




# Bhaskaracharya College of Applied Sciences (University of Delhi)

Sector II, Phase I, Dwarka, New Delhi – 110075

## FACULTY PROFILE

Title	Dr	First Name	SHIVANI	Last Name	VARMANI	Photograph
Designation	ASSOCIATE PROFESSOR					
Department	BIOMEDICAL SCIENCE					
Address (Campus)	<b>Department of Biomedical Science Bhaskaracharya College of Applied Sciences University of Delhi Sector-2, Dwarka New Delhi-110075</b>					
Contact Details	011-25087597, 011-25081015					
Fax (Campus)						
Email Id	shivani.varmani@bcas.du.ac.in					
Educational Qualification	Subject	Institution				
Ph. D. (2002)	Biochemistry	All India Institute of Medical Sciences (AIIMS), New Delhi				
M. Sc. (1995-97)	Biotechnology	All India Institute of Medical Sciences (AIIMS), New Delhi				
B. Sc. (1992-95)	Biochemistry	University of Delhi				
<b>Research Interests/ Specialization</b>						
<p>My research studies are based on molecular diagnostics and understanding drug resistance at the molecular level. Primarily students are working towards their Ph. D. thesis on Pathogen detection using molecular tools and developing kits which are highly sensitive, specific and cost-effective. Antimicrobial surveillance studies are also being carried out on <i>Neisseria gonorrhoeae</i> and pathogenic <i>Escherichia coli</i>.DIYET_</p>						

## Teaching Interest

My teaching interest includes Medical Biochemistry, Medical Biotechnology and Immunology.

## Achievements/Research / Patents

- **INDIA – Patent Application No. 471/DEL/2013**, Dated – February 19, 2013 entitled “**NUTRITIONAL COMPOSITIONS AND METHODS FOR MANUFACTURING THE SAME**” granted
- **INDIA – Patent Application No. 473/DEL/2013**, Dated – February 19, 2013 entitled “**COATING COMPOSITIONS AND METHODS FOR PREPARATION THERE OF**” granted
- Financial assistance from **Volkswagen Foundation, Germany** (July 1998- Dec1998)
- **Lady Tata Memorial Scholarship** (Junior Science) (Jan 1999-Dec 1999)
- **Jawahar Lal Nehru Memorial Scholarship** for Ph.D. studies in India (Jan 2000-Dec 2001)
- **Institute Scholarship** from All India Institute of Medical Sciences, New Delhi (Jan 2002-June2002)
- Senior Research Fellowship funded by **Council for Scientific and Industrial Research, India** (August 2002 –July 2005)
- **CSIR-NET** and **GATE** qualified
- Financial assistance during M. Biotechnology from **Department of Bio-Technology, New Delhi**
- **Best Poster Award** at 9th Asian-Pacific Congress of Clinical Biochemistry & 28th Annual Conference of Association of Clinical Biochemists of India, New Delhi in March 2002
- **Prof. Sita Devi Award for Best Paper** at 29th Annual Conference of Association of Clinical Biochemists of India in February 2003
- **Registration Bursary award for best abstracts**: International federation of clinical chemistry and laboratory medicine (IFCC) Registration Bursary award for best abstracts to attend the 10th Asian Pacific Congress of Clinical Biochemistry to be held in conjunction with the AACB's 42nd Annual Scientific Conference at Perth, Australia from 18-23 September 2004
- **Full travel grant from CSIR** to attend 10th Asian Pacific Congress of Clinical Biochemistry held in conjunction with the AACB's 42nd Annual Scientific Conference at Perth, Australia from 18-23 September 2004
- **Scholarship and Registration waiver** to attend 11th Asian Pacific Congress of Clinical Biochemistry, Beijing, China Centre for Cooperation in Science and Technology among Developing Societies (CCSTDS) INSA-CSIR-DAE/BRNS-DOS/ISRO- MICROSOFT RESEARCH –GMDC CCSTDS Travel Fellowship for Indian Researchers in October 2007
- **Rashtriya Gaurav Award**: Recipient of the prestigious Rashtriya Gaurav Award –Certificate of Excellence for Meritorious Services, Outstanding Performance and Remarkable role on 10th Oct, 2009 given by India International Friendship Society.
- **Convener for the ‘National Symposium on Infectious Diseases: Basic and Applied Research’** on 3rd February, 2010, held at Bhaskaracharya College of Applied Sciences, University Of Delhi. The symposium was generously sponsored by Department of Biotechnology (DBT), Department of Science and Technology (DST), Council of Scientific and Industrial Research (CSIR) and University grant Commission (UGC). A Souvenir was compiled and released on the occasion both in the electronic and hard copy form. The symposium instigated wide interest within the students.
- **Best Poster (Second Prize)** at 4th International conference on updating Food Technology: A challenge towards Public Health Nutrition on May 7 – 8, 2014.
- **Best Display Award for the DU Innovation Project BCAS 205** entitled “To prepare edible packaged low cost healthy snack from fruit and vegetable waste and its effect on healthy respondents” at University of Delhi Academic and Cultural Festival “Antardhwani-2015”, February 20-22, 2015
- **Award from Gandhi Bhawan, Delhi University**: Our active volunteers along with the convener attended an event at Gandhi Bhawan, Delhi University in order to celebrate 150 years of Gandhi Jayanti. The college along with the convener was awarded for spreading the ideas of Gandhiji amongst students in October 2019.

