

## Curriculum vitae

### **NILESH C. SHARMA**

Department of Biology Western  
Kentucky University 1906  
College Heights Blvd.  
Bowling Green, KY 42101-1080  
Phone (270) 745-6593 Fax: (270) 745-6856  
Email: [nilesh.sharma@wku.edu](mailto:nilesh.sharma@wku.edu)

### **Education**

**Ph. D.** (Plant Biotechnology)  
Bihar University, India  
**Master of Science** (Plant Cytogenetics)  
Patna University, India  
**Bachelor of Science** (Honors)  
Patna University, India

### **Bio**

Birthplace: Bihar, India  
Home: 2719 Utah Drive, Bowling Green, KY 42104  
Citizenship: Naturalized Citizen of United States of America

### **Academic assignments**

Instructor II - Department of Biology, Western Kentucky University (August 2016 – cont.)  
Instructor I: Department of Biology, Western Kentucky University (May 2006 – July 2016)  
Research Scientist, Department of Biology, Western Kentucky University (May 2001 – April 2006)  
Senior Lecturer, Department of Microbiology and Biotechnology, S.B.S. Institute of Biomedical Sciences and Research, Meerut University, Meerut, India (1998 – 2001)  
Research Associate, School of Biotechnology, Banaras H. University, Varanasi, India (1992 – 1994)  
Junior/Senior Research Fellow of University Grants Commission of India, India (1987 – 1992)

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### **Class Teaching at WKU**

Undergraduate courses since 2006:  
Plant Biology and Diversity–Biol 222 (Lecture), Biol 223 (Lab)  
Cell, Metabolism and Genetics–Biol 120, Biol 121  
Cell and Molecular Biology – Biol 319, Lab 322  
General Biology (Biol-113)  
General Microbiology (Biol-207); Lab (Biol-208)

### **Upper-level undergraduate courses**

Honors Colloquium: Pandemic Pandemonium (HONS 300): 2020  
Honors Colloquium: Nanotechnology–Biomedical Applications (HON 300): 2012, 13  
Plant Therapeutics as Alt. Therapeutics (Biol-490)- every year since 2008  
Ethnobiology (Biol-390) – Colonnade Connection (Systems subcategory) – since 2018

### **Graduate-level courses**

Plant Therapeutics (Biol-490G)- every year since 2009  
Investigations in Biology (Biol-516): A dozen of students completed this coursework  
Thesis (Biol-599); Independent Adv. Topics (Biol-675)

## **Pedagogical training & Certification**

- **ACUE Training/CITL:** Completed Courses in Effective Teaching Practices (three semester-long curriculum) in 2019
- Process Orientated Guided Inquiry Learning (POGIL) webinar series 1-6 (2016)
- Blended Learning Workshop with Dr. Curtis Bonk (09/25/2015)
- Certificate of Completion of Quality Matters Peer Reviewer Course (10-day module with pass/fail) – Jan 2013
- Certificate of Completion for Applying the QM Rubric (APPQMR) 2008-12 (514) F2F dedicated (QM Program is an inter-institutional quality assurance in Online learning/courses. It involves a collegial review process where reviewers provide feedback on the course design)
- Completion of 8 full-day sessions of Workshop on Critical Thinking Foundations & Assessing Critical Thinking (8/21/2007, 9/27/2007, 3/24-25/2008; 8/22/2008; 02/13/2009; 08/2009 )
- Successful Completion of Training Modules, CITI Collaborative Institutional Training Initiative: CITI training is a federal-requirement in proper handling of research animals

## **Research Interests**

My research interests broadly include problems of plant biotechnology (exploring potentials of plant or microbial systems in environmental cleanup – bioremediation), phytotherapeutics (therapeutic potential of phytochemicals) and nanotoxicology (evaluation of nanomaterial exposure toxicity using organismal models)

