

## BIOGRAPHICAL SKETCH

NAME: **Singh, Jasvinder**

eRA COMMONS USER NAME: JASSINGH

POSITION TITLE: **Professor of Medicine and Epidemiology**

EDUCATION/TRAINING (Begin with baccalaureate education, include postdoctoral training and residency training if applicable.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University College of Medical Sciences New Delhi, India	Bachelor of Medicine & Bachelor of Surgery (MBBS)	12/1993	Medicine
All India Institute of Medical Sciences (AIIMS), New Delhi, India		12/1994	Psychiatry
State University of New York, Syracuse, NY	Residency	06/1998	Internal Medicine
Washington University School of Medicine, St. Louis, MO	Internship	08/2001	Rheumatology
University of Minnesota, Minneapolis, MN	MPH	05/2003	Epidemiology

### A. Personal Statement

My passion in research is two-fold, (1) to improve our understanding of what impacts patient outcomes, such as pain, functional limitation and quality of life (QOL) in people with arthritis and design methods to improve these outcomes and (2) to generate best evidence by performing clinical trials, Cochrane Systematic Reviews, Meta-analyses, Network Meta-analyses (NMA) as well as the development and dissemination of treatment guidelines that can change the way we practice medicine. As the PI on several previous and current federal grants, I led studies on patient-reported outcomes (PROs) in patients with arthritis, including studies of QOL research in rheumatic diseases. **I am qualified to co-lead this project** given my experience in osteoarthritis and total joint replacement, designing and conducting multi-site clinical studies, including observational studies in cohorts of Veterans with osteoarthritis or those undergoing total joint replacement/arthroplasty and randomized controlled trials (RCTs) in patients with rheumatic conditions. My expertise compliments Dr. McDonald's expertise in genetic epidemiology and large-scale genomics data analyses. Dr. McDonald and I have been collaborating for the last 4 years on studying **genetics of osteoarthritis in the Million Veteran Program (MVP)**. Recently, our MVP project was **awarded a CIPHER supplement** to expand the scope by serving as CIPHER partners generating and validating via chart review metadata data elements curated the Electronic Health Record (EHR). I am the PI on an ongoing VA-funded RCT of a storytelling intervention in gout that successfully enrolled 307 African Americans, a PI on a PCORI-funded completed RCT of that tested a patient decision aid in lupus in 301 primarily minority women and a PI of currently funded PCORI implementation multi-center study that has enrolled >1,400 lupus patients. I will directly oversee all aspects of this grant including patient recruitment and participate in all scientific and administrative aspects of the proposed research. Dr. McDonald (Donnelly) and I will be responsible for all study activities for this proposed study including, but not limited to: 1) implementing the study protocol; 2) reviewing all analyses, and 3) assisting in and leading the preparation of abstracts, presentations and manuscripts.

Ongoing and recently completed projects that I would like to highlight include:

### Citations:

1. Gerbal A, Homberg JC, Rochant H, Liberge G, Delarue F, Salmon C. (1967). [New immunologic classification of the hemolytic anemias with autoantibodies]. *Nouv Rev Fr Hematol*, 7(3), 401-6.
2. **Singh JA**, Yu S, Chen L & Cleveland JD. (2019). Rates of Total Joint Replacement in the United States: Future Projections to 2020-2040 Using the National Inpatient Sample. *J Rheumatol*, 46(9), 1134-1140.

