



## HONORS AND AWARDS

2017	<i>Outstanding Faculty Researcher</i> , Howard University College of Medicine
2014	<i>Minority Scholar in Cancer Research</i> - American Association of Cancer Research (AACR)
2014	Recognized by Howard University as “ <i>one of the ten STEM Stars</i> ”
2013	<i>Press Release</i> , by College of Medicine, Howard University
2007	<i>Women Scientist Achievement Award</i> , National Institute on Aging (NIH)
2005	<i>Fellows Award for Research Excellence</i> , NIH
2002-2007	<i>Visiting Fellowship</i> , NIH
2001-2002	<i>Fast Track for Young Scientists</i> , Research award by the Science and Engineering Research Council, Department of Science and Technology, Government of India
1999-2000	Post-doctoral <i>Research Associate</i> , Council for Scientific and Industrial Research (CSIR), Government of India
1994	<i>National Eligibility</i> for Lectureships by the CSIR and the University Grants Commission (UGC), Government of India
1993-1998	Pre-doctoral <i>Junior Research Fellowship</i> (1993-1995) and <i>Senior Research Fellowship</i> (1995-1998), UGC, Government of India
1993	<i>National Graduate Aptitude Test for Engineering</i> (UGC-GATE)- India

## RESEARCH GRANTS

### ACTIVE

1. NSF1832163 (08/1/2018- 07/31/2023); **Role: Principal Investigator (PI)**; Project Title: Investigation of RECQ1 helicase in DNA transactions upon oxidative stress.
2. Canadian Institutes of Health Research (CIHR) (09/1/2017-08/31/2025); **Role: Co-Investigator**; PI: MR Akbari of the University of Toronto. Project Title: Investigating the Role of RECQL in Breast Cancer Susceptibility.
4. NIA/NIH 1R25 AG047843 (09/1/2014-08/31/2025); **Role: Investigator**; PI: Duttaroy; Title: Howard University’s Advancing Diversity in Aging Research (HUADAR) program.
5. National Human Genome Research Institute/NIH (Intramural) (2020-2025); **Role: PI**. Project Title: Genetics of COVID-19 Susceptibility and Manifestation

### COMPLETED

5. HU-ADVANCE-IT Minigrant for (NSF ADVANCE HRD-1208880) (10/01/2014-9/30/2015); **Role: PI**; Title: Investigation of a putative regulator of metastasis in African American and Caucasian breast cancer
6. NIGMS/NIH 5SC1GM093999 (09/2017-08/2022); **Role: PI**; Title: Molecular analyses of RECQ1 functions in genome maintenance.
7. NIGMS/NIH 5SC1GM093999 (09/2010-08/2016); **Role: PI**; Title: Molecular analyses of RECQ1 functions in genome maintenance; (renewed through competitive review).
8. NIGMS/NIH supplement 3SC1GM093999-03S1 (9/2011-8/2014); **Role: PI**; New Grant support obtained in response to NOT-GM-08-130;
9. NIMHD/NIH G12MD007597 (3/2011-6/2013); **Role: New Faculty Pilot Project**; RCMI Grant (G12MD007597) PI: Dr. William Southerland
9. NCI U54CA137788/U54CA132378 Pilot Project (09/01/2010-08/31/2012); **Role: Co-PI** Title: Role of RECQ1 in HR repair of DNA double strand breaks;

## REVIEW AND OTHER PROFESSIONAL ACTIVITIES

### Research Grants Review: International

2021	Reviewer, Breast Cancer Now, the UK's largest breast cancer charity foundation
2021	Reviewer, OPUS grant, National Science Centre (NCN; a government funding agency to support basic science research in Poland), Poland
2020	Reviewer, Czech Science Foundation
2019	Reviewer, PRELUDIUM grants, National Science Centre, Poland
2018	Reviewer, Medical Research Council (MRC; a government agency responsible for co-coordinating and funding medical research in the United Kingdom), UK
2017	Reviewer, Netherlands Organization for Scientific Research (NOW; the national research council of the Netherlands), Netherlands
2017	Reviewer, PRELUDIUM grants, National Science Centre, Poland
2017	Reviewer, POLONEZ grants, National Science Centre, Poland
2016	Reviewer, HARMONIA grants, National Science Centre, Poland

