

ABHISHEK GUPTA

BSc Biological Chemistry

MSc Biochemistry

PGD Bioinformatics

PhD Biomedical Sciences

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SUMMARY:

- Scientist with 17+ years research experience including 8+ years Post PhD on uncounted projects with diversified roles across the organizational hierarchy.
- Implementing/ enhancing biochemical, molecular, toxicology, cellular based tools & methodologies with BSL2 lab experience.
- Excellent organizational, analytical and technical skills to execute effectively on complex projects.
- **ORCID ID:** <https://orcid.org/0000-0002-4690-0843>
- <https://www.researchgate.net/profile/Abhishek-Gupta-66>

RESEARCH EXPERIENCE:

- GUIDEPOINT L.L.C.** **New York, USA**
Global Scientific Advisor Sep 2020 – present
 Scientific research advises on pharmaceutical drug development in clinical and preclinical research.
- PATANJALI RESEARCH INSTITUTE** **Haridwar, INDIA**
Principal Scientist- Preclinical Biology, Drug Discovery and Development Nov 2019 – Aug 2020
Head- Biology (In-vitro & In-vivo) Mar 2018 – Nov 2019
 Efficacy and mechanism of action of the Ayurveda herbal formulation consisting of medicinal herbs.
 Prepared herbal extracts for cellular, and molecular assays in eliminating acute and chronic human diseases.
 In-vitro biochemical, cellular and molecular based profiling of the herbal formulations using mammalian cell lines and low, medium and high-throughput assays for testing cytotoxicity, pharmacotherapeutic actions, cellular physiological and metabolic transformations using enzymatic activity, inflammatory mediators' analysis, oxidative stress, transcriptional (mRNA) and translational (protein) analysis.
 In-vivo testing of the herbal formulation in animal models that includes rodents and mice.
- IRCM, UNIVERSITY OF MONTREAL** **Montreal, CANADA**
Research Associate, Biochemical Neuroendocrinology Aug 2017 – Nov 2017
 Impact of PCSK9 loss/inhibition on lipid and/or glucose/insulin metabolism in different mouse models. Also, unravel the mechanisms and understanding the consequences of the absence of PCSK9.
- UNIVERSITY OF GOTHENBURG** **Göteborg, SWEDEN**
Postdoctoral Fellow Associate, Sahlgrenska University Hospital Oct 2015 – Jul 2017
 Effect of proprotein convertase subtilisin/kexin type 9 (PCSK9) in post myocardial infarction (MI) in the heart.
 Lipid accumulation, protein and gene expression in transgenic and cardiac specific knock-out mice models.
 Genotypic and phenotypic characterization and genetic evaluation of animal model.
- UNIVERSITY OF ALBERTA** **Edmonton, CANADA**
Postdoctoral Fellow, Department of Pediatrics Sep 2014 – Sep 2015
 Role of obesity on cardiac fatty acid oxidation in the failing heart and measured cardiac function and cardiac energy metabolism and the control of cardiac energy metabolism in a mouse model of heart failure and obesity.

- ✚ Lowering body weight effects systolic and diastolic dysfunction by developing a model of obesity and heart failure in mice via transverse aortic constriction (TAC).

VI. IUCPQ, UNIVERSITE LAVAL

Quebec, CANADA

Postdoctoral Fellow, Department of Endocrinology

Jan 2012 – Mar 2014

Exchange Doctoral Student

Nov 2010 – Apr 2011

- ✚ Hormonal and mechanistic evaluation of increasing risk of diabetes and cardiovascular disease in Caucasian women and identified better predictive factors as well as targets for intervention to induce diabetes and other metabolic disorders i.e. a wide range of markers associated with lipid and lipoproteins, adipose tissue derived adipokine, and tissue distribution marker (visceral vs. subcutaneous), to evaluate increased disease susceptibility.
- ✚ Demonstrated the pre-operative levels of orexin, an adipokine hormone, that provides the key information on targeting and identifying improvement of post-operative lipid parameters in Post-bariatric surgery patients.
- ✚ Differential adipose tissue (VAT & SAT) expression of genes involved between adipokine and immune interactions, thus, demonstrating obesity specific and tissue specific alterations in obese women population those undergoing bariatric surgery.

