

Brief CV

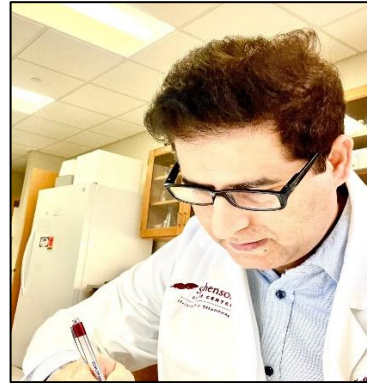
Name: Showket Hussain

Designation: Scientist-E

Division/Department: Molecular oncology & coordinator
Molecular Diagnostics

&, (Molecular Biology Group), ICMR-NICPR, Noida.

Educational Qualification: MS, Ph.D., Post doctorate



Work Experience: More than 18 years

Research Interests: Cancer biology, Cervical cancer research and prevention, HPV DNA Diagnostics, tumor virology.

Member of any national/international research/academic committee:

Nodal officer of Center for Integrative Oncology (CIO), Ministry of Ayush.

Fellowships/Awards/Patents (academic/national/international):

- Received ICMR-DHR Young Scientist International Fellowship Program for the year 2022-23 to work in NCI-designated Cancer Centre USA.
- Selected for DHR Young Scientist International Fellowship Program for the year 2019-20
- Received Corona warrior award on 42nd annual day celebrations of ICMR-NICPR (2021).
- Selected for DHR Young Scientist International Fellowship Program for the year 2019-20.
- Awarded prestigious ICMR award for conducting research in underdeveloped area (2016)
- Received ICMR Young Scientist International Fellowship Program for the year to work in Oklahoma state University, Oklahoma, USA, 2015-16.
- Awarded as ICMR young scientist fellowship award for two years.
- Awarded Post-doctoral fellowship from MD Anderson cancer Center, Houston Texas, USA

Research publications: total (N)= 105 (some of the recent publications in last 5 years)

- Sisodiya, S., V. Kasherwal, A. Khan, B. Roy, A. Goel, S. Kumar, N. Arif, P. Tanwar and **S. Hussain** (2023). "Liquid Biopsies: Emerging role and clinical applications in solid tumours." *Transl Oncol* 35: 101716. **(IF-5) (corresponding author)**
- Tulsyan, S., M. Aftab, S. Sisodiya, A. Khan, A. Chikara, P. Tanwar and **S. Hussain** (2022). "Molecular basis of epigenetic regulation in cancer diagnosis and treatment." *Frontiers in Genetics* 13: 885635-885635. **(IF-4.77) (corresponding author)**
- Gupta, R., **S. Hussain**, R. Hariprasad, K. Dhanasekaran, S. Verma, V. Agarwal, S. Parveen, A. Kaur, C. P. Verma and R. Dwivedi (2022). "High Prevalence of Cervical High-Grade Lesions and High-Risk Human Papillomavirus Infections in Women Living with HIV: A Case for Prioritizing Cervical Screening in This Vulnerable Group." *Acta Cytologica* 66(6): 496-506. **(IF-3)**
- Gupta, R., **S. Hussain**, R. Hariprasad, K. Dhanasekaran, S. Verma, V. Agarwal, P. K. Das, S. Singh and S. Gupta (2022). "Concurrent Cervical and Anal High-Risk Human Papillomavirus Infection in Women Living With HIV: An Observational Case–Control Study." *JAIDS Journal of Acquired Immune Deficiency Syndromes* 91(3). **(IF-3.731)**
- Kumari, N., P. Vasudeva, P. Tanwar, **S. Hussain**, A. Kumar and U. Agrawal (2022). "Peroxiredoxins-Urinary Surveillance Biomarkers in Urothelial Cancer." *Journal of Cancer* 13(9): 2751. **(IF- 3.9)**
- **Hussain, S.**, J. Rani, S. Tulsyan, S. Sisodiya, A. Chikara, S. U. Nazir, A. Srivastava, A. Khan, N. R. Dash, A. Saraya and B. C. Das (2022). "Influence of HPV infection in esophageal cancer: A systematic review and meta-analysis." *Gene Reports* 28: 101640. **(IF-1.3) (corresponding author)**
- Bondhopadhyay, B., S. Sisodiya, F. A. Alzahrani, M. A. Bakhrebah, A. Chikara, V. Kasherwal, A. Khan, J. Rani, S. A. Dar, N. Akhter, P. Tanwar, U. Agrawal and **S. Hussain** (2021). "Exosomes: A Forthcoming Era of Breast Cancer Therapeutics." *Cancers* 13(18): 4672. **(IF-5.2) (corresponding author)**

