Curriculum Vitae

Dr AB Pant

PhD, FATS (USA), UKRT (London), FST, FIAN, FAsAW, FAEB, MNASc, MAMS

Senior Principal Scientist

System Toxicology & Health Risk Assessment Group
CSIR-Indian Institute of Toxicology Research
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Webpage: http://www.iitrindia.org/Admin%20Panel/Profile.aspx?id=55
Pubmed link: http://www.ncbi.nlm.nih.gov/pubmed/?term=Pant+AB
Registered Toxicologist: *UK Register of Toxicologists, London*
Editorial Member: *Scientific Report- (Nature Publishing Group)*
Editorial Advisor: *Toxicology Research (Royal Society of Chemistry)*
Associate Editor: *Annals of Neurosciences (Journal of IAN)*
National GLP Inspector: *NGCMA, DST, Govt. of India*
Secretary General: *Society of Toxicology, India (2010-2014)*

1. ***Date and Place of Birth*** : 05.12.1968/ Dehradun-Uttarakhand
(Place was in Uttar Pradesh till November 8, 2000)

2. ***Present Position*** : Senior Principal Scientist

3. ***Address (Office)*** :

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4 ***Academic qualifications*** : MSc (Microbiology)
PhD (Biotechnology)
DSc (Life Sciences: Enrolled since 2015)

***Title of Ph.D*:** Some immunological and chemotherapeutic studies on the *in vitro* exoerythrocytic stages of rodent malaria"

Title of D.Sc.: Human cord blood stem cell derived 3D neuronal network: tool to study the developmental neurotoxicity and neuroprotection

5. Positions, jobs and assignments held:

Duration	Position Held	Organization
Nov. 2018- till date	Sr. Principal Scientist	CSIR-Indian Institute of Toxicology Research, Lucknow (UP)
Nov. 2012- Nov. 2018	Principal Scientist	CSIR-Indian Institute of Toxicology Research, Lucknow (UP)
Nov. 2008- Nov. 2012	Sr. Scientist	CSIR-Indian Institute of Toxicology Research, Lucknow (UP)
Nov. 2004- Nov. 2008	Scientist-C	Indian Institute of Toxicology Research, Lucknow (UP)
Nov. 2001- Nov. 2004	Scientist-B	Indian Institute of Toxicology Research, Lucknow (UP)
Nov.2003- July 2006	Guest Faculty	Deptt. of Biochemistry, Lucknow University, Lucknow
Nov. 1997- Nov. 2001	PDF	Industrial Toxicology Research Centre, Lucknow (UP)
June 1995 – Nov. 1996	Project Fellow	IIT Roorkee - (Uttarakhand)
June 1992 – June. 1995	SRF	Central Drug Research Institute, Lucknow (UP)
Jan. 1990 – June 1992	JRF	IIT Roorkee -(Uttaranchal)

6. Current area of research:

Applicability of plasticity and pluripotency potential of stem cells derived from human cord blood:

- to develop human brain specific high throughput screening tool to assess the neurotoxicity and developmental neurotoxicity potential of drugs/ chemicals
- to identify the stage specific early markers of injury and repair for developing human brain
- to develop low density genome/proteome array as biomarkers to characterize the stage specific landmarks to assess the chemical/drug induced developmental neurotoxicity
- to develop *in vitro* organ specific universal gene chip as predictive tool to identify the toxic potential of drugs/ chemicals at organ level in one go

7. Brief account of notable contributions in last ten years:

Stem cell based in vitro models for developmental neurotoxicity:

Developed the human cord blood stem cell-derived in vitro model system for the high throughput screening of drugs/ chemicals for their developmental neurotoxicity (DNT) potential. My DNT research discovered that how the master regulator signaling molecules/ cascades are critical to converting the cord blood stem cells into functional neurons and what exactly happens when things go wrong during the intricate process of neuronal development. I have uncovered novel links between the xenobiotic metabolizing capabilities and their regulators in human cord blood stem cell-derived neuronal cells all through the differentiation. The work on the developing neurons not only offers a much sought after the framework for understanding the neurodegenerative disorders and potential therapeutic interventions but also is a strong base for future studies aimed at interpreting the human brain-specific DNT. For the first time from India, we have published the data on a

mechanistic understanding of chemical-induced developmental neurotoxicity in human stem cell-derived neuronal cells throughout the growth phases. We have published our data in 'Stem Cells and Development' 2013; 22(2): 224-238. Prof. Shinya Yamanaka, the Nobel Laureate of 2012 (Medicine and Physiology) has also published his data in the February issue of the same journal [Stem Cells and Development 2013; 22 (3): 473-482]. Prof. John B. Gurdon, who shared the Nobel Prize with Prof. Shinya Yamanaka, has also published his data in the same journal in January 2012. Developed an experimental model of ischemic cerebral stroke, which is being used as a high throughput screening tool to evaluate the target specific anti-stroke potential of drugs and new molecules.

Established international linkages:

- The strategic collaboration has been established with Dr Mayana Zatz, Professor of Genetics, Director- Human genome and Stem-Cell Research Center, Institute of Biosciences, University of São Paulo, Butanta, São Paulo, SP-Brazil to address the challenges of a neglected neurodegenerative disorder-Amyotrophic Lateral Sclerosis (ALS). The scientific collaboration has been funded by the federal funding agencies of both the countries as an Indo-Brazil project for four years in 2016. Prof. Mayana Zatz's research group has been one among the seasoned and established group in the area of familial ALS for over two decades. She has 'State of the Art' infrastructure facility and expertise available to work with human biological samples of ALS patients. The data being generated through non-patient iPSC derived in vitro model of sporadic ALS will be complemented to the data of familial ALS generated from patients' samples. The strategic collaboration between the Investigators and exchange trips to each other's research facilities will not only synergize the generation of human resource and expertise, but also the data generated will be helpful to develop a roadmap for more effective drug development and therapeutic interventions in both sporadic as well familial ALS.
- As an International Advisor, I have been instrumental in establishing the WHO funded "Africa Centre of Excellence in Materials, Product Development and Nanotechnology" at Makerere University, Uganda.
- Twenty-seven of our research papers have been admitted in the "Comparative Toxicogenomics Database (CTD; http://ctdbase.org/) under "Chemical-Gene Interactions and Diseases". CTD is an NIEHS-funded public database that elucidates molecular mechanisms by which environmental chemicals affect the disease. It contains chemical-gene-disease interactions curated from the scientific literature. http://ctdbase.org/basicQuery.go;jsessionid=E489DAA8C3A864F061BB0F2C6E9C9BDD?bqCat=reference&bq=Pant+AB

Contributions made in the strategic sector:

- The findings of by my research group on developmental neurotoxicity studies in human cord blood stem cell derived neuronal cells have been discussed at length in the OECD document entitled 'integrated testing strategies for the identification and evaluation of chemical hazards associated with the developmental neurotoxicity: the use of non-animal test methods for regulatory purposes' (Section 4.2.5, Page No. 119-121; ENV/JM/MONO(2017)4/ANN1: January 27, 2017) http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono(2017)4/ann1&doclanguage=en.
- Being a qualified Lead GLP Inspector, the National GLP Compliance Monitoring Authority, Department of Science & Technology, Ministry of Science & Technology, Government of India, utilizing my expertise to inspect the adequate implementation of OECD principles of GLP in the GLP certified Laboratories and to assess the new facility seeking for GLP

certification in the country. I was also instrumental in GLP certification of CSIR-Indian Institute of Toxicology Research, Lucknow. I am offering all my expert direction and training to the personnel involved in GLP Toxicity Facility of CSIR-IITR, Lucknow.