## **Completed Research Grant (student-centered research)**

- 2019- 2021 Sharma - Leibman FUSE Grant (\$3500): Using *Caenorhabditis elegans* model to study toxicity caused by Titanium Nanoparticles
- 2019- 2020 Sharma - Foster FUSE Grant (\$3500): Phytoremediation Potential of Lespedeza species
- 2016–2018 NSF-EPSCoR grant (\$24,995): Principal Investigator – “Risk Assessment of Plant-derived, Ecofriendly Gold Nanoparticles using an Animal System”
- 2015–2016 Sharma-Sadrinia- FUSE Grant (\$5000): The role of plant-derived gold nanoparticles in inflammatory response in lab mice
- 2014–2016 RCIPI Grant (Sahi - Sharma: \$14,748) Co-PI – “Toxicological Evaluation of Plant-synthesized Gold Nanoparticles”
- 2013–2014 RCIPII Grant (\$3,500): Principal Investigator – “Inflammatory response in Mice Exposed to TiO<sub>2</sub> Nanoparticles”
- 2012–2013 Sharma–Scott FUSE Grant (\$5000): Principal investigator – “Studying the effect of Ga nanoparticles on inflammatory responses in mice”
- 2011–2012 RCIPII Grant (\$10,000): Principal Investigator - “The effect of coconut oil on ulcerative colitis in a mouse model”
- 2011–2012 Kentucky Academy of Sciences Award for Summer Student’s Research (\$3000): Principal Investigator - “Studying Effects of Plumbagin on Experimental Ulcerative Colitis”
- 2010–2011 WKU- Office of Sponsored Program Incentive Grant (\$5,877): Principal Investigator - "Anti-inflammatory effects of plumbagin in ulcerative colitis"
- 2009–2010 NIH-KBRIN Grant (\$9,899.00): Principal Investigator -"The effect of plumbagin on the pathogenesis of ulcerative colitis"
- 2005–2007 NSF-EPSCoR grant (\$22000), 2005–2007: Principal Investigator - “Genetic transformation of *Sesbania drummondii* with citrate synthase gene for enhanced accumulation of heavy metals”

**Endeavors to create course-based undergraduate research opportunities:** I submitted the following proposals to create research opportunities for a large number of undergraduates:

- KBRIN-Course-based undergraduate research experiences (CUREs) award 2021: submitted
- The ASPB Plant Biology Learning Objectives, Outreach Materials & Education Grant, 2020 (BLOOM 2020): not funded

### **Research Mentorship**

#### **Undergraduate student research**

Ty Foster – BS Honors Thesis – 2018 -continuing  
Hannah Leibman – Gatton Academy of Mathematics & Science – 2018-graduated  
Grayson Fuller – rising senior at Gatton Academy of Mathematics and Science – 2016-graduated  
Ahmed Fadil – BS Honors Thesis – 2016 -completed  
Bonny Patel – BS Honors College – 2016 -completed  
Charles Towey – BS Honors Thesis – (2015-2017)-completed  
Cyrus Sadrinia – BS Honors Thesis– (2014-2016)-completed  
Brandon Ray – BS Biology – 2013  
Scott Strecker – BS Biology – 2012–2013  
Justin Pile – BS Honors Thesis- 2010-1012 (Thesis of the Year Award); Student presentation awarded at KAS annual meeting – 20011; 2012  
Sujung Kim – BS (Chem)- 2009-2011 (Completed)  
Annesia Lamb – Completed BS (Biol)- 2006-07 – research awarded at KAS annual meeting -2007  
Reyes Quintero – Completed BS (Biol)- 2005-06 – research awarded at Sigma Xi meeting-2006  
Christa Gaskil–Completed BS- 2006; Jennifer Morris- BS (Biol)-2006; Morgan Mc Gray-BS

#### **Graduate Student Research**

Ashley Cox: MA Biology (2013–2015), “Analyzing nanotitania toxicity in plants and animals”  
Justin Pile: MA Biology (2012–2013), “Role of plumbagin in a mouse model of ulcerative colitis”  
Pranav Chandra: MS Biology Thesis (August 2010-May 2013), “Effect of coconut oil on ulcerative colitis in a mouse model” – Awarded at KAS Annual Meeting, 2011; 2012  
Shaughnessy-Begay, A: Research Internship (August 2008 - May 2009) – Use of Burdock and Plantain Leaves in the Healing of Burn Wound Injury by Amish and Mennonite Populations: An Evaluation for the Antimicrobial Efficacy" – completed

#### **Online Graduate Student Advisor**

Mary Beth Ping – 2013-14  
Charity Jackson – 2013-14  
Ashley Cox – 2013-14  
Justin Pile – 2012-13

#### **Publications with WKU students (\*student; @ book chapter)**

1. \*Cox, A., \*Chandra P., Sharma, N. 2021. @Application of titanium dioxide nanoparticles in consumer products raises human health concerns – Lessons from murine models of toxicity- In: Nanomaterial Biointeractions at the Cellular, Organismal and System Levels (Eds. Nilesh Sharma & Shivendra Sahi); Springer–Nature, Switzerland.
2. Cox, A., Sharma, N. 2021. *Caenorhabditis elegans* – @A Unique Animal Model to Study Soil–Nanoparticles–Organism Interactions. 2021. In: Nanomaterial Biointeractions at the Cellular,

Organismal and System Levels (Eds. Nilesh Sharma & Shivendra Sahi); Springer–Nature, Switzerland.

