

IQAC Report – Details, Part B
Department of Biochemistry
July 2009 – June 2014

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Ph.D. – Ph.D in Biochemistry – 5 years programme; Two courses in maximum of two semesters to be qualified by eligible students.

PG – M.Sc. in Biochemistry – 2 years programme; 4 semesters

Interdisciplinary - M.Phil. Biotechnology jointly with Departments of Genetics, Microbiology, Plant Molecular Biology and Biotechnology; 1.5 years programme

1.3. Feedback from stakeholders

- a.** The feedback of the faculty on curriculum is sought during the departmental meetings which are held almost every month. This is taken into account while the course revision is undertaken.
- b.** The feedback of the students on curriculum is undertaken during discussions with the students especially during the project presentation by the final year students which are more mature and are ready to give good advice based on their experience to improve the syllabus and teaching methodology. This is taken into consideration during the curriculum revision.
- c.** The alumni who are employed to teach Biochemistry course at undergraduate level in the Delhi University colleges regularly give feedback for improvement/revision of the curriculum.

Feedback is mostly sought manually in face-to-face discussions to help the stakeholders justify their position on issues and probable solutions. The open discussion helps find a better solution to problems and promotes frankness, honesty and the immediate solution to problems. Our curriculum has seen inclusion of new papers or deletion of existing papers based on student feedback. We include specific modules for which the demand is there.

Our course also secures very positive feedback on its strength of academic excellence and is considered one of the best courses in Biochemistry nationwide.

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty – 07

Assistant Professor - (1) Dr. Suneel Kateriya

Associate Professor – (1) Dr. Alo Nag (2) Dr. Suman Kundu

Professors - (1) Dr. Anil K Tyagi (2) Dr. Vijay K Chaudhary (3) Dr. Prahlad C Ghosh (4) Debi P Sarkar

2.5 Faculty participation in conferences and symposia

International Conferences – Attendance and Presentation of Papers

1. International symposium on “Understanding and Managing the Pathogenic Microorganisms”, Institute of Microbial Technology, Chandigarh, 22-24 January 2010 (**Prof. Anil K. Tyagi**).
2. International symposium on Trends in Drug Discovery and Development, Department of Chemistry, University of Delhi, 5th – 8th January 2010 (**Prof. Anil K. Tyagi**).
3. International symposium on Emerging Trends in Biotechnology, Banaras Hindu University, Varanasi, 4th – 6th December 2009 (**Prof. Anil K. Tyagi**).
4. Indo-US Tuberculosis Consultation Meeting, National Institute of Immunology, New Delhi, July 2009 (**Prof. Anil K. Tyagi**).
5. Ranu Surolia and **P.C. Ghosh** (2009). Delivery of monensin using PLGA nanopartcles for the treatment of malaria. Presented at 49th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), held at San Francisco, California, USA. September 12-15, 2009.
6. Nikhil Tyagi and **P.C. Ghosh** (2009). Folate-mediated targeted delivery of ricin entrapped into sterically stabilized liposomes to human epidermoid carcinoma (KB) cells for their selective elimination. Presented at International Symposium on Cancer Chemotherapy and Translation Research, held at JNU, New Delhi, December 21, 2009.
7. Attended International Conference of Advanced Nanomaterials & Nanotechnology as a Chairperson & invited speaker, Dec. 9-11, 2009 at IIT, Guwahati, Assam (**Prof. Debi P. Sarkar**).
8. Attended International Conference on Understanding and Managing Pathogenic Microbes as an Organizer, Jan. 22-24, 2010 at IMTECH (CSIR), Chandigarh (**Prof. Debi P. Sarkar**).
9. Attended Golden Jubilee International Seminar Researches in Zoology—Basic & Applied as an invited speaker, March 17 –19, 2010 at the University of Burdwan, W. Bengal (**Prof. Debi P. Sarkar**).
10. Rahul Gupta, Anuja Krishnan, Santosh K. Verma, Prashant Mani, **Suman Kundu** and Debi P. Sarkar (2009) “Putative 3-D Model of Sendai Virus HN Protein Aids in Deciphering a His Switch that Triggers Membrane Fusion”, 23rd Annual Symposium of the Protein Society, July 25-29, 2009, Boston, MA, USA.

11. Abhijeet Kapoor, Rahul Gupta and **Suman Kundu** (2009) “Insight into Substrate Specificity and Stability of Papain-like Proteases from an *In Silico* Comparative Structural Study”, 7th Georgia Tech - Oak Ridge National Lab International Conference on Bioinformatics, November 12-14, 2009, Atlanta, USA.
12. Attended the conference: Epigenetic Regulation and Genome control. CCMB, Hyderabad 500007, India, December 16-18, 2009 (**Dr. Alo Nag**).
13. International Conference on International Liposome Research Days & Lipids, Liposomes & Membrane Biophysics, held at Vancouver, University of British, Vancouver, Canada, and August 4-8, 2010 (**Prof. P.C. Ghosh**)
14. M.I. Oshtrakh, A.L. Berkovsky, A. Kumar, **S. Kundu**, A.V. Vinogradov, T.S. Konstantinova, V.A. Semionkin (2010) “⁵⁷Fe Quadrupole Splitting and Isomer Shift in Various Oxyhemoglobins: Study Using Mössbauer Spectroscopy”, The 3rd Joint International Conference on Hyperfine Interactions and International Symposium on Nuclear Quadrupole Interactions, Geneva, Switzerland, September 13-17, 2010.
15. M.I. Oshtrakh, A.L. Berkovsky, A. Kumar, **S. Kundu**, A. V. Vinogradov, T. S. Konstantinova, V. A. Semionkin (2010) “Heme iron states in various oxyhemoglobins studied using Mossbauer spectroscopy with a high velocity resolution” 7th International Biometals Symposium, Tucson, Arizona, USA, July 25-30, 2010.
16. M.I. Oshtrakh, A.L. Berkovsky, A. Kumar, **S. Kundu**, A. V. Vinogradov, T. S. Konstantinova, V. A. Semionkin (2010) “Relationship of the heme iron stereochemistry and Mossbauer hyperfine parameters in different oxyhemoglobins”, The 5th Central European Conference – Chemistry towards Biology, Primosten, Croatia, September 8-11, 2010.
17. Delivered keynote address at the Indo-Canada symposium on “Redox Status and Control in TB: From Basic Research to Drug Development”, January 30th to February 1st, 2011, Hyderabad (**Prof. Anil K. Tyagi**).
18. Rama-Robbins Lecture delivered during the annual meeting of the Indo-US Vaccine Action Programme, New Delhi 17th November 2010 (**Prof. Anil K. Tyagi**).
19. Attended International Conference on Science, Spirituality and Humanity Transcending Discipline Barriers from February 17-19, 2011 on the occasion of Golden Jubilee Celebrations of Shivaji College, University of Delhi (**Prof. Anil K. Tyagi**).
20. International conference on Biotechnology: A global Scenario, held at Department of Biotechnology, Kakatiya University, Warangal, November 2-4, 2010 (**Prof. P.C. Ghosh**)
21. Amit Kumar and **S. Kundu** (2011) “Regulation of ligand binding in classical plant hemoglobins: Structural aspects of heme pocket”, Indo-US Workshop / Symposium on Modern Trends in Macromolecular Structures, Indian Institute of Technology Bombay, Mumbai, India, February 21-24, 2011.
22. Sheetal Uppal and **S. Kundu** (2011) “Contribution of Heme and His117 in the Stability of Unique Cyanobacterium Hemoglobin”, 7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS), Indian Habitat Center, New Delhi, India, January 30 – February 2, 2011.
23. Amit Kumar, Varun Chhabra and **S. Kundu** (2011) “Multiple strategies of ligand binding regulation in hemoglobins: Novel arrangement of Lupin leghemoglobin heme pocket”, 7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS), Indian Habitat Center, New Delhi, India, January 30 – February 2, 2011.
24. Pushpanjali Dasauni, Nripendra Singh, Amit Kumar, **S. Kundu** (2011) “Mass-Spectrometric and Spectroscopic Characterization of Hemoglobin Disorders”, 7th

- Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS), Indian Habitat Center, New Delhi, India, January 30 – February 2, 2011.
25. Abhijeet Kapoor, Manish Shandilya and **S. Kundu** (2011) “Structural Insight of Human Dopamine β -Hydroxylase, a Drug Target for Complex Traits, and Functional Significance of Exonic SNPs”, 7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS), Indian Habitat Center, New Delhi, India, January 30 – February 2, 2011.
 26. International Conference on Frontiers in Carcinogenesis and Cancer Prevention: Scientific Advances and Public Health Initiatives, Dayanand Sagar Institutions, Bangalore, Feb 16-18, 2011 (**Dr. Alo Nag**)
 27. International meeting: Fifth Asia Oceania Conference on Photobiology 2011, Nara, Japan (**Dr. Suneel Kateriya**)
 28. M.I. Oshtrakh, A.L. Berkovsky, Amit Kumar, A.V. Vinogradov, T.S. Konstantinova, V.A. Semionkin, **Suman Kundu** (2011) “Mössbauer spectroscopy of various hemoglobins in relation to their structure and function”, 8th European Biophysics Congress, August 23-27, 2011, Budapest, Hungary.
 29. M.I. Oshtrakh, A.L. Berkovsky, Amit Kumar, A.V. Vinogradov, T.S. Konstantinova, V.A. Semionkin, **Suman Kundu** (2011) “Study of Various Oxyhemoglobins Using Mössbauer Spectroscopy with a High Velocity Resolution”, Seeheim Workshop on Mossbauer Spectroscopy, June 2011, Frankfurt, Germany.
 30. Delivered lecture in Indo-Swedish Conference on “Post Genomic Opportunities in Tuberculosis and Other Mycobacteria Diseases, Unchagaon Fort, Bulandshahr, 29th – 31st January 2012 (**Prof. Anil K. Tyagi**).
 31. Delivered lecture in International Symposium on “Vaccine to Translation”, Suraj Kund, Faridabad, 14th – 17th November 2011 (**Prof. Anil K. Tyagi**)
 32. Attended South Asia Conference on Current Approaches to the Environmental Risk Assessment of Genetically Engineered Crops, held at Hotel Taj Ambassador, New Delhi, May 16-18, 2011 (**Prof. P.C. Ghosh**)
 33. Sanjay Kumar Dey, Varuni Gang and **Suman Kundu** (2011) “Pharmacophore Based Virtual Screening of Human Dopamine- β -Hydroxylase, a Drug Target for Complex Traits, Shows Promise”, International Conference on Omics Meets Disease and IIIrd Annual Meeting of Proteomics Society (India), December 15-18, 2011, Saha Institute of Nuclear Physics, Kolkata, India.
 34. Vaibhav Chand, Rince John, Neha Jaiswal and **Alo Nag** (2011). “Unraveling the Role of hADA3 in HPV mediated Oncogenesis”, International Symposium on Cancer Biology, National Institute of Immunology, New Delhi, India, November 14-16, 2011. **The Poster was selected for an Excellence Award.**
 35. Enna Dogra Gupta, Prahlad C. Ghosh, Manchikatla Venkat Rajam (2012) at 3rd RNAi Research & Therapeutics Conference held at Boston, MA, USA, May 30-31, **2012 (Prof. P.C. Ghosh)**.
 36. **Suman Kundu** and Sheetal Uppal (2012) “Striking Aspects of Stability and Folding of a Cyanobacterial Globin”, XVIIth International Conference on Oxygen Binding and Sensing Proteins, 29th Aug – 1st Sept, **2012**, University of Parma, Parma, Italy.
 37. Mayanka Awasthi, Jyoti Batra and **Suneel Kateriya**, Disulfide Bridge Mediates the Apparent Lipid Specificity and Dimer Stability of Membrane Bound Phospholipase C in *C. reinhardtii*, 15th International Conference on the Cell and Molecular Biology of Chlamydomonas, June 5-10, **2012**, Potsdam, Germany.
 38. Peeyush Ranjan, Mayanka Awasthi, Rudra Shankar, Peter Hegemann and **Suneel Kateriya**, Distribution of Modular Enzymes in Microalgae, 15th

- International Conference on the Cell and Molecular Biology of Chlamydomonas, June 5-10, **2012**, Potsdam, Germany
39. Indu Barwal, Peeyush Ranjan, **Suneel Kateriya** and Subhash C Yadav, Cellular oxido-reductive proteins of Chlamydomonas reinhardtii control the biosynthesis of nanoparticles, 15th International Conference on the Cell and Molecular Biology of Chlamydomonas, June 5-10, **2012**, Potsdam, Germany
 40. Kumar, M.I. Oshtrakh, I.V. Alenkina, A.P. Zakharova, A.L. Berkovsky, V.A. Semionkin and **Suman Kundu** (2013) "Comparative analysis of the heme iron electronic structure and stereochemistry in monomeric soybean leghemoglobin and tetrameric rabbit hemoglobin using Mössbauer spectroscopy with a high velocity resolution", 3rd International Congress on Analytical Proteomics, 28th – 31st July, 2013, Sao Pedro, Brazil.
 41. **Vignesh Kumar**, S. Durai, N. Singh, **Suman Kundu** and Krishnaswamy Balamurugan (2013) "Understanding host-pathogen interaction by proteomic studies involving *C. elegans* and *P. aeruginosa*". Protein Society Meeting, 20th – 23rd July, 2013, Boston, USA. Paper published in *Protein Science* (Wiley-Blackwell) August: Vol 22, 2013 Special Issue- Supplement S1, Pages 1-258.
 42. Meenakshi Tanwar, Nemneineng Haokip, Aruna Naorem and **Suneel Kateriya**. Biochemical characterization and overexpression studies of photoactivated adenylyl cyclases in Dictyostelium discoideum. 7th Annual Convention of ABAP and International Conference on Plant Biotechnology, Molecular Medicine and Human Health, 18-20 October, 2013 India.
 43. Peeyush Ranjan, Mayanka Awasthi, Sindhu Kandoth Veetil and **Suneel Kateriya**. Cellular trafficking of phototropin and novel modular rhodopsin is mediated by animal like IFT machinery in Chlamydomonas reinhardtii. 7th Annual Convention of ABAP and International Conference on Plant Biotechnology, Molecular Medicine and Human Health, 18-20 October, 2013 India
 44. Amit Kumar, Manish Shandilya, Rudra Kashyap, Usha Yadav, V.A. Semionkin, Michael Oshtrakh, Suneel Kateriya and **Suman Kundu** (2013) "Discovery to Applications: Snapshots of a Globin Journey", International Conference on Biomolecular Forms and Functions, A Celebration of 50 Years of Ramachandran Map, Jan 8-11, 2013, Indian Institute of Science, Bangalore. (**Selected for Travel Award**)
 45. **Suneel Kateriya** (2009) "Characterization of Algal Sensory Photoreceptors for the Development of Light-Sensitive Protein Tools to Control Neural Activity and Cell Signaling" The Young Investigators' Meeting, February 24-28, 2009. Estuary Island, Kerala, India
 46. Manendra Pachauri and **Prahlad C. Ghosh**. (2012) Combination of Curcumin and Monensin Loaded Poly(lactic-co-glycolic acid) Nanoparticles for Cancer Therapy : at 3rd International Conference of Carcinogenesis Foundation- Frontiers in Carcinogenesis and Preventive Oncology Molecular Mechanisms to Therapeutics, New Delhi, India, 19-21 November, **2012**. *The first author was selected for Award of Excellence*.
 47. Enna Dogra Gupta, **Prahlad C. Ghosh**, Manchikatla Venkat Rajam (2012). RNAi-mediated silencing of polyamine biosynthesis genes for the control of growth of MCF7 cells *in vitro*: at 3rd International Conference of Carcinogenesis Foundation- Frontiers in Carcinogenesis and Preventive Oncology Molecular Mechanisms to Therapeutics, New Delhi, India, 19-21 November, **2012**.
 48. Vaibhav Chand, Rince John, Neha Jaiswal, Vanadana Kumari and **Alo Nag** (2012). "Downregulation of hADA3 Promotes Epithelial to Mesenchymal Transition in Cervical Cancer", 3rd International Conference of Carcinogenesis Foundation- Frontiers in Carcinogenesis and Preventive Oncology Molecular Mechanisms to Therapeutics, RML