- Being 'Technical Operational Manager', Biological Sciences, for NABL activities at CSIR-Indian Institute of Toxicology Research, Lucknow, I am ensuring the compliance of 'Laboratory Quality Management System and Internal Audit' are as per IS/ISO/IEC 17025:2005 & ISO/IEC 17025:2005, ISO 15189:2007 Standards.
- Being a Member of National Review Committee for Plastic and Polymeric products at Bureau of Indian Standards (PCD-12 and 21), I am providing my intellectual inputs in the preparation and revision of National Guidelines of Standards at Bureau of Indian Standards.
- In 2016, the Government of India had decided to comprehensively review the Drugs and Cosmetics Act. 1940 and Rules made thereunder and to bring out the new legislation and rules. In this regard, the Central Drugs Standard Control Organization, Office of Drug Controller General India, Ministry of Health and Family Welfare, Government of India constituted the panel of experts. I served in the committee as a subject expert for "Stem Cells and Regenerative Medicine".
- The 'SOP on Patients Consent in India' is drafted by the Institute of Medicine & Law (IML), Mumbai. This initiative is the first of its kind not only in India but in the world whereby an SOP on Consent is collectively and voluntarily drafted by a team of experts and participants. This SOP is expected to clear uncertainties on different aspects of consent that exist today. I served as a member of the SOP draft committee (http://www.patientsconsent.com/ Associates.aspx).
- The data generated on neurotoxicity/ developmental neurotoxicity and neuroprotection in human stem cell derived neuronal cells/ PC12 cells (rat pheochromocytoma cells) will lead to rapid *in vitro* tool to predict the mechanisms involved in chemical induced neurotoxicity and neuroprotection. The model developed will be helpful for regulatory agencies to incorporate new objective in vitro endpoint for the pre-screening of chemicals for neurotoxicity/ developmental neurotoxicity.

Outreach programs for societal goods:

- Besides the laboratory work, I have also dedicated myself to foster the scientific awareness and recent updates in the area of stem cell research, toxicology, GLP compliance and monitoring, biosafety research, etc. among the faculty members, research fellows, postgraduate and undergraduate students through public outreach programs. These persons will pass the gathered knowledge subsequently to the masses. During the last ten years, I have delivered 170 invited talks under this mission.
- Taking up my inputs Society of Toxicology, USA has developed a consensus document **"Hooka: How dangerous is it?"** for wide publicity.

8. Participation in "Major Programs" identified at the National level:

Sl. No	Title of the Project	Coordinating Agency	Contribution being made
1.	Good Laboratory Practices	National GLP Compliance Monitoring Authority of India, DST, New Delhi	Lead GLP Inspector, NGCMA, DST, Ministry of Science, Government of India
2.	Quality Management	Bureau of Indian Standard,	Member, Task force for plastic and polymeric products (PCD-

	System	New Delhi	12, PCD-21)
3.	Review of the Drugs and Cosmetics Act. 1940 and Rules made thereunder and bring out the new legislation and rules	Central Drugs Standard Control Organization, Office of Drug Controller General India, Ministry of Health and Family Welfare, Government of India	Act as subject expert for "Stem Cells and Regenerative Medicine"
4.	National SOP for Patients Consent in India	Institute of Medicine & Law, Mumbai	Member, Drafting Committee
5.	Quality Management System	CSIR-IITR-NABL	Authorized Signatory for Plastic & Polymer Studies Technical Operation Manager
6.	Integrated NextGen approaches in health, disease and environmental toxicity (BSC-0111)	CSIR-IITR Lucknow	PI for two R&D activities
7.	New approaches towards understanding of disease dynamics and to accelerate drug discovery (BSC-0103)	CSIR-CDRI Lucknow	PI for one R&D activity
8	Investigative Toxicology: New paradigms (Supra-institutional Project-SIP-08)	CSIR-IITR Lucknow	PI for two R&D activities

9. List of selected publications in indexed journals:

PubMed Link: http://www.ncbi.nlm.nih.gov/pubmed?term=Pant%20AB

Web page: http://www.iitrindia.org/Admin%20Panel/Profile.aspx?id=55

Total research papers: **152**

Paper presented in symposia/ conferences: **196**

Invited Lectures delivered: **190**

Book Chapters written: **10**

Text Book: **1**

Cyber Lectures delivered: **4**

Copyright Granted: **1**

Pant AB

Indian Institute of Toxicology Research, Lucknow, Indi
Verified email at iitr.res.in
Mechanistic understanding ...

Cited by		VIEW ALL
	All	Since 2014
Citations	5248	3511
h-index	39	33
i10-index	128	100

1. R Bansal, B Seth, S Tiwari, S Jahan, M Kumari, **AB Pant**, RK Chaturvedi, P Kumar, KC Gupta (2018). Hexadecylated linear PEI self-assembled nanostructures as efficient vectors for neuronal gene delivery. ***Drug Delivery and Translational Research***. 2018 Oct;8(5):1436-1449. [**Impact Factor: 3.09**]
2. A Srivastava, S Singh, A Pandey, D Kumar, CS Rajpurohit, VK Khanna, **AB Pant**. (2018). Secretome of differentiated PC12 cells restores the monocrotophos-induced damages in human mesenchymal stem cells and SHSY-5Y cells: role of autophagy and mitochondrial dynamics. ***Neuromolecular Medicine.*** 2018 Jun;20(2):233-251. [**Impact Factor: 3.29**]
3. A Srivastava, S Singh, A Pandey, D Kumar, CS Rajpurohit, VK Khanna, **AB Pant**. (2018). Secretome of differentiated PC12 cells enhances neuronal differentiation in human mesenchymal stem cells via NGF-like mechanism. ***Molecular Neurobiology***. 2018 Nov;55(11):8293-8305. [**Impact Factor: 6.19**]
4. S Jahan, D Kumar, S Singh, V Kumar, A Srivastava, A Pandey, CS Rajpurohit, VK Khanna, **AB Pant**. (2018). Resveratrol prevents the cellular damages induced by monocrotophos via PI3K signaling pathway in human cord blood mesenchymal stem cells. ***Molecular Neurobiology***. 2018 Nov;55(11):8278-8292. [**Impact Factor: 6.19**]
5. P Srivastava, YK Dhuriya, V Kumar, A Srivastava, R Gupta, RK Shukla, RS Yadav, HN Dwivedi, **AB Pant**, VK Khanna. (2018). PI3K/Akt/GSK3β induced CREB activation ameliorates arsenic mediated alterations in NMDA receptors and associated signalling in rat hippocampus: Neuroprotective role of curcumin. ***Neurotoxicology.*** 2018 Jul;67:190-205. **[Impact Factor: 3.076]**
6. P Srivastava, YK Dhuriya, R Gupta, RK Shukla, RS Yadav, HN Dwivedi, **AB Pant**, VK Khanna (2018). Protective effect of curcumin by modulating BDNF/DARPP32/CREB in arsenic-induced alterations in dopaminergic signaling in rat corpus striatum. ***Molecular Neurobiology***. 2018;55(1):445-461. [**Impact Factor: 6.19**]
7. P Bhatnagar, M Kumari, R Pahuja, **AB Pant**, Y Shukla, P Kumar, KC Gupta. (2018). Hyaluronic acid-grafted PLGA nanoparticles for the sustained delivery of berberine chloride for an efficient suppression of ehrlich ascites tumors. ***Drug Delivery and Translational Research.*** 2018 Jun;8(3):565-579. doi: 10.1007/s13346-018-0485-9. [**Impact Factor: 6.402**]
8. R Gupta, RK Shukla, A Pandey, T Sharma, YK Dhuriya, P Srivastava, MP Singh, MI Siddiqi, **AB Pant**, VK Khanna. (2018). Involvement of PKA/DARPP-32/PP1α and β-arrestin/Akt/GSK-3β signaling in cadmium-induced DA-D2 receptor-mediated motor dysfunctions: protective role of quercetin. ***Scientific Reports***. 2018;8(1):2528. [**Impact Factor: 4.26**]
9. RR Jha, C Singh, **AB Pant**, DK Patel. (2018). Ionic liquid based ultrasound assisted dispersive liquid-liquid micro-extraction for simultaneous determination of 15 neurotransmitters in rat brain, plasma and cell samples. ***Analytica Chimica Acta.*** 2018;1005:43-53. [**Impact Factor: 5.26**]
10. G Awasthi G, A Kumari, **AB Pant**, P Srivastava. (2018). In silico identification and construction of microbial gene clusters associated with biodegradation of xenobiotic compounds. ***Microbial Pathologenisis***. 2018;114:340-343. [**Impact Factor: 2.01**]
11. S Jahan, S Singh, A Srivastava, V Kumar, D Kumar, A Pandey, CS Rajpurohit, AR Purohit, VK Khanna, **AB Pant.** (2017). PKA-GSK3β and β-Catenin signaling play a

critical role in *Trans*-Resveratrol mediated neuronal differentiation in human cord blood stem cells. ***Molecular Neurobiology***. 2018;55(4):2828-2839. [**Impact Factor: 6.19**]

