

CURRICULUM VITAE

Deepta Bhattacharya, Ph.D.

Date: March 17, 2022

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Present Position: Professor of Immunobiology

Education:

Undergraduate
1992-1996

B.S. in Biochemistry, Minors in Mathematics and in Biology
Indiana University, Bloomington
Conferred May 4, 1996
Field of research: Electroanalytical chemistry
Advisor: Dennis G. Peters, Ph.D.
Thesis title: "Catalytic reduction of cyclohexanecarbonyl chloride by electropolymerized nickel(I) salen"

Graduate
1996-2002

Ph.D. in Molecular and Cell Biology
University of California, Berkeley
Conferred December 20, 2001
Field of research: Immunology
Advisor: William C. Sha, M.D., Ph.D.
Thesis title: "Regulation of immunoglobulin isotype switching and apoptosis by NF- κ B"

Postgraduate
2003-2008

Postdoctoral Fellow
Stanford University, Stanford, California
Field of research: Hematopoiesis
Advisor: Irving L. Weissman, M.D.

Academic Positions/Employment:

2008-2016

Assistant Professor of Pathology and Immunology, Washington University in St. Louis

2017

Associate Professor, with tenure, of Pathology and Immunology, Washington University in St. Louis

2017-present

Adjunct Associate Professor of Pathology and Immunology, Washington University in St. Louis

2017-2021 Associate Professor, with tenure, of Immunobiology, Surgery, Genetics-GIDP, and Bio5 Institute, The University of Arizona

2021-present Professor, with tenure, of Immunobiology, Surgery, Genetics-GIDP, and Bio5 Institute, The University of Arizona

Honors and Awards:

1992 Indiana University Honors Division Scholarship

1995 Indiana University Undergraduate Research Scholarship

1996 Phi Beta Kappa

1999 University Outstanding Graduate Student Instructor

2003 National Institutes of Health T32 Postdoctoral Fellowship

2004 Cancer Research Institute Postdoctoral Fellowship

2007 National Institutes of Health T32 Postdoctoral Fellowship

2007 National Institutes of Health K01 Career Development Award

2012 New York Stem Cell Foundation-Robertson Investigator Award

2013 American Cancer Society Research Scholar Award

2020 Nomination, Allen Institute Distinguished Investigator

2021 Nomination, Arizona Bioscience Researcher of the Year

2021 Basic and Translational Investigator Award, University of Arizona College of Medicine

Service/Outreach:

Local/State outreach

2019 Guest, Arizona Public Media, Science Fridays, "The Potential of Embryonic Stem Cells."

2020-2022 Interviews regarding COVID-19: Arizona Republic, Capital Times, Arizona Public Media, KVOA, KOLD, KGUN, Telemundo Arizona, Arizona 360, 3TV CBS5, iHeart radio, KJZZ, Arizona Illustrated

National/International outreach

2020-2022 Interviews regarding COVID-19: The New York Times, Washington Post, The Wall Street Journal, NPR; FiveThirtyEight.com, CNN, WGN, Deutsche Welle, El Pais, Salon.com, Huffington Post, NBC News, FactCheck.org, Canadian Broadcasting Corporation, The Atlantic

Departmental committees

2017-present Thesis committees, Marvin O’Ketch, Elizabeth Dahlman, Christine Bradshaw, Tyler Ripperger

2018-present Promotion, tenure, and evaluation committee, Department of Immunobiology, University of Arizona

2018-2019 Faculty search committee, Department of Molecular and Cellular Biology, University of Arizona

College committees

2018-present Mentoring Committee, Dr. Jared Churko, Department of Cellular and Molecular Medicine, College of Medicine, University of Arizona

2019-present Mentoring Committee, Dr. Justin Wilson, Department of Immunobiology, College of Medicine, University of Arizona

University committees

2017-present Joint retreat planning committee, Arizona Biological and Biomedical Sciences Graduate Program, University of Arizona

2019-present Flow Cytometry Shared Resource advisory committee, Office of Research, Innovation, and Impact, University of Arizona

2019-2021 Associate director, Graduate Program in Molecular Medicine, Arizona Biological and Biomedical Sciences Graduate Program, University of Arizona

2021-present Director, Graduate Program in Molecular Medicine.

