**VIKAS SRIVASTAVA, PhD**

Scientist,

CSIR-Indian Institute of Toxicology Research

Lucknow, India

My lab is currently working on identifying the Epigenetic/gene regulatory mechanisms of prenatal toxicant exposure and adult developmental abnormalities including adult onset diseases like Cancer and Fibrosis of kidney, skin and colon. We are also developing *in vitro* models for developmental and adult Nephrotoxicity and developing early Biomarkers for different abnormalities.

**ACADEMIC BACKGROUND**

**Post Doctorate July 2011 to 2012:** Immunology Research Group, HRIC, University of Calgary, Canada.

**Post doctorate 2008- June2011:** CAG-CIHR-AstraZeneca Research initiative award/fellowship 2008. Division of Microbiology and Infectious Diseases, University of Calgary, Canada.

**Doctor of Philosophy (Ph.D) 2002-2007**: Life sciences, Jawaharlal Nehru University, New Delhi, India.

Place of Work: Central Drug Research Institute, Lucknow, India.

**Master of Science (M.Sc) 1998-2000:** University of Allahabad, India.

**Bachelor of Science (B.Sc) 1994-1997:** Ewing Christian College, University Of Allahabad, India.

**FELLOWSHIP/AWARDS**

**TTS Mentor-Mentee Award:** The Transplantation Society, Berlin, Germany.

**Young Investigator Award:** American Transplant Congress, Boston, USA.

**CST FITS Award:** Canadian Society of Transplantation. Quebec, Canada.

**CAG-CIHR Astrazeneca Research Initiative Award:** from Canadian Institute of Health Research (CIHR).

**M. M. Dhar Best Thesis Award:**  For PhD work at Central Drug Research Institute, Lucknow, India.

**SBRI (Seattle Biomedical Research Institute) award:** For Poster and abstract at New Frontiers in Tuberculosis Research. New Delhi, India.

**CSIR-UGC Senior Research Fellowship:** In India.For continuation of PhD studies.

**National CSIR-UGC JRF-NET fellowship :** In India. For research leading to PhD. Among top 20% who qualified for the prestigious **Shyama Prasad Mukherjee (S.P.M) Fellowship**.

**CSIR-UGC JRF-NET Junior research Fellowship.** In India.

**MP-SLET (MP State Lecturership Test).** State of M.P, India.Qualified for Lecturership.

**Membership:**

**Life member: Environmental mutagen society of India (EMSI).**

**GRANTS**

1. **Emerging Health Research Team Grant.2011.** *Biomarkers of Viral Pathogenesis.* Team Member/Co investigator. Canada (2011-2013).
2. **NANO-SHE**: CSIR Network Grant. (2012-2017).
3. **INDEPTH**: CSIR network Grant. (2012-2017)
4. **DBT Young Investigator Grant in Cancer Biology** (**2015-2018**).Delineating the role of genomic imprinting in carcinogenesis induced by prenatal arsenic exposure
5. **DBT-NER twinning project (2017-2020).** In vitro evolution of mRNA cleaving deoxyribozymes; analysis of anticancer activity and modification of evolved DNAzyme/s for higher efficacy *in vitro* and *in vivo.*
6. **DST-SERB EMR project(2017-2020):** Role of Sterile Inflammation in Accelerated Skin Carcinogenesis induced by In utero Arsenic Exposure

**Publications**

**1**. Ratnakar Tiwari, Radha Dutt Singh, Hafizurrahman Khan, Siddha rtha Gangopadhyay, Sandeep Mittal, Vikas Singh, Nidhi Arjaria, Jai Shankar, Somendu Kumar Roy, Dhirendra Singh & **Vikas Srivastava** (2017). [Oral subchronic exposure to silver nanoparticles causes renal damage through apoptotic impairment and necrotic cell death](http://www.tandfonline.com/doi/abs/10.1080/17435390.2017.1343874).