12. A Srivastava, V Kumar, A Pandey, S Jahan, D Kumar, CS Rajpurohit, S Singh, VK Khanna, **AB Pant**. (2017). Adoptive autophagy activation: a much-needed remedy against chemical induced neurotoxicity/ developmental neurotoxicity. ***Molecular Neurobiology***. 2017;54(3):1797-1807. **[Impact Factor = 6.19]**

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14. AK Gupta, K Varshney, V Kumar, K Srivastava, **AB Pant**, SK Puri, AK Saxena. (2017). Design, synthesis, and biological evaluation of novel 1,2,4-Trioxanes as potential anti-malarial agents. ***Archiv der Pharmazie***. 2017;350(3-4). **[Impact Factor- 2.04]**

15. M Kumari, L Ray, MP Purohit, S Patnaik, **AB Pant**, Y Shukla, P Kumar, KC Gupta. (2017). Curcumin-loading potentiates the chemotherapeutic efficacy of selenium nanoparticles in HCT116 cells and Ehrlich's ascites carcinoma bearing mice. ***European Journal of Pharmaceutics and Biopharmaceutics***. 2017:S0939-6411(16)30437-4. [Epub ahead of print] **[Impact Factor- 4.16]**

16. YK Dhuriya, P Srivastava, RK Shukla, R Gupta, D Singh, D Parmar, **AB Pant**, VK Khanna. (2017). Prenatal exposure to lambda-cyhalothrin alters brain dopaminergic signaling in developing rats. ***Toxicology***. 2017;386:49-59. [Epub ahead of print]. **[Impact Factor- 3.82]**

17. YK Dhuriya, P Srivastava, RK Shukla, R Gupta, D Singh, D Parmar, **AB Pant**, VK Khanna. (2017). Prenatal exposure to lambda-cyhalothrin impairs memory in developing rats: Role of NMDA receptor induced post-synaptic signalling in hippocampus. ***Neurotoxicology.*** 2017;62:80-91. [Epub ahead of print]. **[Impact Factor- 3.10]**

18. S Singh, A Srivastava, V Kumar, A Pandey, D Kumar, CS Rajpurohit, VK Khanna, S Yadav, **AB Pant**. (2016) Stem Cells in Neurotoxicology/Developmental Neurotoxicology: Current Scenario and Future Prospects. ***Molecular Neurobiology.*** 2016;53(10):6938-6949. **[Impact Factor = 6.19]**

19. SK Rajput, AK Sharma, CL Meena, **AB Pant**, R Jain, SS Sharma. (2016). Effect of L-pGlu-(1-benzyl)-l-His-l-Pro-NH_2 against in-vitro and in-vivo models of cerebral ischemia and associated neurological disorders. ***Biomedicine & Pharmacotherapy.*** 2016 Dec;84:1256-1265. **[Impact Factor = 2.32]**

20. A Jauhari, T Singh, A Pandey, P Singh, N Singh, AK Srivastava, **AB Pant**, D Parmar, S Yadav. (2016). Differentiation Induces Dramatic Changes in miRNA Profile, Where Loss of Dicer Diverts Differentiating SH-SY5Y Cells Toward Senescence. ***Molecular Neurobiology***. 2016 August 15 [Epub ahead of print] **[Impact Factor = 5.471]**

21. RK Shukla, YK Dhuriya, LP Chandravanshi, R Gupta, P Srivastava, **AB Pant**, A Kumar, CM Pandey, MH Siddiqui, VK Khanna. (2016). Influence of immobilization and forced swim stress on the neurotoxicity of lambda-cyhalothrin in rats: Effect on brain biogenic amines and BBB permeability. ***NeuroToxicology.*** 2016 Jul 7. pii: S0161-813X(16)30120-6. doi: 10.1016/j.neuro.2016.07.002. [Epub ahead of print] **[Impact Factor = 2.73]**

22. P Sharma, O Prakash, A Shukla, CS Rajpurohit, PG Vasudev, S Luqman, SK Srivastava, **AB Pant**, F Khan. (2016). Structure-Activity Relationship Studies on Holy Basil (Ocimum sanctum L.) Based Flavonoid Orientin and its Analogue for Cytotoxic Activity in Liver Cancer Cell Line HepG2. ***Combinatorial Chemistry & High Throughput Screening***. 2016;19(8):656-666. **[Impact Factor = 1.04]**

23. R Gupta, RK Shukla, LP Chandravanshi, P Srivastava, YK Dhuriya, J Shanker, MP Singh, **AB Pant,** VK Khanna. (2016). Protective Role of Quercetin in Cadmium-Induced Cholinergic Dysfunctions in Rat Brain by Modulating Mitochondrial Integrity and MAP Kinase Signaling. ***Molecular Neurobiology***. 2016 July 7 [Epub ahead of print] **[Impact Factor = 5.471]**

24. P Bhatnagar, **AB Pant**, Y Shukla, A Panda, KC Gupta (2016). Hyaluronic acid grafted PLGA copolymer nanoparticles enhance the targeted delivery of Bromelain in Ehrlich's Ascites Carcinoma. ***European Journal of Pharmaceutics and Biopharmaceutics.*** 2016: 105:176-192. **[Impact Factor = 5.471]**

25. V Kumar, A Pandey, S Jahan, RK Shukla, D Kumar, A Srivastava1, S Singh, CS Rajpurohit, S Yadav, VK Khanna, **AB Pant**. (2016). Differential responses of *Trans*-Resveratrol on proliferation of neural progenitor cells and aged rat hippocampal neurogenesis. ***Scientific Reports.*** 2016: 6:28142. DOI:10.1038/srep28142. **[Impact Factor = 5.578]**

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27. RK Shukla, R Gupta, P Srivastava, YK Dhuriya, A Singh, LP Chandravanshi, A Kumar, MH Siddiqui, D Parmar, **AB Pant**, VK Khanna. (2016). Brain cholinergic alterations in rats subjected to repeated immobilization or forced swim stress on lambda-cyhalothrin exposure. ***Neurochemistry International***. 2016;93:51-63. **[Impact Factor = 2.920]**

28. V Kumar, AK Gupta, RK Shukla, VK Tripathi, S Jahan, A Pandey, A Srivastava, M Agrawal, S Yadav, VK Khanna, **AB Pant**. (2015) Molecular Mechanism of Switching of TrkA/p75(NTR) Signaling in Monocrotophos Induced Neurotoxicity. ***Scientific Reports.*** 2015:15;5:14038. **[Impact Factor = 5.578]**

29. P Srivastava, A Tiwari, AC Trivedi, V Thakur, **AB Pant**, S Saxena. (2015). Virtual Screening of Natural and Synthetic Ligands Against Diabetic Retinopathy by Molecular Interaction With Angiopoietin-2. ***Asia-Pacific Journal of Ophthalmology*** (Philadelphia) 2014:3(4):257-9.