- Hospital, New Delhi India, 19-21 November, 2012. ***The first author was selected for oral presentation and received Excellence Award.***
49. Neha Jaiswal, Rince John, Vaibhav chand and **Alo Nag (2012)**. "FoxM1: A Key Player in HPV-Mediated Oncogenesis", Carcinogenesis 2012, 3rd International Conference of the Carcinogenesis Foundation - Frontiers in Carcinogenesis and Preventive Oncology : Molecular Mechanisms to Therapeutics, RML hospital, New-Delhi, India, 19-21 November, 2012. ***The first author was selected for a podium presentation and received an Excellence Award.***
 50. Rince John, Vaibhav Chand, Neha Jaiswal, **Alo Nag (2012)**. "Enhancing the Therapeutic Potential of Chemotherapeutic Drugs by Modulating hADA3 Protein level", Carcinogenesis **2012**, 3rd International Conference of the Carcinogenesis Foundation - Frontiers in Carcinogenesis and Preventive Oncology : Molecular Mechanisms to Therapeutics, RML hospital, New-Delhi, India, 19-21 November, 2012.
 51. Invited to deliver a lecture on "Combating Cancer Through Discovery of Novel Molecular Targets" in the 3rd International Cancer Research Symposium, 18-21 December, **2012**, Swissotel, Kolkata, India. (**Dr. Alo Nag**).
 52. Invited to deliver a lecture on "ADA3, A Novel Molecular Target for Cancer Therapy" in the International Symposium on Infection and Cancer, 13-16 February, **2013**, ACBR, New Delhi, India. (**Dr. Alo Nag**).
 53. International Symposium on "Rotavirus Vaccines for India – The Evidence and the Promise" New Delhi, 14th & 15th May 2013. (**Prof. Anil K. Tyagi**).
 54. Invited as a Speaker in the International Conference "Nanomedicine 2013", 30-31 May, **2013**, New Delhi, India. Delivered a lecture on "PLGA nanoparticles mediated delivery of anti-malarial drugs for the treatment of malaria". (**Professor P.C. Ghosh**).
 55. Pooja Tiwari and **Prahlad C. Ghosh. (2013)**. Monensin encapsulated in poly-methyl methacrylate nanoparticles for anti-malarial therapy: at International Conference on Nanomedicine-2013, New Delhi, India, and 30-31 May, **2013**.
 56. Vinoth Rajendran and **Prahlad C. Ghosh (2014)**. Evaluation of therapeutic efficacy of liposomal monensin for the treatment of malaria (*P. berghei* infection) in a murine model" at International Conference on Chemical Biology: Disease mechanism and therapeutics-2014, Hyderabad, A.P., India, 6-8 February, 2014.
 57. Brijesh Rathi, Anil K. Singh, Neelu Singh, N. Latha, Vinoth Rajendran, **Prahlad C. Ghosh** and Brajendra K. Singh (2014). "Phthalimides as potent anti-malarial agents embodying cyclic amine scaffolds" at International Conference on Chemical Biology: Disease mechanism and therapeutics-2014, Hyderabad, A.P., India, 6-8 February, 2014.
 58. **Suman Kundu (2012)** "Stability, Folding and Amyloidogenesis of a Novel Hemoglobin – Model for Engineering Heme Stability", International Interdisciplinary Science Conference on Protein Folding and Diseases, Dec 8-10, 2012, Jamia Millia Islamia, New Delhi.
 59. S. Durai, Nirpendra Singh, **Suman Kundu**, and K. Balamurugan (**2012**) "Proteomic approach to probe *Caenorhabditis elegans* response against *V. alginolyticus* infection", International Symposium on Proteomics Beyond ID's and Fourth Annual Meeting of Proteomics Society of India, Nov 22-24, 2012, National Chemical Laboratory, Pune.

International Conferences – Resource Person

1. Served as Organizing Secretary of the International Conference "Carcinogenesis 2012" on Frontiers in Carcinogenesis and Preventive Oncology: Molecular Mechanisms to Therapeutics, 19-21 November, 2012, New Delhi, India. (**Dr. Alo Nag**).
2. Invited to serve as a Chairperson of a session of the International Conference "Carcinogenesis 2012" on Frontiers in Carcinogenesis and Preventive Oncology: Molecular Mechanisms to Therapeutics, 19-21 November, **2012**, New Delhi, India. (**Professor Prahlad C. Ghosh**).

3. Attended International Conference on Carcinogenesis as a Chairperson in RML Hospital, New Delhi from 19th to 21st Nov., 2012. (**Professor Debi P. Sarkar**).
4. International Conference on Plant Biotechnology, Molecular Medicine and Human Health, Department of Genetics, UDSC, New Delhi, Chaired a session and delivered a talk, 18th to 20th October 2013. (**Prof. Anil K. Tyagi**).
5. Local Organizer, International Interdisciplinary Science Conference on Protein Folding and Diseases, Dec 8-10, 2012, Jamia Millia Islamia, New Delhi. (**Prof. Suman Kundu**)

National Conferences – Attendance and Presentation of papers :

1. Enna, **P.C. Ghosh** and M. V. Rajam (2009): RNAi-Mediated silencing of ornithine decarboxylase gene inhibits the growth of oral cancer cell line. Presented at Indo-US Workshop Epigenetic Regulation and genome Control (Emphasis on RNAi and miRNA), held at CCMB, Hyderabad, December 16-18, 2009.
2. **Suman Kundu** (2010) “The red rebel: a cyanobacterial globin with unique properties”, Invited Talk, Symposium on Recent Trends in Biophysics, Indian Biophysical Society, Feb 13-15, 2010, Banaras Hindu University, Varanasi, UP, India.
3. Sheetal Uppal, Rajeev Kumar and **Suman Kundu** (2010) “Comparative Analysis of Hexacoordinate Hemoglobins from Plant & Human”, Symposium on Recent Trends in Biophysics, Indian Biophysical Society, Feb 13-15, 2010, Banaras Hindu University, Varanasi, UP, India.
4. Abhijeet Kapoor, Manish Shandilya and **Suman Kundu** (2010) “Putative *In silico* model of Human Dopamine β -hydroxylase for understanding the role of SNPs and rational drug designing”, Symposium on Recent Trends in Biophysics, Indian Biophysical Society, Feb 13-15, 2010, Banaras Hindu University, Varanasi, UP, India.
5. Abhijeet Kapoor, Rahul Gupta, Amit Kumar and **Suman Kundu** (2010) “Insight into substrate specificity and stability of papain like proteases from an *in silico* comparative structural study”, Symposium on Recent Trends in Biophysics, Indian Biophysical Society, Feb 13-15, 2010, Banaras Hindu University, Varanasi, UP, India.
6. Sheetal Uppal, Nitika Mukhi, Amit Kumar and **Suman Kundu** (2009) “A Unique Hemoglobin from a Cyanobacterium” Young Explorers in Biology, TIFR, Mumbai, September 13-18, 2009.
7. Amit Kumar, Mitali Choudhury, Priyanka Singh, Pushpanjali Dasauni and **Suman Kundu** (2009) “Structural Aspect of Stability and Regulation of Ligand Binding in Novel Hemoglobins”, 78th Annual Meeting of Society of Biological Chemists (India), NCCS Pune, October 30- Nov 1, 2009.
8. Sheetal Uppal, Nitika Mukhi, Kavya Venkateswaran and **Suman Kundu** (2009) “An Unusually Stable Novel Hemoglobin from Cyanobacterium with Unique Characteristics”, 78th Annual Meeting of Society of Biological Chemists (India), NCCS Pune, October 30- Nov 1, 2009.
9. **Suneel Kateriya** (2010) “Development of Light Sensitive Protein Tools for Clinical Applications” 97th Indian Science Congress at Kariavattom Campus, Kerala, University, Trivandrum, Kerala, 3-7th Jan. 2010, For Young Scientist Award
10. **Suneel Kateriya** (2010) “Development of Light Sensitive Protein Tools for Neuroscience and Clinical Applications” Indian Biophysical Society 13-15th Feb. 2010, Banaras Hindu University, Varanasi, (U.P), India, Young Scientist Award

11. Rudra Shankar, Aakriti Anand and **Suneel Kateriya** (2010) “Characterization of a putative G-Protein in the phototransduction pathway of *Chlamydomonas reinhardtii*”, Indian Biophysical Society 13-15th Feb. 2010, Banaras Hindu University, Varanasi, (U.P), India
12. Mayanka Awasthi, Rajnish Giri, Vandana Mishra and **Suneel Kateriya** (2009) “The role of protein-protein interaction in the phototransduction pathway of *Chlamydomonas reinhardtii*” 78th Annual Meeting of Society of Biological Chemists (India), NCCS Pune, October 30-Nov 1, 2009
13. Delivered a lecture in National Symposium on “Emerging Trends in Biotechnology”, Indian Institute of Advanced Research, Gandhinagar, Ahmedabad, Gujarat, 27th-28th April 2010 (**Prof. Anil K. Tyagi**).
14. National Conference on Emerging Trend in Biopharmaceuticals: Relevance to Human Health, held at Thapar University, Patiala, November 11-13, 2010 (**Prof. P.C. Ghosh**).
15. Attended National conference on proteomics, IPCON 2011 at JNU, New Delhi (**Prof. D.P. Sarkar**).
16. Attended All India Cell Biology Conference, Dec 04-06, 2010, Bose Institute, Kolkata as invited speaker (**Prof. D.P. Sarkar**)
17. Young Scientist Award, Indian Science Congress Meeting, 2010, Trivandrum, India (**Dr. Suneel Kateriya**).
18. Young Scientist Award, Indian Biophysical Society Meeting, 2010, Varanasi, India (**Dr. Suneel Kateriya**).
19. UGC sponsored symposium 2010, Aurangabad, Maharashtra, India (**Dr. Suneel Kateriya**).
20. Biotechnology symposium 2010, DCRUST, Murthal, Haryana, India (**Dr. Suneel Kateriya**).
21. Annual meeting of Association of Microbiologist of India, 2010, Ranchi, India (**Dr. Suneel Kateriya**).
22. Delivered a lecture in National Symposium on “Microbes in Health and Agriculture” held in JNU, New Delhi, 12th-13th March 2012 (**Prof. Anil K. Tyagi**).
23. Attended as Invited Speaker in the Workshop on “Nanoconstructs” held at The Maharaja Sayajirao University of Baroda, Vadodara, March 26-30, 2012 (**Prof. P.C. Ghosh**).
24. Attended as Invited Speaker in XVI Quality Improvement Programme Sponsored by AICTE on “Challenge in Pharmaceutical Sciences” held at Delhi College of Pharmaceutical Sciences and Research, New Delhi, November 21 to December 2, 2011 (**Prof. P.C. Ghosh**).
25. Attended Biotech 2012, “Current advances in biotechnology & medicine”, ILBS, New Delhi, 24-25 Feb. 2012 (**Prof. Debi P. Sarkar**).
26. Attended Seminar on Molecular Biology, 30th March, 2012, Agartala Govt. Medical College. (**Prof. Debi P. Sarkar**).
27. Attended UGC sponsored seminar on Chemistry & Biology at Ramananda College, (Burdwan University), Bishnupur, on 29th March, 2012 (**Prof. Debi P. Sarkar**).
28. Invited to deliver a lecture on “A Novel Interactor of HPVE6 : Potential Therapeutic Target for Cancer Therapy” in the workshop on “Basic Molecular Biology Techniques Relevant to Cancer Research”, August 8-12, 2011, Institute of Cytology and Preventive Oncology, Noida, U.P., India (**Dr. Alo Nag**).
29. Zoonotic Mycobacterial Infections and their Impact on Public Health, AIIMS, New Delhi, 25th-27th February 2013 (**Professor Anil K. Tyagi**).

30. Attended and delivered an invited talk in ILBS, Vasant Vihar, New Delhi, Biotech on “Current Advance in Biotechnology and Medicine”, 24th & 25th February **2012**. (**Professor Debi P. Sarkar**).
31. Sanjay Kumar Dey and **Suman Kundu (2013)** “Identification of Novel Inhibitors against Human Dopamine- β -Hydroxylase, a Drug Target for Cardiovascular Diseases”, National Symposium on Frontiers of Biophysics, Biotechnology and Bioinformatics and 37th Annual Meeting of Indian Biophysical Society (IBS), Jan 13-16, 2013, University of Mumbai, Kalina Campus, Mumbai. (*The first author received Ratna Phadke Young Scientist Award*).
32. Meenakshi Tanwar, Manuela Stierl, Peter Hegemann and **Suneel Kateriya**, Molecular Characteristics and Optogenetic Applications of Light-Gated Cyclases, Annual Meeting of the Indian Biophysical Society, 19 – 21 January, **2012**. India.
33. Biotechnology Industry Research Assistance Council (BIRAC) Foundation Day and BIRAC Grand Challenge Meet, Indian Habitat Centre, New Delhi, 20th – 22nd March 2013. (**Prof. Anil K. Tyagi**).
34. Zoonotic Mycobacterial Infections and their Impact on Public Health, AIIMS, New Delhi, 25th-27th February 2013. (**Prof. Anil K. Tyagi**).
35. Manish Shandilya, Ridhima Gomkale, Suneel Kateriya and **Suman Kundu (2013)** “An insight into function of novel globins: Characterization of hemoglobins and their reductase partners from *Chlamydomonas reinhardtii*”, National Conference on Recent Trends in Structural Biology, 16th -18th December 2013, Jamia Millia Islamia, New Delhi, India. (**Selected for Oral presentation**)
36. Sanjay Kumar Dey, B.K. Thelma, **Suman Kundu (2013)** “Dopamine- β -hydroxylase as a novel drug target for cardiovascular diseases: *In silico* identification and *in vitro* validation of novel inhibitors, Conference on Recent Advances in Computational Drug Design, 16th-17th September, 2013, Indian Institute of Science, Bangalore. (**Selected for 3rd best poster award**).
37. Sanjay Kumar Dey, Abhishika Srivastava, Rachana Muley, B.K. Thelma and **Suman Kundu (2013)** “*In silico* identification and *in vitro* validation of novel inhibitors to combat cardiovascular diseases exploiting dopamine- β -hydroxylase as the drug target”, SYSCON-2013 on Interfacing Basic and Translational Research, 23rd August, 2013, All India Institute of Medical Sciences, New Delhi, India. (**Won Best Poster Award**).
38. Mayanka Awasthi, Peeyush Ranjan, Sindhu Kandoth Veetil and **Suneel Kateriya*** Mammalian like IFT interactome directs the trafficking of channelrhodopsin 1 in *Chlamydomonas reinhardtii*. 82th Annual Meeting of the Society of Biological Chemist and international conference on Genomes: Mechanism to Function, December 2-5 2013, School of Life Sciences, University of Hyderabad, India
39. Suneeta Basireddy, Sheetal Uppal, Amit Kumar Singh, Neha Jaiswal, **Alo Nag** and Suman Kundu (2014) “Assessing Disorder and Amyloidogenicity in Hemoglobins and their physiological relevance”, National Symposium on Molecular Architecture and Assembly in Living Systems and 38th Annual Meeting of Indian Biophysical Society (IBS), Feb 07-10, 2014, Saha Institute of Nuclear Physics, Kolkata. (Poster)
40. Sheetal Uppal, Suneeta Basireddy, Amit Kumar Singh, Neha Jaiswal, **Alo Nag** and Suman Kundu (2013) “Generic disorder and amyloidogenicity in Hemoglobins : Are there any implications?”, National Conference on Recent Trends in Protein Structural Biology, 16th-18th December, 2013, Jamia Milia Islamia, Delhi, India (Poster).
41. Meenakshi Tanwar and **Suneel Kateriya**. Photochemical and structural characterization of the optozymes. 42nd National Seminar on Crystallography and International Workshop on Application of X-ray Diffraction for Drug Discovery, 21 – 23 November, 2013 India.