3. \*Cox, A.; Venkatachalam, P.; Sahi, S.; **Sharma, N.** 2016. Silver and titanium dioxide nanoparticle toxicity: A review of current research. *Plant Physiol Biochem*, 107, 147-163.
4. \*Pranav Chandra: **Sharma, N.** Doerner, K.C., Alok, P.C. and Choudhary, M. 2015. Skatole remediation potential of *Rhodopseudomonas palustris* WKU-KDNS3 isolated from an animal waste lagoon. *Letters in Applied Microbiology* [60 \(3\)](#) 298–306
5. \*A. Esterle: Krishnamurthy, S., Esterle, A. **Sharma, N.C.** and Sahi, S.V. 2014. Yucca-derived synthesis of gold nanomaterial and their catalytic potential. *Nanoscale Research Letters*, 9:627
6. \*Pile, Justin: Justin, P., Navalta, J., Davis, C., Sharma N.C. 2013. Interventional effect of plumbagin in experimental ulcerative colitis in mice. *Journal of Natural Products* 76, 1001-1006.
7. \*Daniel Starnes: Sharma, N.C., Starnes, D. L., Sahi, S.V. 2007. Phytoextraction of excess soil phosphorus. *Environmental pollution* 146, 120-127.
8. \*Thomas Ruley: Ruley, A.T., **Sharma, N. C.**, Sahi, S. V. and Singh, S. R. 2006. Effects of lead and chelators on growth, photosynthetic activity and Pb uptake in *Sesbania drummondii* grown in soil. *Environmental pollution* 144 (1), 11-18.

### **Invited Research Presentation**

- Presented a synchronous talk via Zoom (June 24, 2020) on “Functional Food in Managing the 21st. Century Health Conditions” at the International Webinar on “Prospects of Natural Products on Human Health in Current Scenario” hosted by Banaras H University, India
- Gave a live talk (January 2020): “Functional Food: Implications in Health & Disease” hosted by the Western Kentucky Heart & Lung Research Foundation and Educational Trust, Bowling Green, KY
- Sam Houston State University, Huntsville, TX, (Seminar Series) "Plant-mediated Fabrication of Gold Nanoparticles – A Green Nanotechnology" (March 2015).

### **Professional Membership**

- American Association of Immunologists
- American Society of Plant Biologists, ASPB
- Kentucky Academy of Sciences, KAS

### **Service**

- Kentucky Academy of Sciences: Served as Secretary (2009-10) and President (2010-11) of Botany Section
- Biology Department Graduate Student Thesis Committee
- Biology Department Promotion & Tenure Subcommittee
- University Pre-Dental Society (Faculty advisor)
- Online Graduate Student Academic Advising Committee
- Biology Department Biology (113) & Biology (207) Courses – Digital Media Adoption Committee
- Judging in KAS, SRC and other research meetings

### Reviewer of peer-reviewed research journal/grant proposal

- Grant proposal of The U.S. Civilian Research & Development Foundation
- Grant proposal (0.6 Million pounds) of BBSRC, UK
- Industrial Crops and Products
- BMC Complementary and Alternative Medicine
- Journal of Natural Products
- Plant Physiology and Biochemistry
- Journal of Pharmaceutical Sciences
- Panel Reviewer of [EPA Science to Achieve Results \(STAR\) Graduate Fellowship Program](#)
- Journal of Scientific Reports (NPG)
- Journal of Environmental Science & Pollution
- Journal of Environmental Science and Technology

### Ph.D. Dissertation Examiner: Appointed as Doctoral Thesis Examiner for

- University of Calcutta, India, 2019
- Central University of Punjab, India, 2020

### Book Editor - “Nanomaterial Biointeractions at the Cellular, Organismal and System Levels” –

Eds.: Nilesh Sharma, Shivendra Sahi; Springer–Nature, Switzerland, 2021. This is the compilation of original works in the form of a book contributed by leading researchers in the field of nanotechnology, chemistry, biology and biotechnology.