2020-present University of Arizona Test, Trace, Treat committee

2020-2021 Faculty Search Committee, Arizona Respiratory Diseases Center

2020-present Planning committee, Human Immune Monitoring Facility

2022 Planning committee, Center for Advanced Molecular Immunotherapy

Other service for UA

- 2019-2020 Successfully led cross-campus effort for NIH shared instrumentation grant for Flow Cytometry Shared Resource (\$596,093)
- 2019-2020 Successfully applied for Department of Energy Cesium/Cobalt Irradiator Replacement program to replace aging UACC instrument with new X-ray machine (\$69,775.00)
- 2019-present Developed Biological and Biomedical Seminar announcements. Reached out to department chairs and center directors to ensure seminars are collated into announcement. Developed automated distribution system and new listserv. Goal is to foster more cross-campus and interdepartmental interactions.
- 2020 Developed University of Arizona SARS-CoV-2 antibody test for statewide and campus-wide use. FDA EUA approval granted 08/2020.

Extramural committees and service

- 2015-present Ad hoc journal reviewer, Blood, Cell, Cell Host and Microbe, Cell Reports, Cell Reports Medicine, Cell Stem Cell, eLife, Immunity, iScience, Journal of Experimental Medicine, Journal of Immunology, Journal of Virology, Molecular and Cell Biology, Nature, Nature Immunology, Nature Medicine, PLoS One, PLoS Pathogens, Proceedings of the National Academy of Sciences, Science, Science Immunology, Scientific Reports, Science Signaling, Stem Cell Reports, Stem Cells and Development, Viral Immunology
- 2018 Ad hoc reviewer, NIH Institutional Review Group, Cellular and Molecular Immunology B
- 2018-2020 Reviewer, The New York Stem Cell Foundation, Robertson Investigator award applications
- 2019-present Section Editor, Journal of Immunology
- 2019-present Standing member, NIH Institutional Review Group, Cellular and Molecular Immunology B
- 2019-present Council member, Midwinter Conference of Immunologists
- 2022-2023 Co-Chair and conference organizer, Midwinter Conference of Immunologists

Publications (#equal contribution/co-corresponding author; *undergraduate/graduate student):

Chapters in Scholarly Books

- *1. Peters DG, Dahm CE, **Bhattacharya D**, Butler AL, Mubarak MS, Use of transition-metal complexes as homogeneous and polymer-based catalysts for electroorganic synthesis. In *Novel Trends in Electroorganic Synthesis*, S. Torii, ed., Kodansha, Tokyo, 1995: 67–70.