National Conferences - Resource Persons

1. First Annual conference of Chemical Biology Society of India, 6-8th February, 2014, Hyderabad (As a Chairperson of session) (**Prof. D.P. Sarkar**)
2. Invited as a Liposomes expert to participate in the Brainstorming Session on “Different Area of Microbiological Sciences with special emphasis on Fungal Diseases” held on March 07, 2010, at Indian National Science Academy (INSA), New Delhi. (**Prof. P.C. Ghosh**)
3. Invited as a Liposomes Expert to participate in the interactive meeting on “Medical Mycology” Sponsored by Department of Biotechnology, Govt. of India held on September 20-21, 2011, at Jawaharlal Nehru University, New Delhi (**Prof. P.C. Ghosh**).
4. Science, Technology and Innovation (STI) Policy – a Brainstorming conference on implementation aspects, National Institute of Plant Genome Research, New Delhi, 2nd March, 2013 (**Prof. Anil K. Tyagi**).
5. Local Organizer, National Conference on Recent Trends in Protein Structural Biology, 16th-18th December, 2013, Jamia Milia Islamia, Delhi, India (Poster). (**Prof. Suman Kundu**)

2.7 Total No. of actual teaching days during this academic year

Each year the total no. of actual days is ~225-230. For five years (2009-2014) the total no. is ~ 1125.

IQAC Report - Details
Part B, Criterion III
Department of Biochemistry
July 2009 – June 2014

3. Research, Consultancy and Extension

3.2 Details regarding major projects

Completed

No.	Name of Project	Duration	Funding Agency	Budget
Professor Anil K. Tyagi				
1.	rBCG85C – a candidate TB vaccine: Removal of antibiotic resistance marker, modifications for stabilization of antigen expression and efficacy studies	Sept. 2009 to August 2013	DBT	193.90 lakhs
2.	Development of a mice model of latent tuberculosis and evaluation of immunotherapeutic potential of DNA vaccines as an adjunct to chemotherapy against tuberculosis	September 2006 – September 2011	DBT	220.51 lakhs
Professor Vijay K. Chaudhary				
3.	High performing lateral-flow type assay concepts for cardiac and infectious disease testing	March 2010- Feb 2013	DBT	89 lakhs
4.	Development of reagents for simple and rapid immunochemical test for culture confirmation of <i>Mycobacterium tuberculosis</i> complex. + Evaluation trial	Sept 2006 to March 2014	DBT and Span Diagnostics Ltd.	269 lakhs
5.	DNA sequencing facility at UDSC Phase (IV)	2010 to 2014	DBT	160 lakhs
6.	Doctor's office diagnostic instrument for detection of <i>M. tuberculosis</i> under "in the field" conditions adapted for use by unskilled personnel	Sept 2009 to Aug 2012	DBT	80 lakhs
Professor Prahlad C. Ghosh				
7.	Carrier mediated delivery of anti-malarial drugs for the treatment of malaria	2009-2013	DU-DST Purse Grant	8.5 lakhs
8.	Biodegradable nanoparticles mediated delivery of antimalarial drugs for the treatment of malaria	2008-2012	DBT	93.90 lakhs
9.	Targeted delivery of polypeptide toxins to tumor cells using long circulatory sterically stabilized liposomes as a	2006-2009	ICMR	18.78 lakhs

	carrier			
Professor Debi P. Sarkar				
10.	Utilization of siRNA tools to study -----nanoparticle derived from Sendai virus (Co-PI with Dr. Sandeep Saxena, NII)	2008-2011	DBT	97.36 lakhs
11.	Role of Nonmescl Myosin II in virus-cell fusion (working as Co-PI with Dr. S.S. Jana, IACS (DST), Kolkata)	2009-2012	DBT	8.82 lakhs
12.	Novel nanoscale materials-----antimicrobial and anticancer activities (Co-PI with Prof. S.S. Ghosh, IIT, Guwahati)	April 2011-2014	NE/DBT	75 lakhs
Professor Suman Kundu				
13.	Structure-function relationship in lupin leghemoglobin pertinent to a new, ubiquitous class of heme proteins with yet unknown physiological function	Jan 2008-Jan 2011	DBT	77.95179 lakhs
14.	Spectroscopic Characterization / Screening of Hemoglobin Disorders	Sept 2008-Sept 2011	DBT	23.21 lakhs
15.	Structure-function relationship in Dopamine Beta Hydroxylase and neuroglobin	Sept 2008-Sept 2013	DBT	39.90 lakhs
16.	Characterizing Novel Globins Across Species and Deciphering their Stress Response and Interacting Partners: An Integrated, Holistic Approach for Function Elucidation (PI 1)	Nov 2009-Nov 2013	DST-DU (PURSE)	41.52 lakhs
Professor Alo Nag				
17.	Role of Human ADA3 protein, a binding partner of Human Papilloma Virus (HPV) oncoprotein E6 in Oncogenesis.	Jan 2009-Jan 2012	DBT	65.02 lakhs
18.	Characterizing Novel Globins Across Species and Deciphering their Stress Response and Interacting Partners: An Integrated, Holistic Approach for Function Elucidation (PI 2)	Nov 2009 Oct 2013	DST-DU (PURSE)	44.313 lakhs
19.	Role of human ADA3 protein in damaged DNA pathways	Sept 2010-Sept 2013	DST - SERC	17.48 lakhs
Dr. Suneel Kateriya				
20.	Characterization of rhodopsin-mediated phototransduction of <i>C. reinhardtii</i> -	2008- 2011	DBT	76 lakhs
21.	Isolation, expression and localization of ion channel coupled rhodopsin of <i>C.reinhardtii</i> -	2008- 2011	DBT	21 lakhs
22.	Development of new light-sensitive protein tools for neuroscience	2009- 2012	DBT-BMBF-	46 lakhs

	applications		Germany	
23.	Characterizing Novel Globins Across Species and Deciphering their Stress Response and Interacting Partners: An Integrated, Holistic Approach for Function Elucidation (PI 3)	Nov 2009- Nov 2013	DST-DU (PURSE)	27 lakhs
24.	Biochemical and biophysical characterization of small GTPase from <i>C. reinhardtii</i>	2010-2013	DST-SERB	20 lakhs
Total				1814.16479 lakhs

Ongoing

No.	Name of Project	Duration	Funding Agency	Budget
Professor Anil K. Tyagi				
1.	A Virtual Centre of Excellence for Co-ordinated Research on Tuberculosis : Development of Alternate Strategies	September 2011 to September 2016	DBT	484.77 lakhs
2.	Development and evaluation of an α -crystallin based prime boost vaccination strategy against TB by employing MVA	May 2012 to November 2014	DBT	80.89 lakhs
Professor Vijay K. Chaudhary				
3.	DNA Sequencing facility at UDSC (Phase V)	June 2014 to May 2017	DBT	111 lakhs
4.	Development of reagents for simple immunochemical tests for the detection of Chikungunya infection	March 2014 to Feb 2017	DBT	86 lakhs
5.	Development and production of a therapeutic monoclonal antibody against eNAMPT, a novel inflammatory target with Gennova Biopharmaceuticals, Pune	Sept 2008- Sept 2013	CSIR NMITLI	275 lakhs
6.	Ready-to-use Microfluidic Cartridges for Affordable Point of-care Diagnostics "ReDia	Jan 2012 to Sept 2014	DBT	74 lakhs
Professor Debi P. Sarkar				
7.	Centre of Excellence for Research on Hepatitis C Virus – Phase II (Co-PI with Prof. Saumitra Das, IISc., Bangalore)	September 2013 to September 2016	DBT	40.12 lakhs
Professor Prahlad C. Ghosh				
8.	Evaluation of Soya Phosphatidylcholine-stearylamine liposome as antimalarial agent	December 2013 to November	ICMR	24.12672 lakhs

		2016		
Dr. Suneel Kateriya				
9.	Engineering of Photoactivated Adenylate Cyclase (PAC) for the Development of Optogenetic Tools for Neuroscience Applications	2012-2015	DBT	46 lakhs
10.	Functional characterization of new photoreceptor proteins and ion channels in the microalga <i>Chlamydomonas reinhardtii</i> using functional genomics methods. DST-India-RFBR-Russia (2014-16)	2014-2016	DBT-RFBR (Indo-Russia)	25 lakhs
11.	Photo-dynamic, Biochemical and Optogenetic Characterization of the Novel Bacterial Photoactivated Adenylate Cyclase	2013-2017	DST-SERB	46 lakhs
Total				1292.90672 lakhs

Sanctioned

None

Submitted

No.	Name of Project	Duration	Funding Agency	Budget
Professor Suman Kundu				
1.	Development of potent small molecule inhibitors against dopamine-beta hydroxylase to combat cardiovascular diseases	3 years Submitted in June 2013; Defended in Dec 2013; Approved but not yet sanctioned	DBT	97.3272 lakhs
2.	Structural characterization of ARL 15 to combat rheumatoid arthritis	3 years Submitted June 2014	DBT	79.02 lakhs
Total				176.3472 lakhs

3.3 Details regarding minor projects

Completed

No.	Name of Project	Duration	Funding Agency	Budget
Professor Anil K. Tyagi				
1.	Characterization of novel drug targets and identification of inhibitory molecules against <i>Mycobacterium</i>	2009-2010	R&D Grant Delhi	2.5 lakhs

	<i>tuberculosis</i>		University	
2.	Characterization of novel drug targets and identification of inhibitory molecules against <i>Mycobacterium tuberculosis</i>	2010-2011	R&D Grant Delhi University	2.5 lakhs
3.	Characterization of novel drug targets and identification of inhibitory molecules against <i>Mycobacterium tuberculosis</i>	2011-2012	R&D Grant Delhi University	2.5 lakhs
4.	Characterization of novel drug targets and identification of inhibitory molecules against <i>Mycobacterium tuberculosis</i>	2012-2013	R&D Grant Delhi University	2.5 lakhs
5.	Characterization of novel drug targets and identification of inhibitory molecules against <i>Mycobacterium tuberculosis</i>	2013-2014	R&D Grant Delhi University	2.8 lakhs
Professor Vijay K. Chaudhary				
6.	Development of reagents for Immuno diagnostic test for the detection of <i>M. tuberculosis</i>	June 2009-April 2010	R&D Grant Delhi University	2.5 lakhs
7.	Development of reagents for Immuno diagnostic test for the detection of <i>M. tuberculosis</i>	June 2010-April 2011	R&D Grant Delhi University	2.5 lakhs
8.	Development of reagents for Immuno diagnostic test for the detection of <i>M. tuberculosis</i>	June 2011-April 2012	R&D Grant Delhi University	2.5 Lakhs
9.	Production of Recombinant Antibodies against Mycobacterial Antigen MPT-63	October 2013-May 2014	R&D Grant Delhi University	2.8 lakhs
Professor Prahlad C. Ghosh				
10.	Long Circulatory PLGA-nanoparticles-mediated delivery of anti-malarial drugs for the treatment of malaria	April 01 2013-March 31, 2014	R & D project Delhi University	2.8 lakhs
11.	Long Circulatory PLGA-nanoparticles-mediated delivery of anti-malarial drugs for the treatment of malaria	April 01 2012-March 31, 2013	R & D project Delhi	2.5 lakhs
12.	Evaluation of stearylamine-phosphatidylcholine liposomes as anti-malarial agent in mouse model	April 01 2011-March 31, 2012	R & D project Delhi Univ	2.5 lakhs
13.	Solid lipid nanoparticles mediated delivery of antimalarial and anticancer drugs for the treatment of malaria and cancer	April 01 2010-March 31, 2011	R & D project Delhi University	2.5 lakhs

14.	Delivery of anti-malarial drugs using vesicular carrier for the treatment of malaria	April 01 2009-March 31, 2010	R & D project Delhi University	2.5 lakhs
Professor Debi P. Sarkar				
15.	To study the role of histidine peptides mimicking HN glycoprotein of Sendai virus in membrane fusion mediated gene/drug delivery.	June 2009-April 2010	R&D Grant Delhi University	2.5 lakhs
16.	To elucidate the Sendai virus–host interactions using proteomic approach.	June 2010-April 2011	R&D Grant Delhi University	2.5 lakhs
17.	Proteomics approach to study Sendai Virosome – Liver cell interactions	June 2011-April 2012	R&D Grant Delhi University	2.5 lakhs
18.	Study of cellular signaling in Sendai virosome-liver cell membrane fusion-phase I	July 2012-March 2013	R&D Grant Delhi University	2.5 lakhs
19.	Study of cellular signaling in Sendai virosome-liver cell membrane fusion-phase II	October 2013-May 2014	R&D Grant Delhi University	2.8 lakhs
Professor Suman Kundu				
20.	Stability Aspects of a Non-Classical Hexacoordinated Hemoglobin in <i>Oryza sativa</i>	June 2009-April 2010	R&D Grant Delhi University	2.5 lakhs
21.	Insight into substrate specificity and stability of papain like proteases from an <i>in silico</i> comparative structural study and its subsequent experimental validation	June 2010-April 2011	R&D Grant Delhi University	2.5 lakhs
22.	An Initiative into Plant Proteomics: Characterization of latex proteome of plants with industrial or medicinal significance	June 2011-April 2012	R&D Grant Delhi University	2.5 lakhs
23.	An Initiative into Plant Proteomics: Characterization of latex proteome of plants with industrial or medicinal significance- Continuation	July 2012-March 2013	R&D Grant Delhi University	2.5 lakhs
24.	An Initiative into Three-Dimensional Structure Determination of Extremophilic Globins from Algae, their Mesophilic Counterparts and the	October 2013-May 2014	R&D Grant Delhi University	2.8 lakhs

