

JOHN G. SKEDROS, M.D.

CURRICULUM VITAE

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June 2021

PERSONAL

Place of Birth: Salt Lake City, Utah

EDUCATION

Clinical Fellowships:

Shoulder and Elbow Surgery and Total Joint Reconstruction
Mentors: Drs. Wayne Z. Burkhead and Richard E. Jones
Baylor Medical Center, St. Paul Medical Center, and
Veterans Medical Center, Dallas Texas
(July 1996 – December 1997)

Orthopaedic Surgery Residency (1990-1996)

University of Southern California/L.A. County Medical Center
Chief Resident 1995-1996
(Board Certified Orthopaedic Surgeon: July 2000, July
2010, and July 2020)

Orthopaedic Research Fellowships

1994-1995: J. Vernon Luck Research Laboratories,
Orthopaedic Hospital, Los Angeles
1988-1989: Bone and Joint Research Laboratories,
Dept. of Veterans Affairs Medical Center, Salt Lake
City

University of Utah School of Medicine (1985-1990)

M.D., May 1990

University of Utah Undergraduate Degree

Honors Program B.A., Biology/Humanities, June 1985
Thesis: *The Trilobites of Antelope Springs, Utah*; 221 pgs.

CURRENT ACADEMIC APPOINTMENTS AND TEACHING POSITIONS

Adjunct Associate Professor of Orthopaedics, Dept. of Orthopaedic Surgery,
University of Utah School of Medicine, Salt Lake City, Utah

PEER-REVIEWED PUBLICATIONS

Articles submitted to journals or nearly completed

Marshall JH, **Skedros JG**, Campana CF, Seibert AM (2021) Diffuse-type tenosynovial giant cell tumor of the knee with concurrent polymicrobial infection (*Klebsiella oxytoca* and group B *Streptococcus*). *Case Reports in Infectious Diseases*, submitted

Skedros JG, Luczak MG, Finlinson ED, Oliver MR (2021) Septic olecranon bursitis and osteomyelitis in manual laborer attributed to *Propionibacterium acnes* (*Cutibacterium acnes*). *BMJ Case Reports*, in preparation

Skedros JG, Finlinson ED, Langston TD, Adondakis MR (2021) A paraplegic patient with failure of a series of shoulder arthroplasties and salvage with permanent cement spacer. *in preparation*

Skedros JG (2021) Are sheep and deer calcanei simply loaded like cantilevered beams? Criticisms of McMahon et al. (1995) in a 45-year perspective of the use of artiodactyl calcanei in bone adaptation studies. *PlosOne*, in preparation

Skedros JG, Keenan KE, Knight AN, Tingey SD (2022) Drifting osteons are not likely mechanically adaptive and are not associated with proximity to the marrow or low-strain regions of adult primate and non-primate bones: new data in a historical perspective. *American Journal of Physical Anthropology*, in preparation

Skedros JG, Mendenhall SD, Knight AN, Bloebaum RD (2022) Distribution and morphology of microdamage in the fatigue-loaded rat ulna: relationships with age, strain mode, modeling and remodeling. *Journal of Bone and Mineral Research*, in preparation

Skedros JG, Mendenhall SD, Knight AN, Horn JB, Williams TJ (2022) Estrogen deficiency correlates with strain-mode-specific differences in bone resorption and microdamage in the rat ulna: implications for the etiology of stress fractures in female athletes. *PlosOne*, in preparation

Published Peer-Reviewed Articles

98. King BW, **Skedros JG**, Glasgow RE, Morrell DG (2020) Resolution of chronic shoulder pain after repair of a posttraumatic diaphragmatic Hernia: a 22-Year delay in diagnosis and treatment. *Case Reports in Orthopedics*, Article ID: 2020:7984936.

97. **Skedros JG**, Doutré MS (2019) Collagen fiber orientation pattern, osteon morphology and distribution, and presence of laminar histology do not distinguish torsion from bending in bat and pigeon wing bones. *Journal of Anatomy*, 234:748-763.

96. **Skedros JG**, Knight AN, Su SC, Bachus KN, Bloebaum RD (2019) Advancing the deer calcaneus model for bone adaptation studies: *ex vivo* strains obtained after transecting the tension members suggest an unrecognized important role for shear strains. *Journal of Anatomy*, 234:66-82

95. Shelton TJ, Steele AE, Saiz AM, Bachus KN, **Skedros JG** (2018) The circle-fit method helps make reliable cortical thickness measurements regardless of humeral length. *Geriatric Orthopaedic Surgery and Rehabilitation*. 9:2151459318818163
94. **Skedros JG**, Henrie MK, Finlinson ED, Trachtenberg JD (2018) Polymicrobial anaerobic infection with a deep abscess in the suprascapular fossa following a subacromial injection. *BMJ Case Reports*, Article ID: 11, pii:e226598
93. **Skedros JG**, Henrie TR, Peterson MD (2018) Rotator cuff tear following long-standing axillary neuropathy in a female motocross racer. *BMJ Case Reports*, Article ID: 15, pii:bcr-2017-223692
92. Henrie TR, **Skedros JG** (2018) Sarcoid of the upper humerus found incidentally on MR images obtained for work-up of rotator cuff tear where compromised tissue quality was a concern for surgical success. *Case Reports in Radiology*, Article ID: 2018:3579527
91. Adondakis MG, **Skedros JG**, Lopansri BK, Merrell SC (2018) Subcutaneous *Eikenella corrodens*, *Actinomyces sp.*, and α -hemolytic *Streptococcus* abscess of the thigh following a vitamin B12 injection. *Case Reports in Infectious Diseases*, Article ID: 2018:4650637
90. **Skedros JG**, Adondakis MG, Brown EM, Oliver MR (2018) *Propionibacterium acnes* and *Staphylococcus epidermidis* olecranon bursitis/osteomyelitis: a case involving surgical and antibiotic treatment. *BMJ Case Reports*, Article ID: pii:bcr-2017-223782
89. **Skedros JG**, Henrie TR, Doutré MS, Bloebaum RD (2018) Sealed osteons in animals and humans: low prevalence and lack of relationship with age. *Journal of Anatomy*, 232:824-835. Erratum in: *J. Anatomy* 233(2):274
88. **Skedros JG**, Smith JS, Henrie MK, Finlinson ED, Trachtenberg JD (2018) Upper extremity compartment syndrome in a patient with acute gout attack but without trauma or other typical causes. *Case Reports in Orthopedics*, Article ID: 2018:3204714
87. **Skedros JG**, Smith JS, Langston TD, Adondakis MG (2017) Reverse total shoulder arthroplasty as treatment for rotator cuff-tear arthropathy and shoulder dislocations in an elderly male with Parkinson's disease. *Case Reports in Orthopedics*, Article ID: 2017:5051987
86. **Skedros JG**, Adondakis MG, Knight AN, Pilkington MB (2017) Frequency of shoulder corticosteroid injections for stiffness and pain after shoulder surgery and their potential to enhance outcomes with physiotherapy: a retrospective study. *Pain and Therapy*, 6:45-60
85. **Skedros JG**, Mears CS, Langston TD, Phippen CM, Burkhead WZ, Stoddard G (2017) Reply: the humeral head circle-fit method greatly increases reliability and accuracy when measuring anterior-posterior radiographs. *Journal of Orthopaedic Research*, 35:1866-1867
84. Mears CS, Langston TD, Phippen CM, Burkhead WZ, **Skedros JG** (2017) Humeral head circle-fit method greatly increases reliability and accuracy when measuring

anterior-posterior radiographs of the proximal humerus. *Journal of Orthopaedic Research*, 35:2313-2322

83. Keenan KE, Mears CS, **Skedros JG** (2017) Utility of osteon circularity for interpreting load history and species determination in primates and non-primates. *American Journal of Physical Anthropology*, 162:657-681

82. **Skedros JG**, Mears CS, Burkhead WZ (2017) Ultimate fracture load of cadaver proximal humeri correlates more strongly with mean combined cortical thickness than areal cortical index, DEXA density, or "calcar-to-canal" ratio. *Bone and Joint Research*, 6:1-7

81. **Skedros JG**, Weaver DJ, Doutré MS (2016) Osteocyte size, shape, orientation, and population density: scaling relationships, interpretation of load history, and mechanical consequences. *Osteologie*, 25:92-100

80. **Skedros JG**, Doutré MS, Weaver DJ (2016) Proximate mechanisms involved in the formation of secondary osteon morphotypes: important considerations and a putative role of primary cilia of osteoblasts and osteocytes. *Osteologie*, 25:101-112

79. **Skedros JG**, Henrie TR (2016) Latissimus dorsi tendon transfer with GraftJacket® augmentation to increase tendon length for an irreparable rotator cuff tear. *Case Reports in Orthopedics*, Article ID: 2016:8086065

78. **Skedros JG**, Knight AN, Pitts TC, Burkhead WZ (2016) Radiographic morphometry and densitometry predict strength of cadaveric proximal humeri more reliably than age and DXA scan density. *Journal of Orthopaedic Research*, 34:331-41

