# Bhaven N. Sampat

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Curriculum Vitae: July 2024

# Academic Appointments

Arizona State University

- Professor, School for the Future of Innovation in Society, 2023-
- Professor, School of Public Affairs, 2023-
- Faculty Affiliate, Consortium for Science, Policy, and Outcomes, 2023-

#### Columbia University

- Professor, Department of Health Policy and Management (HPM), Mailman School of Public Health, 2021-2023
- Associate Professor, Department of Health Policy and Management (HPM), Mailman School of Public Health, 2012-2021.
- Assistant Professor, Department of Health Policy and Management (HPM), Mailman School of Public Health, 2005 - 2012

## New York University

- Distinguished Scholar in Residence, Engelberg Center on Law and Innovation Policy, NYU School of Law, 2015-2016.
- Visiting Professor, Robert F. Wagner School of Public Service, 2015-2016.

## University of Michigan

 Robert Wood Johnson Foundation Scholar in Health Policy Research, Department of Health Management and Policy, School of Public Health, 2003-2005.

#### Georgia Institute of Technology,

• Assistant Professor, School of Public Policy, 2001-2003.

## Other Affiliations

Engelberg Center on Innovation Law and Policy, NYU Law School

• Fellow, 2024-present

Abdul Latif Jameel Poverty Action Lab (J-PAL) Science for Progress Initiative

• Affiliated Professor, 2022-present

National Bureau of Economic Research (NBER)

• Research Associate, Productivity, Innovation, and Entrepreneurship Program, 2013-present

## Education

Graduate School of Arts and Sciences, Columbia University

Ph.D. Economics, with Distinction, 2001.

M.Phil. Economics, 2000.

M.A. Economics, 1998.

Columbia College, Columbia University

B.A. Economics-Political Science, summa cum laude, 1996.

## Training

Post-Doctoral: Robert Wood Johnson Foundation Scholars in Health Policy Research Program, Department of Health Management and Policy, University of Michigan School of Public Health

## Honors and awards

- Columbia Yusuf Hamied Faculty Fellowship, 2019
- Robert Wood Johnson Foundation Investigator Award In Health Policy Research, 2007

## Grant Support

#### Current

- 2023-2024: National Institute for Health Care Management "Can Improving Pharmaceutical Patent Quality Promote Competition and Reduce Drug Prices?" Role: PI.
- 2020-2024 : National Science Foundation The Effects of the World War II Research Effort on Postwar U.S. Science, Technology, and Innovation Role: co-PI. (PI: Daniel Gross)

#### Past

- 2018-2023 : European Research Council Serendipity in Research and Innovation Role: Subaward PI.
- 2019: Sloan Foundation Developing and Validating New Measures of Connections Between Science and Patented Technology Role: PI.
- 2019: Yusuf Hamied Fellowship, Columbia Mailman Trade Related Intellectual Property Rights: Patents and Drug Prices in India Role: PI.
- 2017-2019: National Science Foundation The Effects of Federal Indirect Cost Recovery on Academic Institutions Role: PI.
- 2017-2018: National Science Foundation The Effects of Patents on Innovation, Diffusion, and Access Role: PI.
- 2013-2015: UK Economic and Social Research Council TRIPS Implementation and Secondary Pharmaceutical Patenting: An Empirical Analysis Role: Subaward PI.

- 2011-2013: National Science Foundation Idea and Economic Spillovers from Publicly-funded Biomedical Research Role: Subaward PI. (PI: Pierre Azoulay)
- 2011-2012 : Commonwealth Fund Analysis of National Datasets on Health Reform Issues Role: PI.
- 2010-2012 : Robert Wood Johnson Foundation Drug Patent Challenges and Public Health Role: PI.
- 2009-2010: Commonwealth Fund Contributing to Health Care Reform: Analysis of National Data Sets Role: PL
- 2008-2010 : Ford Foundation TRIPS and Development: The Political Economy of the Patent System Role: PI.
- 2007-2010: Robert Wood Johnson Foundation Investigator Award: The Political Economy of the NIH Role: PI.
- 2005-2007 : Merck Foundation Columbia-Stanford Consortium on Medical Innovation Role: PI.

## Administrative Leadership and Academic Service

## Academic Service

 Co-organizer (with Gail Cohen, James Evans, Daniel Larremore, and Dashun Wang) The International Conference on the Science of Science and Innovation, National Academy of Sciences, Engineering and Medicine, July 2024

https://www.icssi.org/2024schedule

- Committee Member, Congressionally-Mandated NASEM Committee to Evaluate the NASA Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program
- Program committee member, The International Conference on the Science of Science and Innovation (ICSSI), 2023

https://www.icssi.org/archive2023/speakers2023

- Judging panel, UK Office of Health Economics (OHE) 2022 Innovation Policy Prize https://www.ohe.org/ohe-prize/2022-question
- Co-founder, Steering Committee Member, and Co-Director of the Open Data Summer Fellows Program, NBER Innovation Information Initiative (I<sup>3</sup>) https://iii.pubpub.org/
- Committee Member, Congressionally-Mandated NASEM Committee to Evaluate Economic and Healthcare Benefits of the NIH Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program (2020-2021)

https://nap.nationalacademies.org/read/26376/chapter/1

## Administrative Leadership

- Senator (representing Mailman School tenured- and tenure-track faculty members), Columbia University Senate (2019-2021)
- Steering Committee, Columbia University Precision Medicine and Society Initiative
- Research Director, Department of Health Policy and Management, Columbia University (2016-2021)
- Steering Committee, Columbia Mailman School of Public Health (2010-2015)

