



Stuart Goodman, MD, PhD

The Robert L. and Mary Ellenburg Professor of Surgery and Professor, by courtesy, of Bioengineering

Orthopaedic Surgery

 NIH Biosketch available Online

 Resume available Online

CLINICAL OFFICE (PRIMARY)

- **Joint Replacement Center**

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ACADEMIC CONTACT INFORMATION

- **Alternate Contact**

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Bio

BIO

Stuart B. Goodman MD MSc PhD FRCSC FACS FBSE FIOR FORS

Stuart B. Goodman is the Robert L. and Mary Ellenburg Professor of Surgery, and Professor with Tenure in the Department of Orthopaedic Surgery at Stanford University. He has a courtesy appointment in the Department of Bioengineering, and is a Fellow of the Institute of Chemistry, Engineering and Medicine for Human Health (ChEM-H). He was Chief of Orthopaedic Surgery at Stanford University from 1994-2002. Dr. Goodman received his BSc, MD, and MSc from the University of Toronto, and his PhD from Lund University. Dr. Goodman's clinical practice concentrates on adult reconstructive surgery. His clinical research interests center on outcomes of joint replacements, osteonecrosis, and juvenile arthritis. His basic science interests include implant biocompatibility, inflammation, osteonecrosis, and musculoskeletal tissue regeneration and repair.

Dr. Goodman is former Chairman of the AAOS Biological Implants Committee, and former member of the AAOS Biomedical Engineering Committee. He is a member of the American, European, and International Hip Societies, Knee Society, AAHKS, and ARCO, a consultant to the FDA, and former vice-chairman of the Musculoskeletal Tissue Engineering study section at NIH. He was the President of the Society For Biomaterials (2001-2) and served on the Board of Directors of the Orthopaedic Research Society. Dr. Goodman is on the editorial board of numerous medical and bioengineering journals. Dr. Goodman has published over 660 peer-reviewed manuscripts. Dr. Goodman and co-workers have received numerous awards including the Clemson Award for Basic Research from the Society For Biomaterials in May 2000 and the Lifetime Achievement Award from the Association of Bone and Joint Surgeons. Dr. Goodman was recognized as a Fellow, Biomaterials Science and Engineering (FBSE) by the International Union of Societies, Biomaterials Science and Engineering in May 2004, a Fellow of the Japanese Society of the Promotion of Science in 2011, a Fellow of the American Institute of Medical and Biological Engineers in 2012, a Fellow of the International Combined Orthopaedic Research Societies in 2016, and a Fellow of the Orthopaedic Research Society in 2021. He was a council member of the NIH National Institute of Arthritis, Musculoskeletal and Skin Diseases 2021-2024. He became an Honorary Member of the German Arthroplasty Society in 2023, and an honorary fellow of The European Federation of National Associations of Orthopaedics and Traumatology (EFORT) in 2024.

CLINICAL FOCUS

- Adult Reconstruction- Lower Extremity
- Osteonecrosis - hip and knee
- primary and revision hip and knee replacement
- Juvenile arthritis - surgery of the lower extremity
- Adult Reconstructive Orthopedic Surgery

ACADEMIC APPOINTMENTS

- Professor, Orthopaedic Surgery
- Professor (By courtesy), Bioengineering
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance
- Faculty Fellow, Sarafan ChEM-H

ADMINISTRATIVE APPOINTMENTS

- Fellow, Institute for Chemistry, Engineering and Medicine for Human Health (ChEM-H),, Stanford University, (2014- present)
- Professor (by courtesy), Department of Bioengineering, Stanford University, (2011- present)
- Fellowship Director, Orthopaedic Adult Reconstruction, Stanford University, (2008- present)
- Robert and Mary Ellenburg Professor of Surgery, Stanford University, (2006- present)
- Affiliated Faculty – Stanford Center on Longevity, Stanford University, (2005- present)
- Professor, Orthopaedic Surgery, Stanford University, (2002- present)
- Associated Faculty - Biomechanical Engineering Program, Mechanical Engineering Department, Stanford University, (1990- present)

