Curriculum Vitae David James Schneider M.D. Shoulder and Elbow Surgeon Medical Historian and Author

Employment

PURE Orthopedics, a company of Panorama Orthopedics and Spine Center

660 Golden Ridge Road, Suite 250, Golden CO 80401

University of Colorado Department of Orthopedics and Sports Medicine

Assistant Clinical Professor 2002-2014 4200 E. Ninth Ave. Denver. CO 80262

Education

Harvard University Program for Leadership Development

Harvard Business School, Boston, MA, 2022 to 2023

Achieved Alumnus Status of Harvard Business School March, 2023

Accelerated Management Program

Yale School of Management, New Haven, CT, 2021

History of Medicine Online Course

The University of Oxford, Oxford, England, 2016

Fellow in Sports Medicine

Kerlan-Jobe Orthopaedic Clinic, August 2001 to July 2002

Orthopedic Surgery Resident

Penn State University Department of Orthopaedics and Rehabilitation, July 1997 to July 2001, Hershey, Pennsylvania

Michael and Myrtle Baker Research Fellow

Penn State University Department of Orthopaedics and Rehabilitation, July 1996 to June 1997, Hershey, Pennsylvania

General Surgery Intern

Penn State University Department of Surgery, July 1995 to June 1996, Hershey, Pennsylvania

Doctor of Medicine

University of Kansas School of Medicine, August 1990 to May 1995 Kansas City, Kansas

Post Sophomore Research Fellow

Department of Pathology and Laboratory Medicine, research performed in:

Bone Research Laboratory, Wilkinson Laboratory for Cancer Research Orthopaedic Research Laboratory

University of Kansas School of Medicine, July 1992 to June 1993

Bachelor of Science, in Finance

Graduated Cum Laude

Oral Roberts University, August 1985 to May 1990

Board Certification

ABOS- Certified 7/11/04-12-31-2014; Recertified through 12/31/2024

Sports Medicine Subspecialty- through 12/31/2024

United States Patents:

1. US 8,277,458 B2

Apparatus and Method for Arthroscopic Trans-humeral Cuff Repair

2. US 8,740,913

Apparatus and method for arthroscopic trans-humeral cuff repair

3. US 8,738,144

Bioelectric Implant and Method

Team Physician Experience

University of Denver, Men's and Women's Basketball teams, team physician, 2021-present

United States: USA Rugby, team physician (2006-present)

Professional:

Consultant: Los Angeles Dodgers (2002-present)

Associate: Los Angeles Lakers (NBA), Los Angeles Dodgers (MLB), Los Angeles Kings (NHL), Anaheim Mighty Ducks (NHL), Los Angeles Galaxy (MLS), Los Angeles Avengers (AFL), Los Angeles Sparks (WNBA), [2001-2002] Hershey Bears Hockey Club (AHL) (1997-2001)

Collegiate: Penn State University football, University of Southern California football, Loyola Marymount University men's and women's athletics

High school: Numerous football games, basketball games, and wrestling matches, 1996-present to Pennsylvania, California, and Colorado high schools

Honors and Awards

Alpha Omega Alpha, Pennsylvania State University, Eta chapter, April 2000 Residency:

AOA Zimmer Resident Travel Award, June 1998

Stinchfield Award of the Hip Society, March 1998

Eastern Orthopaedic Association Founder's Award, October 1997

Pennsylvania Orthopaedic Society, 1st Place Resident Research Award, May 1998 Medical School:

William H. Bailey Award for excellence in research, May 1994

Eilers Scholar for research, May 1991

Honorable Mention for presentations at Student Research Forum, 1993, 1994

Kansas Scholar August 1990 to June 1994

Undergraduate

Ted R. Platter Leadership Award, ORU men's resident advisor program, May 1989 **Outstanding First Year Resident Advisor**, May 1987

Dr. Paul Scholar, Most Promising Leader in the Business Department, 1988

Who's Who in American Colleges and Universities, 1989

Dean's Scholar, August 1985 to May 1989

All School Intramural Champions- set new all-time points record, 1989-1990

Activities and Organizations

Medical School

Medical Student Assembly Senator, Treasurer, August 1991 to July 1992 **Honor Code Committee** member, October 1992

Tutor at Rosedale Middle School, September 1990 to May 1991

College

Intercollegiate Men's Volleyball team 1989-1990, USVBA intercollegiate team Head Resident Advisor 1987-1988 and 1988-1989 school years Resident Advisor 1986-1987 and 1989-1990 school years Intramural Athletics Basketball, volleyball, football, softball 1985-1990