# **Professional Organizations and Societies**

#### **Editorial Board**

- Editorial Advisory Board, Milbank Quarterly
- Advisory Editor, Research Policy (2014-2021)

# Teaching

Economics of Science and Technology Policy (Fall 2024)

Economics of Biomedical Innovation (Spring 2023; Fall 2021; Spring 2021; Fall 2019; Spring 2019)

Innovation in Health Policy (Spring 2020)

Economics of Precision Medicine (Spring 2020)

Vaccine Innovation and Public Policy (Fall 2020)

Evidence, Politics, Health Policy (with Ron Bayer) (Spring 2018)

Economics of Innovation (ASU Doctoral Seminar) (Spring 2018)

Economics of Medical Technology (Fall 2017; Fall 2016; Spring 2015; Fall 2013)

Program Evaluation (Spring 2017; Spring 2008; Spring 2007)

Integration of Science and Practice (Fall 2016; Spring 2014; Fall 2013; Spring 2013; Fall 2012)

Research Methods 1 (Spring 2015; Spring 2014; Spring 2013)

Health and Development (Spring 2012; Spring 2011; Spring 2010)

Economic Evaluation of Health Technologies (Spring 2012; Spring 2008)

Analytic Methods for Health Service Management (Spring 2009)

Economics and Ethics of New Technologies (Rockefeller University Doctoral Seminar) (Fall 2009)

Science, Technology and Sustainable Development (Sustainable Development PhD seminar) (Spring 2008)

U.S. Science and Technology Policy (SIPA) (Spring 2007; Spring 2006)

## **Publications**

## Peer reviewed research publications

 Daniel P Gross and Sampat, Bhaven N. America, Jump-Started: World War II R&D and the Takeoff of the U.S. Innovation System. American Economic Review, 113(12):3323–3356, 2023

- 2. Daniel P Gross and **Sampat, Bhaven N**. The World War II crisis innovation model: What was it, and where does it apply? *Research Policy*, 52(9):104845, 2023
- 3. Maya Durvasula, C Scott Hemphill, Lisa Larrimore Ouellette, **Sampat, Bhaven N.**, and Heidi L Williams. The NBER Orange Book dataset: A user's guide. *Research Policy*, 52(7):104791, 2023
- 4. Sampat, Bhaven N. The government and pharmaceutical innovation: Looking back and looking ahead. *Journal of Law, Medicine & Ethics*, 49(1):10–18, 2021
- 5. **Sampat, Bhaven N** and Kenneth C Shadlen. The COVID-19 innovation system. *Health Affairs*, 40(3):400–409, 2021
- 6. Kevin A. Bryan, Yasin Ozcan, and **Bhaven N. Sampat**. In-text patent citations: A user's guide. Research Policy, 49(4):103946, May 2020
- 7. Kenneth C. Shadlen, **Bhaven N. Sampat**, and Amy Kapczynski. Patents, trade and medicines: Past, present and future. *Review of International Political Economy*, 27(1):75–97, January 2020
- Bhaven N. Sampat and Heidi L. Williams. How Do Patents Affect Follow-On Innovation? Evidence from the Human Genome. American Economic Review, 109(1):203–236, January 2019
- 9. Pierre Azoulay, Joshua S Graff Zivin, Danielle Li, and **Bhaven N. Sampat**. Public R&D Investments and Private-sector Patenting: Evidence from NIH Funding Rules. *The Review of Economic Studies*, 86(1):117–152, January 2019
- 10. **Bhaven N. Sampat** and Kenneth C. Shadlen. Indian pharmaceutical patent prosecution: The changing role of Section 3(d). *PLOS ONE*, 13(4):e0194714, April 2018
- 11. **Bhaven N. Sampat** and Kenneth C. Shadlen. Secondary pharmaceutical patenting: A global perspective. *Research Policy*, 46(3):693–707, April 2017
- 12. Danielle Li, Pierre Azoulay, and **Bhaven N. Sampat**. The applied value of public investments in biomedical research. *Science*, 356(6333):78–81, April 2017
- 13. **Bhaven N. Sampat** and Kenneth C. Shadlen. Drug patenting in India: looking back and looking forward. *Nature Reviews Drug Discovery*, 14(8):519–520, August 2015
- 14. Deepak Hegde and **Bhaven N. Sampat**. Can Private Money Buy Public Science? Disease Group Lobbying and Federal Funding for Biomedical Research. *Management Science*, 61(10):2281–2298, October 2015
- 15. **Bhaven N. Sampat** and Kenneth C. Shadlen. TRIPS Implementation and Secondary Pharmaceutical Patenting in Brazil and India. *Studies in Comparative International Development*, 50(2):228–257, June 2015
- 16. **Bhaven N. Sampat** and Harold Alan Pincus. Citations in Life Science Patents to Publicly Funded Research at Academic Medical Centers. *Clinical and Translational Science*, 8(6):759–763, December 2015