HONORS AND AWARDS

- Patriotic Employer Award, Employer Support of the Guard and Reserve (ESGR), Department of Defense (2018)
- Fellow, International Combined Orthopaedic Research Societies (2016)
- Fellow, American Institute of Medical and Biological Engineers (2012)
- Fellow, Japan Society for the Promotion of Science (2011)
- Saul Halpern M.D. Orthopaedic Educator Award, Department of Orthopaedic Surgery, Stanford University (2007)
- Fellow, Biomaterials Science and Engineering (FBSE), International Union of Societies, Biomaterials Science and Engineering (2004)
- Clemson Award for Basic Research, Society For Biomaterials., Society For Biomaterials (2000)
- America's Top Surgeons, America's Top Surgeons (2016-2020)
- Patient's Choice Award, Patient's Choice Award (2012-2015, 2020)
- Compassionate Doctor Award, Compassionate Doctor Award (2015, 2020)
- America's Most Honored Professionals, America's Most Honored Professionals (2016-2020)
- America's Top Doctors, America's Top Doctors (2000-2020)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- President, Association Research Circulation Osseous (ARCO) (2024 - present)
- Fellow, American College of Surgeons (1988 - present)
- Fellow, American Academy of Orthopaedic Surgeons (1987 - present)

- Fellow, Fellow Royal College of Physicians & Surgeons (Canada) (1984 - present)

PROFESSIONAL EDUCATION

- Residency: University of Toronto (1984)
- Medical Education: University of Toronto (1978) Canada
- Internship: Toronto General Hospital Postgraduate Education (1979) Canada
- Board Certification: Orthopaedic Surgery, American Board of Orthopaedic Surgery (1987)
- Fellowship: Sunnybrook Medical Center (1985) Canada
- Fellowship: Wellesley Hospital (1985) Canada

LINKS

- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>
- Stanford University's Orthopaedic Surgery Department: <https://ortho.stanford.edu/research/labs.html>
- Research Gate: <https://www.researchgate.net/profile/Stuart-Goodman-2/2>
- Stanford Medicine: <https://med.stanford.edu/profiles/stuart-goodman>

Research & Scholarship

RESEARCH INTERESTS

- Science Education

CURRENT RESEARCH AND SCHOLARLY INTERESTS

As an academic orthopaedic surgeon, my interests center on adult reconstructive surgery including total joint replacement, osteotomies and the fixation of fractures. Both clinical and basic science investigations are ongoing.

My specific research interests include the following:

1. the biological aspects of the interface between orthopaedic implants/biomaterials and bone
2. the innate immune system and macrophages
3. tissue engineering and mesenchymal tissue differentiation
4. total joint replacement: prosthesis design, biomechanics, biomaterials, mechanisms of failure, imaging etc
5. arthritis: etiology, diagnosis, imaging, treatment, outcomes
6. osteonecrosis

CLINICAL TRIALS

- Autologous Bone Marrow Aspirate Treatment for Early-Stage Osteonecrosis, Recruiting

PROJECTS

- Customized MSCs to Enhance Healing of Bone Defects - Stanford University

- Enhanced Bone Healing Around Implants by Transplanted NF- κ B Driven Immunomodulating MSCs - Orthopaedic Research Laboratories, Stanford University
- Tissue Engineering Approaches for Improved Treatment of Early Stage Osteonecrosis of the Hip - Orthopaedic Research Laboratories, Stanford University
- Tissue Chip Modeling of Synovial Joint Pathologies: Effects of Inflammation and Adipose Mediated Diabetic Complications - Orthopaedic Research Laboratories, Stanford University
- Cell-Based Autogenous Grafting for the Treatment of Femoral Head Osteonecrosis - Orthopaedic Research Laboratories, Stanford University

Teaching

STANFORD ADVISEES

Med Scholar Project Advisor

Max Lee

Postdoctoral Faculty Sponsor

Ryota Hirose

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Adult Reconstruction (Fellowship Program)
- Bioengineering (Phd Program)
- Stem Cell Biology and Regenerative Medicine (Phd Program)