	Related Plant Hemoglobins			
Professor Alo Nag				
25.	Characterization of mammalian coactivator protein hADA3	June 2009-April 2010	R&D Grant Delhi University	2.5 lakhs
26.	Characterization of mammalian coactivator protein hADA3	June 2010-April 2011	R&D Grant Delhi University	2.5 lakhs
27.	Characterization of mammalian coactivator protein hADA3	June 2011-April 2012	R&D Grant Delhi University	2.5 lakhs
28.	Characterization of mammalian coactivator protein hADA3	July 2012-March 2013	R&D Grant Delhi University	2.5 lakhs
29.	Characterization of mammalian coactivator protein hADA3	October 2013-May 2014	R&D Grant Delhi University	2.8 lakhs
Dr. Suneel Kateriya				
30.	Characterization Light Dependent Structural Chages of LOV-1 Domain of Phototropin-1 of Marine Algae <i>Ostreococcus tauri</i>	June 2009-April 2010	R&D Grant Delhi University	2.5 lakhs
31.	Deciphering Biochemical Characteristic of Phopholipase-C of <i>Chlamydomonas reinhardtii</i>	June 2010-April 2011	R&D Grant Delhi University	2.5 lakhs
32.	Characterization of tertiary structure of Phopholipase-C of <i>Chlamydomonas reinhardtii</i>	June 2011-April 2012	R&D Grant Delhi University	2.5 lakhs
33.	Elucidate impact of tertiary structure of Phopholipase-C of <i>Chlamydomonas reinhardtii</i> on modulation of lipid interactions.	July 2012-March 2013	R&D Grant Delhi University	2.5 lakhs
34.	Biochemical Characterization of UV-B Photoreceptor from <i>Chlamydomonas reinhardtii</i>	October 2013-May 2014	R&D Grant Delhi University	2.8 lakhs
	Total			87.1 lakhs

Ongoing

Professor Debi P. Sarkar				
1.	Study of cellular signaling in Sendai virosome-liver cell membrane fusion: implication in liver gene therapy	3 years from 2014	DST	4.5 lakhs

Sanctioned

None

Submitted

No.	Name of Project	Duration	Funding Agency	Budget
Professor Vijay K. Chaudhary				
1.	Production of Reagents for simultaneous immunochemical detection <i>M. tuberculosis</i> Complex (MTC) and Non Tuberculous Mycobacteria (NTM)	1 year June 2014	R&D Grant Delhi University	3 lakhs
Professor Prahlad C. Ghosh				
2.	Long Circulatory PLGA-nanoparticles-mediated delivery of anti-malarial drugs for the treatment of malaria.	1 year June 2014	R&D Grant Delhi University	3 lakhs
Professor Suman Kundu				
3.	Stability and Amyloidogenecity of Cyanobacterial Hemoglobin in Relation to Myoglobin: Model for Engineering Stable Artificial Blood Substitutes	1 year June 2014	R&D Grant Delhi University	3 lakhs
Professor Alo Nag				
4.	Investigation of the link between mammalian coactivator hADA3 and Promyelocytic Leukemia protein	1 year June 2014	R&D Grant Delhi University	3 lakhs
Dr. Suneel Kateriya				
5.	Biochemical and Cellular Characterization of Intraflagellar Transport 20 (IFT20) Protein from <i>Chlamydomonas reinhardtii</i>	1 year June 2014	R&D Grant Delhi University	2.8 lakhs
	Total			14.8 lakhs

3.4 Details on research publications (impact factor included)

Professor Anil K. Tyagi

International- Peer Review Journals (Total = 16)

1. Kumar, D., Beena, Khare, G., Kidwai, S., **Tyagi, A. K.**, Singh, R., & Rawat, D. S. (2014). Synthesis of novel 1, 2, 3-triazole derivatives of isoniazid and their *in vitro* and *in vivo* antimycobacterial activity evaluation. *European Journal of Medicinal Chemistry*, 81, 301-313. (IF : 3.432)
2. Khare, G., Kumar, P., & **Tyagi, A. K.** (2013). Whole-Cell Screening-Based Identification of Inhibitors against the Intraphagosomal Survival of *Mycobacterium tuberculosis*. *Antimicrobial Agents and Chemotherapy*, 57(12), 6372-6377. (IF : 4.451)
3. Reddy, P. V., Puri, R.V., Chauhan, P., Kar, R., Rohilla, A., Khera, A., & **Tyagi, A. K.** (2013). Disruption of mycobactin biosynthesis leads to attenuation of *Mycobacterium tuberculosis* for growth and virulence. *Journal of Infectious Diseases*, 208(8), 1255-1265. (IF : 5.778)
4. Khare, G., Nangpal, P., & **Tyagi, A. K.** (2013). Unique residues at the 3-fold and 4-fold axis of mycobacterial ferritin are involved in oligomer switching. *Biochemistry*, 52(10), 1694-1704. (IF : 3.194)
5. Jain, R., Dey, B., & **Tyagi, A. K.** (2012). Development of the first oligonucleotide microarray for global gene expression profiling in guinea pigs: defining the transcription signature of infectious diseases. *BMC Genomics*, 13, 520-530. (IF : 4.04)
6. Saini, V., Raghuvanshi, S., Khurana, J. P., Ahmed, N., Hasnain, S. E., Tyagi, A. K., & **Tyagi, A. K.** (2012). Massive gene acquisitions in *Mycobacterium indicus pranii* provide a perspective on mycobacterial evolution. *Nucleic Acids Research*, 40(21):10832-50. (IF : 8.808)
7. Reddy, P. V., Puri, R. V., Khera, A., & **Tyagi, A. K.** (2012). Iron Storage Proteins Are Essential for the Survival and Pathogenesis of *Mycobacterium tuberculosis* in THP-1 Macrophages and the Guinea Pig Model of Infection. *Journal of Bacteriology*, 194(3):567-75. (IF : 2.688)
8. Jain, R., Dey, B., Khera, A., Srivastava, P., Gupta, U. D., Katoch, V. M., Ramanathan, V. D., & **Tyagi, A. K.** (2011). Over-expression of superoxide dismutase obliterates the protective effect of BCG against tuberculosis by modulating innate and adaptive immune responses. *Vaccine*, 29(45), 8118– 8125. (IF : 3.485)
9. Arora, A., Chandra, N. R., Das, A., Gopal, B., Mande, S. C., Prakash, B., Ramachandran, R., Sankaranarayanan, R., Sekar, K., Suguna, K., **Tyagi, A. K.** & Vijayan, M. (2011). Structural biology of *Mycobacterium tuberculosis* proteins: The Indian efforts. *Tuberculosis*, 91(5):456-68. (IF : 3.503)
10. Tyagi, A.K., Nangpal, P., & Satchidanandam, V. (2011). Development of vaccines against tuberculosis. *Tuberculosis*, 91(5):469-78. (IF : 3.503)
11. Jatana, N., Jangid, S., Khare, G., Tyagi, A. K. & Latha, N. (2011). Molecular modeling studies of Fatty acyl-CoA synthetase (FadD13) from —a potential target for the development of antitubercular drugs. *Journal of Molecular Modeling*, 17(2), 301-313. (IF : 1.867)
12. Dey, B., Jain, R., Khera, A., Rao, V., Dhar, N., Gupta, U. D., Katoch, V. M., Ramanathan, V. D. & **Tyagi, A. K.** (2010). Boosting with a DNA vaccine

- expressing ESAT-6 (DNAE6) obliterates the protection imparted by recombinant BCG (rBCGE6) against aerosol *M. tuberculosis* infection in guinea pigs. *Vaccine*, 28 (1), 63-70. (IF : 3.485)
13. Sachdeva, P., Misra, R., **Tyagi, A. K.**, & Singh, Y. (2009). The sigma factors of *Mycobacterium tuberculosis*: regulation of the regulators. *Federation of European Biochemical Societies Journal*, 277(3):605-26 (IF : 3.986)
 14. Kumar, C. M. S., Khare, G., Srikanth, C. V., **Tyagi, A. K.**, Sardesai, A. A., & Mande, S. C. (2009). Facilitated oligomerization of mycobacterial GroEL: Evidence for phosphorylation-mediated oligomerization. *Journal of Bacteriology*, 191(21), 6525-6538. (IF : 2.688)
 15. Basu, D., Khare, G., Singh, S., **Tyagi, A. K.**, Khosla, S., & Mande, S. C. (2009). A novel nucleoid-associated protein of *Mycobacterium tuberculosis* is a sequence homolog of GroEL. *Nucleic Acids Research*, 37(15):4944-54 (IF : 8.808)
 16. Arora, P., Goyal, A., Natarajan, V. T., Rajakumara, E., Verma, P., Gupta, R., Yousuf, M., Trivedi, O. A., Mohanty, D., **Tyagi, A. K.**, Sankaranarayanan, R., & Gokhale, R. S. (2009). Mechanistic and functional insights into fatty acid activation in *Mycobacterium tuberculosis*. *Nature Chemical Biology*, 5(3), 166-173. (IF : 13.217)

National – Peer Review Journals (total – 1)

1. Gupta, A. K., Reddy, V. P., Lavania, M., Chauhan, D. S., Venkatesan, K., Sharma, V. D., **Tyagi, A. K.** & Katoch, V. M. (2010). *jefA* (Rv2459), a drug efflux gene in *Mycobacterium tuberculosis* confers resistance to isoniazid & ethambutol. *Indian Journal of Medical Research*, 132, 176-188. (IF : 1.661)

International – e-Journals (total = 15)

1. Puri, R. V., Reddy, P. V., & **Tyagi, A. K.** (2014). Apurinic/Apyrimidinic Endonucleases of *Mycobacterium tuberculosis* Protect against DNA Damage but Are Dispensable for the Growth of the Pathogen in Guinea Pigs. *PLoS ONE*, 9(5), e92035. (IF : 3.534)
2. Khare, G., Reddy, P. V., Sidhwani, P., & **Tyagi, A. K.** (2013). KefB inhibits phagosomal acidification but its role is unrelated to *M. tuberculosis* survival in host. *Scientific Reports*, 3, 3527. (IF : 5.078)
3. Chauhan, P., Reddy, P. V., Singh, R., Jaisinghani, N., Gandotra, S., & **Tyagi, A. K.** (2013). Secretory phosphatases deficient mutant of *Mycobacterium tuberculosis* imparts protection at the primary site of infection in guinea pigs. *PLoS ONE*, 8(10), e77930. (IF : 3.534)
4. Puri, R. V., Singh, N., Gupta, R. K., & **Tyagi, A. K.** (2013). Endonuclease IV Is the Major Apurinic/Apyrimidinic Endonuclease in *Mycobacterium tuberculosis* and Is Important for Protection against Oxidative Damage. *PLoS ONE*, 8(8), e71535. (IF : 3.534)
5. Puri, R. V., Reddy, P. V., & **Tyagi, A. K.** (2013). Secreted Acid Phosphatase (SapM) of *Mycobacterium tuberculosis* Is Indispensable for Arresting Phagosomal Maturation and Growth of the Pathogen in Guinea Pig Tissues. *PLoS ONE*, 8(7), e70514. (IF : 3.534)
6. Chauhan, P., Jain, R., Dey, B., & **Tyagi, A. K.** (2013). Adjunctive immunotherapy with α -crystallin based DNA vaccination reduces tuberculosis chemotherapy period in chronically infected mice. *Scientific Reports*, 3, 1821. (IF : 5.078)

7. Dey, B., Jain, R., Gupta, U. D., Katoch, U. D., Ramanathan, V. M., & **Tyagi, A. K.** (2011). A Booster Vaccine Expressing a Latency-Associated Antigen Augments BCG Induced Immunity and Confers Enhanced Protection against Tuberculosis. *PLoS ONE*, 6(8), e23360. (IF : 3.534)
8. Khare, G., Kar, R., & **Tyagi, A. K.** (2011). Identification of Inhibitors against *Mycobacterium tuberculosis* Thiamin Phosphate Synthase, an Important Target for the Development of Anti-TB Drugs. *PLoS ONE*, 6(7), e22441. (IF : 3.534)
9. Dey, B., Jain, R., Khera, A., Gupta, U. D., Katoch, V. M., Ramanathan, V. D., & **Tyagi, A. K.** (2011). Latency antigen alpha-crystallin based vaccination imparts a robust protection against TB by modulating the dynamics of pulmonary cytokines. *PLoS ONE*, 6(4), e18773. (IF : 3.534)
10. Khare, G., Gupta, V., Nangpal, P., Gupta, R. K., Sauter, N. K., & **Tyagi, A. K.** (2011). Ferritin Structure from *Mycobacterium tuberculosis*: Comparative Study with Homologues identifies Extended C-terminus involved in Ferroxidase Activity. *PLoS ONE*, 6(4), e18570. (IF : 3.534)
11. Purushothaman, S., Annamalai, K., **Tyagi, A. K.**, & Surolia, A. (2011). Diversity in Functional Organization of Class I and Class II Biotin Protein Ligase. *PLoS ONE*, 6(3), e16850. (IF : 3.534)
12. Gupta, V., Gupta, R. K., Khare, G., Salunke, D. M., Surolia, A., & **Tyagi, A. K.** (2010). Structural ordering of disordered ligand-binding loops of biotin protein ligase into active conformations as a consequence of dehydration. *PloS ONE*, 5(2), e9222. (IF : 3.534)
13. Khare, G., Gupta, V., Gupta, R.K., Gupta, R., Bhat, R., & **Tyagi, A. K.** (2009). Dissecting the role of critical residues and substrate preference of a fatty Acyl-CoA synthetase (FadD13) of *Mycobacterium tuberculosis*. *PLoS ONE*, 4(12), e8387. (IF : 3.534)
14. Gupta, V., Gupta, R. K., Khare, G., Salunke, D. M., & **Tyagi, A. K.** (2009). Crystal structure of Bfr A from *Mycobacterium tuberculosis*: Incorporation of selenomethionine results in cleavage and demetallation of Haem. *PLoS ONE*, 4(11), e8028. (IF : 3.534)
15. Saini, V., Raghuvanshi, S., Talwar, G. P., Ahmed, A., Khurana, J. P., Hasnain, S. E., Tyagi, A. K., & **Tyagi, A. K.** (2009). Polyphasic Taxonomic Analysis Establishes *Mycobacterium indicus pranii* as a Distinct Species. *PLoS ONE*, 4(7), e6263. (IF : 3.534)

National – e-Journals - None

International – Conference proceedings - None

National – Conference proceedings - None

Professor Vijay K. Chaudhary

International – Peer Review Journals (total = 7)

1. Rana J, Rajasekharan S, Gulati S, Dudha N, Gupta A, Chaudhary VK, Gupta S., Network mapping among the functional domains of Chikungunya virus nonstructural proteins. *Proteins*. 2014 May 13. **Impact Factor: 2.921** [ISSN: 1097-0134 (online)]