77. **Skedros JG**, Kiser CJ, Hill BB (2015) Florid suprascapular neuropathy after primary rotator cuff repair attributed to suprascapular notch constriction in the setting of double crush syndrome. *Journal of Brachial Plexus and Peripheral Nerve Injury*, 10:e66-e73

76. **Skedros JG**, Phippen CM, Langston TD, Mears CS, Trujillo AL, Miska RM (2015) Complex scapular winging following total shoulder arthroplasty in a patient with Ehlers-Danlos syndrome. *Case Reports in Orthopedics*, Article ID: 2015:680252

75. **Skedros JG**, Langston TD, Phippen CM (2015) Surgical correction of post-traumatic scapulothoracic bursitis, rhomboid major muscle injury, ipsilateral glenohumeral instability, and headaches resulting from circus acrobatic maneuvers. *Case Reports in Orthopedics*, Article ID: 2015:302850

74. **Skedros JG**, Henrie TR, Mears CS (2014) Delaying shoulder motion and strengthening and increasing Achilles allograft thickness for glenoid resurfacing did not improve the outcome for a 30-year-old patient with post-arthroscopy glenohumeral chondrolysis. *Case Reports in Orthopedics*, Article ID: 2014:517801

73. **Skedros JG**, Keenan KE, Updike WS, Oliver MR (2014) Failed reverse total shoulder arthroplasty caused by recurrent Candida glabrata infection with prior Serratia marcescens co-infection. *Case Reports in Infectious Diseases*, 2014, Article ID: 2014:142428

72. **Skedros JG**, Mears CS, Langston TD, Van Boerum DH, White TW (2014) Medial scapular winging associated with rib fractures and plating corrected with pectoralis major transfer. *International Journal of Surgery Case Reports*, 5:750-753
71. **Skedros JG**, Knight AN, Pitts TC, Burkhead WZ (2014) Reusing cadaveric humeri for fracture testing after testing simulated rotator cuff repairs. *BioResearch Open Access*, 3:250-254
70. **Skedros JG**, Knight AN, Mears CS, Langston TD (2014) Temporary sternoclavicular plating for an unusual double clavicle fracture (medial nonunion, lateral acute) complicated by an intra-operative pneumothorax. *Case Reports in Orthopedics*, Article ID: 2014:206125
69. **Skedros JG**, Keenan KE, Bloebaum RD (2014) Histocompositional organization and toughening mechanisms in antler. *Journal of Structural Biology*, 187:129-148
68. **Skedros JG**, Knight AN, Thomas SC, Paluso AM, Bertin KC (2014) Dilemma of high conversion rate from knee arthroscopy to TKR. *American Journal of Orthopedics*, 43: e153-e158
67. **Skedros JG**, Mears CS, Phippen CM (2014) Glenohumeral instability and coracoid fracture nonunion corrected without coracoid transfer or nonunion takedown. *Journal of Shoulder and Elbow Surgery*, 23:e166-169
66. **Skedros JG**, Knight AN, Clark GC, Crowder CM, Dominguez VM, Qui S, Mulhern DM, Donahue SW, Busse B, Hulsey BI, Zedda M, Sorenson SM (2013) Scaling of haversian canal surface area to secondary osteon bone volume in ribs and limb bones. *American Journal of Physical Anthropology*, 151:230-244
65. Sinclair KD, Farnsworth RW, Pham TX, Knight AN, Bloebaum RD, **Skedros JG** (2013) The artiodactyl calcaneus as a potential 'control bone' cautions against simple interpretations of trabecular bone adaptation in the anthropoid femoral neck. *Journal of Human Evolution*, 64:366-379
64. **Skedros JG**, Keenan KE, Trachtenberg JD (2013) Candida glabrata olecranon bursitis treated with bursectomy and intravenous caspofungin. *Journal of Surgical Orthopaedic Advances*, 22:179-182
63. **Skedros JG**, Keenan KE, Williams TJ, Kiser KJ (2013) Secondary osteon size and collagen/lamellar organization ("osteon morphotypes") are not coupled, but potentially adapt independently for local strain mode or magnitude. *Journal of Structural Biology*, 181:95-107
62. **Skedros JG**, Knight AN (2012) Treatment of scapular winging with modified Eden-Lange procedure in patient with pre-existing glenohumeral instability. *Journal of Shoulder and Elbow Surgery*, 21:e10-e13
61. Keenan KE, **Skedros JG** (2012) A patient with clavicle fracture and recurrent scapular winging with spontaneous resolutions. *Case Reports in Orthopedics*, Article ID: 2012:603726

60. **Skedros JG**, Knight AN, Farnsworth RW, Bloebaum RD (2012) Do regional modifications in tissue mineral content and microscopic mineralization heterogeneity adapt trabecular bone tracts for habitual bending? Analysis in the context of trabecular architecture of deer calcanei. *Journal of Anatomy*, 220:242-255
59. Pitts TC, Kiser CJ, **Skedros JG** (2012) Inadvisable treatment of recalcitrant olecranon bursitis: an unusual case of prolonged oral antibiotic treatment. *Journal of Medical Cases*, 3:100-105
58. **Skedros JG**, Knight KN (2012) Massive acromioclavicular ganglionic cyst treated with excision and allograft patch of acromioclavicular region: a case report. *Journal of Shoulder and Elbow Surgery*, 21:e1-e5
57. **Skedros JG**, Kiser CJ (2012) Modified Eden-Lange procedure for trapezius paralysis with ipsilateral rotator cuff-tear arthropathy: a case report. *Journal of Bone and Joint Surgery*, 93:e131(1-5)
56. **Skedros JG**, Clark GC, Sorenson SM, Taylor KW, Qiu S (2011) Analysis of the effect of osteon diameter on the potential relationship of osteocyte lacuna density and osteon wall thickness. *The Anatomical Record*, 294:1472-1485
55. **Skedros JG**, Sybrowsky CL, Anderson WE, Chow F (2011) Relationships between *in vivo* microdamage and the remarkable regional material and strain heterogeneity of cortical bone of adult deer, elk, sheep and horse calcanei. *Journal of Anatomy*, 219:722-733
54. **Skedros JG**, Brand RA (2011) Biographical Sketch: Georg Hermann von Meyer, 1815-1892. *Clinical Orthopaedics and Related Research*, 469:3072-3076
53. **Skedros JG**, Mendenhall SD, Kiser CJ (2011) Prolonged dyspnea after interscalene block: attributed to undiagnosed Addison's disease and myasthenia gravis. *Case Reports in Medicine*, 2011: Article ID 968181 (6 pages)
52. **Skedros JG**, Kiser CJ, Mendenhall SD (2011) A weighted osteon morphotype score outperforms regional osteon percent prevalence calculations for interpreting cortical bone adaptation. *American Journal of Physical Anthropology*, 144:41-50
51. **Skedros JG**, Kiser CJ, Keenan KE, Thomas SC (2011) Analysis of osteon morphotype scoring schemes for interpreting load history: evaluation in the chimpanzee femur. *Journal of Anatomy*, 218:480-499
50. **Skedros JG**, Pitts TC, Hill BB (2010) Iatrogenic thoracic outlet syndrome caused by revision surgery for multiple subacute fixation failures of a clavicle fracture: a case report. *Journal of Shoulder and Elbow Surgery*, 19:e18-e23
49. **Skedros JG**, Taylor KW, Pitts TC (2009) Use of a myocutaneous latissimus dorsi flap in managing a deep infection of a shoulder arthrodesis after hardware removal: a case report. *Current Orthopaedic Practice*, 20:582-586

48. **Skedros JG**, Mendenhall SD, Kiser CJ, Winet H. (2009) Interpreting cortical bone adaptation and load history by quantifying osteon morphotypes in circularly polarized light images. *Bone*, 44:392-403
47. **Skedros JG**, Sybrowsky CL, Stoddard GJ (2007) The osteoporosis self-assessment screening tool: a useful tool for the orthopaedic surgeon. *Journal of Bone Joint Surgery*, 89-A:765-772
46. **Skedros JG**, Bertin KC, Holyoak JD, Milleson NM, Halley AJ (2007) The orthopedist as clinical densitometrist: cost- and time-effectiveness. *American Journal of Orthopedics*, 36:15-22
45. **Skedros JG**, Sorenson SM, Hunt KJ, Holyoak JD (2007) Ontogenetic structural and material variations in ovine calcanei: a model for interpreting bone adaptation. *The Anatomical Record*, 290:284-300
44. **Skedros JG**, Sorenson SM, Jenson NH (2007) Are distributions of secondary osteon variants useful for interpreting load history in mammalian bones? *Cells Tissues Organs*, 185:285-307
43. **Skedros JG**, Hunt KJ, and Pitts TC (2007) Variations in corticosteroid/anesthetic injections for painful shoulder conditions: comparisons among orthopaedic surgeons, rheumatologists, and physical medicine and primary-care physicians. *BMC Musculoskeletal Disorders*. 8:63
42. **Skedros JG** and Pitts TC (2007) Temporal variations in a modified Neer impingement test can confound clinical interpretation. *Clinical Orthopaedics and Related Research*, 460:130-136
41. Burkhead WZ, **Skedros JG**, O'Rourke PJ, Pierce WA, Pitts, TC (2007) A novel double-row rotator cuff repair exceeds strengths of conventional repairs. *Clinical Orthopaedics and Related Research*, 461:106-113
40. **Skedros JG**, Baucom SL (2007) Mathematical analysis of trabecular 'trajectories' in apparent trajectorial structures: The unfortunate historical emphasis on the human proximal femur. *Journal of Theoretical Biology*, 244:15-45
39. Hamrick MW, **Skedros JG**, Pennington C, McNeil PL (2006) Increased osteogenic response to exercise in metaphyseal versus diaphyseal cortical bone. *Journal of Musculoskeletal and Neuronal Interactions*, 6:258-263
38. **Skedros JG**, Sorenson SM, Takano Y, Turner CH (2006) Dissociation of mineral and collagen orientations may differentially adapt compact bone for regional loading environments: results from acoustic velocity measurements in deer calcanei. *Bone*, 39:143-151
37. **Skedros JG**, Holyoak JD, and Pitts TC (2006) Knowledge and opinions of orthopaedic surgeons concerning medical evaluation and treatment of patients with osteoporotic fracture. *Journal of Bone and Joint Surgery*. 88-A:18-24