Publications

PUBLICATIONS

- **Nontraumatic Osteonecrosis of the Femoral Head: An International Evidence-Based Clinical Practice Guideline.** *The Journal of arthroplasty*
Cheng, E. Y., Mirzaei, A., Goodman, S. B., Cui, Q., Mont, M. A., Jones, L. C.
2027
- **Infection-resistant alloys for implants** *PROGRESS IN MATERIALS SCIENCE*
Bandyopadhyay, A., Upadhyay, L., Goodman, S. B., Kumar, M., Bose, S.
2027; 164
- **Design and Manufacturing of Multifunctional Hydroxyapatite-Coated Ti6Al4V Implants With Cissus quadrangularis.** *Journal of biomedical materials research. Part A*
Bose, S., Robertson, S. F., Kushram, P., Dernell, W., Goodman, S. B., Bandyopadhyay, A.
2026; 114 (8): e70135
- **Nontraumatic Osteonecrosis of the Femoral Head: An Update.** *The Journal of bone and joint surgery. American volume*
Mont, M. A., Smitherberg, C. W., Jones, L. C., Goodman, S. B., Lieberman, J. R., Parvizi, J., Cheng, E. Y.
2026
- **Biomechanical Assessment of Pin-Site Fractures in Intra- versus Extra-Incisional Pinning Technique for Robotic Total Knee Arthroplasty: A Cadaver Study.** *The Journal of arthroplasty*
Writing Committee, Liau, Z. Q., Shao-Rong Pang, A., Kee Ern, E. T., Peng Ng, M. S., Meng, C. S., Kumarsing, R. A., Chan, C. K., Vachalam, D., Lee, M. L., Po Hui, J. H., Yew, A., Goodman, S.
2026
- **Micro-and nano-plastics in skeletal tissues: detection, biological effects, and mechanisms** *JOURNAL OF HAZARDOUS MATERIALS ADVANCES*
Yi, M., Li, B., Wang, Q., Xu, X., Cui, C., Liu, C., Goodman, S. B., Wong, R., Cheung, W., Zhao, X., Liu, B., Zhang, N.
2026; 23
- **The American Association of Hip and Knee Surgeons Position Statement on OrthoBiologics for Advanced Hip and Knee Osteoarthritis.** *The Journal of arthroplasty*

- Carender, C. N., Grosso, M., Browne, J. A., Nho, S. J., Goodman, S., Della Valle, C. J., Hannon, C. P.
2026
- **Role of cellulose and its derivatives for 3D printing of bone tissue scaffolds** *FRONTIERS IN BIOENGINEERING AND BIOTECHNOLOGY*
Ege, D., Kamali, A., Goodman, S.
2026; 14
 - **Evidence for using synthetic bone grafts for the treatment of osteonecrosis of the femoral head: a systematic review of the literature and meta-analysis.** *Journal of hip preservation surgery*
Dębiński, M., Goodman, S. B., Walecki, J., Bobecka-Wesołowska, K., Waśko, M. K.
2026; 13 (2): 74-87
 - **Developing International Clinical Practice Guidelines: Lessons Learned in Achieving Global Consensus for the Association Research Circulation Osseous Guideline.** *The Journal of arthroplasty*
Cheng, E. Y., Mont, M. A., Goodman, S. B., Jones, L. C., Cui, Q., Restrepo, D. J., Guarin Perez, S. F., Parikh, R. R., Butler, M. E., Mirzaei, A.
2026
 - **Expert Consensus on Vascular Assessment and Treatment Strategies for Adult Femoral Neck Fractures.** *Annals of plastic surgery*
Zhao, D., Goodman, S., Cui, Q. T., Qin, L., Lineaweaver, W. C., Xu, J., Sugano, N., Reina, N., Li, K., Liu, B., Cheng, L., Zhang, Y.
2026
 - **An ITGA11 expressing subpopulation as predictor for the donor-specific osteogenic capacity of stromal cells.** *Bone research*
Jamil, A. J., Madsen, K., Daamouch, S., Villadsen, B., Ma, C., Jeromdesella, S., Nørgård, M. Ø., Grupe, E., Jakobsson, M. B., Wang, Y., Takematsu, E., Zhao, L., Goodman, et al
2026; 14 (1)
 - **Corticosteroid-associated osteonecrosis in paediatric compared with adult patients: are they the same disease?** *Bone & joint open*
Igei, T., Smith, G. B., Chow, S. K., Jobanputra, A., Khoo, B. W., Shea, K. G., Goodman, S. B.
2026; 7 (5): 682-691
 - **Immune profiling in orthopaedic diseases using mass cytometry : a narrative review of applications and future directions.** *Bone & joint research*
Susuki, Y., Thukkaram, M., Shinohara, I., Murayama, M., Morita, M., Igei, T., Ma, C., Pius, A. K., Gao, Q., Chow, S. K., Goodman, S. B.
2026; 15 (5): 497-507
 - **From paradox to population impact: Rethinking strengthening in knee osteoarthritis - A state-of-the-art review** *OSTEOARTHRITIS AND CARTILAGE OPEN*
Gallo, J., Goodman, S. B., Ditmar, R.
2026; 8 (2): 100806
 - **Liposomal Delivery of L-2-Hydroxyglutarate for Targeting Epigenetic Dysregulation in Osteoarthritis** *ADVANCED NANOBIO MED RESEARCH*
Murgia, D., Pandey, A., Spano, R., Martins Estevao, B., Palomba, R., Avancini, G., Gupta, T., Lopez Estevez, A., Goodman, S. B., Bhutani, N., Decuzzi, P.
2026
 - **Nontraumatic Osteonecrosis of the Femoral Head: An International Evidence-Based Clinical Practice Guideline.** *The Journal of bone and joint surgery. American volume*
Cheng, E. Y., Mirzaei, A., Goodman, S. B., Cui, Q., Mont, M. A., Jones, L. C.
2026
 - **Fear and the Adoption of Technology in Total Hip Arthroplasty.** *The Journal of arthroplasty*
Blumenfeld, T. J., Fitzsimmons, L. E., Goodman, S. B., Amanatullah, D. F.
2026
 - **Commentary: Senescence-driven osteonecrosis of the femoral head in the elderly-A distinct pathophysiological entity.** *Frontiers in medicine*
Goodman, S. B., Smitterberg, C. W., Jones, L. C., Mont, M. A.
2026; 13: 1794073
 - **The role of neutrophils in the pathophysiology of knee osteoarthritis : a review.** *Bone & joint research*
Stefancik, M., Goodman, S. B., Gallo, J.