<https://link.springer.com/book/10.1007/978-3-030-65792-5>

**Patent Application** 2021: “Metallic Nanoparticles and Methods of Making and Using the Same” in collaboration with WKU & University of Sciences, Philadelphia

### Publications (\* indicates student coauthors; peer-reviewed journals italicized)

Overall Research Impact: Citations=1900, RG Score=28.73, *h*-index=19, as tracked by Research Gate

37. Prakasha, V., Rai, P., Sharma, N. C., Singh, V. P., Tripathi, D. K., Sharma, S., Sahi, S. Application of zinc oxide nanoparticles as fertilizer boosts growth in rice plant and alleviates chromium stress by regulating genes involved in oxidative stress. *Chemosphere* 303, Part 1, September 2022, <https://doi.org/10.1016/j.chemosphere.2022.134554>
36. Rawat, S., Cota-Ruiz, K., Dou, H., Pullagurala, V.L.R., Zuverza-Mena, N., White, J.C., Niu, G., **Sharma, N.**, Hernandez-Viezcas, J., Peralta-Videa, J.R. and Gardea-Torresdey, J.L. 2021. Soil- weathered CuO nanoparticles compromise foliar health and pigment production in spinach (*Spinacia oleracea*). *Environmental Science & Technology*, DOI: 10.1021/acs.est.0c06548
35. Kumari, S., **Sharma, N.**, Sahi, S.V. 2021. Advances in cancer therapeutics: conventional thermal therapy to nanotechnology-based photothermal therapy. *Pharmaceutics*, 13, 1174. <https://doi.org/10.3390/pharmaceutics13081174>
34. Kumari, S.; Singh, R.P., Chavan, N.N., Sahi, S.V., **Sharma, N.** 2021. Characterization of a novel nanocomposite film based on functionalized chitosan–Pt–Fe<sub>3</sub>O<sub>4</sub> hybrid nanoparticles. *Nanomaterials* 11, 1275. <https://doi.org/10.3390/nano11051275>
33. Cox, A.\*, **Sharma, N.** 2020. *Caenorhabditis elegans*: A unique animal model to study soil- nanoparticles-organism interactions, In *Nanomaterial Biointeractions at the organismal and System Levels* (Eds: Sharma & Sahi), Springer Nature Switzerland AG
32. Cox, A.\*, Chandra, P\*., **Sharma, N.** 2020. Application of Titanium dioxide nanoparticles in consumer products raises human health concerns: Lessons from murine models of