VII. KING GEORGE'S MEDICAL UNIVERSITY

Lucknow, INDIA

PhD Scholar, Department of Physiology

Oct 2006 – Dec 2011

Senior Research Fellow

Jun 2006 – Oct 2009

Research Assistant

May 2005 – May 2006

- ✚ Effect of Interleukin-6 gene polymorphism on endocrinological profile in Polycystic ovary syndrome women.
- ✚ Interleukin-6 gene polymorphism effect on metabolic risk factors in Indian asymptomatic adult women.
- ✚ Impact of adipokine polymorphism on risk factors for developing metabolic syndrome in Indian adult women.

VIII. CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH

Lucknow, INDIA

Project Assistant, Inhalation/Petroleum Toxicology/Immunobiology

Dec 2001 – Aug 2004

- ✚ Effect of toxicity exposure of alcohol blended gasoline in animal model and examined biochemical and toxicological parameters in various tissues (liver, lung, kidney, brain).
- ✚ Toxicological evaluation of gasoline effect on enzymatic studies in animal model.
- ✚ Fly ash inhalation exposure effect on the biochemical and histomorphological changes in rat lungs.

EDUCATION:

- I. **King George's Medical University (KGMU)** **Lucknow, INDIA**
Doctor of Philosophy (Ph.D.), Biomedical Sciences Oct 2006 – Dec 2011
- II. **Chhatrapati Sahu Ji Maharaja University (CSJM)** **Kanpur, INDIA**
Postgraduate Diploma, Bioinformatics Aug 2004- Jul 2005
- III. **Chhatrapati Sahu Ji Maharaja University (CSJM)** **Kanpur, INDIA**
Masters in Science (M.Sc.), Biochemistry Jul 1999-Jul 2001
- IV. **Chhatrapati Sahu Ji Maharaja University (CSJM)** **Kanpur (UP), INDIA**
Bachelor in Science (B.Sc.), Biological Chemistry Jul 1996- Jul 1999

SKILLS (LABORATORY/OTHER ASSIGNMENTS):

LABORATORY TECHNIQUES		
Biochemical	&	Adipokine, Cytokine, Albumin ELISA, Lipid profile assay, Urea/Uric Acid assay, BCA protein assay, Bradford assay, growth factor assay, Western Blot,
Immunological assays		

	collagen assay, LDH assay, Immunoglobulin assay (IgG, IgM, IgA), RIA assay, IRMA assay, Immuno-precipitation, BALF estimation, enzymatic assay, C-Reactive Protein
Cell culture & Cell isolation	Cultured rat/mouse/human hepatocytes, cardiomyocytes etc including daily maintenance, cryopreservation, passage, characterization, and media preparation, Cells counting, Cell based assays (cytotoxicity/viability, Presto Blue/Alamar viability, oxidative stress, Mitochondrial Membrane Potential, NBT, Catalase, SOD)
Animal handling & Surgery	Rat/mouse, heart, liver, kidney, lung, pancreas, muscles, intestine etc
Adipose tissue distribution	Visceral/ Subcutaneous adipose tissue
Molecular biology	Gel electrophoresis (Agarose, SDS-PAGE), DNA & RNA isolation (Blood & Tissue), PCR, cDNA preparation, RT-qPCR
Genetics	Polymorphism, gene validation and identification
Toxicology	Acute, Subacute and Chronic toxicity, Inhalation (Whole body & Nose only), skin exposure
Histopathology	Section cutting, alcohol precipitation, Tissue staining
Microscopy	Inverted, bright field, IF-microscopy (immunofluorescence staining)
Other lab skills	Bio-Safety Level 2, Good Clinical Practice (GCP), SOPs
OTHER ASSIGNMENTS	
Data analysis software	GraphPad Prism, Instat, STATA, Image J, Microsoft office (Word, Excel, and PowerPoint)
Languages	English: professional proficiency. Hindi: native. German: Beginner. French: Beginner
Awards/Honors	20+ Academic/Scientific/Fellowships/Scholarships
Journal Reviewer	15+ journals
Professional membership	20+ International/National membership
Brand Ambassador	Bentham Science (India) Publishers
Leadership	Department, Team, Group, Project
Grant & Manuscript	Documentation, Writing, Submission