- 17. C. Scott Hemphill and **Bhaven N. Sampat**. Drug Patents at the Supreme Court. *Science*, 339(6126):1386–1387, March 2013
- 18. **Bhaven N. Sampat**, Kristin Buterbaugh, and Marcel Perl. New evidence on the allocation of NIH funds across diseases. *The Milbank Quarterly*, 91(1):163–185, 2013
- 19. Christopher A. Cotropia, Mark A. Lemley, and **Bhaven N. Sampat**. Do applicant patent citations matter? *Research Policy*, 42(4):844–854, May 2013
- 20. **Bhaven N. Sampat** and Tahir Amin. How Do Public Health Safeguards in Indian Patent Law Affect Pharmaceutical Patenting in Practice? *Journal of Health Politics, Policy and Law*, 38(4):735–755, January 2013
- 21. Arti K Rai and **Bhaven N. Sampat**. Accountability in patenting of federally funded research. *Nature Biotechnology*, 30(10):953–956, October 2012
- 22. Amy Kapczynski, Chan Park, and **Bhaven N. Sampat**. Polymorphs and Prodrugs and Salts (Oh My!): An Empirical Analysis of "Secondary" Pharmaceutical Patents. *PLOS ONE*, 7(12):e49470, December 2012
- 23. **Bhaven N. Sampat**. Mission-oriented biomedical research at the NIH. *Research Policy*, 41(10):1729–1741, December 2012
- 24. **Bhaven N. Sampat**, Ken Shadlen, and Tahir Amin. Challenges to India's Pharmaceutical Patent Laws. *Science*, 337(6093):414–415, July 2012
- 25. C. Scott Hemphill and **Bhaven N. Sampat**. Evergreening, patent challenges, and effective market life in pharmaceuticals. *Journal of Health Economics*, 31(2):327–339, March 2012
- 26. Mark A. Lemley and **Bhaven N. Sampat**. Examiner Characteristics and Patent Office Outcomes. *Review of Economics and Statistics*, 94(3):817–827, August 2012
- 27. Swathi Padmanabhan, Tahir Amin, **Bhaven N. Sampat**, Robert Cook-Deegan, and Subhashini Chandrasekharan. Intellectual property, technology transfer and manufacture of lowcost HPV vaccines in India. *Nature Biotechnology*, 30(2):193–193, February 2012
- 28. C. Scott Hemphill and **Bhaven N. Sampat**. When Do Generics Challenge Drug Patents?: When Do Generics Challenge Drug Patents? *Journal of Empirical Legal Studies*, 8(4):613–649, December 2011
- 29. Peter Muennig, **Bhaven N. Sampat**, Nicholas Tilipman, Lawrence D. Brown, and Sherry A. Glied. We All Want It, but We Don't Know What It Is: Toward a Standard of Affordability for Health Insurance Premiums. *Journal of Health Politics, Policy and Law*, 36(5):829–853, October 2011
- 30. **Bhaven N. Sampat** and Michael Drummond. Another special relationship? Interactions between health technology policies and health care systems in the United States and the United Kingdom. *Journal of Health Politics, Policy and Law*, 36(1):119–139, February 2011
- 31. **Bhaven N. Sampat** and Frank R. Lichtenberg. What are the respective roles of the public and private sectors in pharmaceutical innovation? *Health Affairs (Project Hope)*, 30(2):332–339, February 2011

- 32. **Bhaven N. Sampat**. When Do Applicants Search for Prior Art? The Journal of Law and Economics, 53(2):399–416, May 2010
- 33. Julia Carbone, E Richard Gold, **Bhaven N. Sampat**, Subhashini Chandrasekharan, Lori Knowles, Misha Angrist, and Robert Cook-Deegan. DNA patents and diagnostics: not a pretty picture. *Nature Biotechnology*, 28(8):784–791, August 2010
- 34. Deepak Hegde and **Bhaven N. Sampat**. Examiner citations, applicant citations, and the private value of patents. *Economics Letters*, 105(3):287–289, December 2009
- 35. **Bhaven N. Sampat**. Academic Patents and Access to Medicines in Developing Countries. *American Journal of Public Health*, 99(1):9–17, January 2009
- 36. Juan Alcácer, Michelle Gittelman, and **Bhaven N. Sampat**. Applicant and examiner citations in U.S. patents: An overview and analysis. *Research Policy*, 38(2):415–427, March 2009
- 37. Anthony D. So, **Bhaven N. Sampat**, Arti K Rai, Robert Cook-Deegan, Jerome H Reichman, Robert Weissman, and Amy Kapczynski. Is Bayh-Dole Good for Developing Countries? Lessons from the US Experience. *PLoS Biology*, 6(10):e262, October 2008
- 38. Mark J. Russo, Annetine C. Gelijns, Lynne W. Stevenson, **Bhaven N. Sampat**, Keith D. Aaronson, Dale G. Renlund, Deborah D. Ascheim, Kimberly N. Hong, Mehmet C. Oz, Alan J. Moskowitz, Eric A. Rose, and Leslie W. Miller. The Cost of Medical Management in Advanced Heart Failure During the Final Two Years of Life. *Journal of Cardiac Failure*, 14(8):651–658, October 2008
- 39. Pierre Azoulay, Ryan Michigan, and **Bhaven N. Sampat**. The Anatomy of Medical School Patenting. *New England Journal of Medicine*, 357(20):2049–2056, November 2007
- 40. **Bhaven N. Sampat**. Patenting and US academic research in the 20th century: The world before and after Bayh-Dole. *Research Policy*, 35(6):772–789, July 2006
- 41. David C. Mowery and **Bhaven N. Sampat**. The Bayh-Dole Act of 1980 and University—Industry Technology Transfer: A Model for Other OECD Governments? *The Journal of Technology Transfer*, 30(1):115–127, December 2004
- 42. R. R Nelson, A. Peterhansl, and **Bhaven N. Sampat**. Why and how innovations get adopted: A tale of four models. *Industrial and Corporate Change*, 13(5):679–699, October 2004
- 43. **Bhaven N. Sampat**, David C. Mowery, and Arvids A. Ziedonis. Changes in university patent quality after the Bayh–Dole act: A re-examination. *International Journal of Industrial Organization*, 21(9):1371–1390, November 2003
- 44. Roberto Mazzoleni and **Bhaven N. Sampat**. University patenting: an assessment of the causes and consequences of recent changes in strategies and practices. *Revue d'économie industrielle*, 99(1):233–248, 2002
- 45. David C. Mowery, **Bhaven N. Sampat**, and Arvids A. Ziedonis. Learning to Patent: Institutional Experience, Learning, and the Characteristics of U.S. University Patents After the Bayh-Dole Act, 1981-1992. *Management Science*, 48(1):73–89, January 2002

