PROF. TAPASYA SRIVASTAVA

Office: Room 313, Second floor, Bachhawat Block
Lab: Room 202, First floor, Biotechnology Centre
Department of Genetics, University of Delhi South Campus,
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Academic Qualification

Bsc (Hon) Zoology; 1993-96;Delhi University
MSc Biochemistry; 1996-98; Hamdard University
PhD ; Genomic instability in astrocytic tumors and cell-lines; Prof Subrata Sinha; All India Institute of Medical Sciences; 2004

Work experience

2005 - 2008	Young Scientist Fellow at All India Institute of Medical Sciences, New Delhi
2008 - 2009	Research Associate at All India Institute of Medical Sciences, New Delhi
2009 (2 months)	Deputy Assistant Director, National Centre for Disease Control (erstwhile NICD)
2009 - 2017	**Assistant Professor at University of Delhi South Campus, New Delhi**
2017 – 2020	**Associate Professor at University of Delhi South Campus, New Delhi**
2020 -	**Professor at University of Delhi South Campus, New Delhi**

Honors and Awards

Indian National Science Academy medal for young scientists in 2010
Indo-US Science and Technology Fellowship 2011
SERB excellence in research award 2013
Elected member, National Academy of Medical Sciences 2016

Mentorship (since 2009)

PhD students: Completed : 7; Ongoing: 7;
M.Phil students; Completed: 3 ; On-going: 0

Research papers, reviews, editorial (only published ones)

1. Prasad P, Chongtham J, Tripathi SC, Ganguly NK, Mittal SA*, **Srivastava T***. Targeted inhibition of NRF2 reduces the invasive and metastatic ability of HIP1 depleted lung cancer cells. **Biochem Biophys Res Commun. 2024** Nov 12;733:150676. doi: 10.1016/j.bbrc.2024.150676.
2. Gandhi S[1], Bhushan A[1], Shukla U, Pundir A, Singh S*, **Srivastava T***. Downregulation of lncRNA SNHG1 in hypoxia and stem cells is associated with poor disease prognosis in gliomas. **Cell Cycle. 2023** May;22(9):1135-1153. doi: 10.1080/15384101.2023.2191411. PMID: 36945177.
3. Pandey N[1], Chongtham J[1], Pal S, Ali A, Lalwani S, Jain D, Mohan A, **Srivastava T***. When "No-Smoking" is not enough: Hypoxia and nicotine acetylcholine receptor signaling may drive lung adenocarcinoma progression in never-smokers. **Biochim Biophys Acta Mol Cell Res. 2023** Feb;1870(2):119302. doi: 10.1016/j.bbamcr.2022.119302.
4. Chongtham J, Pandey N, Sharma LK, Mohan A, **Srivastava T*** SNP rs9387478 at ROS1-DCBLD1 Locus is Significantly Associated with Lung Cancer Risk and Poor Survival in Indian Population. **Asian Pac J Cancer Prev. 2022** Oct 1;23(10):3553-3561. doi: 10.31557/APJCP.2022.23.10.3553.