2. Kumar, K., S. Rajasekharan, S. Gulati, J. Rana, R. Gabrani, C.K. Jain, A. Gupta, **Chaudhary VK**, and S. Gupta. Elucidating the interacting domains of chandipura virus nucleocapsid protein. *Adv Virol*, 2013: 594319., 2013. [ISSN: 1687-8647 (Electronic) 1687-8639 (Print)].
3. Gupta, A., N. Shrivastava, P. Grover, A. Singh, K. Mathur, V. Verma, C. Kaur, and **Chaudhary VK**. A Novel Helper Phage Enabling Construction of Genome-Scale ORF-Enriched Phage Display Libraries. *PLoS One*, 8(9): e75212., 2013. **Impact Factor: 3.73** [eISSN-1932-6203]
4. Dobhal S, **Chaudhary VK**, Singh A, Pandey D, Kumar A, Agrawal S. Expression of recombinant antibody (single chain antibody fragment) in transgenic plant *Nicotiana tabacum* cv. Xanthi. *Mol Biol Rep.* 2013 Dec;40(12):7027-37. **Impact Factor : 1.958** [ISSN:0301-4851(printversion), ISSN: 1573-4978 (electronic version)]
5. Sreejith R, Rana J, Dudha N, Kumar K, Gabrani R, Sharma SK, Gupta A, Vrati S, **Chaudhary VK**, Gupta S. Mapping interactions of Chikungunya virus nonstructural proteins. *Virus Res.* 169(1): 231-6., 2012. **Impact Factor: 2.827** [ISSN: 0168-1702]
6. Kumar K, Rana J, Sreejith R, Gabrani R, Sharma SK, Gupta A, **Chaudhary VK**, Gupta S. Intraviral protein interactions of Chandipura virus *Arch Virol.* 157(10):1949-57., 2012. **Impact Factor: 2.03** [ISSN: 0304-8608 (print version), ISSN: 1432-8798 (electronic version)]
7. Gupta, A, **Chaudhary VK**, and R. Bhat. Directed evolution of an anti-human red blood cell antibody. *mAbs.* 1(3) 268-280., 2009. **Impact Factor: 1.982 (2010)** [ISSN 1942-0870 (Print), 1942-0862 (Online)]

National – Peer Review Journals

Nil

International – e-Journals (total = 3)

1. Rana J, Rajasekharan S, Gulati S, Dudha N, Gupta A, Chaudhary VK, Gupta S., Network mapping among the functional domains of Chikungunya virus nonstructural proteins. *Proteins.* 2014 May 13. **Impact Factor: 2.921** [ISSN: 1097-0134 (online)]
2. Gupta, A., N. Shrivastava, P. Grover, A. Singh, K. Mathur, V. Verma, C. Kaur, and **Chaudhary VK**. A Novel Helper Phage Enabling Construction of Genome-Scale ORF-Enriched Phage Display Libraries. *PLoS One*, 8(9): e75212., 2013. **Impact Factor: 3.73** [eISSN-1932-6203]
3. Sreejith R, Rana J, Dudha N, Kumar K, Gabrani R, Sharma SK, Gupta A, Vrati S, **Chaudhary VK**, Gupta S. Mapping interactions of Chikungunya virus nonstructural proteins. *Virus Res.* 169(1): 231-6., 2012. **Impact Factor: 2.827** [ISSN: 0168-1702]

International – Conference proceedings

Nil

National – Conference proceedings

None

Professor Prahlad C. Ghosh

International – Peer Review Journals (total = 07)

1. Raza, M., Chakraborty, S., Chaudhary, M., Ghosh, P. C., and Nag, A. (2014) Cellular iron homeostasis and therapeutic implications of iron chelators in cancer, *Curr Pharm Biotechnol* 15, 1125-1140. (IF-2.8)
2. Gupta, Ruchi, Rajendran, V., **Ghosh, P. C.** and Srivastava, S. (2014). Assessment of anti-plasmodial activity of non-hemolytic, non-immunogenic, non-toxic antimicrobial peptides (AMPs LR14) produced by *Lactobacillus plantarum* LR/1. *Drugs R & D*. DOI 10.1007/s40268-014-0043-y, 2014 (IF – 1.7)
3. Goel, D., Rajendran, V., **Ghosh, P. C.** and Bhatnagar, R. (2013). Cee mediated immune response after challenge in Omp 25 liposome immunized mice contributes to protection against virulent *Brucella abortus* 544. *Vaccine*, 31, 1231-1239. (IF – 3.3)
4. Surolia, Ranu. and **Ghosh, P. C.** (2012). Preparation and characterization of monensin loaded PLGA nanoparticles: in vitro anti-malarial activity against *Plasmodium falciparum*. *J. Biomedical Nanotechnology*. 8, 1-10 (IF – 7.6)
5. Tyagi, N. and **Ghosh P. C.** (2011). Folate receptor mediated targeted delivery of ricin entrapped into stearylly stabilized liposomes to human epidermoid carcinoma (KB) cells: effect of monensin intercalated into folate-tagged liposomes. *Eur J. Phar. Sci.* 43, 343-353. (IF – 3.0)
6. Tyagi, N., Rathore, S. S. and **Ghosh P. C.** (2011). Enhanced killing of human epidermoid carcinoma (KB) cells by ricin encapsulated into stearylly stabilized liposomes in combination with monensin. *Drug Delivery*. 18(6), 394-404. (IF – 2.2)
7. G.M. Hasan, N. Garg, Enna, Surolia, R. and **Ghosh P. C.** (2011). Inhibition of the growth of *Plasmodium falciparum* in culture by stearylamine-phosphatidylcholine liposomes. *J Parasitol. Res.* 2011;2011:120462. Epub 2011 Published online 2011 June14, doi: [10.1155/2011/120462](https://doi.org/10.1155/2011/120462) (IF – 1.2)

National – Peer Review Journals (Total = 1)

1. Tyagi, N., Rathore, S. S. and **Ghosh P. C.** (2013). Efficacy of liposomal monensin on the enhancement of the anti-tumor activity of liposomal ricin in human Epidermoid carcinoma (KB) cells. *Ind. J. Pharm. Sci.*- 75, 16-22 (IF – 0.3)

International – e-Journals (total = 1)

1. Mahajan, Richi; Kumar, Vinod; Rajendran, Vinoth; Saran, Saurabh; **Ghosh, Prahlad;** Saxena, Rajendra (2014). Purification and characterization of a novel and robust L-asparaginase having low glutaminase activity from *Bacillus licheniformis*: in vitro evaluation of anti-cancerous properties. *Plos One* 9(6) e99037 doi:10.1371/journal.pone.0099037. (IF – 3.7)

Professor Debi P. Sarkar

International – Peer Review Journals (total = 7)

1. Krishnan, A., Verma, S. K., Mani, P., Gupta, R., Kundu S. and **Sarkar Debi P.** A histidine switch in hemagglutinin-neuraminidase triggers paramyxovirus-cell membrane fusion. *Journal of Virology*, 83: 1727-1741, 2009. **IF: 4.6**
2. Kohaar, I., Hussain, S., Thakur, N., Tiwari, P., Nasare, V., Batra, S., Singh, V., Bhambani, S., Das, B.C., **Sarkar, Debi P.**, Bharadwaj, M. Association between HLA Class II alleles with HPV mediated Cervical Cancer in Indian women, *Human Immunology*, 70: 222-229, 2009. **IF: 2.3**
3. Subramanian, N., Mani, P., Roy, S., **Sarkar, Debi P.**, and Das, S. Targeted delivery of hepatitis C virus specific shRNA in mouse liver using Sendai virosomes. *Journal of General Virology*, 90: 1812-1819, 2009. **IF: 3.5**
4. Wang, X., **Sarkar, Debi P.**, Mani, P., Steer, Clifford J., Chen, Y., Guha, C., Chandrasekhar, V., Chaudhuri, A., Roy-Chowdhury, N., Kren, Betsy T., Roy-howdhury, J. Long-term reduction of jaundice in Gunn rats by non-viral liver-targeted delivery of *Sleeping Beauty* transposon. *Hepatology*, 50: 815-824, 2009. **IF: 11.2**
5. Sharma, NR., Mani, P., Nandwani, N., Mishra, R., Rana, A. and **Sarkar, Debi P.** Reciprocal regulation of AKT and MAP Kinase dictates virus-host cell fusion. *Journal of Virology*, 84: 4366-4382, 2010. **IF: 4.6**
6. Upasana Ray, Chaitrali Laha Roy, Anuj Kumar, Prashant Mani, Angel Praveen Joseph, G. Sudha, **Debi P Sarkar**, N. Srinivasan and Saumitra Das. Inhibition of the interaction between NS3 protease and HCV IRES with a small peptide: A novel therapeutic Strategy. *Molecular Therapy*, 21:57-67, 2013 **IF: 6.4**
7. Prasanna Bhat, Sivakumar Vadivel Gnanasundram, Prashant Mani, **Debi P Sarkar** and Saumitra Das. Targeting ribosome assembly on the HCV RNA using a small RNA molecule. *RNA Biology*, 9, 1-10, 2012 **IF: 5.4**

National – Peer Review Journals - None

International – e-Journals (total = 1)

1. Zakaria Khalid Mohammad, Khan Imran, Mani Prashant, Chattopadhyay Parthaprasad, **Sarkar P Debi**, Sinha Subrata. Combination of hepatocyte specific delivery and transformation dependent expression of shRNA inducing transcriptional gene silencing of c-Myc promoter in hepatocellular carcinoma cells. *BMC Cancer*, 14:582, 2014. **IF: 3.3**

National – e-Journals – None

International – Conference proceedings - None

National – Conference proceedings - None

Professor Suman Kundu

International – Peer Review Journals (total = 17)

1. Durai, S., Singh, N., **Kundu, S.*** and Balamurugan, K.* (2014) “Proteomic investigation of *Vibrio alginolyticus* challenged *Caenorhabditis elegans* revealed regulation of cellular homeostatis proteins and their role in supporting innate immune system”. *Proteomics* 14, 1820-1832. **Impact Factor: 4.2**
2. Oshtrakh, M.I., Kumar, A., Alenkina, I.V., Zakharova, A.P., Semionkin, V.A. and **Kundu, S.** (2014) “Characterization of monomeric soybean leghemoglobin using Mössbauer spectroscopy with a high velocity resolution” *Hyp. Interact.* 226, 431-438. **Impact Factor: 0.25**
3. Mukhi, N., Dhindwal, S., Uppal, S., Kumar, P., Kaur, J. and **Kundu, S.** (2013) “X-ray crystallographic structural characteristics of *Arabidopsis* hemoglobin 1 and their functional implications”. *Biochim. Biophys. Acta* **1834**, 1944-1956. **Impact Factor : 3.73**
4. Kumar, P., Patil, D.N., Chaudhary, A., Tomar, S., Yernool, D., Singh, N., Dasauni, P., **Kundu, S.** and Kumar, P. (2013) “Purification and biophysical characterization of 11S globulin from *Wrightia tinctoria* exhibiting hemagglutinating activity”. *Prot. Pep. Lett.* **20**, 499-509. **Impact Factor : 1.9**
5. Jangir, D.K, Dey, S.K., **Kundu, S.** and Mehrotra, R. (2012) “Assessment of amsacrine binding with DNA using UV-visible, circular dichroism and Raman spectroscopic techniques”. *J. Photochem. Photobiol. B.* **114**, 38-43. **Impact Factor : 2.12**
6. Jangir, D.K., Charak, S., Mehrotra, R., and **Kundu, S.** (2011) “FTIR and circular dichroism spectroscopic study of interaction of 5-fluorouracil with DNA”. *J. Photochem. Photobiol. B: Biology* **105**, 143-148. **Impact Factor : 2.12**
7. Oshtrakh, M.I.*, Berkovsky, A.L., Kumar, A., **Kundu, S.***, Vinogradov, A.V., Konstantinova, T.S. and Semionkin, V.A. (2011) “Heme iron states in various oxyhemoglobins probed using Mossbauer spectroscopy with a high velocity resolution”. *Biomaterials* **24**, 501-512. **Impact Factor : 3.1**
8. Bisht, N.K., Abbruzzetti, S., Uppal, S., Bruno, S., Spyrikis, F., Mozzarelli, A., Viappiani, C. and **Kundu, S.** (2011) “Ligand migration and hexacoordination in type 1 non symbiotic rice hemoglobin”. *Biochim Biophys. Acta.* **1814**, 1042-1053. **Impact Factor : 3.73**
9. Oshtrakh, M.I.*, Kumar, A., **Kundu, S.***, Berkovsky, A.L., and Semionkin, V.A. (2011) “Study of human, rabbit and pig oxyhemoglobins using high velocity resolution Mössbauer spectroscopy in relation to their structural and functional variations”. *J. Mol. Struc.* **993**, 292-296. **Impact Factor : 1.6**
10. Oshtrakh, M.I*., Berkovsky, A.L., Kumar, A., **Kundu, S.***, Vinogradov, A.V., Konstantinova, T.S. and Semionkin, V.A. (2010) “⁵⁷Fe Quadrupole Splitting and Isomer Shift in Various Oxyhemoglobins: Study Using Mössbauer Spectroscopy”. *Hyp. Interact.* **197**, 301-307. **Impact Factor : 0.21**
11. Lawit, S.J., Wych, H.M., Xu, D., **Kundu, S.** and Tomes, D. (2010) “Maize DELLA Proteins dwarf plant8 and dwarf plant9 as Modulators of Plant Development”. *Plant Cell Physiol.* **51**, 1854-1868. **Impact Factor : 4.3**
12. Yadav, S.C., Jagannadham, M.V. and **Kundu, S** (2010) “Equilibrium Unfolding of Kinetically Stable Serine Protease Milin: Presence of Various Active and Inactive Dimeric Intermediates”. *Eur Biophys. J.* **39**, 1385-1396. **Impact Factor : 2.4**

13. Jangir, D.K., Tyagi, G., Mehrotra, R., and **Kundu, S.** (2010) “Carboplatin interaction with calf-thymus DNA: A FTIR spectroscopic approach”. *J. Mol. Struc.* **969**, 126-129. **Impact Factor : 1.6**
14. Yadav, S.C., Jagannadham, M.V., **Kundu, S.***, and Jagannadham, M.V.* (2009) “A kinetically stable plant subtilase with unique peptide mass fingerprints and dimerization properties”. *Biophys. Chem.* **139**, 13-23. **Impact Factor : 2.1**
15. Krishnan, A., Verma, S.K., Mani, P., Gupta, R., **Kundu, S.**, and Sarkar, D.P. (2009) “A histidine switch in hemagglutinin-neuraminidase triggers paramyxovirus-cell membrane fusion”. *J. Virol.* **83**, 1727-1741. **Impact Factor : 5.2**
16. Kumar, M.R., Pervitsky, D., Chen, L., Poulos, T., **Kundu, S.**, Hargrove, M.S., Rivera, E.J., Diaz, A., Colón, J.L., Farmer, P.J. (2009) “Nitrosyl hydride (HNO) as an O₂ analogue: long-lived HNO adducts of ferrous globins”. *Biochemistry* **48**, 5018-5025. **Impact Factor : 3.2**
17. Smagghe, B.J., Hoy, J.A., Percifield, R., **Kundu, S.**, Hargrove, M.S., Sarath, G., Hilbert, J.-L., Watts, R.A., Dennis, E.S., Peacock, W.J., Dewilde, S., Moens, L., Blouin, G.C., Olson, J.S., and Appleby, C.A (2009) “Correlations between oxygen affinity and sequence classifications of plant hemoglobins”. *Biopolymers* **91**, 1083-1096. **Impact Factor : 2.6**

National – Peer Review Journals (total = 4)

1. Dey, S.K and **Kundu, S.** (2014) “The Indian Wizard of Biophysics: Remembering G.N. Ramachandran in the International Year of Crystallography” *J. Prot. Proteomics* **5**, 65-72. **Impact Factor : 0.5**
2. Basireddy, S., Uppal, S., Singh, A.K. and **Kundu, S.** (2013) “An evaluation of potential intrinsically disordered and amyloidogenic regions in hemoglobins”. *J. Prot. Proteomics* **4**, 231-248. **Impact Factor : 0.5**
3. Arya, R., Sundd, M. and **Kundu, S.** (2012) “Structural and functional aspects of acyl-coenzyme A binding proteins (ACBPs): a comprehensive review”. *J. Prot. Proteomics* **3**, 61-71. **Impact Factor : 0.2**
4. Kumar, S.B., Venkateshwaran, K. and **Kundu, S.** (2010) “Alternative Conformational Model of a Seed Protein DeK1 for Better Understanding of Structure-Function Relationship” *J. Prot. Proteomics* **1**, 77-90. **Impact Factor : 0.2**