- toxicity. In *Nanomaterial Biointeractions at the Organismal and System Levels* (Eds: Sharma & Sahi), Springer Nature Switzerland AG
31. Bhaskaran, S., **Sharma, N.C.**, Tiwari, P., Singh, SR., Sahi, S.V. 2019. Fabrication of innocuous gold nanoparticles using plant cells in culture. *Scientific Reports* 9, 12040: (2019) 9:12040 | <https://doi.org/10.1038/s41598-019-48475-9>
  30. Arif, N., **Sharma, N.C.**, Yadav, V., Ramawat, N., Dubey, N.K., Tripathi, D.K., Chauhan, D.K., Sahi, S. V. 2019. Understanding heavy metal stress in a rice crop: toxicity, tolerance mechanisms, and amelioration strategies. *J. Plant Biol.* 62:239-253.
  29. Tiwari, M., **Sharma, N.C.**, Fleischmann, P.\* , Burbage, J.\* , Venkatachalam, P., Sahi, SV. 2017. Nanotitanium exposure causes alternation in physiological, nutritional and stress responses in tomato (*Solanum lycopersicum*). *Front. Plant Sci.* 8:633. doi: 10.3389/fpls.2017.00633
  28. Venkatachalam, P.; Jayaraj, M.; Manikandan, R.; Geetha, N.; Rene, E.R.; Sahi, S. V.; **Sharma, N. C.** 2017. Zinc oxide nanoparticles alleviate heavy metal-induced toxicity in *Leucina leucocephala* seedlings: A physicochemical analysis. *Plant Physiol. Biochem.* 110, 59- 69.
  27. Venkatachalam, P.; Jayalakshmi, N.; Geetha, N.; Sahi, S. V.; **Sharma, N. C.**; Rene, E.R.; Sarkar, S.K.; Favas, P.J.C. 2017. Accumulation efficiency, genotoxicity and antioxidant defense mechanisms in medicinal plant *Acalypha indica* L. under lead stress. *Chemosphere* 171, 544-553.
  26. Tripathi, D.K., Singh, S.S., Singh, S., Pandey, R., Singh, V.P., **Sharma, N.C.**, Prasad, S.M., Dubey, N.K. 2017. An overview on manufactured nanoparticles in plants: Uptake, translocation, accumulation and phytotoxicity. *Plant Physiol. Biochem.* 110, 2-12.
  25. Cox, A.\*; Venkatachalam, P.; Sahi, S.; **Sharma, N.** 2017. Silver and titanium dioxide nanoparticle toxicity: A review of current research. *Plant Physiol Biochem*, 107, 147-163.
  24. Tiwari, M., S. Krishnamurthy, D. Shukla, J. Kiiskila, A. Jain, R. Datta, **N. Sharma**, S. Sahi. 2016. Comparative transcriptome and proteome analysis to reveal the biosynthesis of gold nanoparticles in Arabidopsis. *Scientific Reports* 6:21733.
  23. **Sharma, N.** Doerner, K.C., Alok, P.C.\* and Choudhary, M. 2015. Skatole remediation potential of *Rhodopseudomonas palustris* WKU-KDNS3 isolated from an animal waste lagoon. *Letters in Applied Microbiology* 60 (3) 298–306
  22. Krishnamurthy, S., Esterle, A.\* **Sharma, N.C.** and Sahi, S.V. 2014. Yucca-derived synthesis of gold nanomaterial and their catalytic potential. *Nanoscale Research Letters*, 9:627
  21. Justin, P.\* , Navalta, J., Davis, C., **Sharma N.C.** 2013. Interventional effect of plumbagin in experimental ulcerative colitis in mice. *Journal of Natural Products* 76, 1001-1006
  20. **Sharma, N.C.** and Sahi S. 2012. Increased organic phosphorus use promoting biomass and tissue P hyperaccumulations in *Lolium multiflorum* grown in sterile media. *Environmental Science & Technology* 45, 10531–10537
  19. **Sharma, N.C.** and Sahi S. 2011. Excess soil phosphorus – accelerated P transfer, water quality deterioration and sustainable remediation strategies. In: *Improving Crop Resistance to Abiotic Stress*, Eds. N. Tuteja, A. Tiburcio, S. Gill, and R. Tuteja, Wiley-VCH Verlag GmbH & Co. KGaA. Pp.165-191
  18. **Sharma, N.C.**, Sahi, S.V., Nath, S., Parsons J.G., Gardea- Torresdey, J.L. and Pal, T. 2007. Synthesis of plant-mediated gold nanoparticles and catalytic role of biomatrix-embedded nanomaterials. *Environmental Science & Technology* 41 (14), 5137–5142
  17. **Sharma, N.C.**, Starnes, D. L.\* , Sahi, S.V. 2007. Phytoextraction of excess soil phosphorus. *Environmental pollution* 146, 120-127.
  16. Ruley, A.T.\* , **Sharma, N. C.**, Sahi, S. V. and Singh, S. R. 2006. Effects of lead and chelators on growth, photosynthetic activity and Pb uptake in *Sesbania drummondii* grown in soil. *Environmental pollution* 144 (1), 11-18
  15. **Sharma, N.C.**, Sahi, S.V. 2005. Characterization of phosphate accumulation in *Lolium multiflorum* for remediation of phosphorus-enriched soils. *Environmental Science & Technology*