5. Bhushan A, Kumari R, **Srivastava T***. Scouting for common genes in the heterogenous hypoxic tumor microenvironment and their validation in glioblastoma. **3 Biotech. 2021** Oct;11(10):451.
6. Shukla P, Deswal D, Pandit M, Latha N, Mahajan D, **Srivastava T**, Narula AK. Exploration of novel TOSMIC tethered imidazo[1,2-a]pyridine compounds for the development of potential antifungal drug candidate. **Drug Dev Res. 2021** Sep 27. doi: 10.1002/ddr.21883.
7. Pandey N, Tyagi G, Kaur P, Pradhan S, Rajam, MV, **Srivastava T***. Allicin overcomes hypoxia mediated cisplatin resistance in lung cancer cells through ROS mediated cell death pathway and by suppressing hypoxia inducible factors. **Cell Physiol Biochem 2020**; 54:748-766 doi: 10.33594/000000253.
8. Gulati P, Kaur P, Rajam MV, **Srivastava T**, Mishra P, Islam SS. Vertically aligned multi-walled carbon nanotubes based flexible immunosensor for extreme low level detection of multidrug resistant leukemia cells. **Sensors and Actuators B 2019** (Article 127047) https://doi.org/10.1016/j.snb.2019.127047
9. Gulati P, Kaur P, Rajam MV, **Srivastava T**, Mishra P, Islam SS. Single-wall carbon nanotube based electrochemical immunoassay for leukemia detection, **Analytical Biochemistry 2018**, doi: 10.1016/j.ab.2018.07.020.
10. Gulati P, Kaur P, Rajam MV, **Srivastava T**, Ali MA, Mishra P, Islam SS. Leukemia biomarker detection by using photoconductive response of CNT electrode: Analysis of sensing mechanism based on charge transfer induced Fermi level fluctuation. **Sensors and Actuators B 2018** Volume 270, Pages 45-55. https://doi.org/10.1016/j.snb.2018.05.019.
11. Singh P, Jenkins LM, Horst B, Alers V, Pradhan S, Kaur P, **Srivastava T**, Hempel N, Győrffy B, Broude EV, Lee NY, Mythreye K. Inhibin is a novel paracrine factor for tumor angiogenesis and metastasis. **Cancer Res. 2018** Mar 13. pii: canres.2316.2017. doi: 10.1158/0008-5472.CAN-17-2316. PMID: 29535220.
12. Majumder S, Sharma N, Das S, Pandey N, **Srivastava T*,** Ghosh D*. Synthesis, Characterization of Novel PLGA Encapsulated Indole Nanoparticles and Study of its cytotoxic potential against A549 lung cancer cell line. **Journal of Applied Pharmaceutical Science. 2018**; 8(8): 144-150.
13. Pandey N, Pal S, Sharma LK, Guleria R, Mohan A, **Srivastava T***. SNP rs16969968 as a Strong Predictor of Nicotine Dependence and Lung Cancer Risk in a North Indian Population. **Asian Pac J Cancer Prev. 2017** Nov 26;18(11):3073-3079.
14. Prasad P, Arora Mittal S, Chongtham J, Mohanty S, **Srivastava T***. Hypoxia-mediated epigenetic regulation of stemness in brain tumor cells. **Stem Cells. 2017** Apr 4. doi: 10.1002/stem.2621. [Epub ahead of print] PubMed PMID: 28376560.
15. Pradhan S, Mahajan D, Kaur P, Pandey N, Sharma C, **Srivastava T***. Combination treatment of low dose cisplatin and scriptaid overcomes hypoxia-induced chemo-resistance in lung cancer cells. **Oncotarget 2016** Nov 1;7(44):71841-71855.
16. Pandey N, Dhiman S, **Srivastava T***, Majumder S*. Transition metal oxide nanoparticles are effective in inhibiting lung cancer cell survival in the hypoxic tumor microenvironment. **Chem Biol Interact 2016** Jul 4;254:221-30.
17. Mittal S, Pradhan S and **Srivastava T***, Recent advances in targeted therapy for glioblastoma, **Expert Rev Neurother. 2015**, Vol. 15, No. 8 , 935-946.
18. Tyagi G, Pradhan S, **Srivastava T*** and Mehrotra R*, Nucleic acid binding properties of allicin; spectroscopic analysis and estimation of anti-tumor potential, **Biochemica and Biophysica Acta** 2014; 1840(1),350-356,.
19. **Srivastava T***, **Biol Med J 2014**, 6:1, Editorial. Now perceiving: The complete genome package.
20. **Srivastava T***, Molecular targets for therapy in malignant gliomas. **Journal of Proteins and Proteomics 2010** Vol 1, No 2, 65-69.