- Hussain, S., S. Tulsyan, S. A. Dar, S. Sisodiya, U. Abiha, R. Kumar, B. N. Mishra and S. Haque (2022). "Role of epigenetics in carcinogenesis: Recent advancements in anticancer therapy." *Seminars in Cancer Biology* 83: 441-451.. **(IF-17.012) (corresponding author)**
- Khan, A., B. C. Das, U. Abiha, S. Sisodiya, A. Chikara, S. U. Nazir, A. M. Das, A. G. Rodrigues, A. K. Passari, P. Tanwar, S. Hussain, S. Rashid and S. Rashid (2022). "Insights into the role of complement regulatory proteins in HPV mediated cervical carcinogenesis." *Seminars in Cancer Biology* 86: 583-589 .**(IF-17.012) (corresponding author)**
- Nazir, S. U., R. Kumar, A. Dil, I. Rasool, B. Bondhopadhyay, A. Singh, R. Tripathi, N. Singh, A. Khan, P. Tanwar, U. Agrawal, R. Mehrotra and **S. Hussain** (2019). "Differential expression of Ets-1 in breast cancer among North Indian population." *Journal of Cellular Biochemistry* 120(9): 14552-14561. **(IF-4) (corresponding author)**
- Nazir, S. U., R. Kumar, A. Singh, A. Khan, P. Tanwar, R. Tripathi, R. Mehrotra and S. Hussain (2019). "Breast cancer invasion and progression by MMP-9 through Ets-1 transcription factor." *Gene* 711: 143952. **(IF-3.9) (corresponding author)**

Book chapters:

1. **Hussain, S.**, Sisodiya, S., Kasherwal, V., Tulsyan, S. and Khan, A., Use of Immunotherapy in Gynaecological and Breast Cancer. In *Latest Advances in Diagnosis and Treatment of Women-Associated Cancers* (pp. 37-50). CRC Press, 2022
2. Bharadwaj M., **Hussain S.**, Tripathi R., Singh N., Mehrotra R., Chapter 6 - The clinico-molecular approaches for detection of human papillomavirus, in: A.S. Verma, A. Singh (Eds.), *Animal Biotechnology (Second Edition)*, Academic Press, Boston, 2020, pp. 103-130.
3. Bharadwaj M, **Hussain S.**, Tripathi R., Singh N. and Mehrotra R., Human Papillomavirus (HPV): Diagnosis and Treatment. Book chapter 6, pp 95-120, 2014 in "Animal Biotechnology: Models in Discovery and Translation" Edited by Ashish Verma and Anchal Singh, Publisher Academic Press (Elsevier)
4. Bharadwaj M & **Hussain S.**, Chapter name: HPV Vaccine, *Gynecological Cytopathology cervix with clinical aspects 3rd edition* (Mehta Publisher) Edited by Suresh Bhambani, 2013.

Popular articles/op-ed/media-coverage:

Molecular Oncologist Joins Oklahoma State University for Prestigious Fellowship
(https://www.indiawest.com/news/global_indian/molecular-oncologist-joins-oklahoma-state-university-for-prestigious-fellowship/article_bd5fdab8-ec76-11e5-8193-034757816cc0.html)

Presentations/Talks/Lectures: Participated in more than 100 presentations/lectures/conferences
(Last five years):

1. Attended international 11th General Assembly of the Asia Pacific Organisation for Cancer Prevention and the APOCP11 Conference on Cancer Prevention (APOCP), held on 8-10 December 2022 organized by Asian Pacific Organization for Cancer Prevention.
2. Invited guest lecture in Indraprastha dental college and Hospital Ghaziabad on 10th October 2022.
3. Invited guest speaker for a Continuing Dental Education Program organized at Shri Bankey Bihari Dental College and Research Centre, Ghaziabad on 23rd September, 2022.
4. Invited lecture in international conference “Interdisciplinary Research in Cancer Biology”, organized by UPES university, Dehradun, India, held on 22nd Sep to 23rd Sep 2022.
5. Invited lecture in Pre Congress NARCHICON 2022 workshop at Safdarjung Hospital, New Delhi on 22nd September, 2022.
6. Invited speaker at 41st annual conference of Indian Association for Cancer Research (IACR) from 2nd to 5th March 2022 at Amity University Noida.
7. Lecture delivered in 2nd DHR-NICPR workshop on “Basic Molecular Biology Techniques relevant to Cancer Research”, held on 30th Nov-3rd Dec 2021.
8. Attended workshop on, “Six Waste Management Rule 2016” held on 28th Sep to 30th Sep 2021.

