**Curriculum Vitae**

**Prof. Madhulika Singh,**

***M.Sc., Ph.D.(Zoology), F.S.L.Sc.***

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**Objective**

*To pursue a highly rewarding career, in challenging and healthy work environment where I can utilize my skills and knowledge efficiently for organizational and societal growth.*

**Education**

* Ph.D. (Zoology)\*, 2003, University of Lucknow, India
* M.Sc. 1st division (Zoology), 1989, University of Lucknow, India
* B. Sc. 1st division (Zoology, Botany, Geology )1987, University of Lucknow, India

*\*Thesis Title: ‘Effect of Plant Extracts In Relation to their Anti-fertility Activity in Male Albino Rats’*

**Academic, Research and Administrative Experience (Till date)**

***Teaching Experience***

* + **Professor** (Feb 2016-till date), Dept. of Zoology, Maharishi School of Science, Maharishi Univ. of Information Technology, Lucknow
	+ **Guest Faculty** (Oct 2014 –Dec 2015), Dept. of Zoology, Maharishi School of Science, Maharishi Univ. of Information Technology, Lucknow
	+ **Part-time Lecturer** (1991-1993), Dept. of Zoology, Univ. of Lucknow

***Research Experience*** *Post Ph. D. Research Experience-18 years (2003-till date)*

1. **Senior Research Fellow** (funded by Indian Council of Medical Research, New Delhi)
2. **Research Associate** (funded by Indian Council of Medical Research, New Delhi)
3. **Scientist Under Pool Scheme** (funded by Council of Scientificand Industrial Research, New Delhi)
4. **Women Scientist (WOS-A)** (funded by Department of Science & Technology, New Delhi)
5. **Research Supervisor:** 8 (Eight) Ph.D. Students
	* + - * **3** (three) Thesis awarded
				* **5** (five) Students pursuing Ph.D.
6. Ph.D. Scholar name: Ms. Ankita Pandey;

**Thesis entitled:** Investigating the signaling cascades involved in monocrotophos induced neurotoxicity in stem cell derived neuronal cells. *Awarded in year 2018*

1. Ph.D. Scholar name: Ms. Nisha Yadav;

**Thesis entitled:** Toxicological Effects in Fresh Water Teleost Fish Hetropneustisfossilis (Bloch) Induced by Malathion *year of registration 2015 –Awarded in year 2021*

1. Ph.D. Scholar name: Mr. Sachin Rastogi;

**Thesis entitled:** Toxicological Effects in Fresh Water Teleost Fish Hetropneustisfossilis (Bloch) Induced by Cadmium.*year of registration 2015 –Awarded in year 2021*

1. Ph.D. Scholar name: Ms. Priyanka Singh;

**Topic:** Determining the cognitive functions in individuals with type 2 diabetes and their relationship with severity and duration of disease.*year of registration 2015 likely to be submitted*

1. Ph.D. Scholar name: Mr. Indu Kumar;

**Topic:** Analysis of Heavy Metals Toxicity in Fishes of Fresh Water Lake Bhaghar in Tehsil- Ramnagar District- Barabanki (U.P) *year of registration 2016*

1. Ph.D. Scholar name: Ms. Niharika Pandey;

**Topic:** Assesment of heavy metals in water, sediments and fishes collected from Gomti River (Lucknow city area) *year of registration 2020*

1. Ph.D. Scholar name: Ms. E Richard

**Topic:** Studies on Insecticidal Properties of Indigenous Plant Materials Against Some Insects of Curcurbitaceous Vegetables. *year of registration 2020*

1. Ph.D. Scholar name: Ms. Bharti Gupta

**Topic:** Toxicological Evaluation of Heavy Metals Bioaccumulation and Oxidative Stress Biomarkers in Edible Fish Species from North India *year of registration 2020*

***Administrative Experience***

* + **HOD** (July 2015-Feb 2016)**,** Maharishi School of Science, Maharishi Univ. of Information Technology, Lucknow
	+ **Dean** (Feb 2016-Aug 2020)**,** Maharishi School of Science, Maharishi Univ. of Information Technology, Lucknow
	+ **Dean Research** (Feb 2016-June 2019) Maharishi Univ. of Information Technology, Lucknow
	+ **Dean Academics**
	+ **Observer** National Testing Agency (Sept 2020-Till date)
1. Joint CSIR - UGC NET June 2020
2. IGNOU Recruitment – 2021
3. NEET- National Eligibility Cum Entrance Test (UG) – 2020
4. UGC-National Eligibility Test (UGC-NET) June 2020, December 2020 and June 2021
5. JEE (Main) February, 2021 (Session-1)
6. JEE (Main) – March, 2021 (Session-2)
7. JEE (Main) – July 2021 (Session 3)
8. JEE (Main) – August 2021 (Session 4)
9. DUET – Sept 2021
10. BHU/BBAU Enterance Test- Oct 2021
11. ALLAHABAD HIGH COURT Recruitment Exam Dec 2021 and Jan 2022

**Accomplished assignments**

* **Research**
* From Year 2012–2015-**Women Scientist:** CSIR-Indian Institute of Toxicology Research, Lucknow, India.

Worked on MicroRNAs role in breast cancer stem cells (BCSCs) proliferation and self renewal potential. Several dietary natural agents like tea polyphenols, resveratrol,Pterostilbene, curcumin, lupeol, 6-gingerol,berberine etc. have been tested to suppress or reverse the carcinogenic process via inducing apoptosis, senescence and autophagy in cancer cells in, *in vitro* as well as *in vivo* systems. These agents are excellent in laboratory setting, and could be potential cancer chemotherapeutic agents. Using the knowledge of nanomedicinework is being carried out for ultimate beneficial clinical outcome.

* From Year 2008– 2011-**Scientist under Pool:** CSIR-Indian Institute of Toxicology Research,Lucknow, India.