PUBLICATIONS (>25 articles):

1. Audah KA, Musa DA, Adebayo D, Ahmed SM, Bhatia D, Diaz A, **Gupta A**, Ichchaporia P, Lai A, McGrew L, Otusanya M, Nissankararao S, Parrish E, Plante J, Rabbit A, Sherman D, Sherman R, Singh S, Varmaghani S, White CC, Wijegoonawardana N, Xu R, Yahya H, Yalagala PCR, Youssef O, Thatcher A, Perry G, Nallaseth FS. Multi-dimensional factors driving the pandemic and how their impact decides any return to the pre- COVID-19 world! *Acta Scientific Microbiology*. Feb 2021 (**In press**).
2. Balkrishna A, Sakat SS, Ranjan R, Joshi K, Shukla S, Joshi K, Verma S, **Gupta A**, Bhattacharya K, Varshney A. Polyherbal Medicine Divya Sarva-Kalp-Kwath Ameliorates Persistent Carbon Tetrachloride-Induced Biochemical and pathological Liver Impairments in Wistar Rats and in HepG2 cells. *Front Pharmacol*. 2020; 11: 288. doi: 10.3389/fphar.2020.00288. PMID: 32269524.
3. Balkrishna A, Nain P, Chauhan A, Sharma N, **Gupta A**, Ranjan R, Varshney A. Super Critical Fluid Extracted Fatty Acids from Withania Somnifera Seeds Repair Psoriasis-like Skin Lesions and Attenuate Pro-inflammatory Cytokines (TNF- α and IL-6) Release. *Biomolecules* 2020; 10 (2): 185. doi: 10.3390/biom10020185. PMID: 31991752.
4. Wang W, Zhang L, Battiprolu PK, Fukushima A, Nguyen K, Milner K, **Gupta A**, Altamimi T, Byrne N, Mori J, Alrob OA, Wagg C, Fillmore N, Wang SH, Liu D, Fu A, Lu J, Chaves M, Motani A, Ussher J, Reagan J, Dyck JRB, Lopaschuk GD. Malonyl CoA Decarboxylase Inhibition Improves Cardiac Function Post Myocardial Infarction. *JACC: Basic to Translational Sciences*. 2019; 4(3): 385-400. PMID: 31312761.