Committee Assignments/Service

American Orthopaedic Association

2001 Residents Conference Co-Chairman, March30-April 1, 2001, Hershey

The Pennsylvania State University, Dickinson School of Law

Trial Advocacy Seminar, Medical expert witness, May 19, 1999

Research

Publications

- The mechanism of bone induction and bone healing by human osteosarcoma cell extracts H Clarke Anderson, Howard HT Hsu, Prafulla Raval, Thomas R Hunt, John R Schwappach, David C Morris, David J Schneider, Clin Orthop and Rel Res 313, 129-134, 1995
- Expression of Bone Morphogenetic Proteins by Osteoinductive and Nonosteoinductive Human Osteosarcoma Cells Prafulla Raval, Howard HT Hsu, David J Schneider, Michael P Sarras Jr, Ken Masuhara, Lynda F Bonewald, and HC Anderson, Journal of Dental Research 75(7): 1518-1523, 1996
- 3. Evaluation of Fracture Predilection in the Calcaneus Following External Fixator Pin Removal Paul J Juliano, Jim R Yu, David J Schneider, Chris R Jacobs, **Journal of Orthopaedic Trauma 11(6):** 430-434, 1997
- 4. Operative Management of Rotator Cuff Tears: an Update David J Schneider The Resident Reporter 2(6): 13-18, 1997
- 5. The Frank Stinchfield Award: Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model, David J Schneider, Mark JR Moulton, Kishor Singapuri, Vernon Chinchilli, Gurvinder S Deol, Gabriel Krenitsky, Vincent D Pellegrini, Clin Orthop and Rel Res 355: 35-46, 1998
- 6. Biomechanical Evaluation of the Effect of Labral Fixation Sites on Glenohumeral Translation Kevin P Black, David J Schneider, Jim R Yu, Chris R Jacobs, **Am J Sports Med 27:** 339-44, 1999
- 7. The Biomechanical Effects of the Ossific Nucleus on the Capital Femoral Epiphysis. A Porcine Model for Developmental Dysplasia of the Hip Lee Segal, David J Schneider, Joshua M Berlin, Anthony Bruno, **J of Ped Orthop 19:** 433-7, 1999
- 8. Atraumatic Gas Gangrene Associated with Occult Malignancy David J Schneider, J Spence Reid, **New England J Med 343:**1615, 2000
- 9. Biomechanical Evaluation of the Effects of Anterior Cortical Notching of the Femur in Total Knee Arthroplasty. Mark L Lesh, David J Schneider, Chris R Jacobs, Vincent D Pellegrini Jr., **J Bone Joint Surg 82:** 1096-1101, 2000
- 10. Chondronecrosis of the Hip. The Protective Role of the Ossific Nucleus in an Animal Model. Lee S Segal, Joshua M Berlin, David J Schneider, Mark JR Moulton, Elizabeth Frauenhoffer, Clin Orthop Rel Research 377: 265-71, 2000
- 11. Evaluation of an Animal Model for the Study of Shoulder Instability. David J Schneider, Kevin P Black, Charles DeMarco, Qian Chen, Michael Dabbah, submitted for publication to **Am J Sports Med**
- 12. Biomechanics of Total Shoulder Arthroplasty. David J Schneider, Thay Q. Lee, Operative Tech in Orthop 12: 2-9, 2002
- 13. Biomechanical evaluation after five and ten millimeter anterior glenohumeral capsulorrhaphy using a novel shoulder model of increased laxity. Schneider DJ, Tibone JE, McGarry MH, Grossman MG, Veneziani S, Lee TQ. **J Shoulder Elbow Surg.** 2005 May-Jun;14(3):318-23
- 14. A cadaveric model of the throwing shoulder: a possible etiology of superior labrum anterior-to-posterior lesions. Grossman MG, Tibone JE, McGarry MH, Schneider DJ, Veneziani S, Lee TQ. J Bone Joint Surg Am. 2005

- Apr;87(4):824-31
- 15. How is forearm compliance affected by various circumferential dressings? Capo JT, Renard RL, Moulton MJ, Schneider DJ, Danna NR, Beutel BG, Pellegrini VD. Clin Orthop Relat Res. 2014 Oct;472(10):3228-34
- Impact of Modeling Assumptions on Stability Predictions in Reverse Total Shoulder Arthroplasty. Dharia MA, Bischoff JE, Schneider D. <u>Front Physiol</u> 2018 Aug 21;9:1116