9. Invited as speaker and guest of honor in, PRARAMBH 2021 IMS Ghaziabad.
10. Attended online training webinar on “Publishing Webinar-Tips from the Editors.
11. Attended ICMR FICCI health technology accelerated commercialization program H: TAC held on July 11th- August 8th, 2020.
12. Organized 10th “Hands on workshop on cervical cancer screening” from March 4th-6th 2020 at ICMR-NICPR, NOIDA.
13. Lecture delivered as a guest speaker in an international conference “Jivaneeyam: Rejuvenating target cells” held on Feb 12th, 2020, at Scope complex auditorium, CGO complex, Pragati Vihar, New Delhi, from All India Institute of Ayurveda (AIIA) on behalf of Ministry of AYUSH.
14. Invited as speaker in DHR-NICPR workshop on “Basic Molecular Biology Techniques Relevant to Cancer Research” held on Jan 28th- Jan 31st, 2020, at ICMR-NICPR, Noida.
15. Sheeraz Un Nazir, Ramesh Kumar, Ankita Singh, Asiya Khan, Pranay Tanwar, Richa Tripathi, Ravi Mehrotra, Showket Hussain “Transcription factor Ets-1 regulates matrix metallo-proteinase-9 expression in human breast cancer” International conference (BCM-Jan 2019) at Convention center, JNU, New Delhi.
16. Attended international workshop on “Recent Advances in Nano Indentation Techniques”, held on Dec 11th, 2019, at JMI, New Delhi.
17. Attended international conference on “Oral cancer and Reconstruction” held on 13/12/19 at U-Chicago Centre, New Delhi organized by department of ENT head and neck surgery UCMS & GTB Hospital, Delhi.
18. Organized ICMR-AU-SRTC workshop on “Hands- on Workshop on Cervical Cancer Screening for Pathologists” from Sep 11th -Sept 13th, 2019, at ICMR-NICPR, Noida
19. Organized ICMR-AU-SRTC Workshop on “Basic Molecular Biology Techniques Relevant to Cancer Research” from Sept 2nd- Sept 6th, 2019, at ICMR-NICPR, Noida.
20. Attended “Single Cell Genomics Seminar” on April 9th, 2019, at IIIT Delhi organized by Premas Life Sciences.
21. Organized “Hands on workshop on cervical cancer screening” from Feb. 26th – 28th 2019 at ICMR-NICPR, NOIDA.

22. Attended 8th Training Programme on “Science Technology and Emerging Trends in Governance” from 18th to Feb 22nd, 2019, at Indian Institute of Public administration (IIPA), New Delhi.
23. Delivered a Lecture on “Molecular Diagnosis by PCR and RFLP Techniques” held on Feb 14th, 2019, at I.T.S Centre for Dental studies and research, Muradnagar, Ghaziabad.
24. Attended the symposium on “Advances in Immunomics & Immune oncology” on Jan 30th, 2019, in New Delhi organized by Sun Pharma Science Foundation.
25. Ankita Singh, Showket Hussain. MRAS and FOXA1 are regulated epigenetically in Breast Cancer. October 3rd- October 5th, 2018, at 2nd National Post-doctoral Symposium held at CCMB, Hyderabad, India.
26. Sheeraz Un Nazir, Ramesh Kumar, Dil-Afroze, Ishrat Rasool, Banashree Banerjee, Ravi Mehrotra, Showket Hussain: Expression of Ets-1 in breast cancer among Indian population. April 26th-28th, 2018, World Cancer Congress, New Delhi, India.
27. Attended the annual conference of Sun Pharma Science foundation (SPSF) on “Frontiers in oncology” held on Nov 30th, 2018, at AIIMS, New Delhi.
28. Organized “Hands on workshop on cervical cancer screening” from Aug 29th -31st 2018.
29. Organized “Hands on workshop on cervical cancer screening for pathologists” under aegis of Indian academy of cytologists organized by division of cytopathology, ICMR-NICPR, NOIDA from Feb 19-21’2018.
30. Conducted ICMR JRF examination at J&K July 2018.
31. Attended Genetic solutions tour organized by applied biosystems by Thermo Fisher Scientific on August 2nd, 2018, Aerocity, New Delhi.
32. Attended “Induction cum Laboratory Training Programme” organized by National Tobacco testing laboratory ICMR-NICPR NOIDA from Jan 29th – Feb 1st, 2018.
33. Richa Tripathi, Showket Hussain, Ankita Singh and Ravi Mehrotra. Head and Neck Cancer: Advances in Screening, Early detection and Treatment strategies. ICUCPR-2017 International Conference on Updates in Cancer Prevention and Research. Feb 14th-16th 2017. Babasaheb Bhimrao Ambedkar University (A Central University) Vidya Vihar, Rae Bareilly Road, Lucknow-226025 (U.P.) INDIA.