36. **Skedros JG**, Dayton MR, Sybrowsky CL, Bloebaum RD, Bachus KN (2006) The influence of collagen fiber orientation and other histocompositional characteristics on the mechanical properties of equine cortical bone. *The Journal of Experimental Biology*, 209:3025-3042
35. Bloebaum RD, Holmes JL, **Skedros JG** (2005) Mineral content changes in bone associated with damage induced by the electron beam. *Scanning*, 27:240-248
34. **Skedros JG**, Grunander TR, Hamrick MW (2005) Spatial distribution of osteocyte lacunae in equine radii and third metacarpals: considerations for cellular communication, microdamage detection and metabolism. *Cells Tissues Organs*, 180:215-236
33. **Skedros JG** (2005) Osteocyte lacuna population densities in sheep, elk and horse calcanei. *Cells Tissues Organs*, 181:23-37
32. **Skedros JG**, Holmes J, Vajda EG, Bloebaum RD. (2005) Cement lines of secondary osteons in human bone are not mineral deficient: new data in a historical perspective. *The Anatomical Record*, 286:781-803
31. **Skedros JG** (2004) The orthopaedic surgeon's role in diagnosing and treating osteoporosis: standing discharge orders may be the solution for timely medical care. *Osteoporosis International*, 15:405-410
30. **Skedros JG**, Hunt KJ, Bloebaum RD (2004) Relationships of loading history and structural and material characteristics of bone: the development of the mule deer calcaneus. *Journal of Morphology*, 259:281-307
29. **Skedros JG**, Hunt KJ (2004) Does the degree of laminarity correlate with site-specific differences in collagen fiber orientation in primary bone? An evaluation in the turkey ulna diaphysis. *Journal of Anatomy*, 205:121-134
28. Burkhead WZ, **Skedros JG**, Arcand MA, Krishnan SG, O'Rourke PJ, Pierce WA (2004) Transosseous anchor double knot (TOAK) technique for rotator cuff repair. *Techniques in Shoulder and Elbow Surgery*, 5:200-207
27. Kuo TY, **Skedros JG**, Bloebaum RD (2003) Measurement of femoral anteversion by biplane radiography and computed tomography imaging: comparison with an anatomic reference. *Investigative Radiology*, 38:221-229
26. **Skedros JG**, Dayton MR, Sybrowsky CL, Bloebaum RD, Bachus KN (2003) Are uniform regional safety factors and objective of adaptive modeling/remodeling in cortical bone? *The Journal of Experimental Biology* 206:2431-2439
25. **Skedros JG**, Hunt KJ, Hughes PE, Winet H (2003) Ontogenetic and regional morphologic variations in the turkey ulna diaphysis: implications for functional adaptation of cortical bone. *The Anatomical Record*, 273:609-629
24. **Skedros JG**, Sybrowsky CL, Parry TR, Bloebaum RD (2003) Regional differences in cortical bone organization and microdamage prevalence in Rocky Mountain mule deer. *The Anatomical Record*, 274:837-850

23. **Skedros JG**, Mason MW, Bloebaum RD (2001) Modeling and remodeling in a developing artiodactyl calcaneus: a model for evaluating Frost's Mechanostat hypothesis and its corollaries. *The Anatomical Record*, 263:167-185
22. Jones RE, **Skedros JG**, Chan AJ, Beauchamp DH, Harkins PC (2001) Total knee arthroplasty using the S-ROM® mobile-bearing hinge prosthesis. *Journal of Arthroplasty*, 16:279-287
21. Jones RE, Barrack RL, **Skedros JG** (2001) Modular, mobile-bearing hinge total knee arthroplasty. *Clinical Orthopaedics and Related Research*, 392:306-314
20. Vajda EG, **Skedros JG** (1999) Letter to the editor. Primary difficulties in quantitative backscattered electron (BSE) imaging. *Bone*, 24:619-620
19. Su SC, **Skedros JG**, Bachus KN, Bloebaum RD (1999) Loading conditions and cortical bone construction of an artiodactyl calcaneus. *The Journal of Experimental Biology*, 202:3239-3254
18. Vajda EG, Humphrey S, **Skedros JG**, Bloebaum RD (1999) Influence of topography and specimen preparation on backscattered electron images of bone. *Scanning*, 21:379-387
17. Kuo T, **Skedros JG**, Bloebaum RD (1998) Comparison of human, primate and canine femora: implications for biomaterials testing in total hip replacement. *Journal of Biomedical Materials Research*, 40:475-489
16. Zeman CA, Arcand MA, Cantrell JS, **Skedros JG**, Burkhead WZ Jr (1998) The rotator cuff-deficient arthritic shoulder: diagnosis and surgical management. *Journal of American Academy of Orthopaedic Surgeons*, 6:337-348
15. Vajda EG, **Skedros JG**, Bloebaum RD (1998) Errors in quantitative backscattered electron analysis of bone standardized by energy-dispersive X-ray spectrometry. *Scanning*, 20:527-535
14. Bloebaum RD, **Skedros JG**, Vajda EG, Bachus KN, Constantz BR (1997) Determining mineral content variations in bone using backscattered electron imaging. *Bone*, 20:485-490
13. **Skedros JG**, Su SC, Bloebaum RD (1997) Biomechanical implications of mineral content and microstructural variations in cortical bone of horse, elk, and sheep calcanei. *The Anatomical Record*, 249:297-316
12. **Skedros JG**, Mason MW, Nelson MC, Bloebaum RD (1996) Evidence of structural and material adaptation to specific strain features in cortical bone. *The Anatomical Record*, 246:47-63
11. Vajda EG, Bloebaum RD, **Skedros JG** (1996) Validation of energy dispersive X-ray spectrometry as a method to standardize backscattered electron images of bone. *Cells and Materials*, 6:79-92

10. Mason MW, **Skedros JG**, Bloebaum RD (1995) Evidence of strain-mode-related cortical adaptation in the diaphysis of the horse radius. *Bone*, 17:229-237
9. Vajda EG, **Skedros JG**, Bloebaum RD (1995) Consistency in calibrated backscattered electron images of calcified tissues and mineral analyzed in multiple imaging sessions. *Scanning Microscopy*, 9: 741-755
8. **Skedros JG**, Bloebaum RD, Mason MW, Bramble DM (1994) Analysis of a tension/compression skeletal system: possible strain-specific differences in the hierarchical organization of bone. *The Anatomical Record*, 239:396-404
7. **Skedros JG**, Mason MW, Bloebaum RD (1994) Differences in osteonal micromorphology between tensile and compressive cortices of a bending skeletal system: indications of potential strain-specific differences in bone microstructure. *The Anatomical Record*, 239:405-413
6. Bloebaum RD, Lauritzen RS, **Skedros JG**, Smith EF, Thomas KA, Bennett JT, Hofmann AA (1993) Roentgenographic procedure for selecting proximal femur allograft for use in revision arthroplasty. *Journal of Arthroplasty*, 8:347-360
5. Bloebaum RD, Ota DT, **Skedros JG**, Mantas JP (1993) Comparison of human and canine external femoral morphologies in the context of total hip replacement. *Journal of Biomedical Materials Research*, 27:1149-1159
4. **Skedros JG**, Bloebaum RD, Bachus, KN, Boyce TM (1993) The meaning of graylevels in backscattered electron images of bone. *Journal of Biomedical Materials Research*, 27:47-56
3. **Skedros JG**, Bloebaum RD, Bachus KN, Boyce TM, Constantz B (1993) Influence of mineral content and composition on graylevels in backscattered electron images of bone. *Journal of Biomedical Materials Research*, 27:57-64
2. Mantas JP, Bloebaum RD, **Skedros JG**, Hofmann AA (1992) Implications of reference axes used for rotational alignment of the femoral component in primary and revision knee arthroplasty. *Journal of Arthroplasty*, 7:531-535
1. Boyce TM, Bloebaum RD, Bachus KN, **Skedros JG** (1990) Reproducible method for calibrating the backscattered electron signal for quantitative assessment of mineral content in bone. *Scanning Microscopy*, 4:591-600

BOOK CHAPTERS and REVIEW ARTICLES

Skedros JG (2012) Interpreting Load History in Limb-Bone Diaphyses: Important Considerations and Their Biomechanical Foundations. Chapter 7, *In: Bone Histology, An Anthropological Perspective*. Eds. S. Stout and C. Crowder. CRC Press, Boca Raton Florida, 417 pgs.