Refereed Journal Articles

- *1. **Bhattacharya D**, Peters DG, Use of electrochemical concentration cells to demonstrate the dimeric nature of mercury(I) in aqueous media. *Journal of Chemical Education* 1995: 72:64–66
- *2. Ouyang W, Ranganath SH, Weindel K, **Bhattacharya D**, Murphy TL, Sha WC, Murphy KM, Inhibition of Th1 development mediated by GATA-3 through an IL-4-independent mechanism. *Immunity* 1998: 9:745-755
- *3. Ranganath S, Ouyang W, **Bhattarcharya (sic) D**, Sha WC, Grupe A, Peltz G, Murphy KM, GATA-3-dependent enhancer activity in IL-4 gene regulation. *Journal of Immunology* 1998:161:3822-3826
- *4. **Bhattacharya D**, Samide MJ, Peters DG, Catalytic reduction of cyclohexanecarbonyl chloride with electrogenerated nickel(I) salen in acetonitrile. *Journal of Electroanalytical Chemistry* 1998: 441:103–107
- *5. Ouyang W, Jacobson NG, **Bhattacharya D**, Gorham JD, Fenoglio D, Sha WC, Murphy TL, Murphy KM, The Ets transcription factor ERM is Th1-specific and induced by IL-12 through a Stat4-dependent pathway. *Proceedings of the National Academy of Sciences United States of America* 1999: 96:3888-3893
- *6. **Bhattacharya D**, Logue EC, Bakkour S, Degregori J, Sha WC, Identification of gene function by cyclical packaging rescue of retroviral cDNA libraries. *Proceedings of the National Academy of Sciences United States of America* 2002: 99:8838-8843
- *7. **Bhattacharya D**, Lee DU, Sha WC, NF- κ B-mediated regulation of isotype switching: Retroviral expression of RelB specifically inhibits class switch recombination to IgG1, but not to IgE. *International Immunology* 2002: 14:983-991
8. **Bhattacharya D**, Rossi DJ, Bryder D, Weissman IL, Purified hematopoietic stem cell engraftment of rare niches corrects severe lymphoid deficiencies in unconditioned hosts. *Journal of Experimental Medicine* 2006: 203:73-85
9. Luckey CJ[#], **Bhattacharya D**[#], Goldrath AW[#], Weissman IL, Benoist C, Mathis D, Memory T and memory B cells share a transcriptional program of self-renewal with long-term hematopoietic stem cells. *Proceedings of the National Academy of Sciences United States of America* 2006: 103:3304-3309
10. **Bhattacharya D**[#], Bryder D[#], Rossi DJ, Weissman IL, Rapid lymphocyte reconstitution of unconditioned immunodeficient mice with non-self-renewing multipotent hematopoietic progenitors. *Cell Cycle* 2006: 5:1135-1139

11. Forsberg EC, **Bhattacharya D**, Weissman IL, Hematopoietic stem cells: Expression profiling and beyond. *Stem Cell Reviews* 2006: 2:23-30
12. Rossi DJ, Seita J, Czechowicz A, **Bhattacharya D**, Bryder D, Weissman IL, Hematopoietic stem cell quiescence attenuates DNA damage response and permits DNA damage accumulation during aging. *Cell Cycle* 2007: 6: 2371-2376
13. Czechowicz A, Kraft D, Weissman IL[#], **Bhattacharya D**[#], Efficient transplantation via antibody-based clearance of hematopoietic stem cell niches. *Science* 2007: 318:1296-1299
14. **Bhattacharya D**, Cheah MT, Franco CB, Pin CL, Sha WC, Weissman IL, Transcriptional profiling of antigen-dependent murine B cell differentiation and memory formation. *Journal of Immunology* 2007: 179:6808-6819
15. Karsunky H, Inlay MA, Serwold T, **Bhattacharya D**, Weissman IL, Flk2+ common lymphoid progenitors possess equivalent differentiation potential for the B and T lineages. *Blood* 2008:111: 5562-5570
16. **Bhattacharya D**, Ehrlich LI, Weissman IL, Space-time considerations for hematopoietic stem cell transplantation. *European Journal of Immunology* 2008: 38:2060-2067
17. **Bhattacharya D**[#], Czechowicz A[#], Ooi AG, Rossi DJ, Bryder D, Weissman IL, Niche recycling through division-independent egress of hematopoietic stem cells. *Journal of Experimental Medicine* 2009: 206:2837-2850
18. Inlay MA[#], **Bhattacharya D**[#], Sahoo D, Serwold T, Seita J, Karsunky H, Plevritis SK, Dill DL, Weissman IL, Ly6d marks the earliest stage of B cell specification and identifies the branchpoint between B and T cell development. *Genes and Development* 2009: 23:2376-2381
19. Sahoo D, Seita J, **Bhattacharya D**, Inlay MA, Weissman IL, Plevritis SK, Dill DL, MiDReG: A method of mining developmentally regulated genes using Boolean implications. *Proceedings of the National Academy of Sciences United States of America* 2010: 107:5732-5737
20. Beerman I, **Bhattacharya D**, Zandi S, Sigvardsson M, Weissman IL, Bryder D, Rossi DJ, Functionally distinct hematopoietic stem cells modulate hematopoietic lineage potential during aging by a mechanism of clonal expansion. *Proceedings of the National Academy of Sciences United States of America* 2010: 107:5465-5470
21. Edelson BT, KC W, Juang R, Kohyama M, Benoit LA, Klekotka PA, Moon C, Albring JC, Ise W, Michael DG, **Bhattacharya D**, Stappenbeck TS, Holtzman MJ, Sung SJ, Murphy TL, Hildner K, Murphy KM, Peripheral CD103+ dendritic cells form a unified subset developmentally related to CD8 α + conventional dendritic cells. *Journal of Experimental Medicine* 2010: 20:823-836
22. Shizuru JA, **Bhattacharya D**, Cavazzana-Calvo M, The biology of allogeneic hematopoietic cell resistance. *Biology of Blood and Marrow Transplantation* 2010: 16:S2-S7
23. Purtha WE, Tedder TF, Johnson S, **Bhattacharya D**[#], Diamond MS[#], Memory B cells but not long-lived plasma cells possess antigen specificities for viral escape mutants. *Journal of Experimental Medicine* 2011: 208:2599-2606