International – e-Journals (total = 4)

1. Jangir, D.K., **Kundu, S.** and Mehrotra, R. (2013) “Role of minor groove width and hydration pattern on amsacrine interaction with DNA”. *PLoS One.* 8(7):e69933. **Impact Factor : 4.3**
2. Patil, D.N, Datta, M., Dev, A., Dhindwal, S., Singh, N., Dasauni, P., **Kundu, S.**, Sharma, A. K, Tomar, S. and Kumar, P. (2013) “Structural investigation of a novel N-acetyl glucosamine binding chi-lectin which reveals evolutionary relationship with class III chitinases.” *PLoS One.* 8(5):e63779. **Impact Factor : 4.3**
3. Kishore, D., **Kundu, S.*** and Kayastha, A.M.* (2012) “Thermal, chemical and pH induced denaturation of a multimeric β -galactosidase reveals multiple unfolding pathways”. *PLoS One.* 7(11):e50380. doi: 10.1371/journal.pone.0050380. **Impact Factor : 4.3**
4. Kapoor, A., Shandilya, M., and **Kundu, S.** (2011) “Structural insight of dopamine β -hydroxylase, a drug target for complex traits, and functional significance of exonic

single nucleotide polymorphisms” *PLoS One* 6(10): e26509. doi:10.1371/journal.pone.0026509. **Impact Factor : 4.3**

International – Conference proceedings (total = 2)

1. Shandilya, M., Kumar, A., Uppal, S., Kateriya, S and **Kundu, S** (2014) In support of nitric oxide dioxygenase function: Algal hemoglobins and their reduction partners, pp. 674a, 58th Annual Meeting of Biophysical Society, San Francisco, California, Feb 15-19, 2014. Published in *Biophys. J* (Cell Press) 106(2), 674a. **Impact Factor : 3.83**
2. Kumar, B.V., Durai, S., Singh, N., **Kundu, S.**, and Balamurugan, K. (2013) “Understanding host-pathogen interaction by proteomic studies involving *C. elegans* and *P. aeruginosa*”. Protein Society Meeting, 20th – 23rd July, 2013, Boston, USA. Published in *Protein Sci* (Wiley-Blackwell) Vol 22, Special Issue- Supplement S1, Pages 1-258. **Impact Factor : 2.86**

National – Conference proceedings

None

Professor Alo Nag

International – Peer Review Journals (total = 7)

1. Jaiswal, N., Chakraborty, S. and **Nag A.**(2014) “Biology of FOXM1 and its Emerging Role in Cancer Therapy”. *J. Proteins and Proteomics*, 5(1): 249. **Impact Factor : 0.5**
2. Chakraborty, S., John, R. and **Nag A.** (2014) “Cytoglobin in tumor hypoxia: Novel insights into cancer suppression”. *Tumor Biology*, 35(7),6207. **Impact Factor : 2.9**
3. Chand, V., John, R., Jaiswal, N., Johar, S. and **Nag, A.**(2014) “High Risk HPV16E6 Stimulates hADA3 Degradation by Enhancing its SUMOylation”. *Carcinogenesis* . 35(8):1830-9. doi: 10.1093/carcin/bgu104. Epub 2014 May 2. **Impact Factor : 5.6**
4. Raza, M., Chakraborty, S., Choudhury, M., Ghosh, P.C. and **Nag A.** (2014). “Cellular iron homeostasis and therapeutic implications of iron chelators in cancer”. *Curr. Pharm. Biotech.* 15(12):1125-40. **Impact Factor : 2.69**
5. Mohibi S, Gurumurthy CB, **Nag A**, Wang J, Mirza S, Mian Y, Quinn M, Katafiasz B, Eudy J, Pandey S, Guda C, Naramura M, Band H, Band V.(2012). “Alteration/deficiency in activation 3 is essential for mouse embryonic development and cell cycle progression”. *J Biol Chem.* 287(35): 29442-56. **Impact Factor : 5.3**
6. Sharma, P and **Nag, A.** (2014) “CUL4A Ubiquitin Ligase: A Promising Drug Target for Cancer and Other Human Diseases”. *Open Biology.* 4: 130217. doi: 10.1098/rsob.130217. **Impact Factor: 3.6**
7. John, R., Chand, V., Jaiswal, N. and **Nag, A.** (2011) “Genotoxic Stress Induced Posttranslational Modification of Transcriptional Adaptor Protein Ada3”. *J. Proteins and Proteomics*, 2(2): 71-79. **Impact Factor: 0.2**

National – Peer Review Journals (total = 2)

1. Jaiswal, N., Chakraborty, S. and **Nag A.**(2014) “Biology of FOXM1 and its Emerging Role in Cancer Therapy”. *J. Proteins and Proteomics*, 5(1): 249. **Impact Factor : 0.5**

- John, R., Chand, V., Jaiswal, N. and Nag, A. (2011) "Genotoxic Stress Induced Posttranslational Modification of Transcriptional Adaptor Protein Ada3". *J. Proteins and Proteomics*, 2(2): 71-79. **Impact Factor: 0.2**

International – e-Journals (total = 5)

- Chakraborty, S., John, R. and Nag A. (2014) "Cytoglobin in tumor hypoxia: Novel insights into cancer suppression". *Tumor Biology*, 35(7),6207. **Impact Factor : 2.9**
- Chand, V., John, R., Jaiswal, N., Johar, S. and Nag, A.(2014) "High Risk HPV16E6 Stimulates hADA3 Degradation by Enhancing its SUMOylation". *Carcinogenesis* . 35(8):1830-9. doi: 10.1093/carcin/bgu104. Epub 2014 May 2. **Impact Factor : 5.6**
- Raza, M., Chakraborty, S., Choudhury, M., Ghosh, P.C. and Nag A. (2014). "Cellular iron homeostasis and therapeutic implications of iron chelators in cancer". *Curr. Pharm. Biotech.* 15(12):1125-40. **Impact Factor : 2.69**
- Mohibi S, Gurumurthy CB, Nag A, Wang J, Mirza S, Mian Y, Quinn M, Katafiasz B, Eudy J, Pandey S, Guda C, Naramura M, Band H, Band V.(2012). "Alteration/deficiency in activation 3 is essential for mouse embryonic development and cell cycle progression". *J Biol Chem.* 287(35) : 29442-56. **Impact Factor : 5.3**
- Sharma, P and Nag, A. (2014) "CUL4A Ubiquitin Ligase: A Promising Drug Target for Cancer and Other Human Diseases". *Open Biology.* 4: 130217. doi: 10.1098/rsob.130217. **Impact Factor: 3.6**

International – Conference proceedings (total = 5)

- Vaibhav Chand, Rince John, Neha jaiswal, Vandana Kumari and Nag, A. (2012) "Downregulation of hADA3 Promotes Epithelial to Mesenchymal Transition in Cervical Cancer", 3rd International Conference of Carcinogenesis Foundation, PML Hospital, Nov 19-2, 2012. Published in *J. of Carcinogenesis* Nov 2012, 11(1):S48. **Impact Factor : 2.0**
- Neha Jaiswal, Rince John, Vaibhav Chand and Nag, A. (2012) "FoxM1: A Key Player in HPV-Mediated Oncogenesis". 3rd International Conference of Carcinogenesis Foundation, PML Hospital, Nov 19-2, 2012. Published in *J. of Carcinogenesis* Nov 2012, 11(1). **Impact Factor : 2.0**
- Rince John, Vaibhav Chand, Neha Jaiswal and Nag, A. (2012) "Enhancing the Therapeutic Potential of Chemotherapeutic Drugs by Modulating hADA3 Protein level". 3rd International Conference of Carcinogenesis Foundation, PML Hospital, Nov 19-2, 2012. Published in *J. of Carcinogenesis* Nov 2012, 11(1). **Impact Factor : 2.0**
- Pallavi Singhal, Alo Nag and Mausumi Bharadwaj (2012). "Evaluation of NFkB1-94 Insertion/Deletion Promoter Polymorphism and its functional effect in cervical cancer" 3rd International Conference of Carcinogenesis Foundation, PML Hospital, Nov 19-2, 2012. Published in *J. of Carcinogenesis* Nov 2012, 11(1). **Impact Factor : 2.0**
- Vaibhav Chand, Rince John, Neha jaiswal and Nag, A. (2013). " ADA3 : A novel molecular target for cancer therapy" Published in *J. of Cell Communication and Signaling.* Mar 2013, 7(1). **Impact Factor : 4.7**

National – Conference proceedings

None

Dr. Suneel Kateriya

International – Peer Review Journals (total = 12)

1. Ranjan, P., Kashyap, RS., Goel, M., Veetil, SK., and Kateriya, S. (2014) Cellular Organelles Facilitate Dimerization of a Newly Identified Arf from *Chlamydomonas reinhardtii*. *Journal of Phycology* 50, 1137-1145. **Impact Factor : 2.59**
2. Penzkofer, A., Tanwar, M., Veetil, S., Kateriya, S., Stierl, M., and Hegemann, P. (2014) Photo-dynamics of BLUF domain containing adenylyl cyclase NgPAC3 from the amoebflagellate *Naegleria gruberi* NEG-M strain. *Journal of Photochemistry and Photobiology A: Chemistry* 287, 19-29. **Impact Factor : 2.29**
3. Sizova, I., Greiner, A., Awasthi, M., Kateriya, S., and Hegemann, P. (2013) Nuclear gene targeting in *Chlamydomonas* using engineered zinc finger nucleases. *The Plant Journal* 73, 873-882. **Impact Factor : 6.8**
4. Penzkofer, A., Tanwar, M., Veetil, S., Kateriya, S., Stierl, M., and Hegemann, P. (2013) Photo-dynamics and thermal behavior of the BLUF domain containing adenylate cyclase NgPAC2 from the amoebflagellate *Naegleria gruberi* NEG-M strain. *Chemical Physics* 412, 96-108. **Impact Factor : 2.1**
5. Penzkofer, A., Tanwar, M., Veetil, S., Kateriya, S., Stierl, M., and Hegemann, P. (2013) Photo-dynamics of the lyophilized photo-activated adenylate cyclase NgPAC2 from the amoebflagellate *Naegleria gruberi* NEG-M strain. *Chemical Physics* 423, 192-201. **Impact Factor : 2.1**
6. Trippens, J., Greiner, A., Schellwat, J., Neukam, M., Rottmann, T., Lu, Y., Kateriya, S., Hegemann, P., and Kreimer, G. (2012) Phototropin influence on eyespot development and regulation of phototactic behavior in *Chlamydomonas reinhardtii*. *The Plant Cell Online* 24, 4687-4702. **Impact Factor : 10.6**
7. Luck, M., Mathes, T., Bruun, S., Fudim, R., Hagedorn, R., Nguyen, T. M. T., Kateriya, S., Kennis, J. T., Hildebrandt, P., and Hegemann, P. (2012) A photochromic histidine kinase rhodopsin (HKR1) that is bimodally switched by ultraviolet and blue light. *Journal of Biological Chemistry* 287, 40083-40090. **Impact Factor : 4.8**
8. Penzkofer, A., Stierl, M., Hegemann, P., and Kateriya, S. (2012) Absorption and fluorescence characteristics of photo-activated adenylate cyclase nano-clusters from the amoebflagellate *Naegleria gruberi* NEG-M strain. *Chemical Physics* 392, 46-54. **Impact Factor : 2.1**
9. Veetil, S. K., Mittal, C., Ranjan, P., and Kateriya, S. (2011) A conserved isoleucine in the LOV1 domain of a novel phototropin from the marine alga *Ostreococcus tauri* modulates the dark state recovery of the domain. *Biochimica et Biophysica Acta (BBA)-General Subjects* 1810, 675-682. **Impact Factor : 4.2**
10. Barwal, I., Ranjan, P., Kateriya, S., and Yadav, S. C. (2011) Cellular oxido-reductive proteins of *Chlamydomonas reinhardtii* control the biosynthesis of silver nanoparticles. *Journal of nanobiotechnology* 9, 1-12. **Impact Factor : 4.08**
11. Penzkofer, A., Stierl, M., Hegemann, P., and Kateriya, S. (2011) Photo-dynamics of the BLUF domain containing soluble adenylate cyclase (nPAC) from the amoebflagellate *Naegleria gruberi* NEG-M strain. *Chemical Physics* 387, 25-38. **Impact Factor : 2.1**
12. Penzkofer, A., Stierl, M., Hegemann, P., and Kateriya, S. (2011) Thermal protein unfolding in photo-activated adenylate cyclase nano-clusters from the amoebflagellate *Naegleria gruberi* NEG-M strain. *Journal of Photochemistry and Photobiology A: Chemistry* 225, 42-51. **Impact Factor : 2.29**

National – Peer Review Journals (total = 2)

1. Awasthi, M., and Kateriya, S. (2011) Functional diversity and optogenetic potentials of microbial rhodopsins. *Journal of Proteins & Proteomics* 2, 115-123 **Impact Factor : 0.5**
2. Tanwar, M., Stierl, M., Veetil, S. K., Penzkofer, A., Hegemann, P., and Kateriya, S. (2014) Biochemical characterization of photoactivated adenylyl cyclase from *Naegleria gruberi*. *Journal of Proteins & Proteomics* 5, 35-39. **Impact Factor : 0.5**

International – e-Journals (total = 2)

1. Awasthi, M., Batra, J., and Kateriya, S. (2012) Disulphide bridges of phospholipase C of *Chlamydomonas reinhardtii* modulates lipid interaction and dimer stability. *PLoS One* 7, e39258. **Impact Factor : 4.3**
2. Kumar, S., Kateriya, S., Singh, V. S., Tanwar, M., Agarwal, S., Singh, H., Khurana, J. P., Amla, D. V., and Tripathi, A. K. (2012) Bacteriophytochrome controls carotenoid-independent response to photodynamic stress in a non-photosynthetic rhizobacterium, *Azospirillum brasilense* Sp7. *Scientific reports* 2, 872. **Impact Factor : 5.07**

International – Conference proceedings (total = 1)

1. Shandilya, M., Kumar, A., Uppal, S., Kateriya, S and Kundu, S (2014) In support of nitric oxide dioxygenase function: Algal hemoglobins and their reduction partners, pp. 674a, 58th Annual Meeting of Biophysical Society, San Francisco, California, Feb 15-19, 2014. Published in *Biophys. J* (Cell Press) 106(2), 674a. **Impact Factor : 3.83**

National – Conference proceedings

None

3.5 Details on Impact factor of publications (2009-2014)

Professor Anil K. Tyagi

Range : 1.661 – 13.217
Average : 4.209 (total IF – 134.692, total publications – 32)
h-index : 20 (Last 5 years), 31 (overall) (Google Scholar)
Nos. in SCOPUSCitations - 2808 (total); 1294 (5 years)

Professor Vijay K. Chaudhary

Range : 1.982-3.73
Average : 2.20 (total IF = 15.45; total publications = 7)
h-index : 14 (Last 5 years); 34 (overall) (Google Scholar)
Nos. in SCOPUSCitations – 4820 (total); 641 (5 years)

Professor Prahlad C. Ghosh

Range (of IF) 0.32 – 7.6
Average 2.87
h-index 9 (Last 5 years); 16 (overall) (Google Scholar)
Nos. in SCOPUSCitations – 569 (total),

Professor Debi P. Sarkar

Range 2.3 – 11.2
Average 5.16 (total IF = 41.3; total publications = 8)
h-index 11 (last 5 years); 20 (overall)
Nos. in SCOPUS Citations- 1513 (total); 383 (5 years)

Professor Suman Kundu

Range 0.2 – 5.2
Average 2.59 (total IF = 69.95; total publications = 27)
h-index 16 (Last 5 years); 22 (overall) (Google Scholar)
Nos. in SCOPUS Citations – 1224 (total); 669 (5 years)

Professor Alo Nag

Range 0.2 – 5.6
Average 2.97 (total IF = 20.79; total publications = 7)
h-index 12 (Last 5 years); 15 (overall) (Google Scholar)
Nos. in SCOPUSCitations – 1039 (total); 390 (5 years)

Dr. Suneel Kateriya

Range 0.5 – 10
Average 3.58
h-index 12 (Last 5 years); 12 (overall) (Google Schoar)
Nos. in SCOPUSCitations – 1990 (total); 1463 (5 years)

3.7 No. of books published

Professor Anil K. Tyagi

Nil

Professor Vijay K. Chaudhary

Nil

Professor Prahlad C. Ghosh

Nil

Professor Debi P. Sarkar

Wang, X., Mani, P., Sarkar, Debi P., Roy-Chowdhury, N. and Roy-Chowdhury, J., “*Ex Vivo Gene Transfer into Hepatocytes*” in a book chapter entitled “Hepatocyte Transplantation” edited by Anil Dhawan and Robin D. Hughes (eds.), *Methods In Molecular Biology Series*, Chapter 11, Humana Press, New Jersey, USA, vol. 481, 2009.