### Research Grants Review: National

2023	Reviewer, NIH Study Section, NIGMS K99/R00
2022	Reviewer, Beckman Young Investigator 2022-2023
2022	Reviewer, NIH Study Section, (2022/05 ZGM1 TWD-X (KR))
2021	Reviewer, NIH Study Section (ZGM1 RCB-9 (CG))
2021	Reviewer, NIH Study Section (ZGM1 TWD-X PR)
2021	Reviewer, NSF (HSI 2021 Track 2 (IEP) Panel)
2020	Reviewer, NIH Study Section (2021_01/ZGM1 RCB-3 (CM))
2020	Reviewer, NIH Study Section (2020/10 ZGM1 RCB-7 (CM))
2020	Reviewer, Pilot Grant for Mays Cancer Center at UT Health San Antonio
2019	Reviewer, NIH Study Section (ZGM1 RCB-3 (SC) S)
2019	Reviewer, NIH Study section (ZGM1 TWD-X(PR))
2019	Reviewer, NSF (HSI T1 PHD 2 Panel)
2018	Reviewer, NIH Peer-review in the study SSI "Anonymization Project"
2016	Reviewer, NIH Study Section (NCI-SEP, ZCA1 RPRB-B (O1))
2016	Reviewer, NIH Study Section (NCI-SEP, ZCA1 RPRB-B(M2))
2015	Reviewer, NIH Study Section (NCI-SEP, ZCA1 RPRB-B(M2))
2015	Reviewer, NIH Study Section (CE)
2012	Reviewer, NSF Molecular and Cellular Biology Division
2012	Reviewer and member (ad-hoc), National Institute of General Medical Sciences (NIGMS), NIH advisory council

### Review Panels for Fellowships: National

2023	Panelist, NSF Graduate Research Fellowship (NSF GRFP)
2022, 2023	Panelist, National Defense Science and Engineering Graduate (NDSEG)
2018-2021	Panelist, American Fellowship, American Association of University Women (AAUW)
2016-2019,	Panelist, NDSEG
2015-2017	Chair, Physical and Biological Sciences Sub-Panel, AAUW
2012-2017	Panelist, International Fellowship, AAUW
2011-2016	Panelist, NSF GRFP
2012	Panelist, NDSEG

### Editorial Board Service

2021-2023	Member, Editorial Board of <i>Molecular and Cellular Biology</i>
2018-present	Member, Editorial Board of <i>Cells</i>
2013-present	Member, Editorial Board of <i>Scientific Reports</i>

### Invited Guest Editor

- Current Opinions in Pharmacology (COPHAR), Cancer 2023
- Cells: DNA Replication and Genetic Research: An Honorary Issue in Memory of Prof. James L. German (2023)

### Peer-review of Manuscripts

2011-present Reviewer for various Journals including Nature, PNAS, NAR, Cell reports, etc.

## TEACHING

### Medical Course

2015 (Fall)-present *Coordinator* and instructor for Molecules and Cells Unit 1a (MC1a)

### Graduate Courses

General Biochemistry (*BIOC 101 and 170*)

Molecular Biology (*BIOC 270*)

Metabolic Regulation (*BIOC 272-01*)

Advanced Enzymology (*BIOC 240*)

Orientation to Research Laboratory (*BIOC 211*)

Directed Research (*BIOC 205*)

Co-coordinator of Graduate Seminar in Biochemistry (*BIOC 201*)

### Undergraduate Course

Biology of Aging (*Bio 319*), College of Arts and Sciences

## MENTORING

Postdoctoral Fellows: Currently 2 (total 6)

Graduate Students: Total 6

Undergraduate Students (Summer): total 8

High School Students: total 6

Medical Students: Total 4

## INTRAMURAL SERVICE

### Department-wide

2021-2023 Member, Graduate Studies Committee (3-year term)