Skedros JG, Pitts TC. (Feb 2008) The use and misuse of injectable corticosteroids for the painful shoulder. *The Journal of Musculoskeletal Medicine*. 25:78-96

Skedros JG, Pitts TC. (May 2008) Injectable corticosteroids for the painful shoulder: Patient evaluation. *The Journal of Musculoskeletal Medicine*. 25:236-245

Skedros JG, Pitts TC. (Aug 2008) Corticosteroids for painful shoulder conditions: Injection techniques. *The Journal of Musculoskeletal Medicine*. 25:375-386

Skedros JG, O'Rourke PJ, Zimmerman JM, Burkhead WZ Jr. (1999) Alternatives to Replacement Arthroplasty for Glenohumeral Arthritis. In: Iannotti JP and Williams GR (eds): *Disorders of the Shoulder: Diagnosis and Management*. Chapter 18. Lippincott Williams and Wilkins, Philadelphia, PA, pgs. 485-499

Zimmerman JM, **Skedros JG**, O'Rourke PJ, Dean MT, Burkhead WZ Jr. (1999) Rehabilitation and Nonoperative Treatment. In: Warren RF, Craig EV, and Altchek DW (eds): *The Unstable Shoulder*. Chapter 11. Lippincott-Raven Publishers, Philadelphia, PA, pgs. 177-188

Zeman CA, Arcand MA, Cantrell JS, **Skedros JG**, Burkhead WZ Jr. (1998) The rotator cuff-deficient arthritic shoulder: diagnosis and surgical management. *Journal of American Academy of Orthopaedic Surgeons*. 7:337-348

ABSTRACTS

148. **Skedros JG**, Marshall JH, Montgomery JA, Luczak MG, Chase K (2021) Progeny status may be a useful surrogate if neuter status is not known in canine osteoporosis studies: an analysis of dogs in "The Georgie Project". 67th Annual Meeting of the Orthopaedic Research Society, Long Beach, California (Online Meeting), 46:0500

147. **Skedros JG**, Marshall JH, Smith WE, Smith QK, Luczak MG, Chase K (2021) Prevalence of femoral arthritis of the hip and knee joints in Portuguese Water Dogs from "The Georgie Project": implications for genetic analyses. 67th Annual Meeting of the Orthopaedic Research Society, Long Beach, California (Online Meeting), 46:614

146. **Skedros JG**, Marshall JH, Luczak MG, Smith WE, Chase K (2021) Relatively broad femoral condylar notches (large notch width indices) may protect Portuguese Water Dogs from ACL rupture. 67th Annual Meeting of the Orthopaedic Research Society, Long Beach, California (Online Meeting), 46:1274

145. Skedros AJ, Hibbard JN, Marshall JH, Chase K, **Skedros JG** (2021) Consistency of femoral metaphyseal shape in Portuguese Water Dogs: Implications for femoral component design in THA. 67th Annual Meeting of the Orthopaedic Research Society, Long Beach, California (Online Meeting), 46:0911

144. Marshall JH, **Skedros JG**, Chase K (2021) Exploring statistical control of specimen size: examples using Portuguese Water Dogs from "The Georgie Project". 67th Annual Meeting of the Orthopaedic Research Society, Long Beach, California (Online Meeting), 46:0767

143. Marshall JH, Hibbard JN, Skedros AJ, Chase K, **Skedros JG** (2021) Portuguese Water Dog proximal femoral canal flare somatypes: implications for translational studies of total hip replacements. 67th Annual Meeting of the Orthopaedic Research Society, Long Beach, California (Online Meeting), 46:1024
142. Marshall JH, Skedros AJ, Hibbard JN, Chase K, **Skedros JG** (2021) Considerations for restoring center of rotation in the Portuguese Water Dog total hip arthroplasty in the context of the canine as a translational model. 67th Annual Meeting of the Orthopaedic Research Society, Long Beach, California (Online Meeting), 46:0932
141. Marshall JH, Skedros AJ, Luczak MG, King BW, Chase K, Lark KG, **Skedros JG** (2020) Age-related sexual dimorphism of the proximal femur in Portuguese Water Dogs: implications for total hip replacement and osteoporosis. 66th Annual Meeting of the Orthopaedic Research Society, Phoenix, Arizona, 45:2360
140. Camp NW, King BW, Kiser CJ, Bachus KN, **Skedros JG** (2020) The circle fit method is more reliable for assessing bone quality in the proximal humerus than Tingart and Mather methods: an analysis in eight radiographic projections. 66th Annual Meeting of the Orthopaedic Research Society, Phoenix, Arizona, 45:1195
139. King BW, Camp NW, Kiser CJ, Marshall JH, Bachus KN, **Skedros JG** (2020) The deltoid tuberosity index is an unreliable measure of local bone quality in the proximal humerus. 66th Annual Meeting of the Orthopaedic Research Society, Phoenix, Arizona, 45:1762
138. King BW, Marshall JH, Camp NW, **Skedros JG** (2020) Quantitative and subjective analysis in training observers for identifying the deltoid tuberosity on radiographs. 66th Annual Meeting of the Orthopaedic Research Society, Phoenix, Arizona, 45:1691
137. **Skedros JG**, Doutré MS (2019) Uncertainties regarding the physical basis of lamellar bone periodicity in secondary osteons suggest that surrogates based on Infilling/periodicity rates should be considered. *American Journal of Physical Anthropology*, 168(S68): 230-231
136. Finlinson ED, King BW, Henrie MK, Lohse ZM, **Skedros JG** (2019) Evaluating osteon cement-line interface distances for advancing understanding of bone adaptation. *American Journal of Physical Anthropology*, 168(S68):74
135. Smith QK, Finlinson ED, Smith WE, Henrie MK, Luczak MC, Chase K, Lark KG, **Skedros JG** (2019) Femoral component stem shape can remain consistent in canine hip replacement despite age and sex: an analysis in 314 Portuguese Water Dog femora. 65th Annual Meeting of the Orthopaedic Research Society, Austin, Texas, 44:1015
134. Smith WE, Finlinson ED, Smith QK, Henrie MK, Chase K, Lark KG, **Skedros JG** (2019) Variation in cross-sectional morphology in adult Portuguese Water Dog femora across a broad age range. 65th Annual Meeting of the Orthopaedic Research Society, Austin, Texas, 44: 595
133. Smith WE, Smith QK, Finlinson ED, Henrie MK, Luczak MC, Chase K, Lark KG, **Skedros JG** (2019) Anterior bow and isthmus in a large sample of Portuguese Water

Dog femora in the context of total hip replacement. 65th Annual Meeting of the Orthopaedic Research Society, Austin, Texas, 44: 2136

132. Smith WE, Luczak MG, Smith QK, Finlinson ED, Henrie MK, Luczak MC, Chase K, Lark KG, Skedros JG (2019) Femoral arthritis and proximal femoral morphology in Portuguese Water Dog femora demonstrate avenues for establishing etiological relationships via genetic analyses. 65th Annual Meeting of the Orthopaedic Research Society, Austin, Texas, 44: 2089

131. **Skedros JG**, Doutré MS, Peterson MD, Weaver DJ, Smith JS, Chase K, Lark KG (2018) The potential of The Georgie Project (Portuguese Water Dog) for discerning genetic from extra-genetic influences in structural and material variations in anthropoid limb bones. *American Journal of Physical Anthropology*, 165(S66): 254.

130. Henrie MK, Finlinson ED, Smith JS, Keenan KE, **Skedros JG** (2018) Predominant collagen fiber orientation (CFO) is a stronger predictor of load history than drifting osteon prevalence or osteon population density (OPD of conventional osteons): an evaluation in bending regions of adult human fibulae, femora, and chimpanzee femora. *American Journal of Physical Anthropology*, 165(S66): 117

129. Finlinson ED, Henrie MK, Smith JS, Keenan KE, **Skedros JG** (2018) Interface distances between osteon cement lines can reveal aspects of bone adaptation that might evade detection when using conventional microstructural characteristics: a study in the chimpanzee femur. *American Journal of Physical Anthropology*, 165(S66): 85

128. Mears CS, Keenan KE, **Skedros JG** (2018) Regional variations in predominant collagen fiber orientation in the diaphysis and neck of sub-adult baboon femora resemble those in adult chimpanzee femora. Does this reflect similar load histories? *American Journal of Physical Anthropology*, 165(S66): 174

127. **Skedros JG**, Doutré MS, Peterson MD, Weaver DJ, Smith JS, Chase KR, Lark G (2018) Compelling structural and material variations in Portuguese Water Dog femora hold promise for identifying genetic linkages within and between sexes. 64th Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, 43: 1558

126. Shelton TJ, Bachus KN, **Skedros JG** (2018) Does humeral head diameter correlate with humerus length? 64th Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, 43: 1922