***Nanotoxicology*.**Jun;11(5):671-686. <http://dx.doi.org/10.1080/17435390.2017.1343874>. IF:7.9

# 2.[Hafizurrahman Khan](https://www.researchgate.net/profile/Hafizurrahman_Khan2),  [Radha Dutt Singh](https://www.researchgate.net/profile/Radha_Dutt_Singh), [Ratnakar Tiwari](https://www.researchgate.net/profile/Ratnakar_Tiwari), [Siddhartha Gangopadhyay](https://www.researchgate.net/researcher/2128002036_Siddhartha_Gangopadhyay), [Somendu Roy](https://www.researchgate.net/profile/Somendu_Roy), [Dhirendra Singh](https://www.researchgate.net/researcher/2128008673_Dhirendra_Singh),  [Vikas Srivastava](https://www.researchgate.net/profile/Vikas_Srivastava7) (2017). Mercury Exposure Induces Cytoskeleton Disruption and Loss of Renal Function through Epigenetic Modulation of MMP9 Expression.

# *Toxicology* Jul 1;386:28-39. May 2017, DOI: 10.1016/j.tox.2017.05.006. IF:3.6

**3.** Sanjay Mishra, Girish Rai, Amit Kumar Srivastava, Amit Kumar Singh , Asrar Ahmad, Shankar Suman, Madhulika Singh , Mohana Krishna Reddy Mudiam, Brij Nath Tiwari, Prachi Gupta, Vivek Kumar Gaur, **Vikas Srivastava**, Vijay Kumar, Yogeshwer Shukla (2016). miR-34a overexpression induces senescence associated secretory phenotypes in doxorubicin induced pseudo-senescent triple negative breast cancer cells via SOCS4-IL6-STAT3 axis.

***Am J Cancer Res*** 2016; 6(10):XXX-XXX www.ajcr.us /ISSN:2156-6976/ajcr0035143 IF:4.1

**4.** Anshuman Singh\*, Anita Agrahari\*, Radha Dutt Singh, Sanjay Yadav, **Vikas Srivastava#** & Devendra Parmar**#** (2016). Imprinting of cerebral cytochrome P450s in offsprings prenatally exposed to cypermethrin augments toxicity on rechallange.

***Scientific Reports*** 6, Article number: 37426. IF:4.3

**# Co-corresponding authors.**

**5.** [Ankit Kumar Singh](http://www.sciencedirect.com/science/article/pii/S1011134416309241), [Ratnakar Tiwari](http://www.sciencedirect.com/science/article/pii/S1011134416309241), [Vijay Kumar](http://www.sciencedirect.com/science/article/pii/S1011134416309241), [Prabhakar Singh](http://www.sciencedirect.com/science/article/pii/S1011134416309241), [S.K. Riyazat Khadim](http://www.sciencedirect.com/science/article/pii/S1011134416309241), [Anupam Tiwari](http://www.sciencedirect.com/science/article/pii/S1011134416309241), [**Vikas Srivastava**](http://www.sciencedirect.com/science/article/pii/S1011134416309241), [S.H. Hasan](http://www.sciencedirect.com/science/article/pii/S1011134416309241), [R.K. Asthana](http://www.sciencedirect.com/science/article/pii/S1011134416309241) (2016).Photo-induced biosynthesis of silver nanoparticles from aqueous extract of *Dunaliella salina* and their anticancer potential

[***Journal of Photochemistry and Photobiology B: Biology***](http://www.sciencedirect.com/science/journal/10111344)**.** Jan; 166: 202-211. IF:2.7

**6.** Srivastava A, Tiwari R, **Srivastava V**, Singh TB, Asthana RK. (2015). Fresh Water Cyanobacteria Geitlerinema sp. CCC728 and Arthrospira sp. CCC729 as an Anticancer Drug Resource.

**PLoS ONE** 10(9): e0136838. doi:10.1371/journal.pone.0136838.IF:2.8

**7.** [Singh RD](http://www.ncbi.nlm.nih.gov/pubmed/?term=Singh%20RD%5BAuthor%5D&cauthor=true&cauthor_uid=26008221), [Tiwari R](http://www.ncbi.nlm.nih.gov/pubmed/?term=Tiwari%20R%5BAuthor%5D&cauthor=true&cauthor_uid=26008221), [Khan H](http://www.ncbi.nlm.nih.gov/pubmed/?term=Khan%20H%5BAuthor%5D&cauthor=true&cauthor_uid=26008221), [Kumar A](http://www.ncbi.nlm.nih.gov/pubmed/?term=Kumar%20A%5BAuthor%5D&cauthor=true&cauthor_uid=26008221), [**Srivastava V**](http://www.ncbi.nlm.nih.gov/pubmed/?term=Srivastava%20V%5BAuthor%5D&cauthor=true&cauthor_uid=26008221). 2015. Arsenic exposure causes epigenetic dysregulation of IL-8 expression leading to proneoplastic changes in kidney cells.