21. Jha P, Agarwal S, Pathak P, Srivastava A, Suri V, Sharma MC, Chosdol K, **Srivastava T**, Gupta D, Gupta A, Suri A, Sarkar C. Heterozygosity status of 1p and 19q and its correlation with p53 protein expression and EGFR amplification in patients with astrocytic tumors: novel series from India. Cancer Genet Cytogenet. 2010 Apr 15;198(2):126-34.
22. Pal A[1], **Srivastava T[1]**, Sharma MK, Mehndiratta M, Das P, Sinha S, Chattopadhyay P. Aberrant methylation and transcriptional mobilization of Alu elements contributes to genomic instability in hypoxia. J Cell Mol Med. 2010 Nov; 14(11):2646-54.
23. Chosdol K, Misra A, Puri S, **Srivastava T,** Sarkar C, Mahapatra AK and Sinha S. Frequent LOH and altered expression of tumor supressor FAT identified by RAPD in astrocytic tumors. BMC Cancer 9:5, 2009.
24. **Srivastava T**, Chosdol K, Chattopadhyay P, Mahapatra AK, Sarkar C, Sinha S. Frequent loss of heterozygosity encompassing the hMLH1 locus in low grade astrocytic tumors. J Neuro-oncol. 2007 Feb;81(3):249-55.
25. **Srivastava T,** Seth A, Datta K, Chosdol K, Chattopadhyay P, Sinha S. Inter-alu PCR detects high frequency of genetic alterations in glioma cells exposed to sub-lethal cisplatin. Int J Cancer. 2005, 117 (4), 683–689. (Cover Page Article).
26. **Srivastava T**, Chattopadhyay P, Mahapatra AK, Sarkar C and Sinha S. Increased hMSH2 Protein Expression in Glioblastoma Multiforme. J Neuro-oncol 2004 Jan 66 (1-2): 51-57.
27. Datta K, Shah P, **Srivastava T**, Mathur SG, Chattopadhyay P, Sinha S. Sensitizing glioma cells to cisplatin by abrogating the p53 response with antisense oligonucleotides. Cancer Gene Therapy 2004 Aug; 11(8): 525-531. (Highlighted by Nature, Nature Publishing Group)
28. Datta K, Mathur SG, **Srivastava T**, Shah P, Chattopadhyay P, Sinha S. Hydroxylamine potentiates the effect of low dose hydrogen peroxide in glioma cells independent of p53. Int J Biochem Cell Biol. 2003 Dec;35(12):1639-44.
29. Datta K, Babbar P, **Srivastava T**, Sinha S, Chattopadhyay P. p53 dependent apoptosis in glioma cell lines in response to hydrogen peroxide induced oxidative stress. Int J Biochem Cell Biol. 2002 Feb;34(2):148-57.
30. Misra A, Chosdol K, **Srivastava T**, Chattopadhyay P, Mahapatra AK, Sarkar C, Sinha S. Glial tumorigenesis: Molecular alterations and identification of targets. Proc. Indian Natl Sci Acad. 2003. B69 No.1, 49-72

Additionally, One in biorxiv (lung cancer and HIP1), two in communication (CNIH1 in gastric cancer ;WASP in leukemia) and three in manuscript draft stage

Chapters in books/ e-books

1. Gandhi, S. et al. (2023). Hypoxia and the Metastatic Cascade. In: Mukherjee, S., Kanwar, J.R. (eds) Hypoxia in Cancer: Significance and Impact on Cancer Therapy. Springer, Singapore. https://doi.org/10.1007/978-981-99-0313-9_9
2. Srivastava T, Gene Organization, Replication and Repair (BBCCT-117) Unit1: Structure of DNA; IGNOU; ISBN : 978-93-5568-268-0; **2022**
3. Srivastava T, Gene Organization, Replication and Repair (BBCCT-117) Unit 3: Gene and Genomic organization II; IGNOU; ISBN : 978-93-5568-268-1; **2022**
4. T Srivastava and LM Srivastava; Complement System; Textbook of Biochemistry, Biotechnology, Allied and Molecular Medicine; ed: GP Talwar, SE Hasnain and SK Sarin; Prentice-Hall of India Pvt Ltd, New Delhi 4th edition, **2016:** 1227-1237.
5. Srivastava T, Chosdol K, Misra A, Chattopadhyay P, Sarkar C, Mahapatra AK and Sinha S. Molecular Staging of Glial Tumors. Proceeding of 14th Annual symposium

of Ranbaxy Science Foundation on 'Emerging Frontiers in Management of Advanced Stage Cancers 2008.