2021 Organizer, 31<sup>st</sup> Annual Graduate Research Emphasis Day

2019-present Member, APT Committee

2019-2020 Chair, APT Committee

2018-2019 Member, Executive Committee

2015-2016 Director, Graduate Studies Committee

2014 Organizer, 24<sup>th</sup> Annual Graduate Research Emphasis Day

2013-2017 PhD Dissertation Thesis Defense Committee

2013-2016 Member, Graduate Studies Committee (3-year term)

2012-2018 Graduate Student Qualifying Examination Committees

2012-2014 Co-coordinator, Departmental Seminar series

2011-2012 Member, Executive Committee

**College of Medicine-wide**

- 2020- Principal Investigator, collaborative NIH-HU COVID-19 Genetic Study
- 2020-2023 Elected Member, College-wide APT Committee
- 2019- Member, Search Committee for the Chairperson of Neurology
- 2018-present Member, Promotions and Graduations Committee
- 2017-present Interim Director, Human Genome Center
- 2015-present Course Coordinator, Molecules and Cells Unit 1a
- 2015-2022 Presenter, Freshmen Orientation, Team Based Learning Simulation and Exercise
- 2015-2016 Invited Member, Advancing Computational Biology at Howard University Symposium Planning Committee, RCMI
- 2014 Member, Strategic Planning Committee-Research
- 2013-2016 Elected Member, Curriculum Committee
- 2012 Member, Search Committee for Director for the Center for Sickle Cell Disease

**University-wide**

- 2019- Member, Coordinating Committee (CO) of the NIH-Howard Intramural Research Collaboration Project (Appointed by the Dean of College of Medicine)
- 2014-2019 Judge, poster and oral presentations, Howard University Research Day/Week
- 2018 Invited Member, HHS -NIH SBIR/STTR Research Conference Planning Team
- 2016 Reviewer, DoD's Research and Education Program for (HBCU/MI) Equipment/Instrumentation solicitation (Invited by the Associate Provost for Research and Graduate Studies)
- 2015 Reviewer, Limited Submission for NSF's Major Research Instrumentation solicitation (Invited by the Associate Provost for Research and Graduate Studies)
- 2014 Invited participant, Howard University Research Retreat
- 2013-2014 Member, Research Day Planning Committee

**Other Significant Research, Education, and Outreach Activities**

- 2023 Panelist, Capitol Hill briefing of the Institute of Gene Therapy
- 2022-2025 Member, Women in Biochemistry and Molecular Biology Committee, American society for Biochemistry and Molecular Biology
- 2022-2024 Reviewer, Beckman Young Investigator (BYI) by The Arnold and Mabel Beckman Foundation
- 2021-present Consultant, Quality Education for Minorities (QEM)
- 2021 External Evaluator, Tenure application, University of Maryland
- 2020-present Member, Scientific, Academic & Medical council, Institute for Gene Therapies
- 2020 External Evaluator, Tenure application, Catholic University
- 2019 External Evaluator, Tenure application, Indiana University-Purdue University
- 2018-present Member, International Reviewer Database of the National Research Foundation (NRF) of Korea (a counterpart of the NSF)
- 2018 Reviewer/external examiner, PhD Thesis, Indian Institute of Science, India
- 2018 Judge, Poster Session of Indo-US Conference on Transcription, Chromatin Structure, DNA Repair, and Genomic Instability, Bangalore, India
- 2018 Judge, Science Fair at Hyde-Addison Elementary School, Washington DC
- 2017 Judge, Science Education, AACR-Annual Meeting, Washington, DC
- 2015-Present Resource Person, NSF GRFP
- 2015-Present Member, Advisory Board, American Federation of Aging Research (AFAR)

## PEER-REVIEWED PUBLICATIONS

For the complete publication list, please see My Bibliography (#corresponding author)