Professor Suman Kundu

With ISBN No. / Chapters in Edited Books –

1. Kumar, A., Uppal, S., and **Kundu, S.** (2009) “The Red Goldmine: Promises of Biotechnological Riches” *Invited Book Chapter. Biotechnological Applications*, eds. C.S.K. Mishra, India and Dr. Pascale Champagne, Canada. IK Publishing House. ISBN 978-93-80026-29-9
2. Dubey, V.K., and **Kundu, S** (2014) "Processing of Recombinant Proteins" *In Gene and its Engineering*. First Edition Wiley India Pvt. Ltd., New Delhi, India (H. K. Das Ed). pp. 474-479. ISBN 978-81-265-4928-3

Professor Alo Nag

None

Dr. Suneel Kateriya

Nil

3.10 Revenue generated through consultancy

Professor Anil K. Tyagi

None

Professor Vijay K. Chaudhary

Professor Chaudhary received a sum of Rs.26 lacs as Consultancy from M/s Cadila Pharmaceuticals limited, Ahmedabad during June 2009-February 2011. Out of this, 25% was deposited in the University Development fund, and after deducting Income tax @ 30%, Professor Chaudhary was paid a total sum of Rs. 14 lacs.

Professor Prahlad C. Ghosh

None

Professor Debi P. Sarkar

None

Professor Suman Kundu

None

Professor Alo Nag

None

Dr. Suneel Kateriya

None

3.11 No. of conferences organized by the institution

International

International Conference “Carcinogenesis 2012” on Frontiers in Carcinogenesis and Preventive Oncology : Molecular Mechanisms to Therapeutics, 19-21 November, 2012, New Delhi, India. Jointly organized by RML Hospital, RGCI and Delhi University.

National –

“Ramachandran Manifestation: From Peptide to Proteome. Commemorating 50 years of Ramachandran Map”, Department of Biochemistry at University of Delhi South Campus and Sri Venkateswara College, New Delhi, March 14-15, 2013 (sponsored by UGC-SAP Program; DBT-Distributed Information Sub-Centre, Department of Biochemistry; DBT-Star College, Sri Venkateswara)

State

Symposium-cum-workshop on “Next Generation Sequencing Data Analysis” held at the Department of Biochemistry, University of Delhi South Campus and JNU, New Delhi, 28th – 29th January 2011.

University:

1. Symposium on “Systems Biology” held at the Department of Biochemistry, University of Delhi South Campus, New Delhi, 26th March 2012.
2. Conference on “Drug Discovery and Development” held at the University of Delhi South Campus, New Delhi, organized by Bioinformatics Centre, Sri Venkateswara College in association with Bioinformatics Centre, DISC, University of Delhi South Campus, 21st – 23rd January 2009.

3. “Frontiers in Life Sciences and Computational Biology: Mechanistic Understanding and Disease Relevance”, March 22, 2014, Biotech Centre Auditorium, University of Delhi South Campus, jointly sponsored by UGC-SAP Program and DBT-Distributed Information Sub-Centre, Department of Biochemistry.
4. “Development of Molecular Strategies to Combat various Human Diseases” UGC-SAP Seminar Series, March 18, 2013, Biotech Centre Auditorium, University of Delhi South Campus, New Delhi
5. “Frontiers in Biological Sciences”, March 16, 2012, DST PURSE and Delhi University sponsored symposium, S.P. Jain Auditorium, University of Delhi South Campus, New Delhi.
6. “Development of Molecular Strategies to Combat various Human Diseases” UGC-SAP Seminar Series, March 23, 2012, Biotech Centre Auditorium, University of Delhi South Campus, New Delhi
7. “Development of Molecular Strategies to Combat various Human Diseases” UGC-SAP Seminar Series, March 17-19, 2011, Biotech Centre Auditorium, University of Delhi South Campus, New Delhi
8. “Emerging Trends in Globin Research: Need to Imbibe New Approaches and Technologies” February 6, 2010, DST PURSE and Delhi University sponsored symposium, Biotech Centre Auditorium, University of Delhi South Campus, New Delhi.
9. “Development of Molecular Strategies to Combat various Human Diseases” UGC-SAP Seminar Series, March 17-18, 2010, Biotech Centre Auditorium, University of Delhi South Campus, New Delhi

College: Nil

3.12 Served as experts, chairpersons or resource persons

Professor Anil K. Tyagi

Acted as Member of National / International Committees for evaluation / funding / review of scientific research

1. Member, APEX Committee, Vaccine Grant Challenge Programme, Department of Biotechnology, Government of India, New Delhi from 2011 onwards.
2. Member of Expert Committee for North Eastern Region Biotechnology Programmes, Department of Biotechnology, Government of India, 2009 onwards.

Member Governing Bodies of Institutions

1. Chairman, Governing Body, Miranda House, University of Delhi from 2014 onwards.

Professor Vijay K. Chaudhary

Experts

Chairpersons

1. Interim Governing Council WUS Health Centre (IGC-WUSHC), University of Delhi

Resource persons

Professor Prahlad C. Ghosh

1. Member of the Expert Committee constituted by Indira Gandhi National Open University to develop the syllabus and guidelines for conducting the entrance examinations for candidate seeking admission in Ph.D. in Biochemistry, February 29, 2014.
2. Member, Research Review Committee (RRC), National Dope Testing Laboratory w.e.f. f October 09, 2014
3. Member, Doctoral Committee, Dept. of Biochemistry, Indira Gandhi National Open University (IGNOU), New Delhi for the last several years for several Ph.D. Scholars.
4. Member, Doctoral committee, School of Biotechnology, JNU, New Delhi, for the last several years for several Ph.D. Scholars.
5. Invited by Global Innovation & Technology Alliance (GITA) under DST funded India-UK Collaborative Industrial R & D Programme as **Technical Expert** in project mentoring Group for funding research project and quarterly review of the project. September 24, 2014
6. Invited by Hitch Institute of Engineering & Technology, Ghaziabad, UP to deliver a lecture in the “Science Camp” sponsored by DST, Govt. of India, New Delhi for the students of Class XI and XII under INSPIRE Programme on 28th August, 2014.
7. Invited by Department of Animal Biotechnology, Lala Lajpat Rai University of Veterinary and animal Sciences, Hissar, Haryana as guest faculty to deliver a Lecture for their M.Sc. (Biotechnology) students on May 7, 2014.
8. Invited as a Speaker in the International Conference “Nanomedicine 2013”, 30-31 May, **2013**, New Delhi, India. Delivered a lecture on ”PLGA nanoparticles mediated delivery of anti-malarial drugs for the treatment of malaria”.
9. Invited as an Advisor to the Interview Board by the Staff Selection Commission, Govt. of India, for the selection for the post of Research Assistant in National Centre for Disease Control, DGHS, New Delhi, held on July, 12, 2013.
10. Member, Expert Group meeting at ICMR under the Chairmanship of Dr. V. M. Katoch, Secretary, DHR and DG, ICMR to discuss about “Unqualified inclusion of Liposomal Amphotericin B Monograph in Indian Pharmacopoeia (IP) and grant of indiscriminate licenses wrongly as generic”, held on May 25, 2013 at ICMR.
11. Member of Selection Committee for the appointment of Professor / Associate Professor / Assistant Professor, Department of Biotechnology, Guru Gobind Singh Indraprastha University, Delhi, May 2013.

12. Invited as a member, Selection Committee for selection of Professor, Associate Professor & Assistant Professor in the Dept. of Biochemistry, IGNOU October 12, 2012
13. Attended as Invited/Keynote Speaker in the Workshop on “Nanoconstructs” held at The Maharaja Sayajirao University of Baroda, Vadodara, March 26-30, 2012.
14. Attended as Invited Speaker in XVI Quality Improvement Programme Sponsored by AICTE on “Challenge in Pharmaceutical Sciences” held at Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, November 21 to December 2, 2011.
15. Invited to serve as a Chairperson of a session of the International Conference “Carcinogenesis 2012” on Frontiers in Carcinogenesis and Preventive Oncology: Molecular Mechanisms to Therapeutics, 19-21 November, **2012**, New Delhi, India.
16. Invited as a Liposomes Expert to participate in the interactive meeting on “Medical Mycology” Sponsored by Department of Biotechnology, Govt. of India held on September 20-21, 2011, at Jawaharlal Nehru University, New Delhi.
17. Invited as a Liposomes expert to participate in the Brainstorming Session on “Different Area of Microbiological Sciences with special emphasis on Fungal Diseases” held on March 07, 2010, at Indian National Science Academy (INSA), New Delhi.
18. Member of Selection Committee for the appointment of Assistant Professor, Department of Biotechnology, Guru Gobind Singh Indraprastha University, Delhi, 29th November 2010.

Professor Debi P. Sarkar

None

Professor Suman Kundu

Experts

1. SRC committee member for Ph.D students, Department of Biotechnology (Dr. Pravir Kumar), Delhi Technological University, Delhi, May 19th, 2014
2. External expert for Comprehensive Examination of Mr. Siddharth Sinha at Department of Biotechnology, TERI University, Vasant Kunj, New Delhi, April 11, 2014.
3. Member on the Special Committee of the Special Centre for Molecular Medicine of Jawaharlal Nehru University (JNU), 2013-2016 (nominated by Vice-Chancellor w.ef. 11.09.2013)
4. Staff Selection Commission (SSC) invited to be Advisor to Interview Board for the post of Research Assistant in O/o National Centre for Diseases Control, DGHS, New Delhi (July 2013)
5. Examiner, M.Tech. Dissertation (including viva-voce), for M.Tech Degree in Bioinformatics (Dr. Pravir Kumar), Delhi Technological University (July 2013)
6. Reviewed grant applications for DST and CSIR (2010-2014)
7. Reviewed Eight Ph.D Thesis (2011-2014)

8. Peer Reviewed articles for J. Agr. Food Chem., Indian J. Microbiol., PloS One. Applied Biochemistry and Biotechnology; Letters in Drug Design and Discovery, F1000 Research, FEBS Letters, Indian J of Biotechnology, Cell and Developmental Biology (2009-2014).
9. Examiner, Practical examination (BTM-205), M.Sc. Biotechnology, School of Biotechnology, BHU. (March 2012)
10. Examiner, Practical for Diploma in Biotechnology, Sri Venkateswara College, New Delhi (May 2012)
11. Examiner, M.Tech. Dissertation (including viva-voce), for M.Tech Degree in Bioinformatics, School of Bioinformatics, Jawaharlal Nehru University (JNU) (2012)
12. Committee Member, Doctoral Advisory Committee II (Dr. Kaushik Chakrabarty and Dr. Shantanu Sengupta), Institute of Genomics and Integrative Biology (IGIB). (2012; 2013)
13. Committee Member, Doctoral Advisory Committee (Dr. Apurba Sau), National Institute of Immunology (NII) (2010, 2012).
14. Committee Member, Doctoral Advisory Committee (Dr. Pramit Choudhury), Department of Chemistry, IIT Delhi (2010, 2011, 2012).

Chairpersons

1. Chief Editor, Journal of Proteins and Proteomics (www.jpp.org.in), 2010-2014

Resource persons

1. Guest Lecture on “The Basics of Proteomics Investigation and Laboratory Set Up”, Department of Biotechnology, Alagappa University, Karaikudi, Tamil Nadu, March 18, 2014.
2. Guest Speaker, Annual Festival of Chemical Society, Department of Chemistry, Motilal Nehru College (Golden Jubilee Celebration), University of Delhi, New Delhi, March 28, 2014. Title of Talk: “Chemistry of Life: Introduction to Biomolecules and their Quantitation”.
3. Organized “Special seminar” on “Chemical Diversity in Biology” by Prof. P. Balaram, Director, IISc. Bangalore for all the Life Sciences Departments at S.P. Jain Auditorium, University of Delhi South Campus on September 18, 2013. (sponsor: DU-DST)
4. Deputy Coordinator, UGC-SAP Programme, Department of Biochemistry, University of Delhi South Campus (2009-2014)
5. Guest Lecturer, School of Biotechnology, Banaras Hindu University (2009-2012)
6. Teacher-in-Charge, CD, MALDI and DIGE Based Proteomics, CIF, University of Delhi South Campus (2009-2013)
7. Lecture for Undergraduate students at Bioinformatics Centre, Sri Venkateswara College, University of Delhi, New Delhi, India, July 2011. Title of talk: The In Silico Bonanza in Structure-function Investigation of Proteins: An Update
8. Lecture at Bioinformatics Centre, Sri Venkateswara College, University of Delhi, New Delhi, India for Undergraduate students. (Nov 7, 2009). Title of talk: The In Silico Bonanza in Structure-function Investigation of Proteins.
9. Delivered a lecture for Refresher course organized by University of Delhi South Campus - March 12, 2013, Title of lecture: The Magic of Protein Folding.
10. Indian Academy of Sciences (IAS) mentor to Summer Trainees (2011-2014)

11. Act as mentor and judge for school level INSPIRE program (DST, Government of India) – in the science competition section like model building, innovative projects, etc. (Kendriya Vidyalaya – state level).