Investigated the expression pattern of circulating tumor markers (TF, VEGF, VEGFR, EGF, and EGFR) in peripheral blood samples of cervical, ovarian and endometrial cancer patients’ and their association with both clinical parameters and intermittent treatment responses. Additionally, comparison of prognostic utility of flow-cytometry and RT-PCR techniques in detection of circulating tumor markers in patients undergoing chemotherapy and/ or radiation therapy was carried out.

* From Year 2005-2008 **Research Associate:**CSIR-Indian Institute of Toxicology Research, Lucknow, India.

Studied the role of factors involved in the progression of cervical carcinogenesis such as DNA ploidy and S-phase fraction of cell-cycle by flow cytometry. I also investigated the role of apoptotic, antiapoptotic and drug resistance proteins in progression of cervical dysplasia to cancer and their association with presence of HPV16 and 18.

* From Year 2003-2005 **Research Assistant**at King George’s Medical University, Lucknow, India.

I was responsible for AgNORimmunostainingand counting in cervical smear samples. We successfully developed a sensitive procedure that allows simultaneous detection of high risk subjects on the basis of AgNOR counts and demonstrated that this approach can be effectively used in human populations.

* From Year 2001-2003 **SeniorResearch Fellow at** CSIR-Central Drug Research Institute, Lucknow, India.

Examined hepatoprotective potential of picroliv in hamsters infected with *E. histolytica*. Additionally, picrolivhepatoprotective potential against toxicants and*E.histolytica* induced hepatic damage in laboratory animals.During this period we had also developed pinpoint amoebic liver abscess in Gerbils, which can be used as therapeutic model of hepatic amoebiasis.

* From Year 1999-2003 **Doctoral Research Fellow:** Department of Zoology, University of Lucknow, Lucknow, India

-Experimental work conducted at Division of Endocrinology, CSIR-Central Drug Research Institute, Lucknow,India.

* Guide *Prof. GN Verma* (Department of Zoology, University of Lucknow)
* Co-guide *Dr. KartarSrivastav* (Division of Endocrinology, CSIR-Central Drug Research Institute)

Investigated the anti-fertility *(in vivo*) and spermicidal (*in-vitro*) activities of various plantsextract in male albino rats. Results of the study were exciting and showed the capability of plants extracts to inhibit male fertility without affecting hormonal and germinal cells.

*ThesisTitle: Effect of Plant Extracts In Relation to their Anti-fertility Activity in Male Albino Rats.*

**Awards and Recognitions**

* **International -**
* Received **Best Researcher Award** in ‘International Conference on Advancement in Interdisciplinary Research (ICAIR-2021)’, Jointly organised by Shia P.G. College, Lucknow, UP & Science Tech Institute, Lucknow, UP India on October 28th, 2021 & Presented by MKSES Educational Society
* **Organizing Secretary** in ICMSS-2021during Sept 22-24, 2021, Organized by Maharishi School of Science, MUIT, Lucknow
* **Vice Editor** of **Asian Toxicology Research**
* Editor **J of Cancer Treatment and Diagnosis *Sectional Editor (Stem cell biology, Apoptosis)***
* **Reviewer** of **Journal of Pharmaceutical Research International**
* **Reviewer** of **Uttar Pradesh Journal of Zoology**
* **Reviewer** of **Advances in Zoology and Botany**
* **Reviewer** of Taylor & Francis journal **Nutrition and Cancer: An International Journal** since October 2021
* **Reviewer** of Elsiver journal **Food Bioscience** since March 2020
* **Reviewer** of Elsiver journal **Journal of Etanopharmacology** since Aug. 2019
* **Reviewer** of Elsiver journal **Asian Pacefic J of Tropical Biomedicine** since July 2017
* **Reviewer** of Elsiver journal **Journal of Radiation Research and Applied Sciences**
* **Reviewer** of Elsiver journal **Saudi J of Biological Sciences** since Sept. 2015
* **Reviewer** of Elsiver journal **Journal of Functional Foods** since Sept. 2019
* Received **Outstanding reviewing Contribution** Award for reviewing **Journal of Radiation Research and Applied Sciences** *Elsiver journal in March 2018*
* Participated in **International Training Course** ‘Environmental and Health Risk Assessment and Management of Toxic Chemicals’; 5 – 19 December 2017, Bangkok (Thailand) fellowship sponsored by Ministry of Foreigen Affairs Thailand
* **Chair the session** at International Conference on Radiation Oncology & Anti-Cancer Therapy- 2016, Dubai
	+ - * **Invited Speaker** at International Conference on Radiation Oncology & Anti-Cancer Therapy- 2016, Dubai
			* **Invited Speaker** at Oncology-2015, Dubai
* **Speaker** at ESMO Asia-2015 Congress, Singapore
	+ - * **Paper Presented at** 30th Meeting ofAustralasian Flow Cytometry Group-2007 Melbourne, Australia
			* **International Travel award** 2007: Awarded by Australasian Flow Cytometry Group, Melbourne, Australia
* **Advisory Board Member** of ***Innovate Cancer 2017. Australia*** <https://innovateconferences.com/cancer/advisoryboard>
* **National**
* **Convenor** ofworkshop on ‘Towards an Integrative View of Adaptation: Bridging Science and National Issues’during 26-27, August 2021 Organized by Maharishi School of Science, MUIT, Lucknow
	+ - * **Active Review Member** of Journal of Emerging Technologies and Innovative Research (ISSN : 2349-5162) Member ID : 116619
			* **Awarded Honarory Fellowship (F.S.L.Sc.) of Society of Life Sciences** in year 2020
* ***Life Member*** Asian Biological Research Foundation (ABRF), India’
	+ - * **Life Member** Socity for Biotechnologists India
			* Appointed as ‘**Member of the Scientific Committee’ and the *‘*Jury Member’****6th India International Science Festival (IISF) from December 22-25, 2020.** Organized byMinistry of Earth Sciences, Ministry of Science and Technology, Ministry of Health & Family Welfare and Vijnana Bharati
		- **Distinguish speaker** at a National Webinar **On Topic: “Role of Women in Leadership, Innovation & Education"** Organized by Indira Gandhi National Open University (IGNOU), Regional Centre Lucknow in Collaboration With Vigyan Bharti, Awadh Prant on 08th March 2021 Time: 03:00 PM India
		- **Invited Speaker** at a ‘**Women Scientist Conclave: Outreach Programme’** Organized by DST (India), Dr. RMLAU, Ayodhya, MIET and Vigyan Bharti, Awadh Prant on Date 21/12/2020 Time 11:00am onwards
* **Organizer**LIVE WEBINAR on: **‘Job Opportunities through Cultivation and Processing of Medicinal and Aromatic Plants’** on date 12.06. 2020 from 12:00 to 01:00 PM, School of Sciences, MUIT, Lucknow
* **Organizer** LIVE WEBINAR On the occasion of World Nature Conservation Day on title **‘Is Biodiversity Loss Natural? - A View’** Date: 28th July, 2020 Time: 12:00PM to 01:00 PM,; School of Sciences, MUIT, Lucknow
	+ - * **Chancellor’s Gold Meadal** in year 2019byMaharishi University of Information Technology, Lucknow
			* **Chair person and Organizing Secretary** for Workshop and national level compititon in association with IIT MadrasTopic- ‘Bioinformatics and Computational Tool for Life Sciences’ from Nov 20-21, 2019
			* **Chair person**of **Board of Studies (School of Science)** from year 2016-2020, Maharishi University of Information Technology, Lucknow
			* **Member** in **Board of Management** from year 2016-2020, Maharishi University of Information Technology
			* **Head Evaluator** for the Even and Odd Semester Examinationsfrom year 2017-2020, Maharishi University of Information Technology
			* **External Examiner** for UG and PG practical exams at SRM University, Lucknow
			* **Invited Speaker** at Indo Oncology Summit during February 2nd – 4th, 2018 at Mayfair Lagoon, Bhubaneswar, and (India).
			* **Organizing Secretary**conferenceInternational Conference on Materials Science and Spectroscopy. Lucknow September 22-24, 2021
			* **Organizing Secretary**workshop on ‘Towards an Integrative View of Adaptation: Bridging Science and National Issues’ 26 and 27, August 2021
			* **Organizing Secretary** for Seven days workshop on ‘Gene Cloning & its Expression to produce Genetically Modified Organisms’ from 20-26th Dec. 2017 held at Maharishi University of Information Technology, Lucknow
* **Organizing Secretary** for Workshop on‘Recent Molecular Approaches in Biological Research’Jointly Organized by Department of Science and GENETECH BioLab Pvt. Ltd. Date: May 01- 07, 2017
	+ - * **Best Poster Award** at ICBFAM- Jan 23-25, 2017 held at Integral University Lucknow
			* **Women Scientist (WOS-A)** fromyear2012-2015: Grant by Department of Science and Technology, India
			* **Senior Research Associate** fromyear2008-2011: Awarded by Council of Scientific and Industrial Research, India
			* **Foreign Travel Award***2007:* Awarded by Council of Scientific and Industrial Research, India
			* **Research Associate award** from year2005-2008: Awarded by Indian Council of Medical Research, India
			* **Senior Research Fellow** 2001-2003: Awarded by Indian Council of Medical Research, India
			* Reviewer board member: ***Journal of Harmonized Research in Medical and Health Science.***:<http://www.johronline.com/revierboard.aspx>
			* Editor **International J of Technology, Management and Humanities** Editor ISSN Online 2454-566X
* Editor **J of Cancer Treatment and Diagnosis**
* *Organizing committee member* **Indo Oncology Summit** during February 2nd – 4th, 2018 at Mayfair Lagoon, Bhubaneswar, India. <http://www.indooncologysummit.com/committee.php>