Research Presentations

- Osteosarcoma derived bone inducing substance, Student Research Forum,
 20th Annual meeting, University of Kansas, March 5, 1992
- 2. Expression of Bone Morphogenetic Proteins and Transforming Growth Factor Beta in Osteoinductive Saos-2 Cells Student Research Forum, 21st Annual meeting, University of Kansas, April 7, 1993
- 3. Expression of Bone Morphogenetic Protein by Meningiomas, Student Research Forum, 22nd Annual meeting, University of Kansas, April 8, 1994
- 4. Biology of Bone Healing. 6th Annual Rae R Jacobs Memorial Lecture on Spinal Instrumentation, Kansas City, Missouri, June 10, 1994
- 5. Evaluation of Fracture Predilection in the Calcaneus Following External Fixator Pin Removal. American Orthopaedic Association 30th Annual Residents Meeting, New York, New York, March 15, 1997
- 6. The Biomechanical Effects of the Ossific Nucleus on the Capital Femoral Epiphysis. A Porcine Model for Developmental Dysplasia of the Hip. Pediatric Orthopaedics International Symposium, 25th Annual Meeting, Chicago, IL, May 29, 1997
- 7. Founder's Award: The Biomechanical Effects of the Ossific Nucleus on the Capital Femoral Epiphysis. A Porcine Model for Developmental Dysplasia of the Hip. Eastern Orthopaedic Association, 28th Annual Meeting, Scottsdale, AZ October 15-19, 1997
- A Biomechanical Evaluation of the Relationship between Labral fixation Site and Shoulder Translocation During a Bankart Repair. American Orthopaedic Association 31st Annual Residents Conference, Sacramento, California, February 20-22, 1998
- 10. A Biomechanical Evaluation of the Relationship Between Labral Fixation Site and Shoulder Translocation During a Bankart Repair. American Academy of Orthopaedic Surgeons, 65th Annual Meeting, New Orleans, LA March 18-22, 1998
- 11. A Biomechanical Evaluation of the Relationship Between Labral Fixation Site and Shoulder Translocation During a Bankart Repair. American Orthopaedic Society for Sports Medicine, New Orleans, LA, March 21, 1998
- 12. The Frank Stinchfield Award: Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model. **The Hip Society**, New Orleans, LA March 21, 1998
- 13. A Biomechanical Evaluation of the Relationship Between Labral Fixation Site and Shoulder Translocation During a Bankart Repair. **Pennsylvania Orthopaedic Society** Spring Meeting, Orlando FL, April 22-25, 1998
- 14. AOA Zimmer Award: Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model. American Orthopaedic Association 111th Annual Meeting, Asheville NC, June 6-10, 1998

- 15. Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model. Pennsylvania Orthopaedic Society Fall Scientific Meeting, Hershey, PA, November 19-21, 1998
- 16. Evaluation of an Animal Model for the Study of Shoulder Instability.

 International Congress on Surgery of the Shoulder, 7th Triannual Meeting,
 Sydney Australia, October 5-8, 1998
- 17. Evaluation of an Animal Model for the Study of Shoulder Instability. American Orthopaedic Association 32nd Annual Residents Conference, Chapel Hill, NC, March 12-14, 1999
- 18. The relationship of upper extremity compressive dressings to forearm compartment pressures and the effect of univalve and bivalve release. The **American Society for Surgery of the Hand** Residents' and Fellows' Meeting, Boston, MA, August, 1999
- 19. The relationship of upper extremity compressive dressings to forearm compartment pressures and the effect of univalve and bivalve release. The **American Society for Surgery of the Hand**, Seattle, WA, October 2000
- 20. Evaluation of anterior capsulorrhaphy in the treatment of shoulder instability: a biomechanical study. 16th annual Kerlan Jobe Research Forum, Los Angeles, June 2002
- 21. Complex shoulder instability issues. Rocky Mountain Shoulder & Elbow Society, Boulder CO 2006
- 22. Double row rotator cuff repair, with special comment on repair in total shoulder arthroplasty. Rocky Mountain Shoulder & Elbow Society, Aspen CO 2008
- 23. Compressive neuropathies about the shoulder and elbow. Rocky Mountain Shoulder & Elbow Society, Beaver Creek 2010
- 24. Elbow injuries in throwing athletes. University of Kansas Department of Orthopedics. Kansas City, Kansas, May 6, 2010
- 25. Shoulder instability issues in rugby and collision athletes. **USA Rugby Sports Medicine Symposium**, Las Vegas, February 2011
- 26. Complex elbow trauma. University of Connecticut, Farmington, Connecticut, September 7, 2012
- 27. Soft tissue and bony solutions in shoulder dislocations among collision athletes, **Notre Dame Orthopedic Society Annual Meeting**, South Bend, Indiana, September 4, 2015
- 28. Chronic Elbow Instability, **Norton Sports Medicine Symposium**, Louisville, Kentucky, June 8, 2018
- 29. Treatment strategies in acute shoulder instability, **Norton Sports Medicine Symposium**, Louisville, Kentucky, June 8, 2018
- 30. The rise of orthopedics and the Implant Revolution, **University of Colorado Department of Orthopedics**, August 1, 2018
- 31. Treatment strategies in complex elbow injuries and dislocations. **Andrews Institute Orthopedics & Sports Medicine.** Gulf Breeze, Florida, October 28, 2019
- 32. The Birth of Scientific Surgery, **The Mayo Clinic**, Rochester, Minnesota, February 24, 2020
- The Birth of Orthopedics and the Implant Revolution, **New York University and Hospital for Joint Diseases**, April 16, 2020.