<https://www.ncbi.nlm.nih.gov/myncbi/sudha.sharma.1/bibliography/public/>

1. Banday AR, Stanifer ML, Florez-Vargas O, Onabajo O, Papenberg BW, Zahoor MA, Mirabello L, Ring TJ, Lee C-H, Albert PS, Andreakos E, Arons E, Barsh G, Biesecker LG, Boyle DL, Brahier MS, Burnett-Hartman A, Carrington A, Chang E, Choe PG, Chrisholm RL, Colli LM, Dalgard C, Dude CM, Edberg J, Erdmann N, Feigelson HS, Fonseca BA, Firestein GS, Gehring AJ, Guo C, Ho M, Holland S, Hutchinson AA, Im H, Irby L, Ison MG, Joseph NT, Kim HB, Kreitman RJ, Korf BR, Lipkin SM, Mahgoub SM, Mohammed I, Paschoalini GI, Pacheco JA, Peluso MJ, Rader DJ, Redden DT, Ritchie MD, Rosenblum B, Ross ME, Sant Anna HP, Savage S, **Sharma S**, Siouti E, Smith AK, Triantafyllia V, Vargas JM, Vargas JD, Verma A, Vij V, Wesemann DR, Yeager M, Yu X, Zhang Y, Boulant S, Chanock SJ, Feld JJ, Prokunina-Olsson L#. (2022). Genetic regulation of OAS1 nonsense-mediated decay underlies association with COVID-19 hospitalization in patients of European and African ancestries. **Nature Genetics**. 54(8):1103-1116. PMID: 35835913 PMCID: PMC9355882
2. Mahmoodi A, Shoqafi A, Sun P, Giannakeas V, Cybulski C, Nofech-Mozes S, Masson JY, **Sharma S**, Samani AA, Madhusudan S, Narod SA, Akbari MR# (2022). High Expression of RECQL Protein in ER-Positive Breast Tumours Is Associated with a Better Survival. **Front Oncol**. 12:877617. PMID: 35712517; PMCID: PMC9195420
3. Debnath S, Lu X, Lal A, **Sharma S**# (2022). Genome-wide investigations on regulatory functions of RECQ1 helicase. **Methods**. PMID: 35231585; PMCID: in process. (*Invited article*)
4. Lu X, Redon CE, Tang W, Parvathaneni S, Bokhari B, Debnath S, Li XL, Muys BR, Song Y, Pongor LS, Sheikh O, Green AR, Madhusudan S, Lal A, Ambs A, Khan J, Aladjem MI\*, **Sharma S**# (2021). Genome-Wide Analysis Unveils DNA Helicase RECQ1 as a Regulator of Estrogen Response Pathway in Breast Cancer Cells. **Mol Cell Biol**. PMID: 33468559 PMCID: PMC8088126
5. Debnath S, **Sharma S**# (2020). RECQ1 Helicase in Genomic Stability and Cancer. **Genes**;11(6): E622. PMID: 32517021; PMCID: PMC7348745.
6. Sharma P, Alsharif S, Bursch K, Parvathaneni S, **Sharma S**, and Chung BM# (2019). Keratin 19 regulates cell cycle pathway and sensitivity of breast cancer cells to cyclin dependent kinase inhibitors. **Scientific Reports**; 9(1):14650. PMID: 31601969; PMCID: PMC6787034
7. Parvathaneni S and **Sharma S**# (2019). The DNA repair helicase RECQ1 has a checkpoint-dependent role in mediating DNA damage responses induced by gemcitabine. **J Biol Chem**. 294(42):15330-1534. PMID:31444271; PMCID: PMC6802502
8. Bokhari B and **Sharma S**# (2019). Stress marks on the genome: Use or lose? **Int. J. Mol. Sciences** 20(2), 364. PMID:30654540; PMCID: PMC6358951
9. Li XL, Subramanian M, Jones MF, Chaudhary R, Singh DK, Zong X, Gryder B, Sindri S, Mo M, Schetter A, Wen X, Parvathaneni S, Kazandjian D, Jenkins LM, Tang W, Elloumi F, Martindale JL, Huarte M, Zhu Y, Robles AI, Frier SM, Rigo F, Cam M, Ambs S, **Sharma S**, Harris CC, Dasso M, Prasanth KV, Lal A. (2017). Long Noncoding RNA PURPL Suppresses Basal p53 Levels and Promotes Tumorigenicity in Colorectal Cancer. **Cell reports**