**Publications**

***Highest impact factor IF: 32.976*** *Annals of Oncology*

***Publications statistics on research database***

* **Scopus author-** 41 research paper indexed in scopus; Citations-1328;*h-Index* 21

<https://www.scopus.com/authid/detail.uri?authorId=15623695600>

* **Google Scholar-** Citations-2182 ; *h-Index-* 21; *i-10-Index*-24

<https://scholar.google.com.tw/citations?hl=en&pli=1&user=B9GUBxIAAAAJ>

* **Publon citations-** *H- index 17*

[*https://publons.com/researcher/4197463/dr-madhulika-singh/*](https://publons.com/researcher/4197463/dr-madhulika-singh/)

**Published Review Articles (total 3)**

1. Shukla Y, **Singh M.** (2007) Cancer preventive properties of ginger: A brief review. *Food and Chem. Toxicol.*45(5): 683-90.**IF 6.023**
2. **Singh M,** Singh P and Shukla Y.(2012) New Strategies in Cancer Chemoprevention by Phytochemicals.*Front. Biosci.*4:426-52.**IF 4.249**
3. **Singh M,** Suman S and Shukla Y (2014) New Enlightenment of Skin Cancer Chemoprevention through Phytochemicals:In VitroandIn Vivo Studies and the Underlying Mechanisms. *BioMed Research International 2014, 2014:243452.***IF 3.41**