2026; 15 (3): 332-341

- **Periprosthetic joint infection as failure of containment: A causal and probabilistic framework.** *Journal of orthopaedic translation*
Gallo, J., Bal, Z., Goodman, S. B.
2026; 57: 101098
- **Reply to Letter to the Editor on "Patients Who Have Limited English Proficiency Are More Likely to Receive Elective Total Joint Arthroplasty".** *The Journal of arthroplasty*
Angeles, J. P., Abella, M. K., McGovern, A. G., Espiritu, J. R., Bankston, M. E., Arora, P., Koltsov, J. C., Finlay, A. K., Giori, N. J., Huddleston, J. I., Maloney, W. J., Goodman, S. B., Amanatullah, et al
2026; 41 (3): e22-e23
- **Diagnosis and Treatment of Nontraumatic Osteonecrosis of the Femoral Head: A Systematic Review and Meta-Analyses for the ARCO Clinical Practice Guideline Development Workgroup.** *Medical sciences (Basel, Switzerland)*
Parikh, R. R., Mirzaei, A., Butler, M. E., Restrepo, D. J., Guarin Perez, S. F., Brandt, S., Swartz, G., Katanbaf, R., Goodman, S. B., Mont, M. A., Cui, Q., Jones, L. C., Cheng, et al
2026; 14 (1)
- **Increased macrophage autophagy with unique polarization in rheumatoid synovium.** *Autophagy*
Huang, H., Takakubo, Y., Takeda, Y., Uno, T., Satake, H., Asao, H., Futakuchi, M., Yang, Y. P., Goodman, S. B., Takagi, M.
2026: 1-21
- **What would you do first? A survey of treatment priorities for patients with hip-spine syndrome among spine and hip surgeons.** *BMC musculoskeletal disorders*
Breuning, C., Tian, X., Goronzy, J., Günther, K. P., Platz, U., Beyer, F., Disch, A. C., Lachiewicz, P. F., Liu, N., Goodman, S. B., Wood, K. B., Zwillingenberger, S.
2026
- **A Novel Murine Model to Study the Early Biological Events of Corticosteroid-Associated Osteonecrosis of the Femoral Head.** *Bioengineering (Basel, Switzerland)*
Shinohara, I., Susuki, Y., Chow, S. K., Cheung, P., Moses, A. S., Murayama, M., Morita, M., Uno, T., Gao, Q., Ma, C., Igei, T., Beinat, C., Goodman, et al
2026; 13 (1)
- **The presence of persistent synovial inflammation after "Eradication" unmasks the "Unseen" dormant state of infection allowing the prediction of infection free survival in total joint replacements.** *Journal of translational medicine*
Manasherob, R., Warren, S. I., Flanagan, C. M., Arora, P., Heo, L., Moore, C. J., Chow, S. K., Otieno-Ayayo, Z. N., Furukawa, D., Maloney, W. J., Lowenberg, D. W., Goodman, S. B., Amanatullah, et al
2025; 23 (1): 1392
- **Management of retro-acetabular osteolysis with a retained shell and injection of demineralized bone matrix using a vinyl urinary catheter and syringe: a simple technique and case series.** *Arthroplasty (London, England)*
Apinyankul, R., Silva, L. L., Tantikosol, P., Goodman, S. B.
2025; 7 (1): 62
- **Targeting cellular senescence in progenitor cells as a strategy to enhance bone regeneration by cell therapies: a systematic review of pre-clinical investigations.** *Stem cell research & therapy*
Morita, M., Damle, E. B., Shinohara, I., Murayama, M., Susuki, Y., Gao, Q., Ma, C., Chow, S. K., Goodman, S. B.
2025; 16 (1): 669
- **Inhibition of 15-hydroxy prostaglandin dehydrogenase promotes cartilage regeneration.** *Science (New York, N.Y.)*
Singla, M., Wang, Y. X., Monti, E., Bedi, Y., Agarwal, P., Su, S., Ancel, S., Hermsmeier, M., Devisetti, N., Pandey, A., Bakooshli, M. A., Palla, A. R., Goodman, et al
2025: ead6649
- **Osteonecrosis of the femoral head: A Dysbiotic Condition?** *The Journal of arthroplasty*
Ferrini, A., He, M., Mont, M. A., Goodman, S. B., Parvizi, J.
2025
- **Cajal transcriptionally disrupts the Siglec15/NFATc1 signaling cascade to attenuate osteoclast fusion and bone resorption.** *International immunopharmacology*
Ma, C., Mo, L., Wang, Z., He, W., Niu, W., Goodman, S. B., Goodnough, L. H., Liu, Y.