- 20(10):2408-2423. PMID: 28877474; PMCID: PMC5777516.
10. Lu X, Parvathaneni S, Madhusudan S, and **Sharma S#** (2017). RECQ1 expression is upregulated in response to DNA damage and in a p53-dependent manner. **Oncotarget** PMID: 28599317; PMCID: PMC5652675.
  11. Woodruff J, Gupta S, Camacho S, Parvathaneni S, Choudhury S, Cheema A, Bai Y, Khatkar P, Erkizan HV, Sami F, Su Y, Schärer OD, **Sharma S#, and Roy R#** (2017). A new sub-pathway of long-patch base excision repair involving 5' gap formation. **EMBO J.** 36(11):1605-1622. PMID: 28373211; PMCID: PMC5452013. (*Co-corresponding authors*)
  12. Arora A, Parvathaneni S, Aleskandarany MA, Agarwal D, Ali R, Abdel-Fatah T, Green AR, Ball GR, Rakha EA, Ellis EA, **Sharma S# and Madhusudan S#** (2017). Clinicopathological and functional significance of RECQL1 helicase in sporadic breast cancers. **Molecular Cancer Therapeutics.** 16(1):239-250. PMID: 27837030; PMCID: PMC5222686 (*Co-corresponding authors*)
  13. Lu X, Parvathaneni S, Li XL, Lal A, **Sharma S#** (2016). Transcriptome guided identification of novel functions of RECQ1 helicase. **Methods.** 108:111-7. PMID: 27102625; PMCID: PMC5035568 (*Invited article*)
  14. Sami F, Gary RK, Fang Y, and **Sharma S#** (2016). Site-directed mutants of human **RECQ1** reveal functional importance of the zinc binding domain. **Mutation Research.** 790:8-18. PMID: 27248010; PMCID: PMC4967042
  15. Sami F, Lu X, Parvathaneni S, Roy R, Gary RK, and **Sharma S#** (2015). RECQ1 interacts with FEN-1 and promotes binding of FEN-1 to telomeric chromatin. **Biochemical Journal.** 468(2):227-44. PMID: 25774876; PMCID: PMC4441847
  16. **Sharma S#** (2014). An appraisal of RECQ1 expression in cancer progression. **Front. Genet.** 5:426. doi:10.3389/fgene.2014.00426. PMID: 25538733; PMCID: PMC4257099
  17. Garige M and **Sharma S#** (2014). Cellular deficiency of Werner Syndrome protein or RECQ1 promotes genotoxic potential of hydroquinone and benzo[a]pyrene exposure. **International Journal of Toxicology** 33(5):373-81. PMID: 25228686; PMCID: PMC4194143
  18. Li XL, Lu X, Parvathaneni S, Bilke S, Zhang H, Thangavel S, Vindigni A, Hara T, Zhu Y, Meltzer PS, **Lal A#, and Sharma S#** (2014). Identification of RECQ1-regulated transcriptome uncovers a role of RECQ1 in regulation of cancer cell migration and invasion. **Cell Cycle** 13(15):2431-2445. PMID: 24932474; PMCID: PMC24932474
  19. Subramanian M, Francis P, Bilke S, Li XL, Hara T, Lu X, Jones MF, Walker RL, Zhu Y, Pineda M, Lee C, Varanasi L, Yang Y, Martinez LA, Luo J, Ambs S, **Sharma S**, Wakefield LM, Meltzer PS, **Lal A#** (2014). A mutant p53/let-7i axis regulated gene network drives cell migration, invasion and metastasis. **Oncogene** 34(9):1094-104. PMID: 24662829; PMCID: PMC4391367
  20. Li XL, Hara T, Choi Y, Subramanian M, Francis P, Bilke S, Walker RL, Pineda M, Zhu Y, Yang Y, Luo Ji, Wakefield LM, Brabletz T, Park BH, **Sharma S**, Chowdhury D, Meltzer PS, **Lal A#** (2014). A p21/ZEB1 complex inhibits epithelial-mesenchymal transition through the miR-183-96-182 cluster. **Molecular and Cellular Biology** 34(3):533-50. PMID: 24277930; PMCID: PMC3911499
  21. Sami F and **Sharma S#** (2013). Probing genome maintenance functions of human RECQ1. **Computational and Structural Biotechnology Journal** 6 (7): e201303014.