**Book Chapters (3 published and 3 under process)**

1. *Molecular Signatures of Infectious Agents: Application in Human Cancer Control* by **Singh M,** Srivastava AK and Shukla Y. In: Cancer Biomarkers. 2010, Nova Science Publishers
2. *Combinatorial approaches utilizing nutraceuticals in cancer chemoprevention and therapy: a complementary shift with promising acuity* by **Singh M** and Shukla Y. In: 2nd Edition of Genomics, Proteomics and Metabolomics in Nutraceuticals and Functional Foods. Wiley $ Co.
3. *Investigating the Effect of Ethanolic Extract of Trigonella foenum-graecum L. Seeds on Reproductive System of Male Albino Rats*. **Madhulika Singh** G. N. Verma. In: Highlights on Medicine and Medical Research Vol. 7, 10 May 2021 , Page 77-85. <https://doi.org/10.9734/bpi/hmmr/v7/2377E> Published: 2021-05-10
4. Pomegranate and its Derivatives: Natural entities in prevention and Therapy of human cancer. By **Singh M**
5. Black tea and its polyphenols: connotations for prostate cancer chemoprevention. Under communication**. Madhulika Singh**  *Chapter Submitted*
6. ‘Potential of Phytochemicals Derived From Indian Medicinal Plants in Combating COVID-19 Infection.’ **Madhulika Singh** and Santosh Kumar. Book entitled 'COVID-19 Second Wave: Challenges for Sustainable Development ' *ISBN978-93-559305-5-2 from pg. no. 76-89*
7. Breast Cancer Detection and Prediction Through Machine Learning Using Fuzzy Object-Oriented Database. Santosh Kumar and **Madhulika Singh** *Chapter Accepted in QC2022 (Quantum Computing: A Shift from Bits to Qubits)*
8. Nutraceuticals and their possible role in human cancer. **Madhulika Singh**\*, Niharika Pandey. *Chapter Accepted in* Book entitled ‘Oncology in Global World:Its Advance and Research’
9. Plant-based anti-feedants: a gift from nature. Chapter under communication **Madhulika Singh**\* and Erane Richards

**Peer-reviewed Research Papers**

1. Kumar I, **Singh M.** Effect of heavy metal on hematological parameters of fish *Heteropneustes fossils* from Bhaghar lake district Barabanki (U.P) India. Environmental and Experimental Biology. *Communicated*
2. Singh YP Kumar S, **Singh M**, Dwivedi S. Validation Of DNAFIDs Model Through Finite State Machine. Reliability: Theory & Applications 2021; 16(3), 160-167. **IF 0.37** **ISSN 1932-2321**
3. Kumar I, **Singh M.** Impact of copper cu & zinc zn on histopathology in freshwater fish *Channa punctatus* from bhagharlake, district: Barabanki (U.P) India-225001.Uttar Pradesh Journal of Zoology, 2021; 42(20), 52-57. ISSN: 0256-971X
4. Kumar I, **Singh M.** Impact of heavy metals on hematological profile in fish from the Bhaghar Lake, India: A preliminary study. Research in Environment and Life Sciences, 14 (01) 06-09 (2021) Current *NAAS Rating: 3.74 ISSN:* ISSN: 0974-4908*.*

# Singh, Y P; Kumar, S; Singh, M. Analysis and Designing A DNA Fingerprinting Based Identifications (DNAFIDs) Model and Database Management System. Reliability: Theory & Applications . Mar 2021, Vol. 16 Issue 1, p152-160. IF 0.37 ISSN 1932-2321

