

**JOHN G. SKEDROS, M.D.**  
**CURRICULUM VITAE**

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**March 2015**

**PERSONAL**

Date of Birth: June 14, 1960  
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 and July  
2010)

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

**Skedros JG**, Knight AN, Pitts TC, Burkhead WZ (2015) Radiographic morphometry and densitometry predict strength of cadaveric proximal humeri more reliably than age and DXA scan density. *Journal of Orthopaedic Research, in review*

**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, in review*

**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: a case report. *Case Reports in Orthopedics, in review*

**Skedros JG**, Mendenhall SD, Knight AN, Bloebaum RD (2015) 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, submitted*

**Skedros JG**, Mendenhall SD, Knight AN, Horn JB, Williams TJ (2015) 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. *The Journal of Experimental Biology, in review*

**Skedros JG**, Knight AN, Su SC, Bachus KN, Bloebaum RD (2015) Net dorsal compression and plantar tension are maintained in the deer calcaneus despite off-axis loading and transection of the tension members. *The Journal of Experimental Biology, in review*

**Skedros JG** (2015) Are deer and sheep calcanei similarly loaded like cantilevered beams? A critical evaluation of McMahon et al. (1995) with emphasis on the importance of shear. *Journal of Anatomy, in preparation*

Keenan KE, **Skedros JG** (2015) Controversial utility of osteon circularity for interpreting load history and species determination in primates and non-primates. *American Journal of Physical Anthropology, in preparation*

**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, in review*

**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, in preparation*

## **Published Peer-Reviewed Articles**

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*, 2014, Article ID: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: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*, 2014, Article ID: 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*, 2012, Article ID: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*. 88:18-24
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<sup>®</sup> 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**

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. Meeting of the Orthopaedic Research Society, Las Vegas, Nevada, poster no. ; ORS 2015 eBook, pgs.
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. Meeting of the Orthopaedic Research Society, Las Vegas, Nevada, poster no. ; ORS 2015 eBook, pgs.
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. 7<sup>th</sup> 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. 60<sup>th</sup> 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. 60<sup>th</sup> 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. 60<sup>th</sup> 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. 59<sup>th</sup> 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. 59<sup>th</sup> 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. 59<sup>th</sup> 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. 58<sup>th</sup> 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? 58<sup>th</sup> 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. 58<sup>th</sup> 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. 58<sup>th</sup> 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?

58<sup>th</sup> 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

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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, 39<sup>th</sup> Annual Meeting, San Francisco, pg. 533
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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, 16<sup>th</sup> 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, 16<sup>th</sup> Annual Meeting, Charleston, South Carolina, pg. 53

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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

### **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