[***Toxicol Lett*.**](http://www.ncbi.nlm.nih.gov/pubmed/26008221)  2015 May 22; 237(1):1-10. IF:3.2

**8.** Shashi Kant Tiwari, Swati Agarwal, Brashket Seth, Anuradha Yadav, Saumya Nair, Priyanka Bhatnagar, Madhumita Karmakar, Manisha Kumari, Lalit Kumar Singh Chauhan, Devendra Kumar Patel, **Vikas Srivastava**, Dhirendra Singh, Shailendra Kumar Gupta, Anurag Tripathi, Rajnish Kumar Chaturvedi, and Kailash Chand Gupta. 2013.

## [Curcumin-Loaded Nanoparticles Potently Induce Adult Neurogenesis and Reverse Cognitive Deficits in Alzheimer’s Disease Model *via* Canonical Wnt/β-Catenin Pathway](http://pubs.acs.org/doi/abs/10.1021/nn405077y).

## *ACS NANO.* 2014, *8* (1), pp 76–103. IF:14.3

**8.** Singh A, Yadav S, **Srivastava V**, Kumar R, Singh D, Sethumadhavan R, Parmar D.2013. [Imprinting of Cerebral and Hepatic Cytochrome P450s in Rat Offsprings Exposed Prenatally to Low Doses of Cypermethrin.](http://www.ncbi.nlm.nih.gov/pubmed/23447098)

***Mol Neurobiol***. Aug; 48(1):128-40. IF: 5.471.

**9. Srivastava V**, Dey I, Leung P, Chadee K. 2012.Prostaglandin E2 modulates interleukin-8 expression through formation of a multiprotein enhanceosome in human colonic epithelial cells.

***Eur J Immunol****.* 42(4):912-23. IF: 4.97.

# 10. [Singh VK](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Singh%20VK%22%5BAuthor%5D), [Srivastava V](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Srivastava%20V%22%5BAuthor%5D), [Singh V](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Singh%20V%22%5BAuthor%5D), [Rastogi N](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Rastogi%20N%22%5BAuthor%5D), [Roy R](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Roy%20R%22%5BAuthor%5D), [Shaw AK](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Shaw%20AK%22%5BAuthor%5D), [Dwivedi AK](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Dwivedi%20AK%22%5BAuthor%5D), [Srivastava R](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Srivastava%20R%22%5BAuthor%5D), [Srivastava BS](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Srivastava%20BS%22%5BAuthor%5D). 2011. Overexpression of Rv3097c in *Mycobacterium bovis* BCG abolished the efficacy of BCG vaccine to protect against Mycobacterium tuberculosis infection in mice.

# [*Vaccine*.](http://www.ncbi.nlm.nih.gov/pubmed/21565242) 29(29-30):4754-60. IF: 3.458.

**11.** Wallace JL, Vong L, Dharmani P, **Srivastava V**, Chadee K. 2011.Muc2-deficient mice display a gender-specific, Cox-2 related impairment of gastric mucosal repair*.*

[***Am J Pathol****.*](http://www.ncbi.nlm.nih.gov/pubmed/21356364) 178(3):1126-33. IF: 5.327.

**12.** Dharmani P, **Srivastava V**, Kissoon-Singh V, Chadee K. 2009. Role of intestinal mucins in innate host defense mechanisms against pathogens*.* ***J Innate Immun***. 1(2):123-35.IF:  4.458.

**13**. Saxena A, **Srivastava V**, Srivastava R, Srivastava BS.2008. [Identification of genes of *Mycobacterium tuberculosis* upregulated during anaerobic persistence by fluorescence and kanamycin resistance selection.](http://www.ncbi.nlm.nih.gov/pubmed/18434250)

***Tuberculosis*** (Edinb). 88(6):518-25. IF: 3.033.

**14.** **Srivastava V**, Jain A, Srivastava BS, Srivastava R. 2008. [Selection of genes of *Mycobacterium tuberculosis* upregulated during residence in lungs of infected mice.](http://www.ncbi.nlm.nih.gov/pubmed/18054522)

***Tuberculosis*** (Edinb). 88(3):171-7. IF: 3.033.

**15.** **Srivastava V**, Rouanet C, Srivastava R, Ramalingam B, Locht C, Srivastava BS. 2007. [Macrophage-specific Mycobacterium tuberculosis genes: identification by green fluorescent protein and kanamycin resistance selection.](http://www.ncbi.nlm.nih.gov/pubmed/17322185)