1. **Singh M,** Verma G.N. Effects of Hibiscus rosa-sinensis Linn. Flowers extract on testicular functions of male albino rats. *Under communication*
2. **Singh M,** Verma G.N. Effect of ethanolic extract of Trigonellafoenum-greaecum L. seeds on reproductive system of male albino rats. Journal of Complementary and Alternative Medical Research 2019,8(3):1-8.(ISSN:2456-6276) DOI:<http://www.journaljocamr.com/index.php/JOCAMR/article/view/30122>
3. Singh P, **Singh M**, Verma NS. Determining sleep-wake activity using actiwatch in healthy adults and type 2 diabetes. International Journal of Emerging Technologies and Innovative Research (www.jetir.org), ISSN:2349-5162, Vol.5, Issue 9, page no.593-599, September-2018, **IF 5.87**
4. Yadav N, **Singh M,** Yadav P. Effect of malathion toxicity on the behaviour of freshwater fish Heteropneustesfossillis. IJRAR- International Journal of Research and Analytical Reviews, 5(3) 2018 Cosmos **IF 7.17**
5. Yadav N, **Singh M,** Yadav P. Histopathology of gill of freshwater fish Heteropneustesfossillis. after the exposure of malathion. Paripex-Indian Journal Of Research, 7(8) 2018. pg no. 86-87. ISSN - 2250-1991; **IF: 6.761**
6. Rastogi S, Yadav P and **Singh M.** Cadmium Toxicity and its Effect on thehistolopathology of liver and kidney of the fresh water Teleost Heteropneustesfossilis(Bloch). International J of Scientific Research. 2018; 7: 377-379 ISSN No.: 2277-8179 **IF:4.758**
7. Rastogi S, Yadav P and **Singh M.**Toxicity of cadmium and its effect on the morphology of the fresh water teleost, Heteropneustesfossilis.(bloch). International Journal on Biological Sciences 2018; 9 (1): 60-62, ISSN No.: 0976-4518; NAAS Rating 3.14; UGC List of Journal No. 7775 **IF: 4.858**
8. **Singh M,** Verma G.N., Srivastava K. An Assessment of Antifertility Efficacy of Ethanolic Extract of Celastruspaniculatus Seed in Male Albino Rats. IOSR-Journal of Pharmacy and Biological Science. 2018; Volume 13, Issue 4 Ver. I, PP 67-72(e-ISSN:2278-3008, p-ISSN:2319-7676).<http://www.iosrjournals.org/iosr-jpbs/papers/Vol13-issue4/Version-1/L1304016772.pdf> **IF: 3.83**
9. **Singh M,** Ghoshal S. Activity of Picroliv Isolated from PicrorhizaKurrooa against Thioacetamide and EntamoebahistolyticaInduced Liver Damage. IOSR Journal Of Pharmacy 2017; 7 (10) PP. 62-68 e)-ISSN: 2250-3013, (p)-ISSN: 2319-4219 [http://www.iosrphr.org/papers/vol7-issue10/I0710016268.pdf **IF 5.448**](http://www.iosrphr.org/papers/vol7-issue10/I0710016268.pdf%20IF%205.448)
10. Pandey A, **Singh M.** Functional differentiation of neural stem cells into neuronal subtypes: A biological tool for developmental neurotoxicity studies. Journal of Ecophysiology and Occupational Health Volume 18, Issue 3-4, December 2018 p 59-65 https://doi.org/10.18311/jeoh/2018/17925 **IF: 0.68**
11. Pandey A, **Singh M.** Mechanistic Insights into Monocrotophos Induced Toxicity in Neuronal Cells. Toxicology International, 2017 (24) Issue-1, 1. 114-121. ISSN (Online): 0976-5131(In Press) **IF: 1.25, NAAS 5.23**
12. **Singh M**, Shukla Y. Differential miRNAs expression profiles classify mucin 1(+)/(-) human breast cancer stem cells. Journal of Cancer Research & Therapy. 2016**, IF 1.805**
13. **Singh M**, Mishra S, Shukla Y. MicroRNA-125b functions as a key arbitrator for Mucin1 expressing breast cancer stem-like cells proliferation, migration and drug resistance. Annals of Oncology (2015) 26 (suppl\_9): 148-152. 10.1093/annonc/mdv533. **IF:** **32.976**
14. **Singh M**, Mishra S, Shukla Y. Differential mi-RNAs expression profiles classify mucin 1(+)/ (-) human breast cancer stem cells. J Cancer Sci Ther 2015, 7:10<http://dx.doi.org/10.4172/1948-5956.C1.055>. ISSN: 1948-5956 **IF: 3.09**
15. Mishra S, Rai G, Srivastava A, Singh A, Ahmad A, Suman S, **Singh M**, et al. miR-34a Overexpression induces Senescence Associated Inflammatory Responses in Doxorubicin induced Pseudo-Senescent Triple Negative Breast Cancer cells via SOCS4-IL-6-pSTAT3 axis. Am J Cancer Res 2016;6(10):XXX-XXXwww.ajcr.us /ISSN:2156-6976/ajcr0035143 **IF 6.166**
16. **Singh M,** Bhatnagar P, Mishra S, Kumar et al .PLGA-encapsulated tea polyphenols enhance the chemotherapeutic efficacy of cisplatin against human cancer cells and mice bearing Ehrlich ascites carcinoma. Int J Nanomedicine. 2015 Oct 30;10:6789-809.
17. **Singh M,**, Bhui K, Singh R, et al. Tea polyphenols enhance cisplatin chemosensitivity in cervical cancer cells via induction of apoptosis. Life Sciences (2013)
18. Srivastava AK, Bhatnagar P, **Singh M,** Kumar P, Shukla Y, Gupta KC. (2013) Synthesis of PLGA nanoparticles of tea polyphenols and their strong in vivo protective effect against chemically induced DNA damage. Int J. Nanomedicine. 8:1451-62.**IF 5.93**
19. **Singh M,** Singh U, Mathur N, Shukla Y. (2012) Expression of p-glycoprotein is positively correlated with p53 in human papilloma virus induced squamous intraepithelial lesions of uterine cervix: association with poor prognosis. Asian Pac J Cancer Prev.13(12):6039-45.**IF 1.813**
20. Bhui K, Tyagi S, **S**rivastava AK, **Singh M**, Roy P, Singh R, Shukla Y. (2012) Bromelain inhibits nuclear factor kappa-B translocation, driving human epidermoid carcinoma A431 and melanoma A375 cells through G(2) /M arrest to apoptosis. Mol. Carcinog.51:231-43.**IF 4.784**
21. **Singh M**, Bhatnagar P, Srivastava AK, Kumar P, Shukla Y, Gupta KC. (2011) Enhancement of cancer chemosensitization potential of cisplatin by tea polyphenols poly(lactide-co-glycolide) nanoparticles. J. Biomed Nanotechnol.7: 202.**IF 4.483**
22. **Singh M,** Singh R, Bhui K, Tyagi S, Mahmood Z, Shukla Y. (2011) Tea polyphenols induce apoptosis through mitochondrial pathway and by inhibiting nuclear factor kappa B and Akt activation in human cervical cancer cells. Oncol Res. Oncology Research Featuring Preclinical and Clinical Cancer Therapeutics 19: 245-257. **IF** 5.574