30. S Yadav, A Jauhari, N Singh, T Singh, AK Srivastav, P Singh, **AB Pant**, D Parmar. (2015). MicroRNAs are Emerging as Most Potential Molecular Biomarkers. ***Biochemistry & Analytical Biochemistry.*** 2015:1;2015. **[Impact Factor = 2.22]**

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32. A Pandey, A Jauhari, T Singh, P Singh, N Singh, AK Srivastava, F Khan F, **AB Pant**, D Parmar, S Yadav. (2015). Transactivation of P53 by cypermethrin induced miR-200 and

apoptosis in neuronal cells. ***Toxicology Research.*** 2015;4(6):1578-86. **[Impact Factor = 3.983]**

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35. P Bhatnagar, **AB Pant**, Y Shukla, B Chaudhari, P Kumar, KC Gupta. (2015). Bromelain nanoparticles protect against 7,12-dimethylbenz[a]anthracene induced skin carcinogenesis in mouse model. ***European Journal of Pharmacology and Biopharmaceutics.*** 2015;91:35-46. **[Impact Factor = 4.74]**

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41. P Srivastava, RS Yadav, LP Chandravanshi, RK Shukla, YK Dhuriya, LK Chauhan, HN Dwivedi, **AB Pant**, VK Khanna. (2014).Unraveling the mechanism of neuroprotection of curcumin in arsenic induced cholinergic dysfunctions in rats. ***Toxicology and Applied Pharmacology.*** 2014:15;279(3):428-40. **[Impact Factor = 3.63]**

42. MP Kashyap, V Kumar, AK Singh, VK Tripathi, S Jahan, A Pandey, RK Srivastava, VK Khanna, **AB Pant** (2014). Differentiating neurons derived from human umbilical cord blood stem cells work as a test system for developmental neurotoxicity. ***Molecular Neurobiology.*** 2015:51(2):791-807. **[Impact Factor = 5.286]**

43. VK Tripathi, V Kumar, AK Singh, MP Kashyap, S Jahan, A Pandey, S Alam, F Khan, VK Khanna, S Yadav, M Lohani, **AB Pant.** (2014). Monocrotophos induces the expression and activity of xenobiotic metabolizing enzymes in pre-sensitized cultured human brain cells. ***PLoS One***.2014:9(3):e91946. **[Impact Factor = 3.534]**

44. LP Chandravanshi, RS Yadav, RK Shukla, A Singh, S Sultana, **AB Pant**, D Parmar, VK Khanna. (2014). Reversibility of changes in brain cholinergic receptors and

acetylcholinesterase activity in rats following early life arsenic exposure. ***International Journal of Developmental Neuroscience***. 2014:34:60-75**[Impact Factor = 2.918]**

45. DK Yadav, K Kalani, AK Singh, F Khan, SK Srivastava, **AB Pant** (2014). Design, synthesis and in vitro evaluation of 18β-glycyrrhetinic Acid derivatives for anticancer activity against human breast cancer cell line mcf-7. ***Current Medical Chemistry.*** 2014:21(9):1160-70. **[Impact Factor = 3.715]**

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150. **AB Pant**, MK Kapil and Ashutosh Pant (1993). *In vitro* effect of seed, bark and leaf extract of *Nyctanthes arbortritis* on seed germination and early seedling growth of *Parthenium hysterophorous Linn*. ***International Journal of Agriculture and Biological Research.*** 9(1): 26-32.

151. DK Garg, **AB Pant**, Manju R Agarwal and RN Goel (1990). Seasonal variation in ground water quality in Roorkee city. ***International Journal of Environmental Protection.*** 10(9) 673-676.
152. DK Garg, RN Goel, VP Agarwal and **AB Pant** (1990). Correlation among water quality parameters of ground water in Roorkee city. ***International Journal of Environmental Protection.*** 10(5) 335.

10. Copyright granted:

- Copyright granted for the development of "Bio-calculators" for the rapid and precise calculations of biological and statistical endpoints (No. 013/CR/2006/748854). These bio-calculators along with database management system on 'human health risk assessment and management' are available on dedicated website (http://www.healthriskindia.in) developed and designed by us and available for public use.
- Bio-calculators and database management system developed by us are available for public use free of cost through website (http://www.healthriskindia.in).

11. List of book chapters written:

S. No.	Title	Author's Name	Publisher	Publication Year
1	Toxicological consequences of modulation of brain cytochrome P450s by environmental chemicals. Chapter in book entitled "Pharmacological Prospective of Soma Toxic Chemicals and Their Antidotes".	D Parmar, S Yadav, A Johri, N Kapoor, **AB Pant**, A Dhawan and PK Seth	Narosa Publishing House, New Delhi	2004
2	Oxidative stress in macular disorder: strategies for management. A chapter in book entitled "Recent developments in ocular disorders".	VK Khanna, **AB Pant** and S Saxena	Japyee Press, New Delhi	2007
3	Combinational antifungal therapy and recent trends in drug discovery. Chapter in book entitled "Combating fungal infections: problems and remedies".	I Ahmad, MSA Khan, M Zahin, M Owais, Z Mehmood and **AB Pant**	Springer Press	2010
4	In vitro approaches for biosafety of nanoparticles: strategies and points to ponder. Chapter in book entitled "Nanomaterials: Hazards Assessment".	MP Kashyap, RK Srivastava, AK Singh, VK Khanna, **AB Pant**	Educational Book Centre, Mumbai	2012
5	Alternatives to the experimental animals in biomedical research and testing. Chapter in book entitled "Use of animals in scientific	**AB Pant** and VK Khanna	Indian National Science Academy, New Delhi	2012

	research and education".			
6	Status of toxicology in India.	**AB Pant**	Amity University, Lucknow	2012
7	Development of *in vitro* toxicology: A historic story. Chapter in book entitled "*In Vitro* Toxicology".	S Singh, VK Khanna and **AB Pant**	Published by Elsevier	2017
8	इन विट्रो टॉक्सिकोलॉजी का विकास: एक ऐतिहासिक वर्णन	पुनीत खरे, विनय कुमार खन्ना एवं आदित्य भूषण पन्त	सीएसआईआर-भारतीय विषविज्ञान अनुसंधान संस्थान, लखनऊ(उ.प्र.)	2017
9	Phytomedicine: A potential alternative in the management of neurological disorders	A Srivastava, P Srivastava, VK Khanna, **AB Pant**	(Academic Press) 2019, Chapter-24, 625-655. https://doi.org/10.1016/B978-0-12-814619-4.00025-2	2019
10	Molecular diagnostics in melanoma in the book entitled ""Molecular Diagnostics in Oncology"" edited by Kamla Kant Shukla, Prveen Kumar Sharma and Sanjeev Misra (Springer Nature) In press	A Srivastava, P Srivastava, VK Khanna, **AB Pant**	Springer Inc., Chapter 5;73-88, DOI:10.1007/978-981-13-5877-7_5.	2019

12. Citation index of published work in national and international journals:

PubMed Link: http://www.ncbi.nlm.nih.gov/pubmed?term=Pant%20AB

Web page: http://www.iitrindia.org/Admin%20Panel/Profile.aspx?id=55

Pant AB

Indian Institute of Toxicology Research, Lucknow, Indi
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Mechanistic understanding ...

