

Dr. Dhananjay Shukla

Assistant Professor

Department of Biotechnology

Guru Ghasidas Vishwavidyalaya (A Central University)

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RESEARCH INTEREST

- Identification of therapeutic targets for cardiopulmonary diseases using *in-vitro* and *in-vivo* approaches.

EDUCATION

- **Doctor of Philosophy (Biotechnology)** **July 2009**
Defence Institute of physiology and Allied Science and JamiaHamdard University, Delhi
- **Masters of Science (Biotechnology)** **June 2003**
AwadheshPratap Singh University, Rewa, Madhya Pradesh
- **Bachelors of Sciences** **June 1999**
AwadheshPratap Singh University, Rewa, Madhya Pradesh

TEACHING EXPERIENCE

- **Assistant Professor** **Dec 2013 – Present**
Department of Biotechnology
Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India
- **Assistant Professor** **June 2012 – June 2013**
Department of Biotechnology
GITAM Institute of Science, GITAM University, Visakhapatnam, AP, India
- **Assistant Professor** **April 2012 – June 2012**
Department of Biotechnology
Dr. D.Y. Patil Biotechnology and Bioinformatics Institute, Tathawade, Pune, India
- **Guest Faculty** **March 2012 - April 2012**
Centre for Biotechnology
AwadheshPratap Singh University, Rewa, MP, India

RESEARCH EXPERIENCE

Postdoctoral Fellow **2010 - 2012**

*Lunderberg-Kienlen Lung Biology and Toxicology Laboratory
Centre for Veterinary Health Sciences, Physiological Sciences Department
Oklahoma State University, OK, USA*

Postdoctoral Fellow **2009 - 2010**

*Laboratory of Cell Signalling
Centre for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad, AP, India*

Senior Research Fellow **2006 - 2009**

*Defence Institute of Physiology and Allied Sciences,
Defence Research and Development Organization (DRDO), Delhi, India*

Junior Research Fellow **2004 - 2006**

*Defence Institute of Physiology and Allied Sciences,
Defence Research and Development Organization (DRDO), Delhi, India*

Master's Project **2003 - 2003**

Bhabha Atomic Research Centre, Trombay, Mumbai, India

RESEARCH GRANTS AND FUNDINGS

- DST Young Scientist project "Role of GPNMB in pathogenesis of bronchopulmonary dysplasia"
Role: Principal Investigator.(Ongoing)
- UGC Major Research proposal "Therapeutic approach for Hutchinson Gilford Progeria Syndrome using antioxidant and mitochondrial biogenesis enhancer". **Role: Principal Investigator.(Awarded)**
- Seed grant proposal entitled "Role of microRNA-150 in the pathogenesis of bronchopulmonary dysplasia" Awarded by research advisory committee, Centre for Veterinary Health Sciences, Oklahoma State University, Oklahoma, USA (2011-2012). **Role: Principal Investigator. (Completed)**

AWARDS

- *Postdoctoral Fellowship* Awarded by Department of Biotechnology for the year 2009 – 2010.
- *Senior Research fellowship* Awarded by University Grant Commission for the year 2006 – 2009.
- *Junior Research Fellowship* Awarded by University Grant Commission for the year 2004 - 2006.
- *Junior Research Fellowship* Awarded by Indian Council of Medical Research for the year 2004.
- *National Eligibility Test (CSIR-NET)* for Lecturership conducted by Council of Scientific and Industrial Research in year 2004.
- *Graduate Aptitude Test in Engineering (GATE)* conducted by Indian Institute of Technology in year 2004.