23. George J, **Singh M**, Srivastava AK, Bhui K, et al. Resveratrol and Black Tea Polyphenol Combination Synergistically Suppress Mouse Skin Tumors Growth by Inhibition of Activated MAPKs and p53. PLOS ONE 14(4): e0215980.
24. George J, **Singh M**, Srivastava AK, et al (2011) Synergistic growth inhibition of mouse skin tumors by pomegranate fruit extract and diallyl sulfide: Evidence for inhibition of activated MAPKs/NF-κB and reduced cell proliferation. Food ChemToxicol, 49: . **IF 6.023**
25. **Singh M**, Tyagi S, Bhui K, Prasad S, Shukla Y. (2010) Regulation of cell growth through cell cycle arrest and apoptosis in HPV 16 positive human cervical cancer cells by tea polyphenols. Invest. New Drugs. 28: 216-24 **IF 3.850**
26. Srivastava S, **Singh M,** George J, Bhui K, Shukla Y. (2010) Genotoxic and Carcinogenic Risks Associated with the Consumption of Repeatedly Boiled Sunflower Oil. J. Agric Food Chem. 58 (20): 11179–86. **IF 5.279**
27. Srivastava S, **Singh M,** George J, Bhui K, Murari Saxena A, Shukla Y. (2010) Genotoxic and carcinogenic risks associated with the dietary consumption of repeatedly heated coconut oil. Br. J. Nutr.104:1343-52. **IF 3.342**
28. Tyagi S, Bhui K, Singh R, **Singh M,**Raisuddin S, Shukla Y. (2010) Polo-like kinase1 (Plk1) knockdown enhances cisplatinchemosensitivity via up-regulation of p73alpha in p53 mutant human epidermoid squamous carcinoma cells. Biochem.Pharmacol. 80: 1326-34 **IF 5.858**
29. Srivastav A, Chandra A, **Singh M,** Jamal F, Rastogi P, Rajendran SM, Bansode FW, Lakshmi V. (2010) Inhibition of hyaluronidase activity of human and rat spermatozoa in vitro and antispermatogenic activity in rats in vivo by Terminaliachebula, a flavonoid rich plant. Repro.Toxicol. 29:214-24. **IF 3.143**
30. Nigam N, George J, Srivastava S, Roy P, Bhui K**, Singh M,** Shukla Y**.** (2010) Induction of apoptosis by [6]-gingerol associated with the modulation of p53 and involvement of mitochondrial signaling pathway in B[a]P-induced mouse skin tumorigenesis.Cancer Chemother.& Pharmacology 65: 687-96. **IF 3.333**
31. Roy P, Nigam N, **SinghM**, George J, Srivastava S, Naqvi H, Shukla Y. (2010) Tea polyphenols inhibit cyclooxygenase-2 expression and block activation of nuclear factor-kappa B and Akt in diethylnitrosoamine induced lung tumors in Swiss mice. Invest. New Drugs 28:466-71.**IF 3.850**
32. Srivastava S, **Singh M**, Roy P, Prasad S, George J, Shukla Y. (2009) Inhibitory effect of tea polyphenols on hepatic preneoplastic foci in Wistar rats. Invest New Drugs 27(6): 526-33. **IF 3.850**
33. Prasad S, Srivastava S, **Singh M**, Shukla Y. (2009) Clastogenic effects of glyphosate in bone marrow cells of swiss albino mice. J.Toxicol. 308985. **IF 4.60**
34. **Singh M**, Srivastava S, Singh U, Mathur N, Shukla Y. (2009) Co-expression of p53 and bcl-2 proteins in human papilloma virus induced premalignant lesions of uterine cervix: correlation with progression to malignancy. Tumor Biology 30:276-85. **IF 3.597**
35. S Prasad, **M Singh**, K Bhui, S Kumar, Y Shukla. [Clinical relevance of DNA ploidy and S-phase fraction in buccal epithelial cells of smokeless tobacco consumers](https://scholar.google.com/citations?view_op=view_citation&hl=hi&user=AvdwksoAAAAJ&cstart=200&pagesize=100&citation_for_view=AvdwksoAAAAJ:J-pR_7NvFogC). Cytometry Part B-Clinical Cytometry 2007, 72 (6), 489-490
36. Misra JS, Chhavi, **Singh M,**Srivastava AN, Das V. (2008) Assessment of potential of AgNOR counts as marker in cervical carcinogenesis. Diagnostic Cytopathology 36: 194-95.**IF1.58**
37. Prasad S, Kalra N, **Singh M, et al**. (2008) Preventive effects of lupeol and mango extract against androgen induced oxidative stress in prostate of Swiss albino mice. Asian J. Andr.10:313-18. **IF 3.285**
38. Kalra N, Seth K, Prasad S, **Singh M**, et al. Theaflavins induced apoptosis of LNCaP cells is mediated through inductionof p53, down-regulation of NF-kappa B and mitogen-activated proteinkinases pathways. Life Sciences 80 (2007) 2137-2146
39. Shukla Y, Prasad S, Tripathi C, **Singh M,** George J, Kalra N.(2007) In vitro and in vivo modulation of testosterone mediated alterations in apoptosis related proteins by[6]-gingerol. Molecular Nutrition & Food Research,51:1492-502. **IF 5.914**
40. Chandra A, Jamal F., **Singh M** et al. Significance of a fertility inhibiting 33kDa (MEF3) glycoprotein of rhesus monkey (Macacamulatta) in human infertility. Journal of Ecophysiology and Occupational Health 7(3):209-215, 2007 **IF: 0.68**
41. Misra JS, Das V, Singh U, **Singh M,**Saxena C. (2007) Comparative risk assessment of age and parity in cervical carcinogenesis. The J. Obst. &Gyne. India, 57, 422-25.**ISSN: 0971-9202 (print version) IF 0.73**
42. **Singh M,** Prasad S, Kalra N, SinghU, Shukla Y. (2006) Silver Stained Nucleolar Organizer Regions in normal and dysplastic cervical lesions: correlation with DNA ploidy and S- phase fraction by Flow Cytometry. Oncology, 71:411-416. **IF 2.935**
43. **Singh M,** Mehrotra S, Kalra N, Shukla Y. (2006) Correlation of DNA ploidy in progression of human cervical dysplasia. J Cancer Research & Therapeutics, 2: S24. **IF 1.805**
44. **Singh M,** Mehrotra S, Kalra N, Singh U, Shukla Y. (2008) Correlation of DNA ploidy in progression of cervical cancer. Journal of Cancer Epidemiology Volume 2008, Article ID 298495, 7 pages
45. **Singh M,** Tiwari V, Jain A, Ghoshal S. (2005) Protective activity of picroliv on hepatic amoebiasis associated with carbon tetrachloride toxicity. Indian J. Med. Res. 121:676-82.**IF 2.375**
46. Misra JS, Das V, Srivastava AN, Singh U, **Singh M.**(2005) AgNOR counts in cervical smears under normal and other cytopathologic conditions. Anal.&Quant.Cytol.&Histology.27: 337-40.**IF 0.58**
47. Ghoshal S, **Singh M.** (2003) Preliminary studies on extracellular ribonuclease of Entamoebahistolytica (200: NIH). Indian J. Microbiology, 43: 271-73. **IF 2.461**