***Microbiology*.** 153(3):659-66. IF:2.852.

**CONFERENCES AND PRESENTATIONS**

1. Invited Talk at 18th All India congress of cytology and genetics (AICCG), January 29-31, IICB, Kolkota.
2. Invited Lecture at ‘The 12th International Conference and 5th Asian Congress on Environmental Mutagen’ (ICEM-ACEM2017) at Incheon, Korea. November 12-16, 2017.
3. Participated in Indo-US Workshop to Explore Bilateral Research Opportunities to Address Air Quality and Health Issues: 8-10 Nov 16, New Delhi
4. Singh RD, Tiwari R, Gangopadhyay S, Khan H, Singh D and Srivastava V. Imprinting of TGF-β1 expression following prenatal arsenic exposure leads to chronic renal fibrosis. Poster Presentation. *“Conference of International Society for Environmental Epidemiology and International Society of Exposure Science – Asia Chapter 2016 (ISEE-ISES AC2016)”* Sapporo, Hokkaido, Japan. 26-29 June 2016.

**Radha Dutt Singh won TRAVEL AWARD.**

1. Singh AK, Singh U, Kumar V,Tiwari R, SinghP, Khadim Sk. R, Tiwari A, Hasan SH, Srivastava V and Asthana RK. Green synthesis of silver nanoparticles from *Dunaliella salina* as an anticancer agent. Poster Presentation. “*International Conference on Microalgal and Cynobacterial Biotechnology*” Bharathidasan University Tiruchirapalli, Tamil Nadu, India. 29-31 August 2016.
2. Tiwari R, Singh RD, Khan H, Gangopadhyay S and Srivastava V. Gestational exposure of silver nanoparticles: Long Term Safety assessment in an animal model. Poster Presentation. *“2nd International Toxicology conclave 2016 (ITC 2016)”* CSIR-IITR Lucknow. 15-16 November 2016.
3. Tiwari R, Singh RD, Khan H, Gangopadhyay S, Mittal S, Kumar M, and Srivastava V. Safety Assessment of Silver Nanoparticles Following Gestational Exposure. Poster Presentation. “*India International Science Festival (IISF) - Young Scientists’ Conclave (YSC)”.*CSIR-NPL, Delhi. *8-11 December, 2016*.Nominated by CSIR-IITR for Poster Presentation.
4. Singh RD Tiwari R, Khan H, Gangopadhyay S, Singh D and Srivastava V. Folic Acid Attenuates Fetal Arsenic Exposure Induced Kidney Fibrosis. Poster Presentation.“*India International Science Festival (IISF) - Young Scientists’ Conclave (YSC)”.* CSIR-NPL, Delhi. *8-11 December, 2016*.
5. Prenatal Methylmercury Exposure Causes Detrimental Epigenetic Changes In Genes Involved In Nephrogenesis.

6th International Conference on Metals in Genetics, Chemical Biology and Therapeutics (ICMG-2016).February 17-20, 2016. Indian Institute of Science, Bangalore, 560012, India.

Hafizurrahman Khan, Radha Dutt Singh, Ratnakar Tiwari, Siddhartha Gangopadhyay, Dhirendra Singh, Vikas Srivastava\*

1. Exposure to Silver Nanoparticles causes extensive Mitochondrial and DNA Damage in kidney leading to loss of renal function

*“XXXVth Annual Conference of Society of Toxicology (India) (STOX-2015)”* held in Hyderabad, India.

**Ratnakar Tiwari***a*, Radha Dutt Singh*a,b*, Hafizurraman Khan*a,b*, Siddhartha Gangopadhyay*a,b* and *Vikas* Srivastava*a,b\**

**Ratnakar Tiwari won BEST POSTER AWARD.**

1. Arsenic exposure causes epigenetic dysregulation of IL-8 expression leading to proneoplastic changes in kidney cells.

*“XXXVth Annual Conference of Society of Toxicology (India) (STOX-2015)”* held in Hyderabad, India.

Radha Dutt Singh*a*, Ratnakar Tiwari*b*, Hafizurraman Khan*a,b*, Siddhartha Gangopadhyay*a,b, Vikas* Srivastava*a,b\**

1. Prolonged Exposure to Silver Nanoparticles causes Renal Toxicity in rats through Extensive Mitochondrial and DNA damage.