Cited by		VIEW ALL
	All	Since 2014
Citations	5248	3511
h-index	39	33
i10-index	128	100

13. Fellowships/ memberships of academic societies/ professional bodies:

- **Fellow:** Academy of Toxicological Sciences, USA (One among the only two Indians)
- **Fellow**: Society of Toxicology, India

- **Fellow**: Academy of Sciences for Animal Welfare, MoEF, Government of India
- **Fellow:** Academy of Environmental Biology
- **Fellow:** Indian Academy of Neurosciences
- **Member:** Society of Quality Assurance, USA
- **Member:** Royal Society of Biology, London, UK
- **Member:** Federation of European Toxicologists and European Societies of Toxicology (EUROTOX)
- **Member**: National Academy of Sciences, India.
- **Member**: National Academy of Medical Sciences, India
- **Member:** International Society for Stem Cell Research (ISSCR), USA
- **Member:** Society of Toxicology, USA
- **Member:** International Neurochemistry Society, USA
- **Member:** European Society of Toxicology In Vitro
- **Member:** Society for Alternatives to Animal Experiments-India
- **Member:** Academy of Environmental Biology India
- **Member:** Indian Academy of Neurosciences
- **Member**: Indian Neurochemistry Society
- **Member:** Laboratory Animal Scientist's Association, India
- **Member:** Environmental Mutagen Society, India
- **Member:** Indian Pharmacology Society
- **Member**: Advisory Board of Research & Executive Council of National Centre for Stem Cell Technology & Research UP, India
- **Member:** Indian Society for Parasitology
- **Member:** UP Association for Science & Technology Advancement, India
- **Member**: Red Cross Society, Indian Chapter
- **Member**: St. John Ambulance Association, Indian Chapter

14. Awards won

S.No.	Name of Award	Name of the awarding body	Year
1.	Vigyan Ratna Award-2010	Council of Science & Technology UP, Government of Uttar Pradesh, Lucknow	2010
2.	STOX/ASAW Gold Medal	Society of Toxicology, India	2011
3.	Shakuntala Amir Chand Prize-2007	Indian Council of Medical Research, Government of India, New Delhi, India	2011
4.	National Bioscience Award for Career Development-2012	Department of Biotechnology, Ministry of Science & Technology, Govt. of India	2013
5.	AEB Gold Medal-2013 for	Academy of Environmental Biology, India	2013

	Meritorious Service-2013		
6.	Prof. KT Shetty Memorial Oration Award-2017	Indian Aacdemy of Neurosciences, India	2017
7.	Toxicology Promotion Award -2018	National Academy of Sciences, Allahabad	2018

Research Fellows received awards, based on research work carried out under the supervision of Dr Pant (2008-2019):

- **Dr Mahendra Pratap Kashyap** received 'Travel Award' for poster presentation in the 8th Biennial Meeting of the Asia-Pacific Society for Neurochemistry, held at Shanghai, PR China from June 23-26, 2008. Journal of Neurochemistry. 106 (S1), 43.
- **Mr Rajesh Yadav** received 'Jyotsnamoyee Raghunath Bhattacharya Best Paper Award-2009' for our paper "Attenuation of arsenic neurotoxicity by curcumin in rats" published in Toxicology and Applied Pharmacology. 2009; 240 (3):367-376, by Indian Academy of Neurosciences, India at its annual meeting held at NIMS University, Jaipur, India from December 18-20, 2009.
- **Mr Mahendra Pratap Kashyap** received 'Jyotsnamoyee Raghunath Bhattacharya Best Paper Award-2011' for our paper "Caspase cascade regulated mitochondria mediated apoptosis in monocrotophos exposed PC12 cells" published in Chemical Research in Toxicology. 2010; 23(11). 1663-1672, by Indian Academy of Neurosciences, India at its annual meeting held at DRDO, New Delhi, India from October 30- November 1, 2011.
- **Mr Rajesh Yadav** received **'**Molecular Chemoprevention and Therapeutics (MCT)-University of Minnesota Research Excellence Award' for best poster presentation at the Annual Meeting of Society of Toxicology, India (STOX) during December 09 -11, 2010 at Jamia Hamdard, New Delhi, India.
- **Mr Abhishek Kumar Singh** received 'Travel Award' for poster presentation in the 23rd Biennial Meeting of International Society for Neurochemistry (ISN) jointly with European Society for Neurochemistry (ESN) held at Athens, Greece during August 28 to September 1, 2011. Journal of Neurochemistry. 2011; 118 (S1):119.
- **Mr Rajesh Yadav** received 'Travel Award' for poster presentation in the 34th Annual Meeting of the Japan Neuroscience Society (JNS) held on September 14-17, 2011 at Yokohama, Japan. Neuroscience Research. 2011; 71 (S-1): e320.
- **Mr Rajesh Yadav** received 'Professor R. Nath Memorial Travel Award' for poster presentation in the XXIX Annual Meeting of Indian Academy of Neurosciences held at New Delhi from October 30-November 01, 2011.
- **Mr Rajesh Yadav** received 'Congress Travel Award' for poster presentation in the XIX World Congress on Parkinson's disease and Related Disorders held at Shanghai, China from December 11-14, 2011. Parkinsonism and Related Disorders. 2012; 18 (S-2):S213–S214.
- **Mr Abhishek Kumar Singh** received 'Travel Fellowship' for excellent presentation at the 35th Annual Meeting of the Japan Neuroscience Society (JNS) held on September 17-21, 2012 at Nagoya, Japan.
- **Mr Abhishek Kumar Singh** received 'International Travel Grant' from Department of Science and Technology, Govt. of India, New Delhi, to presentation the research work in the 11th Biennial Meeting of Asian Pacific Society for Neurochemistry and 55th Annual

Meeting of the Japanese Society for Neurochemistry held at Kobe, Japan from September 30-October 02, 2012. Journal of Neurochemistry.2012; 123(S-1):85.

- **Mr Rajesh Yadav** received 'ISN-APSN-IBRO Travel Fellowship' to attend ISN-APSN-IBRO School held at Osaka University School of Medicine and Nara Institute of Science and Technology, Osaka, Japan, from September 25-28, 2012.
- **Mr Rajesh Yadav** received 'Best Student Poster Presentation Award' at the 11th Biennial Meeting of the Asian Pacific Society for Neurochemistry and the 55th Annual Meeting of the Japanese Society for Neurochemistry held at Kobe, Japan from September 30-October 02, 2012. Journal of Neurochemistry.2012; 123(S-1):85.
- **Mr Abhishek Kumar Singh** received 'ISN-APSN-IBRO Travel Fellowship' at the 11th Biennial Meeting of the Asian Pacific Society for Neurochemistry and the 55th Annual Meeting of the Japanese Society for Neurochemistry held at Kobe, Japan from September 30-October 02, 2012. Journal of Neurochemistry.2012; 123(S-1):85.
- **Mr Rajesh Yadav** received 'Professor R. Nath Memorial Travel Award' for poster presentation in the XXX Annual Meeting of Indian Academy of Neurosciences and International Symposium on Translational neuroscience: Unraveling the Mysteries of Brain in Health and Disease held at Amritsar, India from October 27-30, 2012. Annals of Neurosciences. 2012; 19(S-1):69.
- **Mr Pranay Srivastava** received 'Tulsabai Somani Education Trust Award' for best oral presentation during the XXX Annual conference of Indian Academy of Neurosciences and International Symposium on Translational neuroscience: Unraveling the Mysteries of Brain in Health and Disease held at Amritsar, India from October 27-30, 2012. Annals of Neurosciences. 2012; 19(S-1):32.
- **Mr Vivek Kumar** received 'Best Poster Award' in 32nd Annual Conference of Society of Toxicology (STOX), India and International Symposium on New Paradigms in Toxicology (NPT-2012) organized at CSIR-Indian Institute of Toxicology Research (IITR), Lucknow, India, from December 05-07, 2012.
- **Mr Pranay Srivastava** received 'Best Poster Award' in the XII Annual Meeting of the Society for Free Radical Research-India and International Symposium on Advances in Free Radicals, Redox Singling and Translational Antioxidant Research held at Lucknow, India, from January 30- February 01, 2013.
- **Mr Rajendra Kumar Shukla** received FAONS Student Travel Award to attend the FAONS Symposium 2013 in association with the 33rd annual meeting of the Australian Neuroscience Society (ANS 2013) held at Melbourne, Australia from February 3-6, 2013.
- **Mr Abhishek Kumar Singh** received 'Best Poster Award' in the 27th Annual Meeting of Society for Neurochemistry, India (SNCI-2013) held at All India Institute of Medical Sciences (AIIMS), New Delhi, India from February 20-23, 2013.
- **Mr Abhishek Kumar Singh** received 'International Travel Grant' from CSIR, Govt. of India, to present the research work in the 24th Biennial Meeting of Society for Neurochemistry being jointly organized with American Society for Neurochemistry (ASN-ISN 2013) at Cancun, Mexico from April 20-24, 2013.
- **Mr Vinay Kumar Tripathi** received 'International Travel Fellowship' to present the research work in the 24th Biennial Meeting of Society for Neurochemistry being jointly organized with American Society for Neurochemistry (ASN-ISN 2013) at Cancun, Mexico from April 20-24, 2013.