- **Award from Gandhi Bhawan, Delhi University:** Gandhian Study Centre of our college was felicitated for propagating Gandhian values among the students under the categories of outstanding performance by the Convener of the Centre by Gandhi Bhawan, University of Delhi in October 2020

## Publications

Year of Publication	Title	Journal	Co-author/s
2023	A comprehensive review of microbial contamination in the indoor environment: sources, sampling, health risks, and mitigation strategies	Frontiers in Public Health November 2023 Link: <a href="#">Click here</a>	Hitikk Chawla, Purnima Anand, Kritika Garg , Neeru Bhagat , Shivani G. Varmani, Tanu Bansal, Andrew J. McBain and Ruchi Gulati Marwah
2022	Upsurge in biomedical waste due to COVID-19 in India: A statistical correlation, challenges and recommendations	Frontiers in Environmental Science December 2022 Volume 10 Link: <a href="#">Click here</a>	Khosla R, Jha A, Dua S, <b>Varmani SG</b> , Rajput N and Pani B
2021	Lifestyle, Immunity and COVID-19- An Amalgamation of Modern Science and Ayurvedic Perspective	Journal of Clinical and Diagnostic Research October 2021 Volume 15 Issue 10 Link: <a href="#">Click Here</a>	Katoch, M., Prabha, S., Vaid, Y. M., Mishra, C., Dash, S., Sharma, D., and <b>Varmani, S.G.</b>
2021	COVID-19 and Cardiovascular Disease: Clinical Implications of Biochemical Pathways	Journal of the Practice of Cardiovascular Sciences August 2021 Volume 7 Issue 2 Link: <a href="#">Click Here</a>	<b>Varmani, S. G.</b> , Chowhan, R. K., Sharma, I., and Narang, R.
2015	E-Waste Management and Handling in Indian Context: Strategies and Urgent Measures	Indian Journal of Research-PARIPEX June 2015 Volume 4(6): p 89-91 Link: <a href="#">Click here</a>	Rajput N, Sharma M and <b>Varmani S.</b>
2014	Diabetes mellitus in beta thalassemia major-pathogenesis and management strategies	International Journal of Food and Nutrition sciences. 2014 Apr-Jun. Vol 3 (3): p 127-131. Link: <a href="#">Click Here</a>	<b>Varmani S</b> , Mehta K, Garg M and Sadhu S
2014	Health benefits of Moringa oleifera: a miracle tree	International Journal of Food and Nutrition sciences. 2014 Apr-Jun. Vol 3 (3): p 111-117. Link: <a href="#">Click Here</a>	<b>Varmani S</b> and Garg M