PMCID: PMC3962141

22. Parvathaneni S, Stortchevoi A, Sommers JA, Brosh, RM Jr., **Sharma S#** (2013). Human RECQ1 interacts with Ku70/80 and Modulates DNA End-Joining of Double-Strand Breaks. **PLoS One** 8(5): e62481. PMID:23650516; PMCID: PMC3641083
23. Lu X, Parvathaneni S, Hara T, Lal A, and **Sharma S#** (2013). Replication Stress Induces Specific Enrichment of RECQ1 at Common Fragile Sites FRA3B and FRA16D. **Molecular Cancer** 12(1):29. PMID: 23601052; PMCID: PMC3663727
24. **Sharma S#**, Phatak P, Stortchevoi A, Jasin M, LaRocque JR (2012). RECQ1 plays distinct role in cellular response to oxidative DNA damage. **DNA Repair** 11(6):537-49. PMID:22542292; PMCID: PMC3420015
25. **Sudha Sharma#** (2011). Non-B DNA Secondary Structures and Their Resolution by RecQ Helicases. **Journal of Nucleic Acids**. 2011:724215. PMID: 21977309; PMCID: PMC3185257
26. Avvaru S, Rawtani N, Wu Y, Sommers J, **Sharma S**, Mosedale G, North P, Cantor SB, Hickson Ian, Brosh, RM Jr. (2011). Interaction between the helicases genetically linked to Fanconi anemia group J and Bloom's syndrome. **EMBO J**. 30(4):692-705.
27. **Sharma S**, Sommers JA, Brosh RM Jr. (2008). Processing of DNA Replication and Repair Intermediates by the Concerted Action of RecQ Helicases and Rad2 Structure-Specific Nucleases. **Protein Pept Lett**. 15:89-102.
28. **Sharma S** and Brosh RM Jr. (2008). Unique and important consequences of RECQ1 deficiency in mammalian cells. **Cell Cycle** 7:989-1000.
29. **Sharma S** and Brosh RM Jr. (2007). Human RECQ1 is a DNA damage responsive protein required for genotoxic stress resistance and suppression of sister chromatid exchanges. **PLoS ONE** 2: e1297.
30. \*Gupta R, \***Sharma S**, Sommers JA, Kenny MK, Cantor SB, Brosh RM Jr. (2007). BACH1 helicase forms DNA damage inducible foci with RPA and interacts physically and functionally with the single strand DNA binding protein. **Blood** 110:2390-8. (\**Co-first authors*)
31. Peng M, Litman R, Xie X, **Sharma S**, Brosh RM Jr., Cantor SB. (2007). The BACH1-MLH1 interaction is required for the DNA crosslink-induced intra S phase checkpoint. **EMBO J**. 26:3238-49.
32. **Sharma S**, Stumpo DJ, Balajee AS, Bock CB, Lansdorp PM, Brosh RM Jr., Blackshear PJ. (2007). RECQL, a member of the RecQ family of DNA helicases, suppresses chromosomal instability. **Mol. Cell. Biol**. 27:1784-94.
33. **Sharma S#**. (2007). Age-related nonhomologous end joining activity in rat neurons. **Brain Res. Bull**. 73(1-3):48-54.
34. Gupta R, **Sharma S**, Brosh RM Jr. (2006). The emerging roles of DNA helicases to stabilize the replication fork. **Current Genomics** 7:387-398.
35. Gupta R, **Sharma S**, Doherty, KM, Sommers JA, Cantor SB, Brosh RM Jr. (2006). Inhibition of BACH1 (FANCI) helicase by backbone discontinuity is overcome by increased motor ATPase or length of loading strand. **Nucleic Acids Res**. 34:6673-83.
36. Muftuoglu M, **Sharma S**, Thorslund T, Stevnsner T, Soerensen MM, Brosh RM Jr, Bohr VA. (2006). Cockayne syndrome group B protein has novel strand annealing and exchange