125. **Skedros JG** (2017) Distributions of secondary osteon collagen/lamellar morphotypes are important in avoiding stress fractures: a new hypothesis for the etiology of stress fractures. *American Journal of Physical Anthropology*, 162(S64): 361

124. Peterson MD, Doutré MS, Kuo T, Bloebaum RD, **Skedros JG** (2017) Analysis of femoral anteversion angle in canines and humans: establishing a uniform method for clinical use and comparative analysis. 63rd Annual Meeting of the Orthopaedic Research Society, San Diego, California, 42: 1276

123. Weaver DJ, **Skedros JG** (2016) Do disparities in *ex vivo* strain data for the human fibula reflect heterogeneous load conditions or limitations of experimental designs? *American Journal of Physical Anthropology*, 159(S62): 331
122. **Skedros JG**, Keenan KE (2016) Patterns of collagen fiber orientation in the human fibula middle-to-proximal diaphysis suggest a history of anterior-posterior bending and torsion consistent with "intermediate complexity" loading. *American Journal of Physical Anthropology*, 159(S62): 293
121. Doutré MS, Adondakis MG, Bloebaum RD, **Skedros JG** (2016) Sealed osteons do not increase in the human femur with aging or in association with a total hip replacement. *American Journal of Physical Anthropology*, 159(S62):132-133
120. **Skedros JG**, Doutré MS, Brown EB, Mears CS, Swartz SM (2016) Advancing understanding of femoral neck histomorphology and its relationship to load history: use of bat and pigeon humeri as models for adaptation for habitual torsion. 62nd Annual Meeting of the Orthopaedic Research Society, Orlando, Florida, 41(S2): 734
119. Doutré MS, **Skedros JG**, Brown EB, Skedros GA, Mears CS, Bloebaum RD (2016) Temporal changes in sagittal curvature and the emergence of load predictability in the sheep radius. 62nd Annual Meeting of the Orthopaedic Research Society, Orlando, Florida, 41(S2): 1550
118. Langston TD, Mears CS, Phippen CM, Brady ST, **Skedros JG** (2016) Inter-observer variations when using popular methods to obtain cortical index and mean combined cortical thickness in proximal humerus radiographs can result in highly variable correlations with fracture strength. 62nd Annual Meeting of the Orthopaedic Research Society, Orlando, Florida, 41(S2): 1655
117. Phippen CM, Langston TD, Mears CS, Drew AJ, Bachus KN, Nielsen MT, **Skedros JG** (2016) Clinical radiographic projections of the upper humerus can result in substantial errors when quantifying the deltoid tuberosity index, cortical index, and other morphological characteristics: a controlled study in cadaveric humeri. 62nd Annual Meeting of the Orthopaedic Research Society, Orlando, Florida, 41(S2): 2148
116. Mears CS, Langston TD, Phippen CM, Brady ST, **Skedros JG** (2016) Current methods for measuring proximal humerus morphology from clinical radiographs are unreliable: establishing a reproducible method for measuring the proximal humerus for clinical and biomechanical studies. 62nd Annual Meeting of the Orthopaedic Research Society, Orlando, Florida, 41(S2): 2146
115. Keenan KE, Mears CS, Langston TD, Phippen CM, Litton SM, Brady TS, Bloebaum RD, **Skedros JG** (2015) Age-related changes in the microstructural organization of the femoral neck suggest degradation in bone quality independent of cortical thinning and increased porosity. 61st Annual Meeting of the Orthopaedic Research Society, Las Vegas, Nevada, 40: 594
114. Mears CS, Keenan KE, Langston TD, Phippen CM, Litton SM, Brady TS, Bloebaum RD, **Skedros JG** (2015) Age-related emergence of deleterious buckling ratio in the femoral neck fails to maintain the coupling with predominant collagen fiber

orientation and osteon morphotypes seen in younger bones. 61st Annual Meeting of the Orthopaedic Research Society, Las Vegas, Nevada, 40: 631

113. **Skedros JG**, Keenan KE, Mears CS, Langston TD (2015) The “shear resistance-priority hypothesis”: a means for enhancing understanding of material adaptations in bones that habitually experience complex loading. *American Journal of Physical Anthropology*, Vol. 154 (Suppl. 60): 290

112. Mears CS, Litton SM, Phippen CM, Langston TD, **Skedros JG** (2015) Improving accuracy, precision, and efficiency in analysis of osteon cross-sectional shape. *American Journal of Physical Anthropology*, Vol. 154 (Suppl. 60): 223

111. **Skedros JG** (2014) Load Complexity Categories: an important consideration in bone adaptation studies. 7th World Congress of Biomechanics; July 11, 2014; Boston, Massachusetts

110. **Skedros JG**, Mears CS, Epperson RT, Bloebaum RD (2014) Trabecular bone has the capacity for hemiosteonal collagen/lamellar “morphotype” adaptation: implications for advancing understanding of the emergence of skeletal fragility in the elderly. 60th Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, poster no. 622; ORS 2014 eBook, pgs. 1145-1146

109. **Skedros JG**, Knight AN, Mears CS, Pitts TC, Burkhead WZ (2014) Mechanical testing data favor modification of humerus fracture treatment algorithms. 60th Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, poster no. 1888; ORS 2014 eBook, pgs. 2489-2493

108. **Skedros JG**, Mears CS, Skedros GA, Henrie TR, Litton SM, Keenan KE (2014) The mechanical relevance of secondary osteon “morphotypes”: implications for accommodating non-uniform strains and the etiology of stress fractures. 60th Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, poster no. 1513; ORS 2014 eBook, pgs. 1293-1295

107. **Skedros JG**, Keenan KE, Litton SM, Skedros GA, Mears CS (2014) Current exclusion criteria for selecting osteons for circularity analysis are potentially problematic. *American Journal of Physical Anthropology*, Vol. 153 (Suppl. 58): 241

106. Mears CS, Keenan KE, **Skedros JG** (2014) Recognizing and resolving inconsistencies and inaccuracies in determining osteon circularity: can methods be standardized? *American Journal of Physical Anthropology*, Vol. 153 (Suppl. 58): 183

105. Keenan KE, Litton SM, Skedros GA, **Skedros JG** (2014) Use of osteon circularity to determine species affiliations can be confounded by habitual load complexity. *American Journal of Physical Anthropology*, Vol. 153 (Suppl. 58): 156

104. Henrie TR, Dalton M, **Skedros JG** (2014) Sealed osteons: a pathological consequence or natural circumstance of extensive remodeling? *American Journal of Physical Anthropology*, Vol. 153 (Suppl. 58): 140

103. **Skedros JG**, Keenan KE, Halley JA (2013) Reduced loading of the femoral neck with aging is correlated with regional changes in collagen fiber orientation but not osteon

morphotypes or population densities. 59th Annual Meeting of the Orthopaedic Research Society, San Antonio, Texas, Vol. 38: 1419

102. Keenan KE, Egbert J, Mears C, Skedros G, Reynolds J, **Skedros JG** (2013) Antler has inherent collagen fiber orientation heterogeneity (CFO-Het): implications for investigating bisphosphonate- and age-related degradation in human bone quality. 59th Annual Meeting of the Orthopaedic Research Society, San Antonio, Texas, Vol. 38: 1420

101. **Skedros JG**, Knight AN, Mears C, Pitts T, Burkhead WZ (2013) Ultimate fracture load of cadaveric proximal humeri correlates more strongly with mean combined cortical thickness than cortical index, DEXA density, or CC ratio. 59th Annual Meeting of the Orthopaedic Research Society, San Antonio, Texas, Vol. 38: 63

100. Sinclair KD, Farnsworth RW, Pham TX, Knight AN, Bloebaum RD, **Skedros JG** (2012) Micro-computed tomography characterization of the trabecular bone architecture of the deer calcaneus: a potential “control bone” for interpreting femoral neck adaptation and loading. 58th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, Vol. 37: 1515

99. Keenan KE, **Skedros JG** (2012) Collagen fiber orientation (CFO) and CFO heterogeneity (CFO-Het) in the human femoral neck cortex: do these characteristics demonstrate age-related changes in load-history? 58th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, Vol. 37: 525

98. **Skedros JG**, Keenan KE, Halley JA, Knight AN, Bloebaum RD (2012) Osteon morphotypes and predominant collagen fiber orientation are adaptations for habitual medial-lateral bending in the human proximal diaphysis: implications for understanding the etiology of atypical fractures. 58th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, Vol. 37: 1512

97. **Skedros JG**, Knight AN, Drew AJ, Millet AM, Bachus KN, Bloebaum RD (2012) Fast Fourier transform analysis of lamellations within trabecular bone packets: relationships with animal maturity, strain mode, and mean tissue age. 58th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, Vol. 37: 1510

95. Knight AN, **Skedros JG**, Farnsworth RW, Kawaguchi BS, Bloebaum RD (2012) Does trabecular bone have the capacity to adapt at the material/compositional level? 58th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, Vol. 37: 524

94. **Skedros JG** (2012) When artiodactyls lead anthropologists astray: important considerations, strengths, and limitations of comparing limb bone adaptation between artiodactyls and primates. *American Journal of Physical Anthropology*, Vol. 147 (Suppl. 54): 270-271