- 39 (14), 5475- 80
14. **Sharma, N.C.**, Sahi, S.V., Jain, J.C. 2005. *Sesbania drummondii* cell cultures: ICP-MS determination of the accumulation of Pb and Cu and assay of antioxidative enzyme activities. *Microchemical J.*, 81, 163-169
  13. **Sharma, N.C.**, Sahi, S.V. 2005. Physiology of lead accumulation and tolerance in a lead accumulating plant (*Sesbania drummondii*). In *Trace Elements in the Environment: Biogeochemistry, Biotechnology and Bioremediation*. Eds. Prasad, M.N.V., Naidu, R., Sajwan, K. CRC Press, Boca Raton, FL. pp. 425-438
  12. **Sharma, N.C.**, Sahi, S.V., Jain, J.C., Raghothama, K.G. 2004. Enhanced accumulation of phosphate by *Lolium multiflorum* cultivars grown in phosphate-enriched medium. *Environmental Science & Technology*, 38, 2443-2448.
  11. **Sharma, N.C.**, Gardea-Torresdey, J.L., Parsons, J., Sahi, S.V. 2004. Chemical speciation and cellular deposition of lead in *Sesbania drummondii*. *Environmental Toxicology & Chemistry*, 23 (9), 2068-2073
  - Ruley A.T.\*, **Sharma N.C.**, Sahi, S.V. 2004. Antioxidant defense in a lead accumulating plant, *Sesbania drummondii*. *Plant Physiology and Biochemistry*, 42 (11), 899-906
  9. Sahi, S.V., **Sharma, N.C.** 2004. Phytoremediation of Lead. In *Trace and Ultratrace Elements in Plants and Soil*. Ed. Shtangeeva, I. WIT Press, Boston/ Southampton, UK. pp. 209-217
  - Cheepala, S.B.\*, **Sharma, N.C.** Sahi, S.V. 2004. Rapid in vitro regeneration of *Sesbania drummondii*: a leguminous shrub of medicinal importance. *Biologia Plantarum*, 48 (1), 13-18.
  8. **Sharma, N.C.**, Jain, J., Sahi, S.V. 2003. Evaluation of phosphate phytoremediation potential of ryegrass. *Proceedings of 2<sup>nd</sup> International. Agronomy Congress: Balancing food and environment security*, New Delhi, India, November, 2002, pp. 1009-1010.
  7. Ruley, T.\*, **Sharma, N.C.**, Sahi, S.V. 2003. Transport and Sequestration of Lead in *Sesbania drummondii*. of 7<sup>th</sup> International Conference on the Biogeochem. of trace elements, Uppsala, Sweden, June 2003, pp. 194-195.
  6. Sahi, S.V., **Sharma, N.C.**, Bryant, N.L., Singh, S.R. 2002. Characterization of a lead hyperaccumulator shrub, *Sesbania drummondii*. *Environmental Science & Technology*, 36, 4676- 4680.
  5. Deepti, M.\*, **Sharma, N.C.**, Cristae, P., Sahi, S.V. 2002. Transformation of maize by 2,4, dihydroxy-7-methoxy-2H-1,4-benzoxazin-3(4H)-one resistant *Agrobacterium* strains. *Biotechnology Letters*, 24, 197-203.
  4. Boswell, C.\*, **Sharma, N.C.** and Sahi, S.V. 2002. Copper-tolerance and - accumulation potential of *Chlamydomonas reinhardtii*. *Bulletin of Environmental Contamination and Toxicology*, 69, 546- 553.
  3. Raikhy, G., **Sharma, N.C.** and Gupta, S. 2001. Dairy waste water: a resource for single cell protein production by yeast. *Pollution Research*, 18 (2), 112-117.
  2. Tiwari, K.N., **Sharma, N.C.**, Tiwari, V., Singh, B.D. 2000. Micropropagation of *Centella asiatica* (L.), a valuable medicinal herb. *Plant Cell Tissue & Organ Culture*, 63 (3), 179-185.
  1. Kojiam, B., **Sharma, N.C.** and Gupta, S. 2000. Production and characterization of fungal cellulases from lignocellulosic wastes. *Asian J. Micro. Biotechnol. Env. Sci.* 4 (3-4), 113-120.

**Presentations in National/Regional meetings** (\* indicates student coauthors)

22. Tyler Foster\* and Nilesh Sharma, 2020. Phytoremediation Potential of *Lespedeza cuneata*. Kentucky Academy of Science Annual Virtual Meeting, Nov 6-7, 2020
21. Cyrus Sadrinia\*, Hannah Leibman\* and Nilesh Sharma, 2020. How safe is the application of nanotitania when it can induce inflammatory response, affect liver function or body weight in animal models? Annual Meeting of the American Association of Immunologists, 2020, Hawaii
20. Hannah Leibman and Nilesh Sharma, 2019. How does the exposure of Titanium dioxide nanoparticles affect the life cycle and gene expression in *Caenorhabditis elegans*? Kentucky Academy of Science Annual Meeting, Berea College, 2019