**Conferences Attended**

* **International:**
	+ - 1. International Conference on Materials Science and Spectroscopy. Lucknow September 22-24, 2021
			2. International Conference on Radiation Oncology & Anti-Cancer Therapy- 2016, Dubai
1. ESMO Asia-2015 Congress, Singapore
2. Oncology-2015, Dubai
3. Internatinal conference on advance in Biotechnology and Bioinformatics Pune (Nov 2013)
4. ‘XXXII Annual Meeting of Society of Toxicology (STOX), India’(Dec 2012), Lucknow, India
5. 3rd International Conference on Stem Cells and Cancer (ICSCC- 2012): Proliferation, Differentiation and Apoptosis (Oct 2012), New Delhi, India
6. International symposium on Role of Genomics in Clinical Practice and 35th Annual Conference of The Indian Society of Human Genetics (Mar 2010), Lucknow, India
7. 30th Annual Meeting of Australasian Flow Cytometry Group (Sept 2007), Melbourne, Australia.
* **National:**
1. COVID-19 Second Wave: Challenges for Sustainable Development” CCSD 2021
2. National Conference on Advancements in Interdisciplinary Research (NCAIR-21) July 29-31.
3. 3rd National Seminar on Current Trends in Life Sciences (NSCTLS-2021) January 29, 2021.
4. New Vistas in Aquatic and Terrestrial Biology and Environment during Current Pandemic” ATBE- 2021on 26-27 March, 2021
5. NATCONBIO 2019 (SRMU Lucknow)
6. Indo Oncology Summit during February 2nd – 4th, 2018 at Mayfair Lagoon, Bhubaneswar, and (India).
7. National Symposium on Cervical Cancer Control in India (Dec, 2009), Kolkata, India
8. 32nd Annual conference of Environmental Mutagen Society of India (Jan 2007), Coimbatore, India.
9. 25th Annual Convention of Indian Association for Cancer Research (Feb 2006), Mumbai, India.
10. 90th Indian Science Congress (Jan 2003), Bangalore, India.
11. 16th National Congress of Parasitology (Nov2002) Bareilly, India.
12. 6th National Conference on structural Based Drug Design; Search for new Drugs, (Feb 2002) Vadodara, India.
* **Papers Presented in Conferences**
1. Assessment of Cadmium Bioaccumulation in Edible Fish from the Gomti River, India in “COVID-19 Second Wave: Challenges for Sustainable Development” 13-15 Sept 2021 CCSD 2021 By Neharika Pandey and **M Singh**
2. Impact of Lead Toxicity in Edible Fishes of River Gomti Lucknow City Area. International Conference on Materials Science and Spectroscopy (ICMSS 2021). Lucknow September 22-24, 2021 By Neharika Pandey and **M Singh**
3. Enhanced anticancer effect of Tea Polyphenols loaded PLGA nanoparticles in Ehrlich’s ascites tumor model. International Conference on Materials Science and Spectroscopy (ICMSS 2021). Lucknow September 22-24, 2021 By **M Singh**
4. Bioaccumulation of Arsenic in Water, Sediments and Edible Fishes in Gomti River Lucknow. National Conference on Advancements in Interdisciplinary Research (NCAIR-21) July 29-31. By Neharika Pandey and **M Singh**
5. Impact of heavy metals on hematological profile in fish from the Bhaghar Lake: a preliminary study. Presented in 3rd National Seminar on Current Trends in Life Sciences (NSCTLS-2021) January 29, 2021.By Indu Kumar and **M Singh**
6. Bioaccumulation of heavy metals in edible fishes in Gomti river Lucknow. Presented in A Two-Day International ( Web) Conference on “ New Vistas in Aquatic and Terrestrial Biology and Environment during Current Pandemic” ATBE- 2021on 26-27 March, 2021 . By Neharika Pandey and **M Singh**
7. Impact of Cu and Zn on histopathology in fresh water fish Channa punctatus from the Bhaghar Lake District Barbanki (UP), India. Presented in ATBE-2021on 26-28 March, 2021. By Indu Kumar and **M Singh**
8. Impact of malathion on behavioral response of a freshwater fish, Heteropneutes fossilis. Presented in International (Web) Conference on recent Advances in Freshwater Aquaculture (RAFA- 2021) January 21-22, 2021. By Neharika Pandey and **M Singh**
9. Deposition of heavy metals in Gomti River: a report from Lucknow City area. Presented in 3rd National Seminar on current Trends in Life Science ( NSCTLS-2021)January 29, 2021. By Neharika Pandey, **M Singh** and Kalpana Padalia
10. ‘Impact of Malathion on Behavioural Response of a Freshwater Fish HeteropneustesfossilisImpact of Malathion on Behavioural Response of a Freshwater Fish *Heteropneustesfossilis*’ **Singh M**., at 'One Health and Ecosystem Services (OHES-2019)' during Nov., 29-30, 2019 at ICAR-NBFGR, Lucknow
11. ‘Observation of impact on Cognitive –function in adults with type 2 diabetes’ **Singh M**., at at NATCONBIO 2019 September 27-28, 2019 (SRMU Lucknow)
12. ‘O-Hexadecyl-dextran-encapsulated berberine potentiates anticancer activity in human cancer cells and Ehrlich ascites carcinoma bearing mice’ **Singh M**., at **National Conference on Biotechnology Innovations: Interdisciplinary Approach to Agriculture, Food, Health, Environment & Sustainable Development** NATCONBIO 2019 (SRMU Lucknow)
13. ‘Circulating Tumor Cells: As a prognostic and treatment monitoring tool for gynecological malignancies’**Singh M**., at Indo Oncology Summit during February 2nd – 4th, 2018 held at Mayfair Lagoon, Bhubaneswar, and (India).
14. ‘A Study on Biochemical Changes on Fresh Water Teleost, *Heteropneustesfossilis* (Bloch) Exposed to the Heavy Metal Toxicant Cadmium.’Rastogi S, Yadav P and **Singh M**. Paper presented in conference **‘**Ecological Degradation and its Impact on Socio-economic Development’. Held at NSCBG P.G. College Aliganj Lucknow. From 2-4 Feb, 2018
15. ‘Behavioral Changes of the freshwater teleost*HeteropneustesFossilis (Bloch)* Exposed to Malathion. Nisha Yadav1, Ramakant Maurya1, Pushpa Yadav2 and Madhulika Singh1. Paper presented in conference **‘**Ecological Degradation and its Impact on Socio-economic Development’. Held at NSCBG P.G. College Aliganj Lucknow. From 2-4 Feb, 2018