24. Fathman JW, **Bhattacharya D**, Inlay MA, Seita J, Karsunky H, Weissman IL, Identification of the earliest transplantable natural killer cell committed progenitor in the murine bone marrow. *Blood* 2011: 118:5439-5447
25. McKittrick TR, Muscat C, Pierce JD, **Bhattacharya D**, De Tomaso AW, Allorecognition in a basal chordate consists of independent activating and inhibitory pathways. *Immunity* 2011: 34:616-626
26. Purtha WE, Swiecki M, Colonna M, Diamond MS, **Bhattacharya D**, Spontaneous mutation of the Dock2 gene in *Irf5^{-/-}* mice complicates analysis of type I interferon production and antibody responses. *Proceedings of the National Academy of Sciences United States of America* 2012: 109:E898-904
27. Becker AM, Michael DG, Satpathy A, Sciammas R, Singh H, **Bhattacharya D**, IRF-8 extinguishes neutrophil potential and promotes dendritic cell lineage commitment in both myeloid and lymphoid mouse progenitors. *Blood* 2012: 119:2003-2012
28. Bednarski JJ, Nickless A, **Bhattacharya D**, Amin RH, Schlissel MS, Sleckman BP, RAG-induced double-strand breaks signal through Pim2 to promote pre-B cell survival and limit proliferation. *Journal of Experimental Medicine* 2012: 209:11-17
29. Satpathy AT, KC W, Albring JC, Edelson BT, Kretzer NM, **Bhattacharya D**, Murphy TL, Murphy KM, *Zbtb46* expression distinguishes classical dendritic cells and their committed progenitors from other immune lineages. *Journal of Experimental Medicine* 2012: 209:1135-1152
30. Seita J, Sahoo D, Rossi DJ, **Bhattacharya D**, Serwold T, Inlay MA, Ehrlich LI, Fathman JW, Dill DL, Weissman IL, Gene expression commons: an open platform for absolute gene expression profiling. *PloS One* 2012: 7:e40321
31. Sandoval G, Graham DB, **Bhattacharya D**, Sleckman BP, Xavier RJ, Swat W, Cell-autonomous control of IL-7 response revealed in a novel stage of precursor B cells. *Journal of Immunology* 2013: 190:2485-2489
32. Sandoval GJ, Graham DB, Gmyrek GB, Akilesh HM, Fujikawa K, Sammut, B, **Bhattacharya D**, Srivatsan S, Kim A, Shaw AS, Yang-Iott K, Bassing CH, Duncavage E, Xavier RJ, Swat W: Novel mechanisms of tumor suppression by polarity gene discs large 1 (DLG1) revealed in a murine model of pediatric B-ALL. *Cancer Immunology Research* 2013: 1:426-437
33. Chan SR, Rickert CG, Vermi W, Sheehan KC, Arthur C, Allen JA, White JM, Archambault J, Lonardi S, McDevitt TM, **Bhattacharya D**, Lorenzi MV, Allred C, Schreiber RD, Dysregulated STAT1-SOCS1 control of JAK2 promotes mammary luminal progenitor survival and drives ER α + tumorigenesis. *Cell Death and Differentiation* 2014: 21:234-246
34. Wang Y, **Bhattacharya D**, Adjuvant-specific regulation of long-term antibody responses by ZBTB20. *Journal of Experimental Medicine* 2014: 211:841-856
35. Day, RB, **Bhattacharya D**, Nagasawa, T, Link, DC, Granulocyte colony-stimulating factor reprograms bone marrow stromal cells to actively suppress B lymphopoiesis in mice. *Blood* 2015: 125:3114-3117