Papers co-Presented

1. Expression of bone morphogenetic proteins by osteoinductive Saos-2 cells. International Conference on Bone Morphogenetic Proteins. Baltimore, MD,

- June 8, 1994. HC Anderson, DJ Schneider, MP Saras, HAT Hsu, P Raval,
- 2. Relationship between Expression of Bone Morphogenetic Proteins and Osteoinductive Activity in Osteosarcoma Cells P. Raval, David Schneider, LF Bonewald and HC Anderson **Orthopaedic Research Society,** San Francisco, CA, 1993
- Biomechanical characterization of a second-generation intramedullary interlocking nail in human cadaveric humeri. American Orthopaedic Association Residents' Conference, 31st Annual Meeting. February 20-22, 1998. Deol GS, Schneider DJ, Davis, BR, Jacobs, CR, Parrish, W
- 4. Bipolar hemiarthroplasty for degenerative hip arthritis: a minimum ten year followup. **American Orthopaedic Association** Residents' Conference, 31st Annual Meeting. February 20-22, 1998. Bixler BL, Deol DS, Schneider DS, Pellegrini VD.
- 5. Biomechanical consequences of notching in total knee arthroplasty. **American Orthopaedic Association** Residents Conference, 31st Annual Meeting February 20-22, 1998. Lesh ML, Schneider DS, Pellegrini VD.
- 6. The effects of perioperative radiation on the inhibition of heterotopic ossification in rabbits: an animal model. **American Orthopaedic Association** Residents Conference, 31st Annual Meeting February 20-22, 1998. Schneider DJ, Moulton MJR, Deol GS, Pellegrini VD
- 7. The contribution of the ossific nucleus to the mechanical stiffness of the capital femoral epiphysis: a porcine model for DDH. **American Academy of Orthopaedic Surgeons**, 65th Annual Meeting, New Orleans, LA, March 22, 1998. Segal LS, Berlin JM, Schneider DS, Bruno A, Jacobs CR.
- 8. The contribution of the ossific nucleus to the mechanical stiffness of the capital femoral epiphysis: a porcine model for DDH. **Pediatric Orthopaedic Society of North America**, Banff, Canada, May 15, 1997, Segal LS, Berlin JM, Schneider DS, Bruno A, Jacobs C
- 9. Injury to the capital femoral epiphysis in growing rabbits. An animal model for the protective role of the ossific nucleus in DDH. **American Academy of Orthopaedic Surgeons** annual meeting, New Orleans, LA, March 19-23, 1998, Segal LS, Berlin JM, Schneider DS, Moulton MM, Frauenhoffer E
- 10. Injury to the capital femoral epiphysis in growing rabbits. An animal model for the protective role of the ossific nucleus in DDH. **Pediatric Orthopaedic Society of North America**, Cleveland Ohio May 5, 1998, Segal LS, Berlin JM, Schneider DS, Moulton MM, Frauenhoffer E
- 11. Biomechanical evaluation of the effects of anterior cortical notching of the femur in total knee arthroplasty. **. American Academy of Orthopaedic Surgeons**, 65th Annual Meeting, New Orleans, LA, March 23, 1998. Lesh ML, Schneider DS, Pellegrini VD.
- 12. Biomechanical evaluation of the effects of anterior cortical notching of the femur in total knee arthroplasty. **Eastern Orthopaedic Association**, 29th Annual Meeting, Dorado, Puerto Rico, October 14-18, 1998. Lesh ML, Schneider DS, Deol GS, Pellegrini VD.
- 13. The consequences of anterior femoral notching in total knee arthroplasty- a biomechanical study. **American Association of Hip and Knee Surgeons**, 8th Annual Meeting, Dallas, TX, November 6-8, 1998. Pellegrini VD, Schneider DS, Jacobs CR. Lesh ML. Deol GS.
- 14. The consequences of anterior femoral notching in total knee arthroplasty- a biomechanical study. The **Pennsylvania Orthopaedic Society** Fall Meeting, Hershey PA, November 19-21, 1998. Pellegrini VD, Schneider DS, Jacobs CR,