6. T Srivastava and K Chosdol. The Muscular System; in E-book on Biochemistry, National Institute of Science Communication and Information Resources (Council of Scientific and Industrial Research, Govt of India), http://nsdl.niscair.res.in/ 2007.
7. T Srivastava and K Chosdol. Clinical Enzymology; in E-book on Biochemistry, National Institute of Science Communication and Information Resources (Council of Scientific and Industrial Research, Govt of India), http://nsdl.niscair.res.in/ 2007.
8. T Srivastava and S Sinha. The Complement System; in E-book on Biochemistry, National Institute of Science Communication and Information Resources (Council of Scientific and Industrial Research, Govt of India), http://nsdl.niscair.res.in/ 2007.
9. T Srivastava and S Sinha Antigens: in E-book on Biochemistry, National Institute of Science Communication and Information Resources (Council of Scientific and Industrial Research, Govt of India), http://nsdl.niscair.res.in/ 2007.
10. T Srivastava and S Sinha An Overview of Immunity: Innate And Adaptive Immunity: in E-book on Biochemistry, National Institute of Science Communication and Information Resources (Council of Scientific and Industrial Research, Govt of India), http://nsdl.niscair.res.in/ 2007.
11. T Srivastava and S Sinha; Elementary Knowledge of Major Histocompatibility Complex and HLA Typing, in E-book on Biochemistry, National Institute of Science Communication and Information Resources (Council of Scientific and Industrial Research, Govt of India), http://nsdl.niscair.res.in/ 2007
12. A Makkar, T Srivastava and LM Srivastava ; Human Genome Project;. Biochemistry for Medical Students ed L.M. Srivastava. CBS publishers and Distributors, New Delhi, 1st edition, 2004: 598-604.
13. K.R. Raju and T Srivastava; Specialized Techniques: Immunodiffusion techniques, Radio Immunoassay (RIA) and ELISA; in Essentials of Practical Biochemistry. ed L.M. Srivastava, N. Das and S.Sinha. CBS publishers and Distributers, New Delhi, 1st edition, 2003: 225-230.
14. B. Naganna and T. Srivastava ; Plasma Proteins in Textbook of Biochemistry and Human Biology. ed G.P. Talwar and L.M. Srivastava. Prentice-Hall of India Pvt Ltd, New Delhi 3rd edition, 2003: 62-74.
15. LM Srivastava, V Anand and T. Srivastava; Complement system; in Textbook of Biochemistry and Human Biology. ed G.P. Talwar , L.M. Srivastava. Prentice-Hall of India Pvt Ltd, New Delhi 3rd edition, 2003: 1020-1029.

Academic (Teaching)

Course contribution in teaching Master's in Genetics

1. Epigenetic regulation of gene expression
2. Immunology
3. Molecular Biology
4. Advances in Replication, Recombination and Repair
5. Regulation of Biochemical pathways
6. Cancer Biology and Genetics

Course contribution in PhD teaching on campus:

1. Advancements in Cancer Biology and Genetics (Genetics)
2. Scientific Writing (Genetics)
3. Research and Publication Ethics (FIAS)

Some Specific Administrative/Academic role at DU

Head, Department of Genetics, UDSC (from August 2024)

IQAC Nodal Officer for Department of Genetics (until 2024)
Warden, Geetanjali Women's hostel for PG students from 2017-2022.
Member Secretary of the Institutional Animal Ethics Committee (2019-2024)
Member Secretary of the Institutional Ethics Committee for biomedical research (ongoing)

Academic/administrative commitments in other institutions:

1. Member, Board of Studies at Department of Molecular and Human Genetics, Banaras Hindu University.
2. Governing Body member at Ram Lal Anand College (ongoing)
3. Member, Board of Studies at Department of Zoology, Central University of Punjab, Bhatinda
4. Member of the Institutional Ethics Committee of CCRH, Ministry of Ayush (past)
5. Member of Institutional Committee for Stem Cell Research of NII (past)
6. Served as Nodal officer for MSC Genetics post graduate and PhD in Genetics recruitment for five years (ending 2018)
7. Served as Expert member from India in Scientific meeting of BRICS nations in 2021
8. Project assessment committee and task force member of SERB-SUPRA (past)
9. Evaluation of fellowship committee at ICMR (ongoing)
10. Project Assessment committee Empowerment and Equity Opportunity, EMEQ-SERB
11. Selection committee of SERB-SIRE (SERB International research experience) (past)
12. Screening committee of SERB-POWER (Life sciences) (past)
13. Screening committee of SERB-SURE (past)
14. Various thesis evaluations for All India Institute of Medical Sciences at post graduate and PhD level
15. Contributor to questions for All India examination conducted by AIIMS

Research projects

Various projects from ICMR, SERB, DBT, Institute of Eminence- DU. Ongoing project from ICMR, SRB-POWER and IOE-MRP.

Research profile

https://genetics.du.ac.in/?Research-Department/Cancer-Biology-Group-Prof.-Tapasya-Srivastava