2025; 168 (Pt 2): 115726

- **Single-cell RNA sequencing reveals early cell dynamics of MSC-based therapy in long bone critical-size defects in mice** *JOURNAL OF ORTHOPAEDIC TRANSLATION*
Zhang, N., Yuan, J., Li, X., Su, N., Wang, Y., Chen, S., Huang, E., Gao, Q., Yang, F., Chow, S., Goodman, S. B.
2025; 55: 121-131
- **Can alternatives to animal testing yield useful information regarding biological mechanisms and drug discovery?** *Journal of orthopaedic translation*
Gao, Q., Chow, S. K., Shinohara, I., Murayama, M., Susuki, Y., Morita, M., Ma, C., Goodman, S. B.
2025; 55: 132-145
- **Single-cell RNA sequencing reveals early cell dynamics of MSC-based therapy in long bone critical-size defects in mice.** *Journal of orthopaedic translation*
Zhang, N., Yuan, J., Li, X., Su, N., Wang, Y., Chen, S., Huang, E., Gao, Q., Yang, F., Chow, S. K., Goodman, S. B.
2025; 55: 121-131
- **CORR Synthesis: What Is the Evidence for Joint-saving Procedures in ARCO Stage III Osteonecrosis of the Femoral Head?** *Clinical orthopaedics and related research*
Chen, K. L., Goodman, S. B.
2025
- **Revision Total Hip Arthroplasty in Juvenile Idiopathic Arthritis: Survivorship After a Mean Follow-up of 11 Years.** *The Journal of arthroplasty*
Tantikosol, P., Hwang, K., Segovia, N. A., Goodman, S. B.
2025
- **Can alternatives to animal testing yield useful information regarding biological mechanisms and drug discovery?** *JOURNAL OF ORTHOPAEDIC TRANSLATION*
Gao, Q., Chow, S., Shinohara, I., Murayama, M., Susuki, Y., Morita, M., Ma, C., Goodman, S. B.
2025; 55: 132-145
- **Preoperative Knee Templating Accuracy Does Not Predict Radiographic or Clinical Outcome in Total Knee Arthroplasty** *ORTHOPEDICS*
Mrutyunjaya, S., Bosch, L. C., Bonano, J. C., Pham, N. S., Hwang, K., Goodman, S. B., Amanatullah, D. F.
2025; 48 (5): e215-e219
- **Evidence for using synthetic bone grafts for the treatment of osteonecrosis of the femoral head: a systematic review of the literature and meta-analysis** *JOURNAL OF HIP PRESERVATION SURGERY*
Debinski, M., Goodman, S. B., Walecki, J., Bobecka-Wesolowska, K., Wasko, M. K.
2025
- **Part II: Biologic Augmentation Strategies as Useful Adjuncts in Musculoskeletal Surgery** *JOURNAL OF ARTHROPLASTY*
Rainey, J. P., Goodman, S. B., Jones, L. C., Sequeira, S. B., Mont, M. A.
2025; 40 (8): 2142-2152
- **Risk Factors for Corticosteroid-associated Osteonecrosis in Children: A National Database Study.** *Journal of the Pediatric Orthopaedic Society of North America*
Smith, G. B., Pham, N. S., Alayleh, A., Smith, S., Chao, K., Goodman, S. B., Shea, K. G.
2025; 12: 100199
- **Patients Who Have Limited English Proficiency are More Likely to Receive Elective Total Joint Arthroplasty.** *The Journal of arthroplasty*
Angeles, J. P., Abella, M. K., McGovern, A. G., Espiritu, J. R., Bankston, M., Arora, P., Koltsov, J. C., Finlay, A. K., Giori, N. J., Huddleston, J. I., Maloney, W. J., Goodman, S. B., Amanatullah, et al
2025
- **Demystifying Our Knowledge of Stem Cells and Progenitor Cells Part I: Basic Concepts Relevant to the Treatment of Osteonecrosis and Other Diseases of the Musculoskeletal System.** *The Journal of arthroplasty*
Goodman, S. B., Goodnough, L. H., Chow, S. K.
2025; 40 (8): 2136-2141
- **Orthobiologics for the Treatment of Osteonecrosis: The Need for a Prospective Randomized Clinical Trial** *REGENERATIVE ENGINEERING AND TRANSLATIONAL MEDICINE*
Goodman, S. B., Rainey, J. P., Chow, S. K., Mont, M. A., Jones, L. P.