- 46. Jeannette Colyvas, Michael Crow, Annetine Gelijns, Roberto Mazzoleni, Richard R. Nelson, Nathan Rosenberg, and **Bhaven N. Sampat**. How Do University Inventions Get Into Practice? *Management Science*, 48(1):61–72, January 2002
- 47. David C. Mowery and **Bhaven N. Sampat**. University Patents and Patent Policy Debates in the USA, 1925-1980. *Industrial and Corporate Change*, 10(3):781–814, August 2001
- 48. David C Mowery, Richard R Nelson, **Bhaven N. Sampat**, and Arvids A Ziedonis. The growth of patenting and licensing by U.S. universities: An assessment of the effects of the Bayh–Dole act of 1980. *Research Policy*, 30(1):99–119, January 2001
- 49. Richard R. Nelson and **Bhaven N. Sampat**. Making sense of institutions as a factor shaping economic performance. *Journal of Economic Behavior & Organization*, 44(1):31–54, January 2001
- 50. David C. Mowery and **Bhaven N. Sampat**. Patenting and Licensing University Inventions: Lessons from the History of the Research Corporation. *Industrial and Corporate Change*, 10(2):317–355, June 2001

#### Book

 David C. Mowery, Richard R. Nelson, Bhaven N. Sampat, and Arvids A. Ziedonis. Ivory Tower and Industrial Innovation: University-Industry Technology Transfer Before and After the Bayh-Dole Act. Stanford University Press, 2004

## Book chapters, law reviews, editorials, and other publications

- 1. Sampat, Bhaven N. Doubling down: Will large increases in the NIH budget promote more meaningful medical innovation? *Journal of Law, Medicine & Ethics*, 51(S2):21–23, 2023
- 2. Sampat, Bhaven N. The History and Political Economy of NIH Peer Review. Brookings/IFP Building a Better NIH Series, 2023
- 3. C Scott Hemphill and **Sampat, Bhaven N**. Fixing the FDA's orange book. *Health Affairs*, pages 10–1377, 2022
- 4. Daniel P Gross and **Sampat, Bhaven N**. Crisis innovation: Historical evidence, insights, and open questions. *NBER Reporter*, (3):12–15, 2022
- 5. Lisa Larrimore Ouellette, Michael Abramowicz, Daniel J Hemel, and **Sampat, Bhaven N**. What role should governments play in setting rewards for medical innovation? NYU Journal of Intellectual Property & Entertainment Law, 11, 2021
- 6. Daniel P Gross and **Sampat, Bhaven N**. Crisis Innovation Policy from World War II to COVID-19. NBER Entrepreneurship and Innovation Policy and the Economy, 2021
- 7. Robert Cook-Deegan and **Bhaven N. Sampat**. An ARPA for health research? *Milbank Quarterly (Opinion)*, 2021
- 8. Daniel Gross and **Sampat**, **Bhaven N**. The Economics of Crisis Innovation Policy: A Historical Perspective. American Economic Review Papers and Proceedings, 2021

- 9. Bhaven N. Sampat. Whose Drugs Are These? Issues in Science and Technology, 2020
- 10. **Bhaven N. Sampat**. Comment on "Leveraging public research for innovation and growth a conceptual framework and common metrics". In Suma Athreye Anthony Arundel and Sacha Wunch-Vincent, editors, *Harnessing Public Research for Innovation in the 21st Century: An International Assessment of Knowledge Transfer Policies*. Cambridge University Press, 2020
- 11. **Bhaven N. Sampat**. Comment on "Local effects of land grant colleges on agricultural innovation and output". In *Economics of Research and Innovation in Agriculture*. University of Chicago Press, 2020
- 12. Amy Kapczynski, **Bhaven N. Sampat**, and Kenneth C Shadlen. The TPP and drug prices. Foreign Affairs, 2016
- 13. Arti Rai and **Bhaven N. Sampat**. Accountability, Government Rights, and the Public Interest: A Thirty-Year Retrospective. In Donald Siegel Albert Link and Mike Wright, editors, *The Chicago Handbook of University Technology Transfer and Academic Entrepreneurship*. University of Chicago Press, 2014
- 14. Arti K. Rai, John R. Allison, and Bhaven N. Sampat. University Software Ownership and Litigation. In Michael Abramowicz, James E. Daily, and F. Scott Kieff, editors, *Perspectives* on Patentable Subject Matter, pages 336–375. Cambridge University Press, New York, 2014
- 15. **Bhaven N. Sampat**. Prevention vs. treatment: What's the right balance? *Global Public Health*, 8(2):236–239, February 2013
- 16. Pierre Azoulay, Joshua S. Graff Zivin, and **Bhaven N. Sampat**. The Diffusion of Scientific Knowledge across Time and Space: Evidence from Professional Transitions for the Superstars of Medicine. In Josh Lerner and Scott Stern, editors, *The Rate and Direction of Inventive Activity Revisited*. University of Chicago Press, 2012
- 17. Bhaven N. Sampat. Lessons from Bayh–Dole. Nature, 468(7325):755–756, December 2010
- 18. **Bhaven N. Sampat**. Research Locally, Diffuse Globally? American Universities, Patents and Global Public Health. *Columbia Journal of International Affairs*, November 2010
- 19. **Bhaven N. Sampat**. Catching Up In Indian Pharmaceuticals and Software: The Roles That Patents Did and Did Not Play. In H. Odagiri, A. Goto, A. Sunami, and R.R. Nelson, editors, *Intellectual Property Rights, Development, and Catch-Up*. Oxford University Press, April 2010
- 20. **Bhaven N. Sampat**. The Dismal Science, the Crown Jewel and the Endless Frontier. In D. Foray, editor, *The New Economics of Technology Policy*. Edward Elgar Publishing, 2009
- 21. Arti Rai, John Allison, **Bhaven N. Sampat**, and Colin Crossman. University Software Ownership and Litigation: A First Examination. *North Carolina Law Review*, 87:1519–1570, January 2009
- 22. Mark A. Lemley and **Bhaven N. Sampat**. Is the Patent Office a Rubber Stamp? *Emory Law Journal*, 58:181, 2008