- Lesh ML, Deol GS.
- 15. The effects of perioperative radiation on the inhibition of heterotopic ossification in rabbits: an animal model. **. American Academy of Orthopaedic Surgeons**, 66th Annual Meeting, Anaheim, CA, February 5, 1999. Deol, GS, Schneider DJ, Moulton MJR, Singapuri K, Chinchilli, V, Pellegrini VD
- 16. Injury to the capital femoral epiphysis in growing rabbits: an animal model for the protective role of the ossific nucleus in DDH. . **American Academy of Orthopaedic Surgeons**, 66th Annual Meeting, Anaheim, CA, February 5, 1999. Segal LS, Berlin JM, Schneider DJ, Moulton MJR, Frauenhoffer E
- 17. The Optimal Time of Preoperative Radiation for the Inhibition of Heterotopic Ossification Following Hip Surgery: An Animal Model in the Rabbit.
- 18. The Optimal Time of Preoperative Radiation for the Inhibition of Heterotopic Ossification Following Hip Surgery: An Animal Model in the Rabbit. The **Pennsylvania Orthopaedic Society** Fall Scientific Meeting, Philadelphia, PA, November 9-11, 2000. Rumi, M.N., Deol, G.S., Schneider, D.J., Bergandi, J., Moulton, M.J.R., Singapuri, K., Pellegrini, V.D., Jr.
- 19. **Orthopaedic Research Society** 46th Annual Meeting (Poster), Orlando, FL, March, 2000. Rumi, M.N., Deol, G.S., Schneider, D.J., Bergandi, J., Moulton, M.J.R., Singapuri, K., Pellegrini, V.D., Jr.
- 20. The Optimal Time of Preoperative Radiation for the Inhibition of Heterotopic Ossification Following Hip Surgery: An Animal Model in the Rabbit. Eastern Orthopaedic Association 31st Annual Meeting, Lake Buena Vista, FL, October 11-15, 2000. Rumi, M.N., Deol, G.S., Schneider, D.J., Bergandi, J., Moulton, M.J.R., Singapuri, K., Pellegrini, V.D., Jr.
- 34. The throwing shoulder: a biomechanical evaluation of anterior instability and simulated posterior capsular contraction. 16th annual **Kerlan Jobe Research Fourm**, Los Angeles, June 2002. Mark Grossman, Thay Lee, Michelle McGarry, Sergio Veniziani, David Schneider, James Tibone

International Experience

USA Rugby: Team physician on overseas tours in: England (2011, 2012, 2013, 2014, 2015), Scotland (2011, 2015), Portugal (2015), Uruguay (2010), New Zealand (World Cup 2011), Canada (2013)

Medical Missions: Brazilian Amazon, Mexico, Rwanda, Kenya

International Orthopedic Lectures:

- 1. Japan, October 19-24, 2011
- 2. Australia, October 25 and 26, 2011
- 3. Rwanda, August 17-24, 2011
- 4. Malaysia, October 24, 2016
- 5. Singapore, October 25, 2016
- 6. Australia, February 14 and 15, 2019

Works of Literature

- 1. **Scalpel**. This Land, Summer, 2015.
- 2. The Invention of Surgery: A History of Modern Medicine: From the Renaissance to the Implant Revolution. Pegasus Books (Simon & Schuster) Publication Date: March 3, 2020.
- 3. "Modern Surgery wouldn't be possible without this one key drug" Popular Science, March 3, 2020

- 4. "Your Health Care is the Love Child of Science and Insurance," <u>Daily Beast</u>, March 14, 2020
- 5. **Mr. & Mrs. Lister. Made for Each Other, for our Good.** In preparation

Reviews

- 1. "The Invention of Surgery" Review: Honing Their Craft," by John J. Ross, **Wall Street Journal**, March 6, 2020
- 2. "Do Some Surgical Implants Do More Harm than Good?" by Jerome Groopman, **The New Yorker**, April 20, 2020
- 3. "Need a New Knee or Hip? A Robot May Help Install it" by John Hanc, **The New York Times**, January 15, 2021

Media Projects

The Invention of Surgery, A five part series in production by Autentic GmbH (Germany) and Arte France Cinema (to debut in 2024).

A Life in Surgery. Documentary series on the lives of the most inspiring surgeons, whose patients are facing the greatest challenges.