2025

- **Metformin Modulates Oxidative Stress in Murine Mesenchymal Stem Cells In Vitro and Alleviates Corticosteroid-Induced Inflammation and Impairment of Bone Formation** *HSS JOURNAL*
 Shinohara, I., Susuki, Y., Murayama, M., Gao, Q., Cekuc, M., Ergul, Y., Morita, M., Pius, A. K., Ma, C., Chow, S., Goodman, S. B.
 2025
- **Metformin Modulates Oxidative Stress in Murine Mesenchymal Stem Cells In Vitro and Alleviates Corticosteroid-Induced Inflammation and Impairment of Bone Formation.** *HSS journal : the musculoskeletal journal of Hospital for Special Surgery*
 Shinohara, I., Susuki, Y., Murayama, M., Gao, Q., Cekuc, M. S., Ergul, Y. S., Morita, M., Pius, A. K., Ma, C., Chow, S. K., Goodman, S. B.
 2025: 15563316251351031
- **Optimization of Cytometry by Time-of-Flight Staining for Peripheral Blood and Bone Marrow Samples.** *Tissue engineering. Part C, Methods*
 Susuki, Y., Shinohara, I., Murayama, M., Morita, M., Ma, C., Pius, A. K., Gao, Q., Chow, S. K., Goodman, S. B.
 2025; 31 (7): 261-270
- **The Role of Cell Therapies for the Treatment of Osteonecrosis of the Femoral Head.** *The Journal of arthroplasty*
 K-H Chow, S., Rainey, J. P., Mont, M. A., Jones, L. P., Goodman, S. B.
 2025
- **Risk Factors, Pathogenesis, Diagnosis, and Treatment Options for COVID-Associated Osteonecrosis: A Systematic Review.** *The Journal of arthroplasty*
 Sequeira, S. B., Jones, L. P., Goodman, S. B., Mont, M. A.
 2025
- **Associated Risk Factors, Pathogenesis, Diagnosis, and Treatment Options for Multifocal Osteonecrosis: A Systematic Review.** *The Journal of arthroplasty*
 Sequeira, S. B., Jones, L. C., Goodman, S. B., Mont, M. A.
 2025
- **Introduction to the 2024 Association Research Circulation Osseous Proceedings Special Issue.** *The Journal of arthroplasty*
 Sugano, N., Jones, L. C., Ando, W., Goodman, S. B., Mont, M. A., Sakai, T.
 2025
- **Osteonecrosis: A More Appropriate Term Than Avascular Necrosis - Pathophysiologic Rationale.** *The Journal of arthroplasty*
 Cheng, E. Y., Mirzaei, A., Sugano, N., Hernigou, P., Jones, L. C., Koo, K. H., Drescher, W. R., Cui, Q., Sierra, R. J., Goodman, S. B., Zhao, D., Mont, M.
 2025
- **MRI detection of senescent cells in porcine knee joints with a β -galactosidase responsive Gd-chelate.** *Npj imaging*
 Nernekli, K., Mangarova, D. B., Suryadevara, V., Hajipour, M., Tang, J. H., Wang, J., Liang, T., Harris, M., Ueyama, T., Lyons, J. K., Moseley, M. E., Roudi, R., Pisani, et al
 2025; 3 (1): 18
- **Single-Cell Epigenetic Dynamics and Determinants of Surgical Outcomes**
 Cambriel, A., Sabayev, M., Ganio, E., Angst, M., Bonham, T., Anronikov, A., Tsai, A., Diop, M., Einhaus, J., Feyaerts, D., Goodman, S., Drover, D., Verdonk, et al
 LIPPINCOTT WILLIAMS & WILKINS.2025: 496
- **Modification of Post-operative Inflammation Through Infusion of a Young Donor Plasma Fraction in Older Patients**
 Tsai, A., Xue, L., Gao, X., McAllister, T., Tingle, M., Porras, G., Feinstein, I., Feyaerts, D., Verdonk, F., Sabayev, M., Hedou, J., Ganio, E., Berson, et al
 LIPPINCOTT WILLIAMS & WILKINS.2025: 965-967
- **Retrospective Analysis and Characterization of Avascular Necrosis By Bone Location in Pediatric Leukemia/Lymphoma Patients.** *Journal of pediatric orthopedics*
 Alayleh, A., Naz, H., Taylor, V., Johnson, T. R., Farook, S., Hofmann, G., Obilo, C., Pham, N. S., Harbacheck, K., Laureano, T., Smith, S. M., Chao, K., Goodman, et al
 2025
- **AN INNERVATED SYNOVIUM-CARTILAGE CHIP FOR MODELING KNEE JOINT INFLAMMATION AND ASSOCIATED PAIN**
 Makarczyk, M., Preisegger, M., Gao, Q., Bunnell, B., Goodman, S., Michael, G., Lin, H.