3. **Singh JA**, Vessely MB, Harmsen WS, Schleck CD, Melton LJ 3rd, Kurland RL & Berry DJ. (2010). A population-based study of trends in the use of total hip and total knee arthroplasty, 1969-2008. Mayo Clin Proc, 85(10), 898-904. PMID: PMC2947961

## B. Positions, Scientific Appointments, And Honors

### Positions

2016-Present	Endowed Professor, Musculoskeletal Outcomes Research
2015-Present	Professor, Department of Epidemiology, University of Alabama at
2014-Present	Professor with Tenure, Department of Medicine, University of Alabama at
2013-Present	Director, Gout clinic, University of Alabama Health Services Foundation, Birmingham, AL
2012-2014	Associate Professor with Tenure, Dept. of Medicine & Epidemiology, University of Alabama
2012-Present	Director, Rheumatology Research, Birmingham VA Medical Center, Birmingham, AL
2009-2012	Associate Professor, Dept. of Medicine & Epidemiology, University of Alabama at
2009-2016	Research Collaborator, Department of Orthopedics, Mayo Clinic, Rochester, MN
2008-2009	Associate Professor, Department of Medicine, University of Minnesota, Minneapolis, MN
2007-2009	Visiting Scientist, Department of Orthopedics, Mayo Clinic, Rochester, MN
2006-2009	Visiting Scientist, Department of Health Sciences, Mayo Clinic, Rochester, MN
2001-2008	Assistant Professor, Department of Medicine, University of Minnesota, Minneapolis, MN
2001-2009	Staff Rheumatologist, VA Medical Center, Minneapolis, MN

### Scientific Appointments

2013-Present	Chair, ACR Meet-the-Professor, Workshop and Study Group subcommittee
2013-Present	Director, UAB Cochrane Musculoskeletal Group Satellite Center
2012-2016	Ad hoc reviewer, Arthritis, Connective Tissue and Skin (ACTS) Study Section
2012-Present	Co-Chair, ACR Annual Meeting Abstract selection committee (Epidemiology)
2011-2014	Member, American College of Rheumatology (ACR) Practice Guidelines Subcommittee
2009-2018	Associate Editor, Biomedical Central Musculoskeletal Disorders
2009-Present	Member, Rheumatology Field Advisory Committee, VA Central Office
2008-2012	Chair, American College of Rheumatology Fellow Selection Committee, OMERACT
2005	Human Studies Committee, Minneapolis VA Medical Center
2005-2007	VA Rheumatology Consortium's (VARC) Quality Indicator Committee
2005-Present	Editorial Board, Journal of Clinical Rheumatology
2004-2007	Co-Chair, Subcommittee on Response and Classification Criteria (SRC) of the American
2004-2008	American College of Rheumatology Standing Committee on Quality of Care (QoC)
2004-2008	American College of Rheumatology (ACR) Annual Meeting Planning Committee (APMC)
2004-2009	Co-Chair, University of Minnesota Rheumatology Division Research Initiative, MN

### Honors

2018	Arthritis Foundation's Lee C. Howley, Sr. award
2017	Max Cooper Award for Research Excellence, University of Alabama at Birmingham (UAB)
2016	Henry Kunkel Young Investigator Award, American College of Rheumatology (ACR)
2013	UAB Research Supplement Award for the 3rd rank at the Associate Professor level
2011	Elected Member, Southern Society of Clinical Investigation (SSCI)
2004-2007	Clinical Scholar, Minneapolis VA Center for Epidemiological and Clinical Research, MN
2001	Awarded American College of Rheumatology (ACR) Rheumatology fellow award
1991	3rd highest grade and honors in Pharmacology in second professional examination

## C. Contributions to Science

1. I have led studies focused on the treatment of osteoarthritis, which is the most common rheumatic disease in the world and the focus of the proposed study.
  - a. Gossec L, Paternotte S, Maillefert JF, Combescore C, Conaghan PG, Davis AM, Gunther KP, Hawker G, Hochberg M, Katz JN, Kloppenburg M, Lim K, Lohmander LS, Mahomed NN, March L, Pavelka K, Punzi L, Roos EM, Sanchez-Riera L, **Singh JA**, Suarez-Almazor ME, Dougados M &