- 23. **Bhaven N. Sampat**. "University Patenting: Shaping A New Government Patent Policy. In D. Guston and D. Sarewitz, editors, *Shaping Science and Technology Policy: The Next Generation of Research*. University of Wisconsin Press, Madison, 2007
- 24. Bhaven N. Sampat, David Mowery, and Arvids Ziedonis. Changes in University Patent Quality After Bayh–Dole: A Re–Examination. In Donald S. Siegel, editor, Technological Entrepreneurship: The International Library of Entrepreneurship Series. Edward Elgar, Northampon, 2007
- 25. David C. Mowery and **Bhaven N. Sampat**. The Bayh-Dole Act of 1980 and University-Industry Technology Transfer. In Dominique Foray and Brian Kahin, editors, *Advancing Knowledge and The Knowledge Economy*. MIT Press, Cambridge, 2006
- David C. Mowery and Bhaven N. Sampat. Universities in National Innovation Systems. In Jan Fagerberg and David C. Mowery, editors, *The Oxford Handbook of Innovation*. Oxford University Press, 2006. 10.1093/oxfordhb/9780199286805.003.0008
- 27. Mark Lemley, Doug Lichtman, and **Bhaven N. Sampat**. What to do about bad patents? *Regulation*, 2005
- 28. **Bhaven N. Sampat** and Arvids A. Ziedonis. Patent Citations and the Economic Value of Patents. In Henk F. Moed, Wolfgang Glänzel, and Ulrich Schmoch, editors, *Handbook of Quantitative Science and Technology Research: The Use of Publication and Patent Statistics in Studies of S&T Systems*, pages 277–298. Springer Netherlands, Dordrecht, 2005
- 29. Richard Nelson and Bhaven N. Sampat. Making Sense of Institutions as a Factor Shaping Economic Performance. In Geoffrey Hodgson, editor, Recent Developments in Institutional Economics, Critical Studies in Economic Institutions. Edward Elgar, 2003
- 30. **Bhaven N. Sampat** and Richard R. Nelson. The evolution of university patenting and licensing procedures: An empirical study of institutional change. In Paul Ingram and Brian S. Silverman, editors, *The New Institutionalism in Strategic Management*, volume 19 of *Advances in Strategic Management*, pages 135–164. Emerald Group Publishing Limited, January 2000
- 31. David Mowery, Richard Nelson, **Bhaven N. Sampat**, and Arvids Ziedonis. The effects of the Bayh-Dole Act on US university research and technology transfer. In Fumio Kodama Lewis Branscomb and Richard Florida, editors, *Industrializing Knowledge*. MIT Press, 1999

## Other: Government and other reports

- 1. **Bhaven N. Sampat**. Global Innovation Report, chapter The Economics of Health Innovation: Looking Back and Looking Forward. World Intellectual Property Organization, 2019
- 2. **Bhaven N. Sampat**. Science policy research report: The effects of patents on innovation (reprinted as NBER working paper 2018). Technical report, National Science Foundation, 2018
- 3. **Bhaven N. Sampat**. Intellectual property rights and pharmaceuticals: The case of antibiotics. Technical report, World Intellectual Property Organization Economic Research Working Paper 26, 2015

- 4. **Bhaven N. Sampat**. The impact of publicly funded biomedical and health research: A review. Technical report, Appendix D of "Measuring the Impact of Federal Investments in Research: A Workshop Summary" (National Academies Press), 2011
- 5. **Bhaven N. Sampat**. The Bayh-Dole model in developing countries: Reflections on the Indian bill on publicly funded intellectual property. Technical report, UNCTAD-ICTSD Project on Intellectual Property Rights and Sustainable Development, 2009

## Selected Work in Progress

- The Therapeutic Consequences of the War: World War II Medical Research and the Mid-Century Expansion of Biomedicine (with Daniel Gross, Duke Fuqua School of Business)
- The Government Patent Register: A New Resource for Measuring US Government-Funded Patenting (with Daniel Gross, Duke Fuqua School of Business), NBER working paper w32136, revised and resubmitted to Research Policy
- Hatch-Waxman at 40 (with Scott Hemphill, NYU Law School). In preparation for the *Journal* of Economic Perspectives
- TRIPS, Pharmaceutical Patents, and Generic Competition in India (with Margaret Kyle, Center for Industrial Economics, MINES ParisTech, and Ken Shadlen, Department of International Development, LSE)
- The Feasibility of Using Bayh-Dole March-In Rights to Lower U.S. Drug Prices (with Lisa Larrimore Ouellette, Stanford Law School) NBER working paper w32217, Under review
- The Paper Trail of Knowledge, Revisited (with Kevin Bryan, Rotman School of Management, University of Toronto)