5. Altamimi TR, Thomas PD, Darwesh AM, Fillmore N, Mahmoud MU, Zhang L, **Gupta A**, Al Batran R, Seubert JM, Lopaschuk GD. Cytosolic carnitine acetyltransferase as a source of cytosolic acetyl CoA: a possible mechanism for regulation of cardiac energy metabolism. *Biochem J*. 2018 Mar 9;475(5):959-976. doi: 10.1042/BCJ20170823. PMID: 29438065.
6. **Gupta A**, Rezvani R, Lapointe M, Poursharifi P, Marceau P, Tiwari S, Tchernof A, Cianflone K: Downregulation of complement C3 and C3aR expression in subcutaneous adipose tissue in obese women. *PLoS One*. 2014 Apr 17; 9(4): e95478. doi: 10.1371/journal.pone.0095478. PMID: 24743347.
7. **Gupta A**, Miegueu P, Lapointe M, Poirier P, Martin J, Bastien M, Tiwari S, Cianflone K: Acute post-bariatric surgery increase in orexin levels associates with preferential lipid profile improvement. *PLoS One*. 2014 Jan 6; 9(1): e84803. doi: 10.1371/journal.pone.0084803. PMID: 24400115.
8. Roy C, **Gupta A**, Fisette A, Lapointe M, Poursharifi P, Richard D, Lu H, Lu B, Gerard N, Gerard C, Cianflone K: C5a receptor deficiency alters energy utilization and fat storage. *PLoS One*. 2013 May 7; 8(5): e62531. doi: 10.1371/journal.pone.0062531. PMID: 23667486
9. Gauvreau D, **Gupta A**, Fisette A, Tom FQ, Cianflone K: Deficiency of C5L2 increases macrophage infiltration and alters adipose tissue function in mice. *PLoS One*. 2013 Apr 22; 8(4): e60795. doi: 10.1371/journal.pone.0060795. PMID: 23630572
10. **Gupta A**, Gupta V, Singh AK, Tiwari S, Agrawal S, Natu SM, Agrawal CG, Negi MP, Pant AB: Interleukin-6 G-174C gene polymorphism and serum resistin levels in North Indian women: potential risk of metabolic syndrome. *Hum Exp Toxicol*. 2011 Oct; 30(10):1445-53. doi: 10.1177/09603271110393763. Epub 2010 Dec 22. PMID: 21177727

SHORT ARTICLES (>50 articles):

1. Acharya Balakrishna, Yashika Rustagi, **Abhishek Gupta**, Kunal Bhattacharya, Anurag Varshney. Role of Herbo-Metal Bhasma Yogendra Ras in Ameliorating Cardiac Hypertrophy. *Int J Yoga* 2019; 12, Suppl S1: 1-28. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6752054>
2. Acharya Balakrishna, Yashika Rustagi, **Abhishek Gupta**, Kunal Bhattacharya, Anurag Varshney. Cardioprotective Effect of Ayurvedic Herbal Formulations in Isoproterenol-Induced Hypertrophy in H9C2 Cardiomyocytes. *Int J Yoga* 2019; 12, Suppl S1: 1-28. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6752054>
3. Qutuba G Karwi, Liyan Zhang, **Abhishek Gupta**, Arata Fukushima, Vaibhav Patel, Osama Abo Alrob, Tariq Altamimi, Cory S. Wagg, Raj S. Padwal, David E. Johnstone, Arya M. Sharma, Gavin Y. Oudit and Gary D Lopaschuk. Caloric restriction limits fatty acid oxidation and improves cardiac function in heart failure associated with obesity. *Journal of Molecular and Cellular Cardiology* 2018. 124: 99. doi: 10.1016/j.yjmcc.2018.07.053
4. Altamimi TR, Fukushima A, Zhang L, Gao S, **Gupta A**, Lopaschuk GD. Adropin enhancement of cardiac insulin sensitivity and inhibition of fatty acid oxidation is associated with improvement of cardiac function and efficiency in hearts from fasted mice. *Circulation Research* 2016; 119 (Suppl 1): A282.
5. **Gupta A**, Tiwari S, Singh AK, Agrawal S, Paul BN, Pandey CM. Evaluation of Homo and Heterozygous frequencies of Resistin C-420G Gene Polymorphism in North Indian adult women having metabolic syndrome. *Endocr. Pract.* Jan-Feb 2014; 20 (1): 41-42A.
6. Gauvreau D, **Gupta A**, Tom FQ, Cianflone K. Deficiency of the Acylation Stimulating Protein Receptor; C5L2, Increases Macrophage Infiltration into Adipose Tissue of Mice. *Obesity*. Nov 2011; 19 (Suppl 1): S66.