- **Mr Vivek Kumar** received 'International Travel Fellowship' to present the research work in the 24th Biennial Meeting of Society for Neurochemistry being jointly organized with American Society for Neurochemistry (ASN-ISN 2013) at Cancun, Mexico from April 20-24, 2013
- **Ms Ankita Pandey** received 'International Travel Fellowship' to present the research work in the 24th Biennial Meeting of Society for Neurochemistry being jointly organized with American Society for Neurochemistry (ASN-ISN 2013) at Cancun, Mexico from April 20-24, 2013.
- **Ms Parul Singh** received 'International Travel Fellowship' to present the research work in the 24th Biennial Meeting of Society for Neurochemistry being jointly organized with American Society for Neurochemistry (ASN-ISN 2013) at Cancun, Mexico from April 20-24, 2013.
- **Mr Abhishek Jauhari** received 'ISN Travel Award' to attend the 6th special conference of International Society of Neurochemistry at Tokyo, Japan from September 20-22, 2014.
- **Mr Pranay Srivastava** received **'**Best Poster Presentation award' at International Pharmaceutical Conference on Nano-formulation and Translational Research: Small getting Bigger at BBA University, Lucknow, India from February 2-3, 2015.
- **Mr Rajendra Kumar Shukla** received the Travel Award to attend the 38th Annual Meeting of the Japan Neuroscience Society, Kobe, Japan from July 28 – 31, 2015.
- **Ms Tanisha Singh** received "International Travel Award" for 25th ISN-APSN Joint Biennial Meeting at Cairns, Australia organized in conjunction with Australian Society of Neuroscience (ANS) from August 23-27, 2015.
- **Ms Richa Gupta** received 'IBRO APRC Travel Award' for IBRO/APRC Chandigarh School at Punjab University, Chandigarh, India from October 26-30, 2015.
- **Mr Pranay Srivastava** received 'Congress Travel Award' by the Melvin Yahr International Parkinson's Disease Foundation and the International Association of Parkinsonism and Related Disorders to attend the XXI World Congress on Parkinson's Disease and Related Disorders at Milan, Italy from 6-9 December, 2015.
- **Ms Richa Gupta** received 'Congress Travel Award' by the Melvin Yahr International Parkinson's Disease Foundation and the International Association of Parkinsonism and Related Disorders to attend the XXI World Congress on Parkinson's Disease and Related Disorders at Milan, Italy from 6-9 December, 2015.
- **Mr Pranay Srivastava** received 'IBRO APRC Travel Award' for IBRO/APRC Colombo School at Colombo, Sri Lanka from December 14-20, 2015.
- **Mr Dipak Kumar** was amongst the 16 shortlisted candidates from all over the world to attend 3rd AIST International Imaging Workshop organized at Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Science City, Japan from January 18-24, 2016.
- **Ms Ankita Pandey** received the "IBRO APRC Travel Fellowship" to attend the IBRO APRC School at National Brain Research Centre (NBRC), Manesar, Haryana from March 15-30, 2016.
- **Ms Akriti Srivastava** received the "Post Graduate Travel Award" to attend the 14th meeting of the Asian- Pacific Society for Neurochemistry (APSN) held at Kuala Lumpur, Malaysia from August 27-30, 2016.

- **Ms Shripriya Singh** received the first prize for the **best oral presentation award** at the IBRO/APRC Associate School of Neuroscience: 'Dawn of the aging world-nipping neurodegeneration in the bud', held at Selangor, Malaysia from August 8th-14th 2016.
- **Mr Akriti Srivastava** received **Post Graduate Travel Award** for attending the 14th Meeting of the Asia-Pacific Society for Neurochemistry (APSN) held from August 27-30, 2016 at Kuala Lumpur, Malaysia.
- **Ms Richa Gupta** awarded **World Parkinson's Congress Travel Grant** by World Parkinson's Congress to present the research paper in 4th WPC2016, Portland, Oregon from September 20-24, 2016.
- **Mr Chetan Singh Rajpurohit** received **best Poster Presentation award** at XXXIV Annual Conference of the Indian Academy of Neurosciences held at National Brain Research Centre, Gurugram, India, during October 19-21, 2016.
- **Ms Richa Gupta** received **best Poster Presentation award** at XXXIV Annual Conference of the Indian Academy of Neurosciences held at National Brain Research Centre, Gurugram, India, during October 19-21, 2016.
- **Ms Akriti Srivastava** received **Best Poster Award** (1st runner-up) at 2nd IBRO/APRC Chandigarh School of Neuroscience held from December 14-22, 2016 at Panjab University, Chandigarh, Punjab.
- **Mr Pranay Srivastava** received **Best Oral Presentation Award** at 2nd IBRO/APRC Chandigarh School of Neuroscience at Panjab University, Chandigarh, Punjab from December 14-22, 2016.
- **Ms Ankita Pandey** received Best Poster Presentation Award in Indo-Russian Meet and Second International Conference on Biotechnological Advancements in Free Radical Biology and Medicine (ICBAFM) held at Integral University, Lucknow from January 23-25, 2017.
- **Mr Chetan Singh Rajpurohit** received the "IBRO/APRC Travel Grant" to attend the IBRO/APRC Associate School 2017 on "Computational approaches in Neuroprotection and Neurorehabilitation" held at Department of Biomedical Engineering, NEHU, Shillong, Meghalaya, India from June 05-10, 2017.
- **Ms Richa Gupta** received IBRO-APRC Travel Grant by IBRO to attend the IBRO/APRC Singapore associate School of Neuroscience, Singapore from July 03-07, 2017.
- **Ms Richa Gupta** awarded MDS International Travel Grant by Movement disorder society to attend the 21st International Congress of Parkinson's Disease and Movement Disorders, June 4-8, 2017 in Vancouver, BC, Canada.
- **Ms Shripriya Singh** selected for the ISN Advanced School Travel Award to attend the 14th ISN Advanced School entitled as "The Energetic Brain" to be held from 16-24 August, 2017 at Paris, France.
- **Mr Chetan Singh Rajpurohit** selected for ISN Travel Award to attend the International Society of Neurochemistry- European Society of Neurochemistry (ISN-ESN) Meeting to be held from 20-24 August, 2017 at Paris, France.

- **Ms Richa Gupta** selected for the **ISN Advanced School Travel Award** to attend the 14th ISN Advanced School entitled as "The Energetic Brain" to be held from 16-24 August, 2017 at Paris, France.
- **Ms Ankita Pandey** selected for **FENS Travel Award** to attend FENS regional meeting to be held at Pecs, Hungary from 20-23rd September, 2017.
- **Ms Ankita Pandey** received best scientific paper presentation waard "Tulsabai Somani Award" during The XXXV Annual Meet of Indian Academy of Neuroscience & International Conference on Translational Neurosciences and its Application in Protection of Mental Health held at Ravenshaw University, Cuttack, Odisha, India on October 29-31, 2017.
- **Ms Shripriya Singh** received a travel grant to attend and present the research work at the '2018 ISN-JNC Flagship School' in Alpbach, Austria, September 10-15, 2018.
- **Mr CS Rajpurohit** received the best poster presentation award at symposium on 'Exploring mind, brain and behavior' held at Amity Institute of Neuropsychology & Neurosciences, Noida, Uttar Pradesh during March 28-29, 2019.