93. Keenan KE, Millet AM, **Skedros JG** (2012) Unexpected regional differences in collagen fiber orientation heterogeneity (CFO-Het) between chimpanzee and human proximal femoral shafts: is CFO-Het still a useful characteristic for corroborating load history data? *American Journal of Physical Anthropology*, Vol. 147 (Suppl. 54): 178-179

92. Knight AN, Keenan KE, Halley JA, **Skedros JG** (2012) Drifting osteons seem unlikely to be a mechanical adaptation in view of inconsistent regional distributions and overall low prevalence in adult chimpanzee and human femora. *American Journal of Physical Anthropology*, Vol. 147 (Suppl. 54): 184
91. **Skedros JG**, Ogden BW, Paluso AM, Thomas SC, Knight AN, Bertin KC (2011) An orthopaedic surgeon double-triage system failed to reduce the conversion rate from index knee arthroscopy to total knee replacement. 57th Annual Meeting of the Orthopaedic Research Society, Long Beach, California, Vol. 36: 2006
90. Williams TJ, Horn JB, Oakes AE, Mendenhall SD, **Skedros JG** (2011) Estrogen deficiency produces strain-mode-specific differences in bone resorption and microdamage in the rat ulna: implications for the etiology of stress fractures in the female athlete triad. 57th Annual Meeting of the Orthopaedic Research Society, Long Beach, California, Vol. 36: 1490
89. **Skedros JG**, Keenan KE, Dakoulas LL, Bloebaum RD (2011) What can antler microstructure teach us about human bone toughening? 57th Annual Meeting of the Orthopaedic Research Society, Long Beach, California, Vol. 36: 2236
88. **Skedros JG** (2011) Collagen fiber orientation (CFO) variations in the hominid femoral neck are likely invalid for deciphering load history when cortical robusticity is low. *American Journal of Physical Anthropology*, Suppl. 52: 275-276
87. Dakoulas LL, Keenan KE, **Skedros JG** (2011) Collagen fiber orientation heterogeneity (CFO-Het): evaluation of this new characteristic in antler, primate, and non-primate bones shows that it does not correlate well with load history. *American Journal of Physical Anthropology*, Suppl. 52: 120
86. Keenan KE, **Skedros JG** (2011) Collagen fiber orientation heterogeneity (CFO-Het): does this new characteristic reflect habitual load history in the chimpanzee femur and does it corroborate CFO based on image gray levels? *American Journal of Physical Anthropology*, Suppl. 52: 183
85. Williams TJ, Jardine CN, Keenan KE, **Skedros JG**, Kiser CJ (2010) Secondary osteon cross-sectional size and morphotype score are independent in limb bones subject to habitual bending or torsion. *American Journal of Physical Anthropology*, Suppl. 50: 245
84. Keenan KE, Knight AN, Tingey SD, Kiser CJ, Thomas SC, **Skedros JG** (2010) Drifting osteons occur in higher concentrations in habitual tension environments: a microstructural toughening mechanism? *American Journal of Physical Anthropology*, Suppl. 50: 140
83. Beckstrom AB, **Skedros JG**, Kiser CJ, Keenan KE, (2010) Predominant collagen fiber orientation data support the multi-domain load hypothesis in the chimpanzee femur. *American Journal of Physical Anthropology*, Suppl. 50: 63
82. **Skedros JG**, Kiser CJ, Keenan KE (2010) Trabecular eccentricity: This new characteristic reveals relative influences of tension and compression stress in adapting

metaphyses/epiphyses for habitual bending. *American Journal of Physical Anthropology*, Suppl. 50: 218

81. Kiser CJ, **Skedros JG**, Keenan KE, Thomas SC, Beckstrom AB (2010) Twelve-point osteon morphotype scoring schemes are not better than a six-point scoring scheme for interpreting habitual bending: evaluation in chimpanzee femora. *American Journal of Physical Anthropology*, Suppl. 50: 143
80. Horn JB, Williams TJ, Mendenhall SD, **Skedros JG** (2010) Microdamage morphology and distribution in the OVX fatigue-loaded rat ulna: effects of absolute estrogen status and strain mode on microdamage accumulation and repair. 56th Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, Vol. 35: 173
79. Clark GC, **Skedros JG**, Taylor KW, Sorenson SM, Qiu S (2009) Do osteocyte densities control osteon wall thickness? The hypothesis is supported in non-human appendicular bones but not in male human ribs. 55th Annual Meeting of the Orthopaedic Research Society, Las Vegas, Nevada, Vol. 34: 856
78. **Skedros JG** (2009) Microscopic hypermineralized interfaces enhance toughness in antler and bone. 8th Pacific Rim Conference on Ceramic and Glass Technology. Vancouver, BC, Canada, pg. 163
77. **Skedros JG**, Beckstrom AB, Kiser CJ, Bloebaum RD (2008) The importance of bipedality/bending in mediating morphological adaptation in the chimpanzee femoral neck might be overstated; *American Journal of Physical Anthropology*, Suppl. 46: 195
76. Kopp DV, **Skedros JG** (2007) A control bone for trabecular architecture variation. *American Journal of Physical Anthropology*, Suppl. 44, pg. 146
75. **Skedros JG**, Clark GC, Qiu S (2007) Bone surface/volume relationships in stimulated vs. actual osteons: the confounding influences of ultrastructural complexity. 53rd Annual Meeting of the Orthopaedic Research Society, San Diego, California, Vol. 32: 1323
74. Mendenhall SD, Kitterman RT, **Skedros JG** (2007) Microdamage morphology and distribution in the fatigue-loaded rat ulna: effects of age and strain mode on osteon-related repair 53rd Annual Meeting of the Orthopaedic Research Society, San Diego, California, Vol. 32: 1404
73. Mendenhall SD, Jones JB, Kitterman RT, **Skedros JG** (2007) The periosteal and endosteal modeling process is affected by estrogen differently in response to fatigue loading than during development. *J. Bone Miner. Res.*, Vol. 22(Suppl. 1): S217
72. Jones JB, Kitterman RT, Mendenhall SD, **Skedros JG** (2007) Do periosteal and intracortical response to ulnar fatigue loading differ between old and young rats? *J. Bone Miner. Res.*, Vol. 22(Suppl. 1): S218
71. **Skedros JG**, Sorenson SM, Clark GC, Taylor KW, Anderson WE, Hoopes JV (2006) The influence of osteocytes on surface area/volume relationships in secondary osteons: challenging paradigms based on human rib data. 52nd Annual Meeting of the Orthopaedic Research Society, Chicago, Illinois, Vol. 31: 1601

70. **Skedros JG**, Mendenhall SD, Anderson WE, Gubler KE, Hoopes JV, Sorenson SM (2006) Osteon phenotypic morphotypes: a new characteristic for interpreting bone quality in cortical bone. 52nd Annual Meeting of the Orthopaedic Research Society, Chicago, Illinois, Vol. 31: 1600
69. **Skedros JG**, Sybrowsky CL, Bloebaum RD, Bachus KN, Wang X (2006) The relative influence of collagen crosslinks on the mechanical properties of equine cortical bone. 52nd Annual Meeting of the Orthopaedic Research Society, Chicago, Illinois, Vol. 31: 1581
68. Clark GC, Sorenson SM, Taylor KW, Hoopes J, **Skedros JG** (2005) Histomorphometric comparison of human rib data to mammalian appendicular bones. 35th Int. Sun Valley Hard Tissue Workshop, J. Musculoskeletal & Neuronal Interactions. 5(4): 370-371
67. Sorenson SM, Clark G, Hoopes J, Anderson WE, Taylor K, **Skedros JG** (2005) Surface area/volume relationships of secondary osteons in equine radii: implications for regional variations in convective nutrient delivery. J. Bone Miner. Res., 20(Suppl. 1): S150-S151
66. Anderson WE, **Skedros JG** (2005) Comparative analysis of confocal and light microscopy for detecting *in vivo* microdamage in wild and domesticated animals. J. Bone Miner. Res., 20(Suppl. 1): S324
65. **Skedros JG**, Baucom SL (2004) Regional trabecular anisotropies suggest a two-domain loading regime in the proximal femur. 50th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, Vol. 29: 1232
64. Sybrowsky CL, **Skedros JG** (2004) Comparison of the OST versus a typical risk-factor questionnaire for evaluating osteoporosis in men. J. Bone Miner. Res., 19(Suppl. 1): S164
63. Sorenson SM, Jenson NH, **Skedros JG** (2004) Prevalence of atypical osteon characteristics may reflect adaptations in bending environments and during growth. J. Bone Miner. Res., 19(Suppl. 1): S223
62. **Skedros JG** (2003) Knowledge and opinions of orthopaedic surgeons concerning initiation of treatment for patients with osteoporotic fractures. 49th Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, Vol. 28: 1058
61. **Skedros JG**, Sybrowsky CL, Dayton MR, Bloebaum RD, Bachus KN (2003) The role of osteocyte lacuna population density on the mechanical properties of cortical bone. 49th Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, Vol. 28: 414
60. **Skedros JG**, Hunt KJ, Dayton MR, Bloebaum RD, Bachus KN (2003) The influence of collagen fiber orientation on mechanical properties of cortical bone of an artiodactyl calcaneus: implications for broad applications in bone adaptation. 49th Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, Vol. 28: 411