36. He Z, O'Neal J, Wilson WC, Mahajan N, Luo J, Wang Y, Su MY, Lu L, Skeath JB, **Bhattacharya D**, Tomasson MH, Deletion of Rb1 induces both hyperproliferation and cell death in murine germinal center B cells. *Experimental Hematology* 2015: 44:161-165
37. Becker AM, Callahan DC, Richner JM, Choi J, DiPersio JF, Diamond MS, **Bhattacharya D**, GPR18 controls reconstitution of mouse small intestine intraepithelial lymphocytes following bone marrow transplantation. *PLoS One*, 2015: 10:e0133854
38. Becker AM, Walcheck B, **Bhattacharya D**, ADAM17 limits the expression of CSF1R on murine hematopoietic progenitors. *Experimental Hematology*, 2015: 43:44-52
39. **Bhattacharya D**, Basophils take a slice of IRF8 pie. *Blood* 2015: 125:214-215
40. Lam WY#, Becker AM#, Kennerly KM#, Wong R, Curtis JD, Payne EM, McCommis KS, Fahrman J, Pizzato, HA, Nunley RM, Lee J, Wolfgang MJ, Patti GJ, Finck BN, Pearce EL, **Bhattacharya D**, Mitochondrial pyruvate import promotes the long-term survival of antibody-secreting plasma cells. *Immunity* 2016: 45:60-73
41. Jash A, Wang Y, Weisel FJ, Scharer CD, Boss JM, Shlomchik MJ, **Bhattacharya D**, ZBTB32 restricts the duration of memory B cell recall responses. *Journal of Immunology* 2016: 197:1159-1168
42. Chou C, Verbaro DJ, Tonc E, Holmgren M, Cella M, Colonna M, **Bhattacharya D**, Egawa T, The transcription factor AP4 mediates resolution of chronic viral infection through amplification of germinal center B cell responses. *Immunity* 2016: 45:570-582
43. **Bhattacharya D**, Wong R, The Chosen Few: Only a Subset of Memory B Cells Responds to Secondary Dengue Virus Infections. *eBioMedicine* 2016: 12:12-13
44. Adamo L, Staloch LJ, Rocha-Resende C, Matkovich SJ, Jiang W, Bajpai G, Weinheimer CJ, Kovacs A, Schilling JD, Barger PM, **Bhattacharya D**, Mann DL, Modulation of cardiac B lymphocytes improves cardiac function after acute injury. *Journal of Clinical Investigation Insight*, 2018: 3:11
45. Lam WY, Jash A, Yao C, D'Souza L, Wong R, Nunley RM, Meares GP, Patti GJ, **Bhattacharya D**, Metabolic and Transcriptional Modules Independently Diversify Plasma Cell Lifespan and Function. *Cell Reports* 2018: 24:2479-2492
46. Lam WY, **Bhattacharya D**, Metabolic Links between Plasma Cell Survival, Secretion, and Stress. *Trends in Immunology* 2018: 29:19-27
47. Pizzato HA, **Bhattacharya D**, Sending Cancer into the Fetal Position. *Cell Stem Cell* 2018: 22:479-480
48. Egawa T, **Bhattacharya D**, Regulation of key metabolic pathways in B cells and plasma cells. *Current Opinion in Immunology* 2019: 57:8-14
49. Wong R, **Bhattacharya D**, Basics of memory B cell responses: lessons from and for the real world. *Immunology* 2019: 156:120-129
50. D'Souza L, **Bhattacharya D**, Plasma cells: You are what you eat. *Immunological Reviews* 2019: 288:161-177