15. ***Recent foreign visits:***

S. No.	Place of visit	Purpose	Duration
1.	Chulabhorn Research Institute Bangkok, Thailand	To attend international training course on 'Environmental and Health Risk Assessment and Management of Toxic Chemicals'	Nov 23-Dec 14, 2016

16. Major R&D projects/ programmes implemented:

Research Grants received

Project Title	Funding Agency	Amount (In Lacs)	Period
Extramural projects as Principal Investigator			
In vitro model for evaluation of medical devices for biological hazards.	ICMR	5.00	Jan. 2000 to Jan. 03
Neuro-genotoxicity assessment of co exposure of lead and ethanol: an *in vitro* Study	ICMR	6.50	May 05- May 08
Development of *in vitro* models of cerebral stroke to evaluate neuroprotective effects of herbal drugs	ICMR	18.00	July 06 - July 09
Studies on the expression and regulation of xenobiotic metabolizing cytochrome P450s in human brain cells	CST-UP	5.50	July 07- July 10
Therapeutic interventions in oral sub-mucous	ICMR	20.00	May 09- May 12

fibrosis: an experimental study			
Development of monoclonal antibody based ELISA/Dip stick kits for GM food and crops	DBT	53.00	Oct. 08 - Oct. 11
Functional neuronal differentiation of human cord blood stem cells: tool to study the chemical induced developmental neurotoxicity	DBT	54.00	Nov. 2010- Oct 13
Functional characterization of brain cytochrome P450s in differentiating neuronal and glial cells - derived from human umbilical cord blood stem cells	DST	65.00	May 2012- May 15
Dissecting the signaling cascade involved in *Trans*-Resveratrol induced neuronal differentiation in PC12 cells: implications in neurodegenerative disorders (Project received under National Bioscience Award for Career Developemnt-2012)	DBT	9.00	Aug. 2013-Aug. 16
Human cord blood stem cells derived 3D neuronal network: mechanistic understanding of chemical induced developmental neurotoxicity and neuroprotection (Approved but funds yet to receive)	ICMR	92.00	2019-2022
Application of human iPSCs in deciphering the cellular and molecular mechanisms of amyotrophic lateral sclerosis and disease association with developmental neurotoxicity	Indo-Brazil (DBT)	168.00	June 2016-May2020
Application of human iPSCs derived 3D neuronal niche: A high-throughput system to screen the developmental neurotoxicity potential of chemicals/ drugs	SERB, New Delhi	80.00	Dec.2018-Dec.2021
Profiling of mesenchymal stem cell secretome and its restorative potential in neuronally differentiated human iPSCs receiving toxic insult (Project submitted in January 2019: Under consideration)	DBT, New Delhi	128.00	Under consideration
Pre-clinical regulatory toxicity/ bio-safety profiling of ethoxyquin (Project submitted in January 2019: under consideration)	FSSAI, New Delhi	141.00	Under consideration
Extramural projects as Co-Principal Investigator			
Clinical trial with RISUG: genotoxicity and mutagenicity studies	ICMR	8.00	April 05-March 06

Cytokine profile in Eales' disease: relationship with disease activity	KGMU	1.00	April 05- March 06
Flow Cytometric analysis of DNA ploidy and cell cycle in buccal mucosal cells in smokeless tobacco consumers	ICMR	26.00	March 06- Feb.09
Cytochrome P450s (P450s) in cultured rat brain cells: cell specific inducibility and vulnerability to environmental chemicals	CST-UP	5.40	Oct. 04- Sept. 07
Potential of black tea and its constituents in reversal of multi drug resistance and as bio-enhancer in cancer chemoprevention	DBT	52.00	Nov. 05- Nov. 08
To study the genetic stability of bacterial strain from earthworm gut *in situ* application in detoxification of endosulfan	CST-UP	5.40	Aug. 06 - Aug. 09
Neurotoxicity of synthetic pyrethroid (Lambda-cyhalothrin) pesticide: behavioral, neurochemical and immunohistochemical studies in developing and young rats	ICMR	20.00	April 07 - March 10
Development of ELISA & PCR based tests for GM Crops & Food	DBT	56.00	August 07- July 10
Role of microRNAs in neuronal differentiation and regulation of their expression by known developmental neurotoxins	DBT	17.00	May 09-May 12
Identification and validation of early biomarkers for predicting toxicity including pre-carcinogenic leasons in individuals occupationally exposed to PAHs and through tobacco	Indo-US (ICMR)	60.00	May 12-May 15
Prenatal viral infection: neuroimmunoigical, molecular and cognitive consequences during development, adulthood and senility in mice	ICMR	60.00	May 13-May 16
Intramural projects as Principal Investigator			
Establishment and validation of primary cultures of brain cells as *in vitro* model for neurotoxicity	CSIR (CMM-0018)	50.00	April 02-March 07
Establishment and validation of *in vitro* model system for cytotoxicity assessment	CSIR (CMM-0018)	22.14	April 02- March 07
Stem cells: *in vitro* tool to understand the	CSIR	60.00	April 07-March 12

mechanisms of pesticide induced developmental neurotoxicity	(NWP-34)		
Development and validation of *in vitro* models of developmental neurotoxicity	CSIR (SIP-08)	50.00	April 07-March 12
Stem cell derived skin dendritic cells: an in vitro tool to assess the immune-toxicity of environmental contaminants	CSIR (NWP-17)	54.00	April 07-March 12
Development and validation of in vitro models for cytotoxicity, neurotoxicity and metabolism assessment	CSIR (NWP-34)	45.00	April 07-March 12
Secretome based stage specific markers of developmental neurotoxicity in hematopoietic stem cell derived differentiating neuronal	CSIR (BSC-0111)	75.00	April 12- March 17
Molecular imprinting of genes associated with neural development, injury and repair in differentiating neural cells derived from human umbilical cord blood stem cells	CSIR (BSC-0111)	75.00	April 12- March 17
In vitro model of ischemic cerebral stroke: applicability of human neuronal cells derived from umbilical cord blood stem cells	CSIR (BSC-0103)	50.00	April 12- March 17
Pre-clinical regulatory studies for development of new drugs and devices **(Approved)**	CSIR-HCT	850.00	July 2018-June 2020
National Facility of 3D-Bioprinting for Toxicity/ Biosafety (Under consideration)	CSIR-HCT	700.00	July 2018-June 2020

Consultancy/sponsored projects

Besides the R/D work, I am also involved in consultancy/ sponsored projects from the Industries/ Public Sectors/ Non-Government organizations. Since 2001, I have been participated in the consultancy projects of worth more than 300,000.00 lacs.

17. Mentorship provided (Students guided, teaching etc.):

M Sc	:	One hundred and fifty one
MDS	:	Thirty one
M Tech	:	Eighteen
B Tech	:	Eighteen
PhD	:	Nineteen (Awarded) Six (Currently working)
TWAS Fellow	:	One PhD Awarded (I was Co-Guide)

Co-ordinator (Stem Cells, Regeneration and Aging course-205) in the Academy of Scientific and Innovative Research (AcSIR):

Co-ordinator (Stem Cells, Regeneration and Aging course-BIO-IITR-2-3207) and Co-coordinator (Xenobiotic Interaction and Response course- BIO-IITR-2-3204)in the Academy of Scientific and Innovative Research (AcSIR):

Since the day of inception, I am a part of AcSIR as Member of the committee of curriculum design at CSIR-IITR, Lucknow. I was involved in the designing of course curriculum of the following credits: Research Methodologies, Ethics and Safety; Stem cells, Regeneration and Aging; Systemic Toxicology, Xenobiotic Interactions. I am serving as a Course coordinator of 'Stem cells, Regeneration and Aging' and Xenobiotic Interaction and Response.