- OARSI-OMERACT Task Force "total articular replacement as outcome measure in OA".. (2011). The role of pain and functional impairment in the decision to recommend total joint replacement in hip and knee osteoarthritis: an international cross-sectional study of 1909 patients. Report of the OARSI-OMERACT Task Force on total joint replacement. *Osteoarthritis Cartilage*, 19(2), 147-54. PMID: PMC4151518
- b. **Singh JA**, Mahowald ML & Noorbaloochi S. (2010). Intraarticular botulinum toxin A for refractory painful total knee arthroplasty: a randomized controlled trial. *J Rheumatol*, 37(11), 2377-86. PMID: PMC3018709
  - c. Boon AJ, Smith J, Dahm DL, Sorenson EJ, Larson DR, Fitz-Gibbon PD, Dykstra DD & **Singh JA**. (2010). Efficacy of intra-articular botulinum toxin type A in painful knee osteoarthritis: a pilot study. *PM R*, 2(4), 268-76.
  - d. **Singh JA**, Sperling J, Buchbinder R & McMaken K. (2010). Surgery for shoulder osteoarthritis. *Cochrane Database Syst Rev*, (10), CD008089.
2. Our team has led key studies focused on the epidemiology of osteoarthritis that have contributed to a better understanding of the disease mechanisms underlying osteoarthritis.
    - a. Sheehy L, Culham E, McLean L, Niu J, Lynch J, Segal NA, **Singh JA**, Nevitt M & Cooke TD. (2015). Validity and sensitivity to change of three scales for the radiographic assessment of knee osteoarthritis using images from the Multicenter Osteoarthritis Study (MOST). *Osteoarthritis Cartilage*, 23(9), 1491-8. PMID: PMC4831715
    - b. Maxwell J, Niu J, **Singh JA**, Nevitt MC, Law LF & Felson D. (2013). The influence of the contralateral knee prior to knee arthroplasty on post-arthroplasty function: the multicenter osteoarthritis study. *J Bone Joint Surg Am*, 95(11), 989-93. PMID: PMC3748984
    - c. Maxwell JL, Felson DT, Niu J, Wise B, Nevitt MC, **Singh JA**, Frey-Law L & Neogi T. (2014). Does clinically important change in function after knee replacement guarantee good absolute function? The multicenter osteoarthritis study. *J Rheumatol*, 41(1), 60-4. PMID: PMC3914207
    - d. Ghomrawi HMK, Mushlin AI, Kang R, Banerjee S, **Singh JA**, Sharma L, Flink C, Nevitt M, Neogi T & Riddle DL. (2020). Examining Timeliness of Total Knee Replacement Among Patients with Knee Osteoarthritis in the U.S.: Results from the OAI and MOST Longitudinal Cohorts. *J Bone Joint Surg Am*, 102(6), 468-476. PMID: PMC7508265
  3. We have made significant contributions to understanding the predictors of pain, function and quality of life in cohorts of patients after joint replacement as well as other arthroplasty outcomes. We have assessed prevalence, trends and predictors of pain, function, quality of life and postoperative complications following arthroplasty. We have conducted one of the few population-based studies examining utilization rates of these procedures as well as cardiopulmonary complications following arthroplasty.
    - a. Khanna G, **Singh JA**, Pomeroy DL & Gioe TJ. (2011). Comparison of patient-reported and clinician-assessed outcomes following total knee arthroplasty. *J Bone Joint Surg Am*, 93(20), e117(1)-(7).
    - b. **Singh JA** & Lewallen DG. (2010). Predictors of activity limitation and dependence on walking aids after primary total hip arthroplasty. *J Am Geriatr Soc*, 58(12), 2387-93. PMID: PMC3850176
    - c. **Singh JA**, Borowsky SJ, Nugent S, Murdoch M, Zhao Y, Nelson DB, Petzel R & Nichol KL. (2005). Health-related quality of life, functional impairment, and healthcare utilization by veterans: veterans' quality of life study. *J Am Geriatr Soc*, 53(1), 108-13.
    - d. **Singh JA**, Nelson DB, Fink HA & Nichol KL. (2005). Health-related quality of life predicts future health care utilization and mortality in veterans with self-reported physician-diagnosed arthritis: the veterans arthritis quality of life study. *Semin Arthritis Rheum*, 34(5), 755-65.
  4. Our team has made contributions to the studying epidemiology of total joint arthroplasty and outcomes. I have led/co-led several methodological groups and serve as a steering committee member of the OMERACT (Outcome Measures in Rheumatology trials), an independent international organization that has played key role in development of outcome measures in arthroplasty, including the AAOS appropriateness criteria.
    - a. **Singh JA**, Jensen MR, Harmsen WS, Gabriel SE & Lewallen DG. (2011). Cardiac and thromboembolic complications and mortality in patients undergoing total hip and total knee arthroplasty. *Ann Rheum Dis*, 70(12), 2082-8. PMID: PMC3315837