ELSEVIER SCI LTD.2025

- **Pathophysiology of the Effects of Oxidative Stress on the Skeletal System.** *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*
Shinohara, I., Morita, M., Chow, S. K., Murayama, M., Sususki, Y., Gao, Q., Goodman, S. B.
2025
- **Human skeletal development and regeneration are shaped by functional diversity of stem cells across skeletal sites.** *Cell stem cell*
Ambrosi, T. H., Taheri, S., Chen, K., Sinha, R., Wang, Y., Hunt, E. J., Goodnough, L. H., Murphy, M. P., Steininger, H. M., Hoover, M. Y., Felix, F., Weldon, K. C., Koepke, et al
2025
- **Revision Total Knee Arthroplasty for Juvenile Idiopathic Arthritis: Implant Survivorship and Clinical Outcomes the Second Time Around.** *The Journal of arthroplasty*
Cheng, R., Coxe, F. R., Chiu, Y., Szapary, H., Hwang, K., Chen, A. F., Goodman, S., Shah, V. M., Figgie, M. P., Blevins, J. L.
2025
- **Incidence and Risk Factors for Steroid-associated Osteonecrosis in Children and Adolescents: A Systematic Review of the Literature.** *Journal of pediatric orthopedics*
Johnson, T., Naz, H., Taylor, V., Farook, S., Hofmann, G., Harbacheck, K., Pham, N. S., Smith, S. M., Chao, K., Lee, T., Goodman, S., Shea, K.
2025
- **Macrophage phenotypes modulate neoangiogenesis and fibroblast profiles in synovial-like organoid cultures.** *Osteoarthritis and cartilage*
Gao, Q., Zhang, X., Makarczyk, M. J., Wong, L. E., Quig, M. S., Shinohara, I., Murayama, M., Chow, S. K., Bunnell, B. A., Lin, H., Goodman, S. B.
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- **Infusion of young donor plasma components in older patients modifies the immune and inflammatory response to surgical tissue injury: a randomized clinical trial.** *Journal of translational medicine*
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