19. Nilesh Sharma (presenter), P. Fleischmann\*, Towey, Charles\* and S. Sahi, 2017. Physiological, nutritional and stress responses in tomato plant exposed to TiO<sub>2</sub> nanoparticles. International Conference on the Biogeochemistry of Trace Elements (ICOBTE), July 16-20, 2017, Zurich, Switzerland
18. Fadil Ahmed\*, Shivendra Sahi, Nilesh Sharma, 2017. Phytosynthesis, transcriptomic interaction and toxicity of gold nanoparticles. Annual Meeting of American Society of Plant Biologists, June 23-28, 2017, Honolulu, Hawaii
17. Sadrinia, Cyrus\*, Sharma, N.C. 2016. Comparative evaluation of inflammatory responses in mice exposed to gold nanoparticles of biological and chemical origins. Annual Meeting of the American Association of Immunologists, May 13-17, 2016, Seattle, WA
16. Fleischmann, P.\*, Sharma, N.C., Sahi, S.V. 2015. Effect of titanium dioxide nanoparticles on the growth, photosynthetic efficiency, and oxidative Stress in Food Crops, March 21-22, 2015. American Society of Plant Biologists (Midwestern section), St Louis, USA
15. Sadrinia, C.\*, Sharma, N.C. 2014. Does Exposure to TiO<sub>2</sub> Nanoparticles Trigger Inflammatory Response in Mice? Annual Meeting of Kentucky Academy of Sciences, Nov. 14-16, 2014, Lexington, KY
14. Strecker, R.\*, Ray, B., Sharma, N.C. 2013. Inflammatory responses in mice exposed to multiple doses of TiO<sub>2</sub> nanoparticles. Annual Meeting of the American Association of Immunologists, May 3-7, 2013, Honolulu, Hawaii
13. Chandra, P.\* and Sharma N.C. 2012. Bioaccumulation and effects of gold nanoparticles after their prolonged administration in mice. 5th. Annual Nanotechnology Symposium, Sullivan University College of Pharmacy, Sept. 20-21, 2012. Louisville
12. Chandra, P.\*, Sharma, N.C. 2012. Effect of coconut oil in the chronic model of ulcerative colitis. 98th. Annual Meeting of Kentucky Academy of Sciences, Oct. 19-20, 2012. Richmond (KY)
11. Pile, J.\*, Sharma, N. C. 2011. Studying the effect of plumbagin in ulcerative colitis in mice. 97th. Annual Meeting of Kentucky Academy of Sciences, Nov 4-5, 2011. Murray (KY)
10. Chandra, P.\*, Sharma, N.C. 2011. Effect of coconut oil in the experimental model of ulcerative colitis. 97th. Annual Meeting of Kentucky Academy of Sciences, Nov 4-5, 2011. Murray (KY)
9. Pile, J.\*, Kim, S., Sharma, N. C. 2010. Studying effects of plumbagin in ulcerative colitis pathogenesis in mice. 96th. Annual Meeting of Kentucky Academy of Sciences, Nov 12-13, 2010. Bowling Green (KY)
8. Lamb, Annesia.\*, Sharma, N.C. 2007. Cell and tissue culture of a lead accumulating shrub, *S. drummondii*. 2007 PMBB research symposium, The Ohio State University, March 30-31, 2007. Columbus (OH)
7. Sharma, N.C., Paul, P.\*, Sahi, S.V. 2006. Phosphatase activities and assimilation of organic phosphorus in *Lolium multiflorum* grown *in vitro*. *International annual meeting, American Society of Plant Biologists*, Aug.5-9, 2006. Boston, MS, USA
6. Sharma, N.C., Sahi, S.V. 2005. Evaluation of organic phosphorus assimilation in *Lolium multiflorum*. *International annual meeting, American society of Agronomy, Crop science society of America & Soil science society of America*, Nov. 6-10, 2005. Salt Lake City, UT, USA
5. Sharma, N.C., Sahi, S.V. 2004. Could phytoremediation be used to remove excess phosphorus from soil? *International annual meeting, American society of Agronomy*, Oct 31-Nov 4, 2004. Seattle, Washington
4. Sharma, N.C., Sahi, S.V. 2004. Strategy for phosphate phytoremediation. *4<sup>th</sup> International Phosphorus Workshop*, August 16-19, 2004. Wageningen, The Netherlands.
3. Ruley, T.\*, Sharma, N.C., Sahi, S.V. 2003. Transport and sequestration of lead in *Sesbania drummondii*. *7<sup>th</sup> International Conference on the Biogeochem. of trace elements*, June 2003, Uppsala, Sweden.
2. Sharma, N.C., Sahi, S.V. 2003. Evaluation of crops for phosphate accumulation potential (poster). *International annual meeting, American society of Agronomy*, Nov 2-6, 2003. Denver, Colorado, USA