51. Krummel M, Blish C, Kuhns M, Cadwell K, Oberst A, Goldrath A, Ansel KM, Chi H, O'Connell R, Wherry EJ, Pepper M; **Future Immunology Consortium**. Universal Principled Review: A Community-Driven Method to Improve Peer Review. *Cell* 2019: 179:1441-1445.
52. Jash A, Zhou YW, Parikh BA, Piersma S, Boon ACM, Yokoyama WM, Hsieh CS, **Bhattacharya D**, ZBTB32 restrains antibody responses to murine cytomegalovirus, but not other repetitive challenges. *Scientific Reports* 2019: 9:15257
53. Nikolich-Zugich J, Knox KS, Rios CT, Natt B, **Bhattacharya D**, Fain MJ, SARS-CoV-2 and COVID-19 in older adults: what we may expect regarding pathogenesis, immune responses, and outcomes. *Geroscience* 2020: 42:505-514
54. Jamwal DR, Laubitz D, Harrison CA, Figliuolo da Paz V, Cox CM, Wong R, Midura-Kiela M, Gurney MA, Besselsen DG, Setty P, Lybarger L, **Bhattacharya D**, Wilson JM, Ghishan FK, Kiela PR, Intestinal Epithelial Expression of MHCII Determines Severity of Chemical, T Cell-Induced, and Infectious Colitis in Mice. *Gastroenterology* 2020: 159:1342-1356.
55. Baumgarth N, Nikolich-Zugich J, Lee FE, **Bhattacharya D**, Antibody responses to SARS-CoV-2: Let's stick to the known knowns. *Journal of Immunology*, 2020: 205:2342-2350
56. Wong R, **Bhattacharya D**, ZBTB38 is dispensable for antibody responses. *PLoS One* 2020: 15(9):e0235183
57. Zbesko JC, Frye JB, Bechtel DA, Gerardo DK, Stokes J, Calderon K, Nguyen TV, **Bhattacharya D**, Doyle KP, IgA natural antibodies are produced following T-cell independent B-cell activation following stroke. *Brain Behav Immunol* 2020: 91:578-586
57. Wong R, Belk JA, Govero J, Uhrlaub JL, Reinartz D, Zhao H, Errico JM, D'Souza L, Ripperger TJ, Nikolich-Zugich J, Shlomchik MJ, Satpathy A, Fremont DH, Diamond MS, **Bhattacharya D**, Affinity-restricted memory B cells dominate recall responses to heterologous flavivirus challenges. *Immunity* 2020: 53:1078-1094
58. Ripperger TJ[#], Uhrlaub JL[#], Watanabe M[#], Wong R[#], Castaneda Y, Pizzato HA, Thompson MR, Bradshaw C, Weinkauff CC, Bime C, Erickson HL, Knox K, Bixby B, Parthasarathy S, Chaudhary S, Natt B, Cristan E, El Aini T, Rischard F, Champion J, Chopra M, Insel M, Sam A, Knepler JL, Capaldi AP, Spier CM, Dake MD, Edwards T, Kaplan ME, Scott SJ, Hypes C, Mosier J, Harris DT, Lafleur BJ, Sprissler R, Nikolich-Zugich J^{##}, **Bhattacharya D^{##}**. Orthogonal SARS-CoV-2 serological assays enable surveillance of low prevalence communities and reveal durable humoral immunity. *Immunity* 2020, 53:925-933
59. Ripperger TJ, **Bhattacharya D**, Transcriptional and Metabolic Regulation of B Cells. *Annual Review of Immunology* 2021, 39:345-368.
60. Schenten D and **Bhattacharya D**. Immunology of SARS-CoV-2 Infections and Vaccines. *Advances in Immunology* 2021, 151: 49-97.
61. Shroff RT, Chalasani P, Wei R, Pennington D, Quirk G, Schoenle MV, Uhrlaub JL, Ripperger TJ, Jergović M, Dalgai S, Wolf A, Hammad H, Carrier A, Scott AJ, Nikolich-Zugich J, Worobey M, Sprissler R, Dake M, LaFleur BJ, **Bhattacharya D**. Immune Responses to Two and Three Doses of the BNT162b2 mRNA Vaccine in Adults with Solid Tumors. *Nature Medicine* 2021, 27(11) 2002-2011.