Ratnakar Tiwari1, Radha Dutt Singh2, Hafizurraman Khan2, Siddhartha Gangopadhyay2and Vikas Srivastava1, 2

IITR, ITC October 2015. Toxicology conclave.

1. **NIEHS** (National Institute of Environmental Health Sciences) **Student Travel Award** for poster presentation in ***4th Asian Conference on Environmental Mutagens,* IICB Kolkata, India**
2. **Srivastava V** and Tibbles, LA. 2012. BK Polyoma Virus Induces Aberrant Methylation of Host Genome to Promote Epithelial Mesenchymal Transition and Fibrosis. Oral presentation for TTS Mentor- Mentee award. TTS Meeting, Berlin, 2012.
3. **Srivastava V** and Tibbles, LA. 2012. BK polyoma virus induces epigenetic reprogramming of renal epithelial cells to promote cell proliferation and fibrosis. Oral presentation for CST fellow award. CST Annual scientific meeting, Feb 22-25, Quebec, Canada.
4. **Srivastava V.** 2011. Epigenetic Reprogramming of Renal Epithelial cells by BK Polyoma Virus. IRG seminar, October 19th 2011.Calgary, Canada.
5. **Srivastava V.** 2011. Understanding how Prostaglandin E2 regulates interleukin-8 in human colonic cells. GIRG seminar June 27th, 2011.Calgary, Canada.
6. **Srivastava V**. 2011. Prostaglandin E2 modulates T cell lineage through regulation of Foxp3 expression. Shaffer Awards, June 2nd .Calgary, Alberta, Canada.
7. **Srivastava V** and Chadee K. 2011. Prostaglandin E2 modulates T cell lineage through regulation of Foxp3 expression. GIRG Celebrations, March18 to 20th. Banff, Alberta, Canada.
8. **Srivastava V** and Chadee K. 2011.Prostaglandin E2 regulates IL-8 through formation of a multiprotein enhanceosome .Canadian Digestive Disease Week. Feb 26 to March1st. Vancouver, BC, Canada.
9. **Srivastava V**. 2010. Prostaglandin E2-induced regulation of interleukin-8 expression: potential role of CREB and ICER. Shaffer Awards, May 12th. Calgary, Alberta, Canada.
10. **Srivastava V**, Chadee K. 2010. Prostaglandin E2 promotes either T cell suppression or proliferation in a TGF-β-dependent manner. Canadian Digestive Diseases Week, February 27th to March 2nd Toronto, Canada.
11. Kissoon-Singh V, **Srivastava V**, Moreau F, Chadee K. 2010. Muc2, TTF3 and RELMβ are involved in innate immune responses to *Entamoeba histolytica*. Canadian Digestive Diseases Week, February 27th to March 2nd Toronto, Canada. **Award: Poster of Distinction.**
12. Singh-Kissoon V, **Srivastava V**, Fodor I, Chadee K. 2009. Muc-2, TFF3 and Relm-β are involved in innate immune responses to *Entamoeba histolytica*. Research Topics in GI Disease IX meeting, October 16th to 18th, Kingsbridge, Ontario, Canada.
13. Singh-Kissoon V, **Srivastava V**, Fodor I, Chadee K. 2009. Expression of TFF3, RELM-β and TNF-α in MUC2-/- animals challenged with *Entamoeba histolytica*. GIRG Symposium: Emerging and Re-Emerging Concepts in Gut and Liver Diseases, January 23rd to 25th, Kananaskis, Alberta, Canada.
14. **Srivastava V**, Rouanet C, Srivastava R, Ramalingam B, Locht C and Srivastava BS. 2006. Identification of Macrophage Specific *Mycobacterium tuberculosis* genes by Green Fluorescent Protein and Kanamycin Resistance Selection. New Frontiers in Tuberculosis Research.Dec4th to 6th ICGEB, New Delhi, India. Awarded the **SBRI ( Seattle Biomedical Research Institute) Bursary award** for the poster and abstract at this Symposium.
15. **Srivastava V**, Saxena A, Srivastava BS. 2005. Identification of *M. tuberculosis* genes upregulated in response to stress. Functional Genomics for Novel Vaccine and Drug Design against Mycobacterial Infection (VDMI). Jan10th and 11th, 2005. IIT Kharagpur India.