engineering Design Thesis	Instructor	1	2	2002 2003
ENG 279 Graduate Student Research	Instructor	1	1	2003-Present
ENG 2910 Translational Research in Engineering		20	1	2008-2020
Alpert Medical School INTR 0001 “SCRUBS: Clinical Research Course” 2009-2014				

BROWN UNIVERSITY

Graduate Dissertation Committee Chair for John Torres, ME Candidate	2003-2005
Graduate Dissertation Committee for John McMurdy, PhD Candidate	2004-2008
Graduate Dissertation Committee for Elizabeth Drewniak, PhD Candidate	2007-2011
Graduate Dissertation Committee for Kenny Morabito, ME Candidate	2006-2008
Graduate Dissertation Committee Chair for Kimberly Waller, PhD Candidate	2008-2013
Graduate Dissertation Committee for Leslie Shelton, PhD Candidate	2006-2009
Graduate Dissertation Committee for Sunmee Park, PhD Candidate	2013-2014
Graduate Dissertation Committee Chair for Ramon Castillo, MS Candidate	2014-2015
Graduate Dissertation Committee Chair for Katherine Larson, PhD Candidate	2013-2017
Graduate Dissertation Committee Chair for Talia Dambruoso, ME Candidate	2018-2021
Graduate Dissertation Committee Chair for Ava Marks, PhD Candidate	2022 - Present
Post-doctoral Fellow Khaled A. Elsaid, PhD	2005-2008
Post-doctoral Fellow Erin Teeple MD	2011-2013
Post-doctoral Fellow Jillian Beveridge, PhD (K99 funded)	2016-2019
Post-doctoral Fellow Holly Richendrfer, PhD	2017- 2020
Undergraduate BME Honors Thesis Matthew Lo	2017-2018
Undergraduate BME Honors Thesis Daniel Yang	2018-2019
Undergraduate BME Honors Thesis Emily Borkowski	2018-2019

UNIVERSITY OF RHODE ISLAND

Graduate Dissertation Committee for Brian Felice, PhD Candidate	2000-2002
Graduate Dissertation Committee for Khaled A. Elsaid, PhD Candidate	2003-2005

NORTHEASTERN UNIVERSITY

Graduate Dissertation Committee for George E. Aninwene II, PhD Candidate	2011-2013
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HOSPITAL TEACHING ROLES

Course Title	Role	Students Resident/ Session	Hrs/ Session	Sessions/ Year	Academic Year
Anderson ED	Supervising Attending	1 (S) 4 (R)	10 10	50 100	1993-Present 1993-Present
EM Intern Orientation	Lecturer	10 (R)	1	2	1994-Present
ED Resident Morning Report	Preceptor	1 (S) 6 (R)	1	10	1995-Present
Hasbro ED	Supervising Attending	1 (S) 3 (R)	8 10	12 12	1995 – 1998 1995 – 1998
ED Environmental Medicine Lecture Series	Preceptor	2 (S) 30 (R)	1	2	1995- Present
EM Research Fellowship	Kazu Onuma, MD Walter Simmons, MD		10 10	30 30	1997 – 1998 2001 – 2002
Miriam Hospital ED	Supervising Attending	2 (R)	10	12	1999 – 2000
CPC Faculty Discussant	Lecturer	2 (S) 30 (R)	1	2	1999 -Present
BMS1 Student PT Safety & Medical Sim. Orientation	Lecturer	20 (S)	1	3	2004-Present
Doctoring Course	Facilitator	1 (S)	4	12	2006 – 2007
Summer Research EM	Supervisor	10 (S)	1	10	2010 - 2022

CONTINUING MEDICAL EDUCATION COURSES TAUGHT

Marine Medicine

Lectures on 1) *Barotrauma and Arterial Gas Embolism* & 2) *Demonstration of a Portable Hyperbaric Chamber*. Newport, RI, August 27-30, 1995.

1st Annual New England Regional Meeting for the Society of Academic Emergency Medicine. Conference Co-chair and presenter of “*Alterations in COHb Pharmacokinetics Produced by Oxygen Under Pressure*.” Providence, RI. April 11, 1997.

New England Regional Meeting for the Society of Academic Emergency Medicine Conference Co-chair. Providence, RI. April 1997, 2005 & 2013.

Rhode Island Emergency Management Agency

Emergency Medical Treatment of Radiation Victims

Lecturer on Nuclear Casualties. Providence, RI. March 22 & 25, 1999.

Marine Medicine

Lectures on *Identification and Treatment of Decompression Syndrome and Demonstration of a Portable Decompression Chamber*. Newport, RI. August 12, 1999.

Ocean Review 2000- RI ACEP Chapter
Emergency Medical Treatment of Radiation Victims
Newport, RI. August 9, 2000.

Ocean Review 2001- RI ACEP Chapter
High Fidelity Medical Simulation and Medical Error
Newport, RI. August 10, 2001.

Rhode Island Emergency Management Agency
Nuclear, Biological and Chemical Weapons of Terrorism: A Seminar for Health Care Providers
Warwick, RI. November 21, 2001.

45th Annual Symposium on Critical Care, Trauma and Emergency Medicine, University of Southern California Continuing Medical Education
Non-invasive Measurements of Carboxyhemoglobin
Las Vegas, NV. March 8, 2007.

Emergency Medicine Association of Turkey
InnovEMtech Train the Trainer Course
October 17-18, 2020.

HOBBIES

Amateur Radio: Advanced Class Licensee

FCC Call Signs:

- WN2EDY granted in 1977
- WA2EDY granted in 1978
- W1EDY granted in 2012