- b. **Singh JA**, Vessely MB, Harmsen WS, Schleck CD, Melton LJ 3rd, Kurland RL & Berry DJ. (2010). A population-based study of trends in the use of total hip and total knee arthroplasty, 1969-2008. Mayo Clin Proc, 85(10), 898-904. PMCID: PMC2947961
  - c. **Singh JA**, Inacio MC, Namba RS & Paxton EW. (2015). Rheumatoid arthritis is associated with higher ninety-day hospital readmission rates compared to osteoarthritis after hip or knee arthroplasty: a cohort study. Arthritis Care Res (Hoboken), 67(5), 718-24. PMCID: PMC4391985
  - d. **Singh JA**, Lu X, Rosenthal GE, Ibrahim S & Cram P. (2014). Racial disparities in knee and hip total joint arthroplasty: an 18-year analysis of national Medicare data. Ann Rheum Dis, 73(12), 2107-15. PMCID: PMC4105323
5. We have led the development of key outcome domains and measures for clinical trials of total knee or total hip replacement. Through our Outcomes Measures in Rheumatology Trials (OMERACT) Working Group in Knee and Hip Replacement/arthroplasty outcomes group, an international organization that leads data-driven development of trial outcome measures, we have developed a core domain set for arthroplasty trials and recently published studies for measures of these core domains.
- a. Goodman SM, Mehta BY, Mandl LA, Szymonifka JD, Finik J, Figgie MP, Navarro-Millán IY, Bostrom MP, Parks ML, Padgett DE, McLawhorn AS, Antao VC, Yates AJ, Springer BD, Lyman SL & **Singh JA**. (2020). Validation of the Hip Disability and Osteoarthritis Outcome Score Pain and Function Subscales for Use in Total Hip Replacement and Total Knee Replacement Clinical Trials. J Arthroplasty, 35(5), 1200-1207.e4. PMCID: PMC7193650
  - b. Goodman SM, Mehta BY, Kahlenberg CA, Krell EC, Nguyen J, Finik J, Figgie MP, Parks ML, Padgett DE, Antao VC, Yates AJ, Springer BD, Lyman SL & **Singh JA**. (2020). Assessment of a Satisfaction Measure for Use After Primary Total Joint Arthroplasty. J Arthroplasty, 35(7), 1792-1799.e4.
  - c. Goodman SM, Mehta B, Mirza SZ, Figgie MP, Alexiades M, Rodriguez J, Sculco P, Parks M & **Singh JA**. (2020). Patients' perspectives of outcomes after total knee and total hip arthroplasty: a nominal group study. BMC Rheumatol, 4, 3. PMCID: PMC6956500
  - d. **Singh JA**, Mehta B, Mirza SZ, Figgie MP, Sculco P, Parks M & Goodman SM. (2021). When Has a Knee or Hip Replacement Failed? A Patient Perspective. J Rheumatol, 48(3), 447-453.

**Complete List of Published Work in MyBibliography:**

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1dWPeHcC732QD/bibliography/43542450/public/?sort=date&direction=descending>