PROFESSIONAL AFFILIATIONS

Indian Immunological Society
Indian Science Congress

Life Member
Life Member

PUBLICATIONS	h-Index – 14	i-Index - 16	Total Citations: 445
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1. Saurabh S, **Dhananjay S**, Anju B. Expression of monocarboxylate transporter isoforms in rat skeletal muscles under hypoxic preconditioning and endurance training. **High Altitude Medicine and Biology**17; (2016) 32-42. **IF: 1.52** Citations: 1
2. Yogie G, Emily H, Chunling Z, **Shukla D**, Weng T, Lin L. Platelet-derived Wnt antagonist Dickkopf-1 is implicated in ICAM-1/VCAM-1-mediated neutrophilic acute lung inflammation. **Blood**126; (2015) 2220-2229. **IF: 11.84** Citation: 05
3. Singh SK, Naik PK, Vishwakarma NK, Dixit V, Tiwary AK, **Shukla D**. Identification and Ligand-based Virtual screening of 1,4-Dihydropyridine Analogues as Novel Calcium Channel Blockers. **International Journal of Research Studies in Biosciences** 08; (2015) 107-115.
4. Narasaraju T, **Shukla D***,More S, Huang C, Zhang L, Xioa X,and Lin L. Role of miR-150 and glycoprotein non metastatic melanoma protein B in angiogenesis during hyperoxia induced neonatal lung injury. **American Journal of Respiratory Cell and Molecular Biology** 52; (2015)253-261. (*Equal Authorship) **IF: 4.08** Citation: 09
5. Somadri G, **Dhananjay S**, Suman Komjeti, Jothi L, Manorama R, Satish K, Rashna Bhandari. Inositol hexakisphosphate kinase 1 maintains hemostasis in mice by regulating platelet polyphosphate level. **Blood**122; (2013) 1478-1486. **IF: 11.84** Citation:27
6. Mrinalini S, Pauline T, **Dhananjay S**, Rajkumar T, Saurabh S, Anju B. Effect of subchronic hypobaric hypoxia on oxidative stress in rat heart. **Applied Biochemistry and Biotechnology** 169; (2013) 2405-2419. **IF: 1.60**Citation: 15
7. Saurabh S, **Dhananjay S**, Anju B. Augmentation of aerobic respiration and mitochondrial biogenesis in skeletal muscles by hypoxic preconditioning with cobalt chloride. **Toxicology and Applied Pharmacology**264; (2012) 324-334. **IF: 3.84**Citations: 20
8. Yasmin A,**Dhananjay S***, Iti G, Narendra KS, Saurabh S, Vineet KM, Kalpana B. Identification of Haptoglobin and Apolipoprotein A-1 as biomarkers of high altitude pulmonary edema. **Functional and Integrative Genomics**11; (2011) 407-417. (*Equal Authorship) **IF: 2.26** Citations:20
9. **Dhananjay S**, Saurabh S, Jayamurthy P, Kalpana Shrivastava, Shirish Shukla, Mrinalini S, Swatantra KJ, Anju B. Hypoxic preconditioning with cobalt ameliorates hypobaric hypoxia induced pulmonary edema in rat. **European Journal of Pharmacology** 656; (2011) 101-109. **IF:2.73** Citations: 32
10. Pauline T, Anju B, Mrinalini S, **Dhananjay S**, Saurabh S. Preconditioning effect of Cobalt chloride supplementation on hypoxia induced oxidative stress in male albino rats. **Biomedicine and Preventive Nutrition**1; (2011) 84-90. **IF:0** Citations:3

11. Mrinalini S, **Dhananjay S**, Thomas P. Saurabh S, Anju B. Hypoxic preconditioning facilitates acclimatization to hypobaric hypoxia in rat heart. **Journal of Pharmacy and Pharmacology** 62; (2010) 1729-39. IF: **2.36** Citations: **11**
12. Saurabh S, **Dhananjay S**, Shashank S, Yasmin AK, Mrinalini S, Anju B, Sairam M, Swatantra KJ. Hypoxic preconditioning by cobalt chloride enhances endurance performance and protects skeletal muscles from exercise induced oxidative damage in rats. **Acta Physiologica** 200; (2010) 249-263. IF: **4.06** Citations: **35**
13. Himadri P, Sarda SKS, Chitaranjan M, **Dhananjay S**. Role of oxidative stress and inflammation in hypoxia induced cerebral edema: a molecular approach. **High Altitude Medicine and Biology** 11; (2010) 231-244. IF: **1.52** Citations: **26**
14. **Dhananjay S**, Saurabh S, Jayamurthy P, Sairam M, Mrinalini S, Swatantra KJ, Anju B, Ilavazhagan G. Hypoxic preconditioning with cobalt attenuates hypobaric hypoxia induced oxidative damage in rat lung. **High Altitude Medicine and Biology** 10; (2009) 57-69. IF: **1.52** Citations: **31**
15. Nadeem K, **Dhananjay S**, Anju B, Sairam M, Ilavazhagan G. Immunogenicity and protective efficacy of GroEL (hsp 60) of *Streptococcus pneumoniae* against lethal infection in mice. **FEMS Immunology and Medical Microbiology** 56; (2009) 56-62. IF: **2.44** Citations: **30**
16. Kalpana S, **Dhananjay S**, Anju B, Lily G, Sairam M. Cobalt chloride attenuates hypobaric hypoxia induced vascular leakage in rat brain: Molecular mechanism of action of cobalt chloride. **Toxicology and Applied Pharmacology** 231; (2008) 354-363. IF: **3.84** Citations: **31**
17. Kalpana S, **Dhananjay S**, Anju B, Ilavazhagan G, Sairam M, and Banerjee PK; Neuroprotective effect of cobalt chloride on hypobaric hypoxia induced oxidative stress. **Neurochemistry International** 52; (2008) 368-375. IF: **2.65** Citations: **45**
18. Jayamurthy P, Geetha S, **Dhananjay S**, Himani J, Harinath K, Rajesh K, Sawhney RC. Modulatory effects of seabuckthorn (*Hippophae rhamnoides* L) in hypobaric hypoxia induced cerebral vascular injury. **Brain Research Bulletin** 77; (2008) 246-252. IF: **2.93** Citations: **38**
19. Jayamurthy P, Geetha S, **Dhananjay S**, Harinath K, Ratan K, Sawhney RC, Arumughan C. Modulation of hypoxia induced pulmonary vascular leakage in rats by Seabuckthorn (*Hippophae rhamnoides* L.). **Evidence Based Complementary and Alternative Medicine** 8; (2009) 1-13. IF: **1.72** Citations: **19**
20. Nadeem K, Anju B, **Dhananjay S**, Piyush P, Sarada SKS, Sairam M, Pratul KB. Immunogenicity and protective efficacy of Dnaj of *Streptococcus pneumoniae* in mice. **Vaccine** 24; (2006) 6225-6231. IF: **3.49** Citations: **34**
21. Badri NP, Sarma HD, **Dhananjay S** and Kaushal PM. Low dose radiation induced modification of ROS and apoptosis in thymocytes of whole body irradiated mice. **International Journal of Low Radiation** 2; (2006) 111-118. IF: **0** Citations: **13**