34. Invited to give a talk on “Prospects and Prejudices of cervical cancer in India” held on March 4th, 2016, at Stephenson Cancer center at The University of Oklahoma
35. Attended “Life Sciences summit” in Chandigarh, New Delhi and Lucknow from Dec 7th to 9th 2016.
36. Joint coordinator in workshop at “Basic molecular biology techniques relevant to cancer research” organized by NICPR NOIDA from Dec 6th – 9th 2016.
37. Joint coordinator in workshop at “Basic molecular biology techniques relevant to cancer research” organized by NICPR NOIDA from 18th to April 21st 2017.
38. Attended “Pre-symposium and symposium on developing protocol for management of diabetes and its complications” Madhu Samvaada organized by All India Institute of Ayurveda from March 15th-18th, 2017.
39. Invited as panelist the first joint Gall Bladder Cancer Symposium held on Nov 6th, 2017, at Ramalingaswami Board Room, AIIMS, New Delhi, India. Dr BRA-IRCH & National Cancer Institute (NCI), AIIMS New Delhi and The University of Texas M. D. Anderson Cancer Center (MDACC).
40. Invited as panelist: National conference on emerging perspectives in nursing care. Sept 11th -12th 2017 at SKICC Srinagar.
41. Workshop attended (Speaker/Chairperson/Delegate): Organized two-day program on “Updates in Management of Breast Cancer” An Initiative of NCI-INDIA, AIIMS on May 6th-7th, 2017 at JLN Auditorium, AIIMS, New Delhi.
42. Workshop conducted: 4th workshop on Basic Molecular Biology Techniques relevant to Cancer Research April 18th -21st, 2017 (As Joint- coordinator).
43. Organized Hands-on Workshop “Basic molecular biology techniques relevant to Cancer Research” at NICPR, NOIDA, Dec 6th-9th 2016. (As Joint- coordinator).

Projects:

- **Ongoing projects**

1. **Title: Genomics of Gall Bladder Carcinoma in Indian patients (National Task Force Project).**

Name of funding agency: ICMR, New Delhi.

Role: Principal investigator

Duration of project: 5 years (2018-2023)

2. **Title:** The functional role of autophagy in regulation of extracellular vesicles (EVs) derived circRNA in breast cancer metastasis (**ICMR-RA**).

Name of funding agency: ICMR, New Delhi.

Role: Principal investigator

Duration of project: 3 years (2022-2025)

3. **Title:** To study the role of kinesin 3 family associated with paclitaxel drug resistance in breast carcinogenesis (PI). Ongoing

Name of funding agency: ICMR, New Delhi.

Role: Principal investigator

Duration of project: 3 years (2022-2025)

4. **Title:** To explore the SALL transcription factor family in breast carcinogenesis. (**ICMR-SRF**)

Name of funding agency/Intramural: ICMR, New Delhi.

Role: Principal investigator

Duration of project: 3 years (2020-2023)

5. **Title:** Prevalence of concurrent cervical and anal cytological abnormalities and high-risk HPV infectious in HIV infected women.

Name of funding agency/Intramural: ICMR, New Delhi.

Role: Co-PI

Duration of project: 3 years (2019-2021)

- **Completed projects:**

1. **Title:** Comparative study of Genetic, Clinical and Epidemiological factors of Breast Cancer in Indian population (**National Task Force Project**).

Name of funding agency: ICMR, New Delhi.

Role: Principal investigator

Duration of project: 5 years (2017-22)

- 2. Title: Landscape of genomic alterations in Human papillomavirus infection associated cancers- a genomics, bioinformatics, and computational approach.**

Name of funding agency/Intramural: Indo- Sweden (DST sponsored).