- activities. **Nucleic Acids Res.** 34:295-304.
37. **Sharma S**, Doherty KM, Brosh RM Jr. (2006). Mechanisms of RecQ helicases in pathways of DNA metabolism and maintenance of genomic stability. **Biochem. J.** 398:319-37.
  38. Doherty KM, **Sharma S**, Gupta R, Brosh RM Jr. (2006). Tetraplex binding molecules as anti-cancer agents. **Recent Patents on Anti-Cancer Drug Discovery** 1:185-200.
  39. **Sharma S**, Sommers JA, Gary RK, Friedrich-Heineken E, Hubscher U, Brosh RM Jr.(2005). The interaction site of Flap Endonuclease-1 with WRN helicase suggests a coordination of WRN and PCNA. **Nucleic Acids Res.** 33:6769-81.
  40. **Sharma S**, Sommers JA, Choudhary S, Faulkner JK, Cui S, Andreoli L, Muzzolini L, Vindigni A, Brosh RM Jr. (2005). Biochemical analysis of the DNA unwinding and strand annealing activities catalyzed by human RECQ1. **J Biol Chem.** 280:28072-84.
  41. **Sharma S**, Doherty KM, Brosh RM Jr. (2005). DNA helicases as targets for anti-cancer drugs. **Curr. Med. Chem. Anticancer Agents** 5:183-99.
  42. Doherty KM, **Sharma S**, Uzdilla LA, Wilson TM, Cui S, Vindigni A, Brosh RM Jr. (2005). RECQ1 helicase interacts with human mismatch repair factors that regulate genetic recombination. **J Biol Chem.** 280:28085-94.
  43. Gupta R, **Sharma S**, Sommers JA, Jin Z, Cantor SB, Brosh RM Jr. (2005). Analysis of the DNA substrate specificity of the human BACH1 helicase associated with breast cancer. **J Biol Chem.** 280:25450-60.
  44. Sommers JA, **Sharma S**, Doherty KM, Karmakar P, Yang Q, Kenny MK, Harris CC, and Brosh RM Jr. (2005). p53 modulates RPA-dependent and -independent WRN helicase activity. **Cancer Res.** 65:1223-33.
  45. **Sharma S**, Sommers JA, Brosh RM Jr. (2004). In vivo function of the conserved non-catalytic domain of Werner syndrome helicase in DNA replication. **Hum Mol Genet.** 13:2247-61.
  46. **Sharma S**, Sommers JA, Wu L, Bohr VA, Hickson ID, Brosh RM Jr. (2004). Stimulation of flap endonuclease-1 by the Bloom's syndrome protein. **J Biol Chem.** 79: 9847-56.
  47. **Sharma S**, Otterlei M, Sommers JA, Driscoll HC, Dianov GL, Kao HI, Bambara RA, Brosh RM Jr. (2004). WRN helicase and FEN-1 form a complex upon replication arrest and together process branch migrating DNA structures associated with the replication fork. **Mol Biol Cell.** 15:734-50.
  48. **Sharma S**, Sommers JA, Driscoll HC, Uzdilla L, Wilson TM, Brosh RM Jr. (2003). The exonucleolytic and endonucleolytic cleavage activities of human exonuclease 1 are stimulated by an interaction with the carboxyl-terminal region of the Werner syndrome protein. **J Biol Chem.** 278: 23487-96.
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  51. **Sharma S**, Rathaur S. (1999). Characterization of secretory acetylcholinesterase from *Setaria cervi* microfilariae: a potential antigen for diagnosis of human filariasis. **Trop Med Int Health.** 4:341-8.

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#### BOOK CHAPTERS

1. Debnath S, Lu X, Sharma S#. (2022). Transcriptional regulation by a RecQ helicase. **Methods in Enzymology**. (Forthcoming). NIHMSID: NIHMS1812400. (Invited article)
2. Bokhari B, Parvathaneni S, and **Sharma S#** (2018). Role of zinc-binding domain of RecQ helicases. **Helicases from all domains of life**. DOI: <https://doi.org/10.1016/B978-0-12-814685-9.00011-7>. (Invited article).
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