In each semester, I am delivering the lectures as per the following schedule:

Sl. No	Subject/Course	Credits	No. of Students	Lecture/ Hours	Practical Sessions
1	Stem Cells, Regeneration and Aging (BIO-IITR-2-3207)	One	Variable batch wise	Sixteen	Two
2	Xenobiotic Interaction and Response BIO-IITR-2-3204	Two	Variable batch wise	Sixteen	Two
3	Research Methodologies, Ethics and Safety (104)	One	Variable batch wise	Two	-

18. Expert Member in National Regulatory/ Scientific Bodies:

- **Member:** Taskforce of DBT for monitoring and implementation of DBT funded mega project on creation of "Small Animal Research Facility for Preclinical Studies and Services" at SVB Mahatma Gandhi Medical College and Research Institute, Puducherry.
- **Member:** Institutional Committee for Stem Cell Research, at King George's Medical University, Lucknow
- **Member:** Institutional Committee for Stem Cell Research, at SGPGIMS, Lucknow
- **Member:** Institutional Committee for Stem Cell Research, at Era University, Lucknow
- **Chairman:** Institutional Committee for Research Ethics at HNB Uttarakhand Medical Education University, Dehradun
- **Member:** Advisory Committee of 'Chemical and Pharmaceuticals Sciences', and 'Biotechnology' for evaluation of research projects submitted for possible funding at Council of Science & Technology, Uttar Pradesh.
- **Member:** Board of Studies "Environmental Sciences" Dr Ram Manohar Lohia Awadh University, Faizabad.
- **Member:** Expert Committee for the selection of Project Fellows at Baba Bhimrao Ambedkar University, Lucknow (UP)
- **Member:** Expert Committee for the selection of 'Research and Teaching Faculty' at National Institute of Pharmaceutical Education and Research, Raebareli
- **Member**: Scientific Panel on Antibiotic Residues at Food Safety and Standards Authority of India, Delhi
- **Subject Expert:** in accreditation agencies- BIS, NGCMA, DCGI, FSSAI, etc.

- **Member:** Institutional Animal Ethics Committee, Baba Bhimrao Ambedkar University, Lucknow (UP)
- **Member:** Centralized Technical Purchase Committee for procurement of equipments at all the NIPERs
- **External Expert:** Advisory Board of Era University, Lucknow.
- **Member Secretary:** Institutional Biosafety Committee, CSIR-Indian Institute of Toxicology Research, Lucknow (UP)
- **Member:** Drafting Committee of 'National SOP-2018 for Patients Consent in India' developed and implemented by Institute of Medicine & Law, Mumbai (http://www.patientsconsent.com/Associates.aspx).
- **Joint Secretary:** Society for Alternatives to Animal Experiments-India
- **Lead GLP Inspectors:** Department of Science & Technology, Ministry of Science & Technology, Government of India, New Delhi.
- **Secretary General,** Society of Toxicology, India, since May 2012-November 2014.
- **Technical Operational Manager,** in a team of NABL for biosafety assessment of plastic and polymeric products at Institute level. The role is to ensure the compliance of 'Laboratory Quality Management System and Internal Audit' as per IS/ISO/IEC 17025:2005 and ISO/IEC 17025:2005, ISO 15189:2007 Standards.
- **Member**, National Review Committee for Plastic and Polymeric products at Bureau of Indian Standards (PCD-12 and 21).
- **Honorary e-consultant** for Toxicology and Forensic Sciences through www.indmedica.com
- **Member,** Panel of Expert for the assessment of Scientists working at Central Research Institute (Ayurveda), Central Council for Research Ayurveda and Siddha, Ministry of Health & Family Welfare, Govt. of India. (Since 2008- till date)
- **Member,** Biosafety Committee, Aligarh Muslim University, Aligarh. (Since 2009- till date)
- **Member,** Research Council, Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow (UP)
- **Chairman,** 'Ethical Clearance Committee for Stem Cell Research' at Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow (UP)
- **Member,** Research Council, Amity University, Lucknow (UP)
- **Member,** Research Council, Integral University, Lucknow (UP)
- **Member,** Research Committee Biotechnology, Gautam Buddha Technical University, Lucknow (Formerly: UP Technical University, Lucknow)
- **Member,** Selection Committees of more than ten Universities in India.
- **Chair the Scientific Sessions** in more than fifty National and International Symposia/ Conferences held at various parts of the country in last 5-6 years.
- **Chairman** of the selection panel constituted for the interview of aspirants for admission in B.Tech, MSc. and M.Tech. courses in Amity University, Lucknow (2008-2012)

19. Editorial Assignments:

- **Editorial Member:** Scientific Report (Stem Cells and Development Section)**,** a Journal of Nature Publishing Group (December 2014- till date)
- **Academic Editor:** PLoS ONE, world's largest online journal (January 2012- till date)
- **Advisory Member:** Toxicology Research, a journal of Royal Society of Chemistry (January 2012- till date)
- **Executive Editor:** Journal of Clinical Toxicology (January 2013- till date)
- **Managing Editor:** Toxicology International, the official journal of the Society of Toxicology, India (January 2010- November 2014)
- **Editor:** Journal of Ecophysiology and Occupational Health, an official journal of Academy of Environmental Biology, India (January 2006- till date)
- **Member:** International Editorial Board of National Journal of Physiology, Pharmacy and Pharmacology (March 2011 – till date)
- **Senior Editor:** 'The Age of Biotechnology' for Microbiology/Pharmacy/ Biomedical Section (January 2011- till date)
- **Editorial Member:** News Bulletin of Environmental Mutagenesis Society of India (January 2004 -December 2006)
- **Member:** International Editorial Board, IMTU Medical Journal (April 2012- till date)
- **Review Editor:** Frontiers in Pharmacogenetics and Pharmacogenomics (January 2013-till date)
- **Associate Editor:** Annals of Neurosciences, an official journal of Indian Academy of Neurosciences (January 2015-till date)

20. Workshops/ Symposia organized (Ten Years):

1. **Co-Convener** in "Training Workshop on Scientific Communication" held at Industrial Toxicology Research Centre, Lucknow during on July 24 and 25, 2004.
2. **Joint Organizing Secretary** in "National Symposium on Safety Assessment of Cosmetics" held at Industrial Toxicology Research Centre, Lucknow during November 18-19, 2004.
3. **Joint Organizing Secretary** in "International symposium on Diet in Causation & Prevention of Cancer, along with XXX Annual Conference of Environmental Mutagen Society of India held at Industrial Toxicology Research Center, Lucknow during on March 17-19, 2005.
4. **Joint Organizing Secretary** in "International Update on Basic and Clinical Neuroscience Advances" and XXII annual meeting of Indian Academy of Neurosciences to be held at Industrial Toxicology Research Center, Lucknow during on December 17-20, 2006.
5. **Organizing Secretary** in the Symposium on 'Neurodegeneration and Neuro-regeneration: Current Trends and Future Strategies' held at Industrial Toxicology Research Centre, Lucknow, on July 30, 2007.
6. **Organizing Secretary** of International Conference on Recent developments, future prospects and entrepreneurial trends in biotechnology, held at IET Biotechnology Institute, Northern Extension, MIA, Alwar, Rajasthan, during December 19-21, 2009.

7. **Joint Organizing Secretary** of 5th Federation of Asian and Oceanian Neuroscience Societies (FAONS) Congress-2010 & XXVIII Annual Meeting of Indian Academy of Neurosciences, held at Lucknow, during November 25 - 28, 2010.
8. **Organizing Secretary** in the 32 Annual Meeting of Academy of Environmental Biology, India, held at Indian Institute of Toxicology Research, Lucknow-India, during September 21-23, 2012.
9. **Organizing Secretary** of the Brain Awareness Week held at Regional Science City, Lucknow on March 28, 2012.
10. **Organizing Secretary:** One day National workshop of GLP held at CSIR-Indian Institute of Toxicology Research, Lucknow-India, on December 4, 2012
11. **Jt. Organizing Secretary** in the 32 Annual Meeting of Society of Toxicology, India and International Symposium on New Paradigms in Toxicology held at CSIR-Indian Institute of Toxicology Research, Lucknow-India, during December 5-7, 2012.
12. **Organizing Secretary** in the National Symposium on "Recent Progress in Nanomaterial Toxicity/ Biosafety", a satellite symposium of Society of Toxicology, India, held at CSIR-Indian Institute of Toxicology Research, Lucknow-India, on July 25, 2014.
13. **One of the Coordinators** of National Workshop on 'Good Laboratory Practice (GLP) Sensitization for Faculty and Scientists' held at CSIR-Indian Institute of Toxicology Research, Lucknow, on December 7, 2018.

Date: November 21, 2019
Place: Lucknow-India

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