Role: Principal investigator

Duration of project: 3 years (2017-2020)

- 3. Title: Development and validation of a lab-on-a-chip integrated DNA extraction and LAMP-based detection of high-risk HPV genotypes.**

Name of funding agency: ICMR, New Delhi.

Role: Principal investigator

Duration of project: 3 years (2023-2026)

- 4. Title: Role of withaferin-a in the regulation of notch-3 signalling in breast cancer cells**

Name of funding agency/Intramural: Ministry of AYUSH

Role: Principal investigator

Duration of project: 3 years (2022-2025)

- 5. Title: solation, characterization of herbal plant constituents and their effect on curing Osteoporosis using osteoblastic cell lines**

Name of funding agency/Intramural: Ministry of AYUSH

Role: Co- investigator

Duration of project: 3 years (2022-2025)

- 6. Title: Role of T-Reg Cells in obesity and their clinical co-relation in obesity associated inflammation and type-2 diabetic and chronic kidney diseases.**

Name of funding agency/Intramural: ICMR, New Delhi.

Role: Co-PI

Duration of project: 3 years (2019-2022)

- 7. Title: Genome wide methylation profiling of north Indian gallbladder patients. (ICMR-RA)**

Name of funding agency/Intramural: ICMR, New Delhi.

Role: Principal investigator

Duration of project: 3 years (2020-2023)

- 8. Title: Role of cellular Transcription Factor NF-KB and HPV in the development of esophageal carcinogenesis**
Name of funding agency/Intramural: ICMR, New Delhi.
Role: Principal investigator
Duration of project: 3 years (2017-2020)
- 9. Title: To understand the mechanism of aberrant expression of miRNAs and their crosstalk with drug resistance in cervical cancer cells. (ICMR-SRF)**
Name of funding agency: ICMR, New Delhi.
Role: Principal investigator
Duration of project: 3 years (2019-2022)
- 10. Title: To understand the role and mechanism of HPV E4 & E5 oncoproteins in cervical cancer cells. (ICMR-SRF)**
Name of funding agency/Intramural: ICMR, New Delhi.
Role: Principal investigator
Duration of project: 3 years (2019-2022)
- 11. Title: Role of ETS-1 transcription factor in breast carcinogenesis. (ICMR-SRF)**
Name of funding agency/Intramural: ICMR, New Delhi.
Role: Principal investigator
Duration of project: 3 years (2017-2020)
- 12. Title: A molecular understanding of the role of oral contraceptives in the pathogenesis of cervical cancer. (DHR WOMEN SCIENTIST)**
Name of funding agency/Intramural: DHR
Role: Principal investigator
Duration of project: 3 years (2017-2020)
- 13. Title: Charting histone modifications in Indian breast cancer patients. (PDF)**
Name of funding agency/Intramural: ICMR, New Delhi.
Role: Principal investigator
Duration of project: 2 years (2017-2019)
- 14. Title: Development of DNA based vaccine constructs against HPV-16 variant: enhancement of immunogenicity of L1 constructs and characterization of T-cell epitope based E6/E7 constructs.**

Name of funding agency/Intramural: ICMR, New Delhi.

Role: Co-PI

Duration of project: 3 years (2016-2019)

15. Title: A combinatorial study and evaluation of role of therapeutic agents/inhibitors on JAK/STAT pathway.

Name of funding agency/Intramural: DST-SERB

Role: Co-PI

Duration of project: 3 years (2017-2020)

Brief Biosketch:

My laboratory is extensively working in India on Human Papillomavirus (HPV) research and cervical cancer. My major areas of research interest at present are early cervical cancer detection & prevention; HPV-DNA diagnostics, transcriptional regulation of viral oncogene expression, cancer drug discovery, micro-RNA research, cancer signaling pathways epigenetics and immunotherapeutics.

Moreover, the laboratory also works on other common cancers in India such as Breast, Gall bladder, esophageal wherein we are trying to map the genetic landscapes to come up with some of the novel India specific/predisposed genetic markers which may eventually help in diagnosis / management of these cancers. I have published more than 100 research papers including book chapters in reputed journals and have several ongoing projects as principal investigator. Most importantly, my Laboratory is recognized by CDSCO for providing HPV- DNA diagnostics and teaching/training to young and curious minds who are eager to take up cancer research as career.

Contact me at:

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