# Invited presentations, discussions, panels (since 2015)

1. Invited presenter. "Science Policy, War, and Peace" Science Policy and Diplomacy Distinguished Speaker Series

## University of Arizona

October 2024

2. Invited presenter. "U.S. Science and Technology Policy: Solving for What and for Whom"

Science and Technology Policy Fellows Training Session

American Association for the Advancement of Science (AAAS) September 2024

3. Invited presenter. "Hatch-Waxman at 40"

Health Care at Reasonable Cost: The Hatch-Waxman Act at 40 and Beyond

NYU Law School

September 2024

4. Invited presenter. "Hatch-Waxman at 40"

#### **Brookings Institution**

September 2024

5. Invited discussant. "Institutional Concentration of Elite Researchers" Science of Science Funding

#### **NBER Summer Institute**

July 2024

6. Invited presenter. "The Feasibility of Using Bayh-Dole March-In Rights to Lower U.S. Drug Prices"

Life Sciences Symposium

## **Bates White Economic Consulting**

May 2024

7. Invited presenter. "The Therapeutic Consequences of the War: World War II Medical Research and the Mid-Century Expansion of Biomedicine"

Shidler College of Business Speaker Series

## University of Hawaii at Manoa

March 2024

8. Invited presenter. "Evaluating Benefits from Publicly Funded Research Using Patent-Data: Applications, Benefits, & Misuse"

#### **American Evaluation Association**

March 2024

9. Invited presenter. "U.S. Science and Technology Policy: World War II to Covid-19" Science and Technology Policy Fellows Training Session

## American Association for the Advancement of Science (AAAS)

February 2024

10. Invited panelist. "How Can Taxpayer-Funded Science Yield Drugs That Are Innovative and Affordable?"

## Issues in Science and Technology

January 2024

11. Invited presenter. "Data and Metrics for the DOD SBIR and STTR Programs"

## National Academies of Sciences, Engineering, and Medicine (NASEM)

December 2023

12. Invited presenter. "The Government Patent Register: A New Lens on Historical U.S. Government-Funded Patenting"

NBER Innovation Information Initiative

#### **NBER**

December 2023

13. Invited panelist. "US Patent System: What is Needed – Tweaks or Reform?" Committee on Science, Technology, and Law

#### National Academies of Sciences, Engineering, and Medicine (NASEM)

November 2023

14. Invited speaker. "Evaluating Benefits from Publicly Funded Research Using Patent-Data: Applications, Benefits, & Misuse"

New Tools for Science Policy

## Consortium for Science, Policy & Outcomes (CSPO)

October 2023

15. Invited presenter. "The Government Patent Register: A New Lens on Historical U.S. Government-Funded Patenting"

11th Annual Mid-Atlantic Patent Works-in-Progress (MAPWIP) Colloquium

## Georgetown Law School

October 2023

16. Invited moderator. Workshop on Accelerating Research Translation for Equity and Inclusion National Science Foundation,

September 2023

17. Invited presenter. "A Novel Experiment: The Long-Run Effects of the World War II Medical Research Effort on Science, Technology, and Practice"

Technology and Operations Management Seminar

#### Harvard Business School

April 2023

18. Invited presenter. "America, Jump-started: World War II R&D and the Takeoff of the U.S. Innovation System"

Entrepreneurship and Innovation Seminar

#### Haas School of Business, U.C. Berkeley

March 2023

19. Invited presenter. "A Novel Experiment: The Long-Run Effects of the World War II Medical Research Effort on Science, Technology, and Practice"

Applied Micro Seminar

## University of Massachusetts

October 2022

20. Invited presenter. "The History and Political Economy of NIH Reform"

## **Brookings Institution**

October 2022

21. Invited panelist. "Innovation and Growth" panel.

# International Conference on the Science of Science and Innovation June 2022

22. Keynote address, "Crisis Innovation Policy from World War II to Covid-19" 2022 OECD Conference on the Analysis of Support for Business Innovation **OECD** 

May 2022

23. Inaugural address. "What is a strong patent system, anyways?" Innovation for Shared Prosperity: Celebrating 110 Years of India's Tryst with Patents'

Jindal Global University, Initiative on Research on IP and Competition, March 2022.

24. Invited presenter. "Crisis medical innovation during World War II" ASSA Annual Meeting January 2022.

25. Invited discussant. North American Winter Meeting of the Econometric Society ASSA Annual Meeting January 2022.

 Invited presenter Intellectual Property and Access to Medicines Course Harvard Law School September 2021.

 Invited discussant. Law and STEM Junior Faculty Forum Penn Law October 2021.

 Invited presenter. "Advances in Patent Research" Professional Development Workshop Academy of Management Annual Meetings August 2021

 Invited discussant. Intellectual Property Day Boston University School of Law July 2021.

30. Panelist. "Ways to Fund Scientists" NBER Summer Institute, Science of Science Funding July 2021

31. Panelist. "COVID Vaccines: Policies to end this pandemic and avoid another one"
Richman Center, Columbia University
June 2021

32. Keynote speaker. "Crisis Innovation Policy." Taiwan Symposium on Innovation Economics and Entrepreneurship

National Taiwan University. June 2021.

33. Invited presenter. "Crisis Innovation from World War II to Warp Speed" Entrepreneurship and Innovation Policy and the Economy Conference

National Bureau of Economic Research April 2021.

- 34. Invited panelist. Access to Medicine: The Role and Impact of U.S. Innovation Policy NYU Journal of Intellectual Property & Entertainment Law's 2021 Symposium July 2021.
- 35. Invited speaker. "Crisis Innovation from World War II to Warp Speed" Science, Technology, and Innovation Policy Seminar

University of Manchester (U.K.) February 2021.