59. **Skedros JG**, Demes B, Judex S (2003) Limitations in the use of predominant collagen fiber orientation for inferring loading history in cortical bone. *American J. Physical Anthropology*, Suppl. 35: 193
58. **Skedros JG**, Hunt KJ (2003) Does laminarity mediate site-specific differences in collagen fiber orientation in primary bone? An evaluation in the turkey ulna. *J. Bone Miner. Res.*, 18 (Suppl. 1): S307
57. **Skedros JG** (2003) Regional trabecular anisotropies suggest a 'two-domain' loading regime in the proximal femur. *J. Bone Miner. Res.*, 18(Suppl. 1): S255
56. **Skedros JG**, Brady JH, Sybrowsky CL (2002) Mathematical analysis of trabecular trajectories in apparent trajectorial structures: the unfortunate historical emphasis on the human proximal femur. *American J. Physical Anthropology*, Suppl. 34: 142-143
55. **Skedros JG**, Milleson NM, Henderson GL (2002) The orthopaedic surgeon's role in diagnosing and treating osteoporosis: standing discharge orders may be the solution for timely medical care. *Osteoporosis International*, 13 (Suppl. 1): S36
54. **Skedros JG**, Milleson NM (2002) The orthopaedic surgeon as a clinical densitometrist: evaluation of cost and time effectiveness. *Osteoporosis International*, 13 (Suppl. 1): S128
53. **Skedros JG** (2002) Use of predominant collagen fiber orientation for interpreting cortical bone loading history: bending vs. torsion. *J. Bone Miner. Res.*, 17 (Suppl. 1): S307
52. **Skedros JG**, Hunt KJ, Sybrowsky CL (2002) Ontogenetic development of the ovine calcaneus: a model for examining the relative contributions of genetic, epigenetic, and extra-genetic stimuli. *J. Bone Miner. Res.*, 17 (Suppl. 1): S330
51. **Skedros JG** (2002) Osteoporosis fracture tracking study: medical care is often delayed for patients of orthopaedic surgeons. *J. Bone Miner. Res.*, 17 (Suppl. 1): S427
50. **Skedros JG**, Hunt KJ, Bloebaum RD (2001) Expanding Wolff's law: variant and invariant strain stimuli in bone adaptation and maintenance. 47th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, Vol. 26: 548
49. **Skedros JG**, Dayton MR, Bachus KN (2001) Strain-mode-specific loading of cortical bone reveals an important role for collagen fiber orientation in energy absorption. 47th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, Vol. 26: 519
48. Vajda E, Gingell D, Miller S, Bachus K, **Skedros JG** (2001) Fatigue-loading increases intracortical resorption in rat ulnae independent of load-bearing strains. 47th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, Vol. 26: 540
47. **Skedros JG**, Kuo TY, Bloebaum RD, Bachus KN (2001) The role of cross-sectional cortical morphologies in interpreting habitual bending across the anthropoid hip: a comparative analysis. *American J. Physical Anthropology*, Suppl. 32: 138

46. Hunt KJ, **Skedros JG** (2001) The role of osteocyte lacunae populations in interpreting loading history of bone. *American J. Physical Anthropology*, Suppl. 32: 83
45. **Skedros JG** (2001) Collagen fiber orientation: a characteristic of strain-mode-related regional adaptation in cortical bone. *Bone*, 28 (Suppl.): S110-S111
44. **Skedros JG** (2001) Do osteon population densities reflect differences in fatigue history between limb bones of cursorial mammals? *Bone*, 28(Suppl.): S200
43. **Skedros JG**, Hunt KJ, Dayton MT, Bloebaum RD, Bachus KN (2001) Relative contributions of material characteristics to failure properties of cortical bone in strain-mode-specific loading: implications for fragility in osteoporosis and aging. *Conference Proceedings of the American Society of Biomechanics (25th Annual Meeting, San Diego, CA)*, pg. 215
42. Hunt KJ, **Skedros JG** (2001) Implications for understanding fluid flow dynamics during functional loading: application of regional microstructural heterogeneity in the turkey ulna. 31st Int. Sun Valley Hard Tissue Workshop, *J. Musculoskeletal & Neuronal Interactions*. 2: 98
41. **Skedros JG**, Brady JH (2001) Ontogeny of cancellous bone anisotropy in a natural "trajectorial structure: genetics or epigenetics? *J. Bone Miner. Res.*, 16 (Suppl. 1): S331
40. Hunt KJ, **Skedros JG** (2001) Regional microstructural heterogeneity in the turkey ulna: implications for understanding fluid flow dynamics during functional loading. *J. Bone Miner. Res.*, 16 (Suppl. 1): S330
39. **Skedros JG**, Dayton MR, Bachus KN (2000) Relative effects of collagen fiber orientation, mineralization, porosity, and percent and population density of osteonal bone on equine cortical bone mechanical properties in mode-specific loading. *Conference Proceedings of the American Society of Biomechanics (24th Annual Meeting, Chicago, IL)*, pgs. 173-174
38. **Skedros JG** (2000) Do BMUs adapt osteon cross-sectional shape for habitual tension vs. compression loading? *J. Bone Miner. Res.*, 15(Suppl. 1): S347
37. **Skedros JG**, Takano Y, Turner CH (2000) Mechanical loading patterns determine collagen and mineral orientation. *J. Bone Miner. Res.*, 15(Suppl. 1): S348
36. **Skedros JG**, Hunt KJ, Attaya EN, Zirovich MD (2000) Uniform osteocyte lacuna population densities in a limb bone with highly non-uniform strain milieu. *J. Bone Miner. Res.*, 15(Suppl. 1): S347
35. **Skedros JG**, Hunt KJ, Gingell D (2000) Changes in osteocyte densities during skeletal organogenesis. *J. Bone Miner. Res.*, 15(Suppl. 1): S459
34. Vajda EG, Gingell D, Miller SC, Bachus KN, **Skedros JG** (2000) Repair of fatigue damage occurs independent of load-induced strain in rats. *J. Bone Miner. Res.*, 15(Suppl. 1): S445

33. **Skedros JG**, Holmes JL, Vajda EG, Durand P (1999) Quantitative microprobe analyses suggest that cement lines of secondary osteonal bone are not mineral deficient. Transactions of the 45th Annual Meeting of the Orthopaedic Research Society, Anaheim, California, pg. 775
32. **Skedros JG**, Kuo, TY (1999) Ontogenetic changes in regional collagen fiber orientation suggest a role for variant strain stimuli in cortical bone construction. Journal for Bone and Mineral Research (Annual Meeting, St. Louis, Missouri) 14(Suppl. 1): S441
31. **Skedros JG**, Hughes PE, Nelson K, Winet H (1999) Collagen fiber orientation in the proximal femur: challenging Wolff's tension/compression interpretation. Journal for Bone and Mineral Research (Annual Meeting, St. Louis, Missouri) 14(Suppl. 1): S441
30. Kuo TY, **Skedros JG**, Lundeen, GA, Bloebaum RD (1998) Direct and indirect measurement of femoral anteversion. Western Orthopaedic Association, Aspen, Colorado.
29. Jones RE, **Skedros JG**, Chan AJ, Beauchamp DH, Harkins PC (1998) Total knee arthroplasty using the S-ROM mobile-bearing hinge total knee system. Western Orthopaedic Association, Aspen, Colorado.
28. Burkhead WZ, **Skedros JG**, O'Rourke PJ, Arcand MA, Pierce WA (1998) Comparison of failure strengths of conventional rotator cuff repairs to a technique using a combination of trans-osseous sutures and suture anchors. Western Orthopaedic Association, Aspen, Colorado.
27. **Skedros JG**, Hughes PE, Zirovich MD (1998) Collagen fiber orientation in the turkey ulna supports a role for variant strain stimuli in cortical bone construction. ASBMR-IBMS Second Joint Meeting, San Francisco. Bone 23(5, Suppl.): S437
26. Kuo TY, **Skedros JG**, Lundeen, GA, Bloebaum RD (1998) Direct and indirect measurement of femoral anteversion. Transactions of the 44th Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, pg. 835.
25. Dayton MR, **Skedros JG**, Bloebaum RD, Bachus KN (1997) Investigation of the objectives of adaptation of a cortical tension/compression system through mechanical testing. Transactions of the 43rd Annual Meeting of the Orthopaedic Research Society, San Francisco, California, pg. 817.
24. Dayton MR, Nelson MC, **Skedros JG**, Bloebaum RD (1996) Safety factors as the objective of cortical bone adaptation. Transactions of the 42nd Annual Meeting of the Orthopaedic Research Society, Atlanta, Georgia. pg. 131
23. Kuo T, **Skedros JG**, Bloebaum RD (1996) Comparison of human, primate, and canine proximal femoral morphologies in the context of total hip replacement. Western Orthopaedic Association, Honolulu, Hawaii.
22. **Skedros JG**, Deitch KC, Zirovich MD, Mason MW (1996) Uniform Osteocyte lacuna population densities in a limb bone with non-uniform customary strain milieu and

heterogeneous material organization. Journal for Bone and Mineral Research (Annual Meeting, Seattle, Washington) 11(Suppl. 1): S268

21. Nelson MC, **Skedros JG**, Mason MW, Bloebaum RD (1995) Potential evidence of microstructural, mineral, and cross-sectional adaptation to specific strain features in bone. Transactions of the 41st Annual Meeting of the Orthopaedic Research Society, Orlando, Florida, 20(2), pg. 551.