2014	Polymers in Energy harvesting	International Journal of Engineering Science Invention.  2014 Apr.  Vol3 (4): p1-5  Link: <a href="#">Click Here</a>	Sadhu S, Chakraborty S, Garg M and <b>Varmani S</b>
2014	Drying kinetics of thin layer pea pods using tray drying	International Journal of Food and Nutrition sciences.  2014 Apr-Jun.  Vol 3 (3): p 61-66.  Link: <a href="#">Click Here</a>	Garg M, Sharma S, <b>Varmani S</b> , Sadhu S
2014	Nutritional health status of North Indian adults	International Journal of Food and Nutrition Sciences.  2014 Apr-Jun.  Vol 3 (3): p 118-121.  Link: <a href="#">Click Here</a>	Garg M and <b>Varmani S</b>
2005	APOA1-75G to A substitution associated with severe forms of CAD, lower levels of HDL and apoA-I among Northern Indians	Disease Markers.  2005.  Vol 21(4): p 169-174.  Link: <a href="#">Click Here</a>	<b>S. Chhabra</b> , R. Narang, R. Lakshmy and N. Das
2004	Apolipoprotein C3 SstI in the risk assessment of CAD	Molecular and Cellular Biochemistry.  April 2004.  Vol 259 (1-2): p 59-66 Link: <a href="#">Click Here</a>	<b>Chhabra S</b> , Narang R, Krishnan LR, Vasisht S, Agarwal DP, Srivastava LM, Manchanda SC and Das N
2003	Study of apolipoprotein C3 SstI polymorphism in healthy volunteers from Northern India	Indian Journal of Clinical Biochemistry.  2003.  Vol 18(2): p 8-34.  Link: <a href="#">Click Here</a>	<b>S. Chhabra</b> , D.P. Agarwal, S Vasisht, K. Luthra, R. Narang, S.C. Manchanda, L.M. Srivastava and N. Das
2002	Apolipoprotein C3 SstI polymorphism and triglyceride levels in Asian Indians	BMC Genetics.  2002.  Vol 3(9)  Link: <a href="#">Click Here</a>	<b>S Chhabra</b> , R Narang, LR Krishnan, S Vasisht, DP Agarwal, LM Srivastava, SC Manchanda and N Das
2000	Studies on the Apolipoprotein Polymorphisms in North Indian Population	Biochemical Society Transactions (Abstract).  2000.  Vol 28, Part 5 (Abstract)  Link: <a href="#">Click Here</a>	<b>S. Chhabra</b> , N. Das, S. Vasisht, K. Luthra, R. Narang, S. C. Manchanda, L. M. Srivastava and D. P. Agarwal
2000	Apolipoprotein E phenotyping and lipid profile in angiographically proven CAD patients and controls from a North-Indian	Biochemical Society Transactions (Abstract).  2000.  Vol 28, Part 5 (Abstract)	K. Luthra, B. Bharghav, S. Vasisht, <b>S. Chhabra</b> , D.P. Agarwal, N. Das, L.M Srivastava.

	Population	Link: <a href="#">Click Here</a>	
2000	Study of apolipoprotein E polymorphism in normal healthy controls from Northern India	Disease Markers. 2000. Vol 16(3-4): 159–161 Link: <a href="#">Click Here</a>	<b>S. Chhabra</b> , D.P. Agarwal, S. Vasisht, K. Luthra, R. Narang, S.C. Manchanda, L.M. Srivastava and N. Das
1998	LP(a) phenotypes and levels in angiographically proven coronary heart disease patients and controls	Indian Journal of Clinical Biochemistry. January 1998. Vol 13 (1): p 9-12. Link: <a href="#">Click Here</a>	Kalpana Luthra, Suman Vasisht, <b>Shivani Chhabra</b> , K.R. Raju, D.P. Agarwal, S.C. Manchanda and L.M. Srivastava

#### Publications (Full length articles in the proceedings of the conference)

2002	ApolipoproteinA1 – 75G/A and apolipoproteinC3 SstI polymorphisms in the risk assessment of CAD	Proceedings of 9th Asian-Pacific Congress of Clinical Biochemistry & 28th Annual Conference of Association of Clinical Biochemists of India, New Delhi March 2002 Link: <a href="#">Click Here</a>	<b>Chhabra S</b> , Narang R, Krishnan LR, Vasisht S, Agarwal DP, Srivastava L M, Manchanda SC and Das N
2014	Atomic force microscopy for characterization of polymers	ICPAM International Conference in Patna, Bihar 30-31st May 2014	S. Dey Sadhu, Kushagra Mallick, Meenakshi Garg and <b>S. G. Varmani</b>
2014	Biopolymers: A solution to Environmental Hazard	ICPAM International Conference in Patna, Bihar: 30-31st May 2014	S. Dey Sadhu, Rishi Raj, Meenakshi Garg and <b>S. G. Varmani</b>

#### Mutational report published in a journal

2000	Gene symbol Apo A1, Disease: Atherosclerosis associated with coronary artery disease (double vessel disease)	Hum. Gene. Mutations (Section), Hum Genetics 2000 Vol 107: p 204	<b>Chhabra S</b> , Narang R, Manchanda SC, Srivastava LM, Agarwal DP and Das N
------	--	--	--