62. Ripperger TJ, **Bhattacharya D**, Less Bmi1 is more for chronic infections. Nature Immunology 2022, 23(1):6-8.

Conferences and Scholarly Presentations (since 2017):

Completed

- 2017 Vaccine Research Center, National Institute of Allergy and Infectious Disease, Bethesda, MD. "A Metabolic Explanation for Plasma Cell Lifespan and the Duration of Immunity."
- 2017 University of California, Davis, Department of Comparative Medicine. Davis, CA. "A Metabolic Explanation for Plasma Cell Lifespan and the Duration of Immunity."
- 2018 Arizona State University, Biodesign Institute, Tempe, AZ. "A Metabolic Explanation for the Duration of Immunity."
- 2018 West Virginia University, Department of Microbiology, Immunology and Cell Biology, Morgantown, WV. "Durable Humoral Immunity: Lessons from Flaviviruses and Metabolism."
- 2018 University of Massachusetts, Department of Pathology, Worcester, MA. "Durable Humoral Immunity: Lessons from Flaviviruses and Metabolism."
- 2019 Midwinter Conference of Immunologists, Pacific Grove, CA. "B Cell Recall Responses to Flaviviruses."
- 2019 American Association of Immunologists meeting major symposium, San Diego, CA. "Metabolic plasticity during hematopoietic development and B cell responses."
- 2019 European Hematology Association, Amsterdam, Netherlands. "A Metabolic Explanation for Plasma Cell Lifespan and the Duration of Humoral Immunity."
- 2019 American Association of Immunologists Advanced Course in Immunology, Boston, MA. "B cell memory."
- 2019 TRR130 Symposium on B cell responses in immunity and autoimmunity, Freiburg, Germany. "Recall responses to flaviviruses."
- 2019 University of California, Berkeley, Department of Molecular and Cell Biology. Berkeley, CA. "Durable antibody responses: lessons from flaviviruses and metabolism."
- 2020 Cell Symposium, Frontiers in the field of B cell immunology, Shanghai, China. "Metabolic explanations for plasma cell lifespan and the duration of immunity."
- 2020 Harvard University, Department of Stem Cell and Regenerative Biology, Cambridge, MA. "Engineering pluripotent stem cells to evade and promote immunity."
- 2020 Pfizer Inc., Boston, MA. "B cell memory."