- 36. Presenter. "The Economics of Crisis Innovation"
  Allied Social Sciences Association (ASSA) Annual Meeting
  January 2021.
- 37. Invited discussant. "The Rise of American Corporate Science"
  Allied Social Science Association (ASSA) Annual Meeting
  January 2021.
- 38. Presenter. Global Virtual Symposium on Trade and Investment Treaties and Access to Medicines in a COVID-19 Era

Boston University Global Development Policy Center December 2020.

39. Invited presenter. "Inventing the Endless Frontier: The Effects of the World War II Research Effort on Postwar Innovation"

Association for Public Policy Analysis and Management (APPAM) Annual Conference

November 2020.

40. Invited presenter. "The Race for the Covid Vaccine: New Challenges for Innovation Policy" Columbia/SIPA Seminar: Covid-19: Policymaking in the Throes of a Global Crisis

Columbia University

No. 1, 2000

November 2020.

- 41. Invited presenter. "Linking drugs to government funding" Knowledge Ecology International (KEI) Panel on Government Funding of COVID Drugs and Vaccines

  Congress on Intellectual Property and the Public Interest

  November 2020.
- 42. Invited presenter. "How Covid-19 is Changing the Biomedical Innovation System" *Implications of the Pandemic for Science and Innovation Policy: Insight from Economists*National Academies of Sciences, Engineering, and Medicine (NASEM) Board on Science, Technology, and Economic Policy (STEP)

  October 2020.
- 43. Invited presenter. "Should We Patent a COVID-19 Vaccine?" Consortium for Science, Technology, and Outcomes (CSPO) September 2020.
- 44. Invited discussant. Intellectual Property Day Boston University School of Law July 2020.
- 45. Invited panelist. Innovation Policy for a Pandemic Panel, Summer Institute 2020. National Bureau of Economic Research
  July 2020.
- 46. Invited panelist. Vagts Roundtable: Conceptualizing Intellectual Property as a Social Determinant of Health.

## American Society of International Law Annual Meeting

June 2020.

47. Moderator. Panel on "International Ethical, Regulatory and Economic Issues in Precision Medicine" Precision Medicine and Society Conference

#### Columbia University

May 2020.

48. Presenter. "TRIPS, Patents, and Drug Prices in India" Tenth Annual Tri-State Region Intellectual Property Workshop

## NYU Law School.

January 2020.

49. Invited speaker. "TRIPS, Patents, and Drug Prices in India" Columbia Global Center (Mumbai, India)

November 2019.

50. Invited speaker. "TRIPS, Patents, and Drug Prices in India" Center for Development Studies (Trivandrum, India) November 2019.

51. Invited speaker. "TRIPS, Patents, and Drug Prices in India"
Indian Institute of Management (Ahmedabad, India)
November 2019.

52. Invited presenter. Empirical Patent Law Conference Georgetown Law School

October 2019.

53. Invited speaker. "TRIPS, Patents, and Drug Prices in India" Innovation, Justice, and Globalization: A Celebration of J.H. Reichman

#### Harvard Law School.

September 2019.

54. Invited presenter. "The Roles of the Government in Pharmaceutical Innovation" Workshop on Role of NIH in Drug Development Innovation and its Impact on Patient Access National Academies of Sciences, Engineering, and Medicine July 2019.

55. Invited discussant. "Science Quality and the Value of Inventions" and "Standing on the Shoulders of Giants" Summer Institute 2019 "Science of Science Funding" Session.

National Bureau of Economic Research

July 2019.

56. Invited discussant. "Local Effects of Land Grant Colleges on Agricultural Innovation and Output" Conference on Agricultural Science, Innovation, and R&D

National Bureau of Economic Research May 2019.

57. Invited speaker. The Complex World of Drug Pricing

## Columbia Business School

April 2019.

58. Invited speaker. Radcliffe Seminar: The U.S. Government's Contribution to Transformative Drug Development.

## Harvard University

December 2018.

59. Presenter. "Federal Indirect Cost Recovery Policies and Academic Research"

# Association for Public Policy Analysis and Management (APPAM) Fall Research Conference

November 2018.

60. Invited speaker. 'Measuring the Economic Impact of Science" IP, Science, and Technology Workshop

## University of Texas at Austin

October 2018.

61. Invited speaker. "Beyond Patents: Assessing the Value and Impact of Research Investments" Government-University-Industry Research Roundtable

The National Academies of Sciences, Engineering, and Medicine October 2018.

62. Invited speaker. The Cost of a Cure: Creating Sustainable Solutions for Gene and Cell Therapies

Leonard Davis Institute of Health Economics, University of Pennsylvania September 2018.

63. Invited presenter. "Using Patent Citations to Assess Science-Innovation Linkages and the Value of Medical Research" NIA-ESRC International Network on the Value of Health Research.

#### National Bureau of Economic Research

September 2018.

64. Invited speaker. Research on Research Workshop

## The Wellcome Trust (London, UK)

April 2018.

65. Invited presenter. "Measuring the Links Between Science and Innovation: Advances from Economics"

# American Association for the Advancement of Science Annual Meetings (Austin, TX)

February 2018.

66. Invited speaker. NIH Health Economics Research meeting.

## National Institutes of Health

January 2018.

67. Invited presenter. "The Effects of Patents on Innovation" Workshop on Results from NSF Science Policy Research Reports

National Academic of Sciences, Engineering, and Medicine January 2018.