#### Books Published

2021	Concepts in Environmental Studies	I.K. International Pvt. Ltd. ISBN: 978-93-89969-15-3 Link: <a href="#">Click Here</a>	Balaram Pani, Namita Rajput, <b>Shivani G. Varmani</b> and Ritu Khosla
2022	BBCCCL-126: Genetic Engineering and Biotechnology (Practical)	Indira Gandhi National Open University, New Delhi Link: <a href="#">Click Here</a>	<b>Shivani G. Varmani</b> , M. Abdul Kareem

#### Chapter in Books

2021	CHAPTER OF BOOK 'Block-I: Introduction to	Indira Gandhi National Open University, New Delhi	Neera Kapoor, <b>Shivani G Varmani</b>
------	---	---	--

	Immunology': Unit-I: Overview of the Immune System	Link: <a href="#">Click Here</a>	
2021	CHAPTER OF BOOK 'Block-I: Introduction to Immunology': Unit II - Components of Immune System - I	Indira Gandhi National Open University, New Delhi Link: <a href="#">Click Here</a>	Neera Kapoor, <b>Shivani G. Varmani</b>
2021	CHAPTER OF BOOK 'Block-I: Introduction to Immunology': Unit III - Components of Immune System - II	Indira Gandhi National Open University, New Delhi Link: <a href="#">Click Here</a>	Neera Kapoor, <b>Shivani G. Varmani</b>
2021	CHAPTER OF BOOK 'Block-III: Working of the Immune System': Unit-10 - Working of Immune System - II	Indira Gandhi National Open University, New Delhi Link: <a href="#">Click Here</a>	Neera Kapoor, <b>Shivani G. Varmani</b>
2021	CHAPTER OF BOOK BZYEL-142 Immunology: Laboratory': Exercise 1 - Histological Study of Thymus, Spleen and Lymph Nodes Through Slides/Photographs	Indira Gandhi National Open University, New Delhi Link: <a href="#">Click Here</a>	<b>Varmani, Shivani G.</b> Sachdeva, Sarita Singh, Indrakant K. N., Moses Rinchui Kapoor, Neera
2021	CHAPTER OF BOOK 'Block-II: Immunology-II (B-Cell Biology): Unit-5 – Antibody Structure and Function	Indira Gandhi National Open University, New Delhi Link: <a href="#">Click Here</a>	<b>Shivani G. Varmani</b>
2021	CHAPTER OF BOOK 'Block-II: Immunology-II (B-Cell Biology): Unit-7 – Biology B-Lymphocyte	Indira Gandhi National Open University, New Delhi Link: <a href="#">Click Here</a>	<b>Shivani G. Varmani</b>
<b>Project (Minor/Major)</b>			
<ol style="list-style-type: none"> <li><b>1. Co- Investigator for UGC project</b> titled “Effect of religious fasting on weight loss of Indian adults” from August 2012 till 2015. (Total award INR 9 lakhs)</li> <li><b>2. Principal Investigator for Delhi University Innovation project</b> titled “Development of low-cost nutritious bar and its packaging in sustainable nano bio polymer”.(Total award INR 10 lakhs). Project being undertaken along with two other faculty members from Department of Polymers and Food Technology, Bhaskaracharya College of Applied Sciences. There are 10 students in the project from Department of Food Technology, Polymers and Biomedical Sciences who are gaining research expertise and hands-on training through this interdisciplinary project (2012-2013).</li> <li><b>3. Principal Investigator for Delhi University Innovation project</b> titled “Development of edible packaged health snack from fruit and vegetable waste and its effect on healthy respondents” (Total Award INR 5 lakhs). Project was undertaken along with two other faculty members from Departments of Food Technology, and Polymer Sciences, Bhaskaracharya College of Applied Sciences. There were 10 students in the project (2013-14).</li> </ol>			
<b>Any other information</b>			
<ul style="list-style-type: none"> <li>Invited lecture on the role of genetic polymorphism of apolipoproteins in CAD in symposium on molecular aspects of Atherosclerosis and Related Metabolic Disorders on 24th Oct 2005.</li> <li>Co-Supervisor for M.Sc. Dissertation of student from Department of Biochemistry, All India Institute of Medical Sciences (AIIMS), New Delhi</li> </ul>			