20. **Skedros JG**, Nelson MC, Dayton M (1995) Safety factors as the objective of cortical bone adaptation and maintenance. The American Orthopaedic Association 28th Annual Residents' Conference. Pittsburgh, Pennsylvania.

19. **Skedros JG**, Chow F, Patzakis MJ (1995) The artiodactyl calcaneus as a model for examining mechanisms governing regional differences in remodeling activities in cortical bone. Journal for Bone and Mineral Research (Annual Meeting, Baltimore, Maryland) 10(Suppl. 1): S441

18. **Skedros JG**, Parry TR, Durand P, Bloebaum RD (1995) Potential evidence of fatigue-related material adaptation between limb bones of a cursorial mammal. Journal for Bone and Mineral Research (Annual Meeting, Baltimore, Maryland) 10(Suppl. 1): S441

17. **Skedros JG**, Durand P, Bloebaum RD (1995) Hypermineralized peripheral lamellae in primary osteons of deer antler: potential functional analogues of cement lines in mammalian secondary bone. Journal for Bone and Mineral Research (Annual Meeting, Baltimore, Maryland) 10(Suppl. 1): S441

16. **Skedros JG** (1995) Examination of trabecular bone for material adaptation to habitual differences in physiologic strain modes. Journal for Bone and Mineral Research (Annual Meeting, Baltimore, Maryland) 10(Suppl. 1): S442

15. **Skedros JG**, Dirksmeier P (1995) Evidence of strain-mode-related ultrastructural adaptation in cortical bone - detected using circularly polarized light in thin sections. Transactions of the 2nd Annual Meeting of the International Orthopaedic Research Society, San Diego, pg. 129

14. Mason MW, **Skedros JG**, Bloebaum RD (1994) Evidence of microstructural adaptation to compression loading: the optimal cortical structure. Transactions of the Orthopaedic Research Society, 40th Annual Meeting, New Orleans, pg. 562

13. **Skedros JG** (1994) Collagen fiber orientation in skeletal tension/compression systems: a potential role of variant strain stimuli in the maintenance of cortical bone organization. Transactions of the American Soc. for Bone and Mineral Research, Annual Meeting, Kansas City, Vol. 9, abstract B84, pg. S251

12. **Skedros JG**, Ota D, Bloebaum RD (1993) Mineral content analysis of tension/compression skeletal systems: indications of potential strain-specific differences. Transactions of the American Society for Bone and Mineral Research, Annual Meeting, Tampa, Florida, 8(Suppl. 1), pg. 789

11. **Skedros JG**, Ghiassi A, Schmotzer H (1993) Quantification of *in vivo* microdamage in bone - implications for the role of structural microdamage in mediating bone remodeling. Southern Orthopaedic Association Annual Meeting, New Orleans.
10. **Skedros JG**, Mason MW, Bloebaum RD (1993) Evidence of potential strain-mode-specific differences in cortical bone microstructure in a tension/compression system. Transactions of the Orthopaedic Research Society, 39th Annual Meeting, San Francisco, pg. 533
9. **Skedros JG**, Mills BG (1993) Presence of bioactive molecules (osteopontin and osteocalcin) in osteon cement lines: implications for bone remodeling theory and stress fracture biology. University of Southern California Graduate Orthopaedic Society, Annual Meeting, Los Angeles.
8. Zou L , **Skedros JG** (1993) Determining the mineralized volume fraction of cancellous bone. Transactions of the Orthopaedic Research Society, 39th Annual Meeting, San Francisco, pg. 543
7. **Skedros JG**, Ota D, Mason MW, Nelson MC, Bloebaum RD (1992) Influence of strain magnitudes on the structural/material organization of bone: implications for osteoporosis research. Western Orthopaedic Association, Annual Meeting, Seattle, Washington.
- 6a. Gunasekaran S, Constantz BR, Monjazez M, **Skedros JG**, Bloebaum RD (1991) An effective way of assessing crosslinks of collagenous proteins in biomaterials and tissues. Transactions of the Society for Biomaterials, 17th Annual Meeting, Scottsdale, Arizona, pg. 139
- 6b. Gunasekaran S, Constantz BR, Monjazez M, **Skedros JG**, Bloebaum RD (1991) Correlation between mechanical environment and collagen cross-linking in bone: an example from the deer calcaneus. Proceedings of the American Society of Biomechanics, 15 Annual Meeting, Arizona State University, Tempe, AZ, 132-133
- 6c. Gunasekaran S, Constantz BR, Monjazez M, **Skedros JG**, Bloebaum RD (1992) Correlation between mechanical environment and collagen cross-linking in bone: an example from the deer calcaneus. J. Biomechanics 25(6):668 (shorter abstract for 6b).
5. **Skedros JG**, Bloebaum RD (1991) Geometric analysis of a tension/compression system: implications for femoral neck modeling. Transactions of the Orthopaedic Research Society, 37th Annual Meeting, Anaheim, CA, pg. 421
4. Boyce TM, Bloebaum RD, Bachus KN, **Skedros JG** (1990) Calibration of the backscattered electron signal for bone, biomaterial, and implant research. Transactions of the Society for Biomaterials, 16th Annual Meeting, Charleston, South Carolina, pg. 188
3. **Skedros JG**, Bloebaum RD, Boyce TM (1990) Relationship of graylevels in backscattered electron images of simulated bone tissue to atomic number, density, and mineral content. Transactions of the Society for Biomaterials, 16th Annual Meeting, Charleston, South Carolina, pg. 53

2. Gunasekaran S, Constantz BR, **Skedros JG**, Bloebaum RD (1990) Collagen cross-link differences between superior and inferior portions of deer calcaneus bone. Gordon Research Conference on Bioengineering and Orthopaedic Sciences.

1. **Skedros JG**, Bloebaum RD (1988) Challenging conventional modeling of the human femoral neck: implications for osteoporosis-related femoral neck fractures. American Federation of Clinical Research, Annual Meeting, Carmel, California.

CLINICAL TRIALS and GRANTED STUDIES

Principal investigator, 2002-2003; "**Use of the Rat-Ulna Model for Investigating Microcrack Repair: Implications for Osteoporosis**" [Orthopaedic Research and Education Foundation, grant: 01-024]

Principal investigator, 2002-2003; "**The Use and Misuse of Injectable Cortisone in Treating the Painful Shoulder**" [Pharmacia, Inc.]

Principal investigator, 2000-2004; "**The Orthopaedic Surgeon's Role in Diagnosing and Treating Patients with Osteoporotic Fractures**" [Merck & Co., Inc.]

Regional co-principal investigator, 1999-2000; Protocol 102 COX472 "**A randomized, double blind, multicenter study to evaluate the tolerability and effectiveness of Rofecoxib (MK-0966) 25 mg q.d. vs. Naproxen 500 mg in patients with osteoarthritis**" [F.D.A. Phase IIIB Trial; Merck & Co., Inc., Whitehouse Station, NJ]

JOURNAL REVIEW BOARDS, HONORS, AND AWARDS

Reviewer for:

Journal of Bone and Joint Surgery (American)
Journal of Shoulder and Elbow Surgery
The Anatomical Record
Journal of Anatomy
Journal of Biomechanics
The Journal of Experimental Biology
Journal of Musculoskeletal and Neuronal Interactions
BONE
Journal of Orthopaedic Research
Acta Biomaterialia
Bioessays
Journal of Theoretical Biology
and others

Honors

Administrative Chief Resident
Los Angeles County/Univ. Southern California Dept. of Orthopaedic Surgery
(1995-1996)

Awards

G. June Marshall Research Award, Orthopaedic Hospital, Los Angeles (1996)
Lowman Research Award (Univ. Southern California, Orthopaedics) (1996)
University of Southern California Graduate Orthopaedic Society Research Award (1996)

TEACHING EXPERIENCE

University of Utah Department of Orthopaedic Surgery Residency Program
VA Medical Center Surgery Proctor/Teacher (Shoulder Surgery) (1997-2012)

University of Utah School of Medicine
Department of Anatomy Lecturer (1986-1988)

Utah College of Massage Therapy, Salt Lake City
Anatomy and Physiology Course Master (1986-1989)

University of Utah Department of Biology teaching assistant (TA) positions
Human Anatomy TA, TA coordinator, and Lecture Proctor (1980-1985)
Additional TA positions: Comparative Vertebrate Morphology, Comparative
Animal Physiology, Human Physiology, and General Microbiology Laboratory

SOCIETY MEMBERSHIPS

American Shoulder and Elbow Surgeons (ASES)
American Academy of Orthopaedic Surgeons (AAOS)
American Association of Anatomists
American Association of Physical Anthropologists
American Medical Association
American Society of Biomechanics
American Society for Bone and Mineral Research
International Bone and Mineral Society
International Society of Musculoskeletal and Neuronal Interactions
Orthopaedic Research Society
Utah Medical Association