ABSTRACT PRESENTATIONS

- **Dhananjay S**, Kalpana S, Saurabh S, Anju B, Sairam M, Ilavazhagan G, Banerjee PK. Administration of cobalt chloride prevents high altitude pulmonary damage in rats. 4th congress of Federation of Indian Physiological Societies (FIPS) Jan 11-13 2007, Delhi, India.
- Jayamurthy P, **Dhananjay S**, Geetha S, Ratan K, Sawhney RC. Acute hypoxia induced VEGF causes vascular permeability in rats. Indian Journal of Clinical Biochemistry. 22; 2007, 443 (Suppl).

PLATFORM/POSTER PRESENTATIONS

1. National conference on “Frontiers in Research and Development on Agriculture, Biomedical, Chemical and Pharmaceutical Sciences” Mewar University, Rajasthan, March 4, 2016. **Invited Lecture**
2. National Seminar on “*Innovation and Research in Science, Management and Technology*” (IRSMT 2015) Department of Microbiology and Bioinformatics, Bilaspur University, Bilaspur (CG), March 29-30, 2015. **Chaired (Technical Session)**.
3. National Seminar on “*Innovation and Research in Science, Management and Technology*” (IRSMT 2015) Department of Microbiology and Bioinformatics, Bilaspur University, Bilaspur (CG), March 29-30, 2015. **Poster presentation**.
Title: Effect of hypoxic preconditioning on gene expression profiling in hypobaric hypoxia Induced Pulmonary oedema.
4. National Seminar on “*Innovation and Research in Science, Management and Technology*” (IRSMT 2015) Department of Microbiology and Bioinformatics, Bilaspur University, Bilaspur (CG), March 29-30, 2015. **Poster presentation**.
Title: Identification and ligand based virtual screening of..... novel calcium channel blocker.
5. “8th National Conference on Biodiversity Conservation, Biotechnology and Environmental Management and Research” Department of Biotechnology and Botany, Govt. New Science College, Rewa, MP, March 16-17, 2013. **Invited Lecture**.
6. “XXXIII All India Cell Biology Conference”, School of Life Sciences, University of Hyderabad, India, December 10-13, 2009.
7. “2nd Indian Peptide Symposium”, National Institute of Immunology, New Delhi, India, February 26-27, 2009.
8. *International symposium on “Novel strategies for targeted prevention and treatment of cancer”*, School of Life Sciences, Jawaharlal Nehru University, New Delhi, India, December 19-20, 2008.
9. “4th Congress of Federation of Indian Physiological Societies”, Defence Institute of Physiology and Allied Sciences (DIPAS), Delhi, India, January 11-13, 2007. **Poster presentation**.
10. “33rd annual conference of Indian Immunological Society (IMMCON)”, Department of Biochemistry, All India Institute of Medical Sciences, New Delhi, India, January 28-31, 2007.
11. *International Conference on “Cardiopulmonary regulation in health and disease: molecular and systemic integration”*, Vallabhshai Patel Chest Institute, University of Delhi, India, February 22-24, 2007. **Platform presentation**.
12. “34th Annual Conference of Association of Clinical Biochemists of India (ACBICON)”, New Delhi, India December 17-20, 2007. **Poster Presentation**.
13. “51st Annual conference of the Association of Physiologists and Pharmacologists of India (APPICON 2005)”, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondichery, India, December 12-15, 2005. **Platform presentation**.