Publications link (<https://scholar.google.co.in/citations?hl=en&user=xxFWuZUAAAJ>)

JOURNAL REVIEWER:

- 3 Biotech # Metabolic syndrome and related disorders # Journal of Nutrition, Health and Aging # Infection: Genetics and Evolution # In Silico Pharmacology # International Journal of Bioinformatics Research and Applications # Indian Journal of Clinical Biochemistry # Basic Research in Cardiology #

Obesity # European Journal of Heart failure # The Journal of Prevention of Alzheimer's Disease # Trends in Biosciences Journal # Advances in Life Sciences Journal & Trends in Biotechnology # Biological Sciences Journal # Trends in Bioscience Journal

PROFESSIONAL MEMBERSHIP/AFFILIATIONS:

- ✚ Guest Editor & Reviewer- AEIC, China; <https://www.ais.cn/peerReview/index>
- ✚ Editorial Board Member- European Journal of Clinical and Biomedical Sciences (Journal, Science Publishing Groups); <http://www.ejcb.org/editorialboard>
- ✚ Editorial Board Member- Biochemistry and Molecular Biology (Journal, Science Publishing Groups) <http://www.sciencepublishinggroup.com/journal/editorialboard?journalid=244>
- ✚ Guest Editor (Invitation, 2020): Frontiers in Pharmacology (Journal, Frontiers Groups)
- ✚ Brand Ambassador India-Bentham Science Publishers
- ✚ Board Member, Life Science Institute of New Jersey (LSINJ), New York, USA <https://www.lifesciencesinstitutenj.com/board-members>
- ✚ Member Secretary, Institutional Biosafety Committee (IBSC), India
- ✚ Member, European Atherosclerosis Society (EAS), Sweden
- ✚ Member, American Heart Association (AHA), USA
- ✚ Member, American Society of Metabolic and Bariatric Surgery (ASMBS), USA
- ✚ Fellow of the Obesity Society (TOS), USA
- ✚ Member, Canadian Obesity Network (CON), Canada
- ✚ Fellow of Quebec Society of Lipidology, Nutrition and Metabolism (SQLNM), Quebec, Canada
- ✚ Fellow of Primary Care Diabetes Society (PCDS), London, UK.

AWARDS (SCIENTIFIC/ACADEMIC):

- ✚ Research Excellence Award, Institute of Scholars (InSc), Bangalore, India, 2020
- ✚ Research Associate Fellowship/Staff Scientist, University of Montreal, Montreal, QC, Canada, 2017
- ✚ Senior Postdoc Researcher, Icahn School of Medicine, Mount Sinai, New York, USA (Accepted) 2017
- ✚ Postdoctoral Fellow Associate, University of Gothenburg, Gothenburg, Sweden, 2015
- ✚ CIHR Postdoctoral Research Scholarship, Edmonton, Canada, 2014
- ✚ Poster of Distinction Award for best research work, ASMBS@obesity 2013, Atlanta, Georgia, USA, 2013
- ✚ TOS Abstract reviewer, ASMBS@obesity 2013, Atlanta, Georgia, USA, 2013
- ✚ CIHR-HOPE Postdoctoral Research Fellowship, Quebec, Canada, 2012
- ✚ Common Wealth Indo-Canadian Exchange doctoral Studentship, Canada, 2010
- ✚ AV Tilak Parvati Devi Prize for best paper in Endocrinology, APPICON INDIA, 2008
- ✚ Best Postgraduate Research Paper Award, APPICON INDIA, 2006
- ✚ PhD Scholar, KGMU, Lucknow, India, 2006
- ✚ Senior Research fellowship, KGMU-ICMR, New Delhi, India, 2006
- ✚ Research Assistant, KGMU, Lucknow, India, 2005
- ✚ Project Assistant, IITR, Lucknow, India, 2001
- ✚ BL Mehta Memorial Award, Kanpur, India, 1998

PERSONAL:

- **Nationality** : Indian
- **Date of Birth** : 14/09/1979
- **R&D Experience** : India, Canada, Sweden

~ REFERENCES AVAILABLE UPON REQUEST ~