16. ‘Mechanistic insights into monocrotophos induced neurotoxicity in stem cell derived neuronal cells’; A Pandey, **Singh M**., 7th International Conference on Engineering Technology Science and Management Innovation at Institution of Electronics and Telecommunication Engineers, Lodhi road Delhi on 16th July 2017
17. Determining sleep-wake activity using actiwatch in healthy adults and type 2diabetes". Priyanka Singh2, Dr. NarsinghVerma, Dr. QulsoomNaaz , **Dr. Madhulika Singh** BPCON 1-3 September2017, Delhi
18. “3-Methylcholanthrene induces neurotoxicity in developing neurons derived from human stem cells by activation of AHR”. A Pandey, **Singh M.** ICBFAM- Jan 23-25, 2017 Lucknow *Best Poster Award*
19. “Differential miRNAs expression profiles classify Mucin 1(+)/(-) human breast cancer stem cells.” **Singh M** and Shukla Y. International Conference on Radiation Oncology & Anti-Cancer Therapy- Nov 21-22, 2016, Dubai
20. Differential mi-RNAs expression profiles classify mucin 1(+)/ (-) human breast cancer stem cells. 9th Indo Global Summit onCancer Therapy-2015 Hyderabad, India
21. “Muc1 is a functional and targetable marker of cancer stem cells in human breast cancer cases”**Singh M** and Shukla Y. World Congress on Cancer and Prevention Methods”, during August 27-29, 2015 at Crowne Plaza Dubai – Deira, Salahuddin Rd - Dubai - United Arab Emirates Oncology-2015, Dubai.
22. “MiR-34a regulates senescence-associated secretary phenotypes via SOCS4- IL6 axis in drug-induced breast cancer cells” at 33rd Indian Association for Cancer Research, Kollam (Feb 2014) Rai G, Mishra S, **Singh M** and Shukla Y
23. “Expression of Muc 1 cells surface antigen: defining the stem/progenitor cells with tumor initiated capability to human breast cancer cases”. International conference on advance in Biotechnology and Bioinformatics Pune (25-27, Nov 2013) **Singh M**
24. “Senescence-like phenotype in human cancer cells after exposure to low-doses of phytochemicals” at The XXXII annual conference of society of toxicology (STOX), Lucknow (Dec 5-7, 2012). **Singh M**
25. “Expression of p-glycoprotein and p53 proteins in HPV induced squamous intraepitheliallesions of uterine cervix: association with clinical outcome”. International Symposium on Role of Genomics in Clinical Practice & 35th Annual Conference of the Indian Society of Human Genetics held at SGPGI, Lucknow, (March 6-8, 2009)**Singh M**
26. “Co-expression of p53 and Bcl-2 proteins in human papilloma virus induced premalignant lesions of uterine cervix: correlation with progression to malignancy.”Symposium of Cervical Cancer Control in India held at Kolkata, (December 4, 2009)**Singh M**
27. “Lupeol induces p53 and cyclin-B mediated G2/M arrest and targets apoptosis through activation of caspases in mouse skin.” International Conference on ‘Predictive, Preventive and Mechanistic Mutagenesis and XXXIII Annual Meeting of Environmental Mutagen Society of India held at Aligarh Muslim University, Aligarh (January 1-3, 2008)Nigam N, Prasad S, **Singh M**, Shukla Y.
28. “Silver stained nucleolar organizing regions in normal and dysplastic cervical lesions: correlation with DNA ploidy and S-phase fraction by flow cytometry”.International Conference on Biomarkers in the health and management in and XXXII Annual Meet of Environmental Mutagen Society of India held at Coimbatore, (January 10-12, 2007) **Singh M**
29. “Diagnostic and Prognostic Value of Flow Cytometric Profile of DNA Content and S-Phase fraction in Cervical Dysplasia”. 30th Annual Meet of Australasian Flow Cytometry Group held at Melbourne, Australia. (September 16-19, 2007) **Singh M**
30. “Correlation of DNA Ploidy in Progression of Human Cervical Cancer.” 25th Annual Convention of Indian Association of Cancer Research at Advanced Centre for Treatment, Research and Education in Cancer, Navi Mumbai, (2006) **Singh M**
31. “Chemopreventive activity of green and black tea polyphenols in medium term carcinogenicity bioassay.” International Conference on Toxicology and Occupational Health (ICTTOH) & XXVI Annual Conference of Society of Toxicology held at Gwalior, India, (October 9-11, 2006) Srivastava S, Khatoon A, Naqvi SHN, **Singh M**, Kalra N, Shukla Y.
32. “Mechanism of apoptosis induction by black tea in human prostate cancer cell lines.” International Conference on Toxicology and Occupational Health (ICTTOH) & 26th Annual Meeting of Society of Toxicology, held at Gwalior, India. (October 9-11, 2006) Kalra N, Prasad S,**Singh M**, Pant AB, Shukla Y.
* **Workshops Attended**
1. 8th Indo-US cytometry workshop (17-22 Dec, 2007), at SGPGI, Lucknow, India.
2. In vitro characterization of hematopoietic stem cells by Colony Forming Unit Assay (Mar, 2013) at Stem Cell Facility, AIIMS, New Delhi, India

**Technical Skills**

* Aquatic toxicology and neurotoxicology evaluation in *in vitro* and *in vivo* animal model systems.
* **Stem Cells**: Cancer Stem cell isolation from cell lines and patients biopsy samples, in vitro propagation andcharacterization, colony forming assay etc.
* **Molecular Biology:** Isolation of Genomic DNA, PCR, Isolation of RNA and RT-PCR.
* **Cell Biology:** Cytology, histology, Flow Cytometry (cell cycle analysis, MMP, ROS generation, lipid peroxidation, immunocytochemistry etc.), immunohistochemistry.
* **Biochemistry:**Estimation of enzymes in tissue and serum.
* **Tissue Culture:**Maintenance of cancer as well as normal cell lines.
* **Parasites:** Isolation and maintenance of *E. histolytica.*
* **Animal Modelshandling:**Fishes**,** Rats, mice, gerbils, mastomys and hamsters.
* ***In vitro* and *in vivo* screening of drugs and toxicants:**Nanotized forms of drugs, anticancer phytochemicals and chemotherapeutic compounds.

**References**

**1. Dr. AdityaBhushan Pant 2.Dr. Y Shukla 3. Dr. SheelaGhosal**

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