- Invited speaker. "Pharmaceutical Patent Citations and Real Value"
   Leonard Davis Institute of Health Economics, University of Pennsylvania November 2017.
- Invited speaker. NIH-NSF Workshop on the Value of Data Sharing National Institutes of Health October 2017.
- Invited panelist. "Public Health as a Public Good?" Mailman School Grand Rounds Columbia University September 2017.
- 71. Invited presenter. "Secondary Pharmaceutical Patenting: A Global Perspective" Competition Issues in Pharmaceuticals: The Challenges Ahead

Centre for Competition Policy, University of East Anglia School of Economics (Norwich, UK)

June 2017.

72. Invited discussant. "Personalized Medicine and Patient Selection: Discretion vs. Guidelines"

10th annual Economics of Entrepreneurship and Innovation Conference

Queen's School of Business (Kingston, QN)

Queen's School of Business (Kingston, ON) June 2017.

73. Invited speaker. "Private Investment vs. Public Funding in Therapeutic Development" *Health Policy and Bioethics Consortium* 

Dana-Farber/Harvard Cancer Center May 2017.

74. Invited speaker. "The Government and Pharmaceutical Innovation" Technology and Operations Management Seminar

Harvard Business School

May 2017.

75. Invited discussant. World Intellectual Property Organization (WIPO) Workshop on "International Comparison of Knowledge Transfer Policies"

Maastricht, the Netherlands March 2017.

- 76. Invited presenter. Webinar: Pharmaceutical Drug Pricing: Where Should We Go From Here?

  Columbia University Bioethics

  January 2017.
- 77. Invited discussant. "Does Winning a Patent Race lead to more follow-on Innovation?" Roundtable on Engineering Entrepreneurship Research

## Georgia Institute of Technology

November 2016.

78. Invited lecturer. "Secondary Pharmaceutical Patenting in the U.S." and "The Globalization of Pharmaceutical Patenting" Lecture Series on the Law Economics of Innovation

#### ETH Zurich

October 2016.

79. Presenter. 'The links between publicly funded medical research and innovation" Roundtable on Empirical Methods in Intellectual Property

## U.S. Patent and Trademark Office

April 2016.

80. Invited presenter. NIH and the Science of Science Policy

#### **National Institutes of Health**

April 2016.

81. Invited panelist. Workshop on the Politics of Science and Innovation Policy

## The Brookings Institution

March 2016.

82. Invited speaker. "The Effects of Restrictions on Secondary Pharmaceutical Patents: Brazil and India in Comparative Perspective" *The Economics of Science and Engineering Workshop* **Harvard University, Department of Economics**February 2016.

83. Invited presenter. "How do Patents Affect Follow-on Innovation? Evidence from the Human Genome"

## **NYU Wagner**

February 2016.

84. Invited presenter. "Linking Public Sector R&D to Health Outcomes" NIA-ESRC International Network on the Value of Health Research.

## Institute for Fiscal Studies (London, UK)

December 2015.

85. Invited presenter. "The Effects of Restrictions on Secondary Pharmaceutical Patents" IP Statistics for Decisionmakers

European Patent Office/Organization of Economic Cooperation and Development November 2015.

86. Invited speaker. Seminar on Drug Pricing

## **Knowledge Ecology International**

November 2015.

87. Invited presenter. Workshop on "Rethinking the Economics of Pharmaceutical Innovation"

Open Society Foundation

October 2015.

88. Invited presenter. "The Effects of Restrictions on Secondary Pharmaceutical Patents: Brazil and India in Comparative Perspective" *Empirical Patent Law Conference*University of Illinois School of Law
October 2015.

89. Moderator. Pharmaceuticals Panel, Antitrust in Emerging and Developing Economies: Africa, Brazil, China, India, Mexico

NYU Law School

October 2015.

90. Invited discussant. "Innovation Under Regulatory Uncertainty: Evidence from Medical Technology" 8th Annual Conference on the Economics of Entrepreneurship and Innovation Queen's School of Business (Kingston, ON)
June 2015.

- 91. Invited presenter. "TRIPS Implementation and Secondary Pharmaceutical Patenting" Institute of Applied Economic Research (Rio de Janeiro, Brazil) May 2015.
- Invited presenter. "TRIPS Implementation and Secondary Pharamceutical Patenting" Universidade Federal do Rio de Janeiro May 2015.
- 93. Invited presenter. ""How do Patents Affect Follow-on Innovation? Evidence from the Human Genome" Creativity and Innovation Research Initiative
  NYU Stern

April 2015.

94. Invited presenter. "Breakthrough Historical Innovation: The Case of Antibiotics"

World Intellectual Property Organization Workshop on the World Intellectual Property
Report 2015
February 2015.

95. Invited speaker. Intellectual Property Teaching Workshop National Law School (Delhi, India) February 2015.

96. Invited speaker. "How Do Patents Affect Follow-On Innovation? Evidence From the Human Genome" Chief Economist Speaker Series

U.S. Patent and Trademark Office February 2015.

# Conferences and panels organized

- 1. "The International Conference on the Science of Science and Innovation" National Academy of Sciences, Engineering and Medicine, July 2024
- 2. "Workshop on empirical research on Pharmaceutical IP" (Columbia University, HEC Lausanne, HEC Paris) February 2021.

- 3. "The Past and Future of Innovation Policy: The Bush Report at 75 Years" Super-session panel at Association for Public Policy Analysis and Management (APPAM) Annual Conference, November 2020
- 4. "Secondary Pharmaceutical Patents" conference, NYU Law School, February 2016
- 5. "TRIPS@10" conference on the impact of the Trade Related Intellectual Property Rights Agreement, Columbia Earth Institute, November 2005