- 2020 Cleveland Clinic, Department of Inflammation and Immunity. Cleveland, OH. "Antibody responses to viral infections and vaccines."
- 2020 University of Texas Health Sciences, San Antonio, Department of Microbiology, Immunology & Molecular Genetics. San Antonio, TX. "Antibody responses to viral infections and vaccines."
- 2020 Georgia Medical College, Department of Biochemistry, Augusta, GA. "Antibody responses to viral infections and vaccines."
- 2021 Predicting and Responding to Emerging Viruses and Pandemics Symposium, virtual. "Antibody responses to SARS-CoV-2 infections and vaccines."
- 2021 University of Pittsburgh, Department of Immunology. Pittsburgh, PA. "Antibody responses to viral infections and vaccines."
- 2021 Duke University, Departments of Immunology and Department of Molecular Genetics and Microbiology. Durham, NC. "Antibody responses to viral infections and vaccines."
- 2021 American Association of Immunologists meeting, virtual. "Using Twitter to disseminate your work to colleagues and the public."
- 2021 Mayo Clinic, Scottsdale, AZ/ Rochester, MN. "Antibody responses to viral infections and vaccines."
- 2021 Emory University, Department of Microbiology and Immunology. Atlanta, GA. "Antibody responses to viral infections and vaccines."
- 2021 University of Pennsylvania, Department of Microbiology. Philadelphia, PA. "Antibody responses to viral infections and vaccines."
- 2021 Thomas Jefferson University, Department of Microbiology and Immunology. Philadelphia, PA. "Antibody responses to viral infections and vaccines."
- 2022 Yale University, Department of Immunobiology, Graduate Student-invited Symposium. New Haven, CT (virtual). "Antibody responses to viral infections and vaccines."
- 2022 Indiana University, Department of Microbiology and Immunology, Indianapolis, IN. "Antibody responses to viral infections and vaccines."
- 2022 University of Illinois-Chicago, Department of Microbiology and Immunology. Chicago, IL. "Antibody responses to viral infections and vaccines."
- 2022 Viroholics seminar series. Tempe, AZ (virtual). "Antibody responses to viral infections and vaccines."

Upcoming

- 2022 Washington University in St. Louis, Department of Pathology and Immunology. St. Louis, MO. "Instructing durable antibody immunity for viral infections and vaccines."

2022	Nature Medicine Virtual Conference on understanding COVID-19 to prepare for the next pandemic. "Primary and Secondary Antibody Responses to SARS-CoV-2 Infections and Vaccines."
2022	American Association of Immunologists, major symposium on immunology of COVID-19. Portland, OR. Title TBD.
2022	International Society for Stem Cell Research, plenary session on Pushing the Boundaries in Stem Cell Therapy and Regeneration. San Francisco, CA. Title TBD.

Awarded Grants and Contracts:

Federal

09/01/12-11/30/22	Principal Investigator, Deepta Bhattacharya, Transcriptional regulation of antibody responses and immunity. NIH R01AI099108
12/13/17-11/30/27	Principal Investigator, Deepta Bhattacharya, Glucose and Amino Acid Catabolism in Plasma Cell Biology. NIH R01AI129945
12/22/17-11/30/20	Principal Investigator, Deepta Bhattacharya, Pluripotent Stem Cell-Based Immunotherapies. NIH R21AI132910
07/10/20-07/09/21	Principal Investigator, Deepta Bhattacharya. Imagestream-X MKII to enhance cell biology research. NIH 1S10OD028466

State

05/06/20-05/05/21	Co-investigator, Deepta Bhattacharya, COVID-19 SEROLOGY TESTING. Arizona Department of Health Services,
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Private Foundation

07/01/17-06/30/19	Co-Principal Investigator, Deepta Bhattacharya, Generation of immune privileged stem cell derived beta cells by genome editing. Juvenile Diabetes Research Foundation, 2-SRA-2017-365-S-B
01/01/20-04/31/22	Co-Principal investigator, Deepta Bhattacharya, Overcoming Immune Barriers to Stem Cell-Derived Beta Cell Transplantation. Juvenile Diabetes Research Foundation, 3-SRA-2020-895-S-B
11/14/18-10/30/23	Principal Investigator, Deepta Bhattacharya, Plasma cell therapies for infectious disease, Bill and Melinda Gates Foundation, OPP1206188_2018_UA

Intellectual Property:

2006	Selective immunodepletion of endogenous stem cell niche for engraftment. US20180327507A1. Granted 2018. Licensed by Gilead Sciences.
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- 2017 Cells and Methods of Uses and Making the Same. US20200095543A1. Published 2020. Licensed by Sana Biotechnology.
- 2019 Modified stem cells and methods of use thereof. WO2021072302A1. Published 2021. Licensed by Clade Therapeutics.
- 2020 Serological assays for SARS-CoV-2. WO2021252887A1. Granted 2020.

Other Industry relations:

- 2021 Scientific co-founder, Clade Therapeutics
- 2022 Advisory panel for GlaxoSmithKline on COVID-19 therapeutics.