Professor Alo Nag

Experts

1. Examiner, M.Phil. Dissertation (including viva-voce), for M.Phil Degree in Life Sciences, Gujrat Central University of Gujrat, Gandhinagar (December, 2013).
2. Invited as an External Interviewer for selection of Project SRF (NII), Jan, 2013
3. Nominated by Univ. of Delhi for review of Departmental Promotion Committee (staff), SGTB Khalsa College, Oct 2010.
4. Reviewed grant applications for DST and CSIR (2012-2014).
5. Peer Reviewed articles for Molecular Cancer, Tumor Biology, eCancer Medical Science, Plasmid, Plos One. (2009-2014).
6. Examiner, Practical for Diploma in Biotechnology, Sri Venkateswara College, New Delhi (2012-2014)

Chairpersons

Served as a Chairperson of a session of the International Conference “Carcinogenesis 2012” on Frontiers in Carcinogenesis and Preventive Oncology: Molecular Mechanisms to Therapeutics, 19-21 November, **2012**, New Delhi, India.

Resource persons

1. Invited speaker in the Centenary Celebrations of ICMR, a five day’s workshop on “Basic Molecular Biology Techniques relevant to Cancer Research” at ICPO, Noida, UP on 8-8-2011. Title of the talk “A Novel Interactor of HPVE6 : Potential Therapeutic Target for Cancer Therapy”.
2. **Organized an International Cancer Conference** in New Delhi and served as **Organizing Secretary**. Details are: **Carcinogenesis 2012**, Frontiers in Carcinogenesis & Preventive Oncology Molecular Mechanisms to Therapeutics, held at RML Hospital, New Delhi, 19-21 Nov, **2012**.
3. Invited to deliver a lecture on “Combating Cancer Through Discovery of Novel Molecular Targets” in the 3rd International Cancer Research Symposium, 18-21 December, **2012**, Swissotel, Kolkata, India.
4. Invited to deliver a lecture on “ADA3, A Novel Molecular Target for Cancer Therapy” in the International Symposium on Infection and Cancer, 13-16 February, **2013**, ACBR, New Delhi, India.
5. **Training PG students with research skills** by serving as mentor in the Summer Research Fellowship Programme jointly sponsored by the three national science Academies, India. (2012-2014).
6. **Teacher-in-Charge** for Phosphoimager, LAS-4000 Imager, CIF, University of Delhi South Campus (2009-2014).
7. Delivered a **lecture for Refresher course organized by Jamia Milia Islamia** - March 12, 2013, Title of lecture: The Magic of Protein Folding.

8. Invited to deliver a talk on “HPV-E6 Oncoprotein Targets Sumoylated hADA3 in Cervical Cancer” by Department of Biological Sciences, **Univ. of Illinois at Chicago**, USA, June 2012.
9. Invited talk on “Developmental Biology: from cells to selves” for Refresher Course in life sciences at the Academic Staff College, JNU in Jan 2013.
10. Guest speaker for a talk on “Developmental Biology: Basic concepts to applications” for Refresher Course in Basic sciences at the UGC Academic Staff College, Jamia Milia Islamia, New Delhi, May 2013.
11. Invited to deliver a lecture on “Stem Cells” for Refresher Course in Basic sciences at the UGC Academic Staff College, Jamia Milia Islamia, New Delhi, May 2013.

Dr. Suneel Kateriya

Experts

1. Reviewed grant applications for SERB and DBT (2010-2014)
2. Peer Reviewed articles for New Phytologist, U.K PloS One, Indian Journal of Microbiology, Journal of Applied Phycology, International Journal of Photoenergy etc.
3. Editorial Board Member-2010 through present, Advances in Applied Research Journal
4. Examiner, Practical for Diploma in Biotechnology, Sri Venkateswara College, New Delhi (May 2013)

Chairpersons

None

Resource persons

1. Delivered a lecture for Refresher course organized by University of Delhi South Campus - March 12, 2013
2. Delivered a lecture for Refresher course organized by JNU-Feb.2015
3. Indian Academy of Sciences (IAS) mentor to Summer Trainees (2011-2014)

3.13 Number of Collaborations

(a) National collaboration

Name of the Faculty	Collaborated Agency
Prof. Vijay K. Chaudhary	Development for reagents for simple immunochemical tests for the detection of Chikungunya infection. ICMR Virus Research Unit, Kolkata and IIIT, Noida.
	Development of rapid test for infectious diseases with M/s SPAN Diagnostics Limited, Surat
	Development and evaluation for the development of rapid test for culture confirmation of <i>M. tuberculosis</i> with AIIMS (New Delhi), PGI (Chandigarh), P.D. Hinduja Hospital (Mumbai), Nizam Institute of Medical Sciences (Hyderabad), NJIL&OMD (Agra)

Prof. Debi P. Sarkar	Inhibition of HCV RNA translational and replication using small RNAs” in collaboration with Dr. Saumitra Das, Dept. of Microbiology and Cell Biology, Indian Institute of Science, Bangalore-560012
	Role of Nonmuscle Myosin II in virus-cell fusion” with Dr. SS Jana, IACS, Kolkata.
	Novel nanoscale materials-----antimicrobial and anticancer activities” with Prof. SS Ghosh, IIT, Guwahati.
Dr. Suneel Kateriya	Engineering of photoactivated adenylatecyclase (PAC) for the development of optogenetic tools for neuroscience Applications. Collaborative project with Dr. Surjit Sarkar, Department of Genetics, UDSC, New Delhi

(b) **International Collaboration**

Name of the Faculty	Collaborated Agency
Prof. Vijay K. Chaudhary	High Performing Lateral Flow For Cardiac and Infectious diseases”)with University of Turku, Finland under Indo-Finland programme supported by DBT
	Ready-to-use Microfluidic Cartridges for Affordable Point-of-care Diagnostics “ReDia”” by Prof. Vijay. K. Chaudhary, Prof. PasiKallio, Tampere University of Technology and Department of Biotechnology, University of Turku, BioCity, Finland under Indo-Finnish collaboration in diagnostics” by Finnish Funding Agency for Technology and Innovation (TEKES), and the Indian Department of Biotechnology (DBT).
Prof. Suman Kundu	Mossbauer Spectroscopy of Mammalian and other Novel Hemoglobins. Boehringer Ingelheim Fonds Fellowship for student and Research Collaboration with Ural State Technical University-UPI, Ekaterinburg, Russia, 2010-2015
Dr. Suneel Kateriya	Development of novel optogenetics tools, collaborative project with Prof. Peter Hegeman, Humboldt University, Berlin, Germany
	Engineering and characterization of LOV domain proteins, Max-Planck Institute, Muelheim, Germany

3.16 No. of patents received this year

Professor Anil K. Tyagi

Patents : 06

Type of Patent		Number
National	Applied	2 (2008, 2009)
	Granted	2 (2011, 2014)
International	Applied	Nil
	Granted	Nil
Commercialized	Applied	Nil
	Granted	Nil

Professor Vijay K. Chaudhary

Type of Patent		Number
National	Applied	One (2013)
	Granted	Nil
International	Applied	Nil
	Granted	Nil
Commercialized	Applied	
	Granted	Technology of TBConform was transferred to M/s SPAN Diagnostics limited, Surat on 26 th August 2011

Professor Prahlad C. Ghosh

None

Professor Debi P. Sarkar

None

Professor Suman Kundu

None

Professor Alo Nag

None

Dr. Suneel Kateriya

None

3.17 Research awards / recognitions

Professor Anil K. Tyagi

International – None

National –

- J.C. Bose National Fellow, Department of Science and Technology, GOI (2010)
- Vigyan Gaurav Samman Award by UP Government. (2010)

State - None

University – None

Research fellow-

International –

- **Garima Khare**, Vibha Gupta, Rakesh K. Gupta, Radhika Gupta, Rajiv Bhat and Anil K. Tyagi. Dissecting the role of critical residues and substrate preference of a Fatty Acyl-CoA Synthetase (FadD13) belonging to a virulence associated operon of *Mycobacterium tuberculosis*. Presented at International Symposium “Understanding and Managing Pathogenic Microbes (UMPM 2010)” organized by Institute of Microbial Technology, Chandigarh. *The first author was selected for Best Poster Award.*

National –

- **Garima Khare**. Determination of the structure of Thiamin Phosphate Synthase (MtTPS) of *Mycobacterium tuberculosis* by homology modeling and identification of inhibitors by using virtual screening. Young Scientist Oral presentation at Symposium on “Microbes in Health and Agriculture”, 2012, held at Jawaharlal Nehru University, Delhi. *The first author was selected for Best Oral Presentation Award.*
- **Priyanka Chauhan**. Mycobactin biosynthesis is essential for the growth and virulence of *Mycobacterium tuberculosis*: An attractive target for therapeutic interventions. Presented at National Science Day Symposium 2013, held at University of Delhi South Campus. *The first author was selected for Best Oral Presentation Award.*
- **Garima Khare**, Prachi Nangpal, Anil K. Tyagi. Mycobacterium tuberculosis bacterioferritins-Structural and biochemical characterization to facilitate rational drug design. Presented at National Symposium on “Innovation in TB Diagnostics, Drug Targets and Biomarkers”, 2014, held at Mahatma Gandhi Institute of Medical Sciences, Sevagram. *The first author was selected for Best Poster Award.*
- **Ritika Kar**, Priyanka Chauhan, Garima Khare, Prachi Nangpal, Anil K. Tyagi. rBCG85C – A Superior Vaccine than BCG : Modifications for Human Clinical Trials. Presented at National Science Day Symposium (2013), held at University of Delhi South Campus. *The first author was selected for Best Poster Award.*

State – None

University - None

Professor Vijay K. Chaudhary

International –

National – **Biotech Product and Process Development and Commercialization Award 2014** – given by Department of Biotechnology, Ministry of Science and Technology, Govt. of India

State – None

University –

Research fellow-

International – Best poster award to Charanpreet Kaur, Payal Grover, Kapil Mathur at the International Conference on technological challenges in developing affordable *in vitro* molecular diagnostics held in March, 2012, Navi Mumbai, India.

National - Nil

State - Nil

University –

Third prize awarded to Charanpreet Kaur, Payal Grover, Kapil Mathur for poster presentation at National Science Day Symposium (28th February 2011) at University of Delhi South Campus.

Second Prize awarded to Charanpreet Kaur, Payal Grover, Kapil Mathur for poster presentation at UGC-SAP (2012) at Department of Biochemistry, University of Delhi South Campus.

Professor Prahlad C. Ghosh

Faculty

1. Fellow of National Academy of Sciences, India. 1997
2. Awarded travel fellowship by the University of Delhi to attend International conference on International Liposomes Research Days & Lipids, Liposomes & Membrane Biophysics, held at University of British Columbia campus, Vancouver, Canada, August 4-8, 2010.

Research Fellows:

1. Dr. Nikhil Tyagi was awarded Prof. A. R Rao Memorial Best Poster Award in the International Symposium on Cancer Chemoprevention and Translational Research held at the School of Life Sciences, J NU, New Delhi, December 2009.
2. Nikhil Tyagi and P.C. Ghosh (2009). Folate-mediated targeted delivery of ricin entrapped into sterically stabilized liposomes to human epidermoid carcinoma (KB) cells for their selective elimination. Presented at International Symposium on Cancer Chemotherapy and Translation Research, held at JNU, New Delhi, December 21, 2009.
3. Manendra Pachauri and **Prahlad C. Ghosh. (2012)** Combination of Curcumin and Monensin Loaded Poly(lactic-co-glycolic acid) Nanoparticles for Cancer Therapy : at 3rd International Conference of Carcinogenesis Foundation- Frontiers in Carcinogenesis and Preventive Oncology Molecular Mechanisms to Therapeutics, New Delhi, India, 19-21 November, **2012. *The first author was selected for Award of Excellence.***

4. **Vinoth Rajendran**, Mohsin Raza, Shilpa Rohra and Prahlad C. Ghosh. Evaluation of liposomal monensin in combination with artemisinin on growth inhibition of blood stages of *Plasmodium falciparum* (3D7) *in vitro*. Presented at International conference on “Emerging Trends of Nanotechnology in drug discovery” (2014), held at University of Delhi South Campus. *The first author was selected for 1st Best Poster Award.*
5. **Vinoth Rajendran, Manendra Pachauri, Mohsin Raza**, selected for Biotechnology Entrepreneurship student team at “ABLE-BEST INDIA 2014”, held at Fortune Select Trinity Hotel, Bangalore. *The team members were awarded travel fellowship.*

Professor Debi P. Sarkar

International – None

National –

- Recipient of J.C. BOSE National Fellowship (DST) Award, September, 2010
- Conferred Prof. B.K. Bachhawat Memorial Lecture Award 2011 by NASI, Allahabad

State – None

University – None

Research fellow-

International – None

National - None

State - None

University – None

Professor Suman Kundu

International –

1. Citation in Marquis Who's Who in Medicine and Healthcare 2011-2012 (8th Edition)
2. Indo-US Research Fellow, 2010, from Indo-US Science and Technology Forum and DST, Government of India.

National – None

State - None

University –

1. University of Delhi Travel Award for Attending International Conference Abroad, 2012.

Research fellow

International –

1. *Amit Kumar*, Travel Award (2013), International Conference on Biomolecular Forms and Functions, A Celebration of 50 Years of the Ramachandran Map, Indian Institute of Sciences, Bangalore, January 8th -11th , 2013.
2. *Amit Kumar*, Boehringer Ingelheim Fonds (Germany) International Travel Grant as visiting research scholar for 3 months (Oct-Dec), 2012 to Ural Federal State University, Ekaterinburg, Russian Federation

National –

1. *Sanjay Kumar Dey*, 3rd Best Poster Award (2013), Conference on Recent Advances in Computational Drug Design, 16th-17th September, 2013, Indian Institute of Science, Bangalore.
2. *Sanjay Kumar Dey*, **Ratna Phadke Young Scientist Award** (2013), National Symposium on Frontiers of Biophysics, Biotechnology and Bioinformatics and 37th Annual Meeting of Indian Biophysical Society (IBS), Jan 13-16, 2013, University of Mumbai, Kalina Campus, Mumbai.
3. *Amit Kumar*, Travel Award (2011), Indo-US Workshop / Symposium on Modern Trends in Macromolecular Structures, February 21-24, 2011, Indian Institute of Technology Bombay, Mumbai, India.
4. *Sheetal Uppal*, Recognition for selection among 20 best papers nationally (2009), Young Explorers in Biology, September 13-18, 2009, TIFR, Mumbai, India.

State –

1. *Amit Kumar*, Oral Presentation Award (2013) Biospark, School of Life Sciences, Jawaharlal Nehru University, February 16th, 2013.
2. *Sanjay Kumar Dey*, Best Poster Award (2013) SYSCON-2013 on Interfacing Basic and Translational Research, 23rd August, 2013, All India Institute of Medical Sciences, New Delhi, India.

University –

1. *Amit Kumar*, 3rd Best Poster Award (2011), National Science Day Symposium, University of Delhi South Campus, Feb 28, 2011

Professor Alo Nag

International –

1. Invited as Research Scientist Fellow in University of Illinois at Chicago, USA, from May to July 2012.
2. Appreciation award from Carcinogenesis Foundation, USA for organizing the International Carcinogenesis conference in India in Nov 2012.

National – None

State - None

University – None

Research fellow

International –

1. *Vaibhav Chand*, **Award of Excellence and Oral presentation** (2012), International Conference Frontiers in Carcinogenesis and Preventive Oncology Molecular Mechanisms to Therapeutics, RML Hospital, New Delhi India, November 19-21, 2012.
2. *Neha Jaiswal*, **Award of Excellence and Oral presentation** (2012), International Conference Frontiers in Carcinogenesis and Preventive Oncology Molecular Mechanisms to Therapeutics, RML Hospital, New Delhi India, November 19-21, 2012.
3. *Vaibhav Chand*, **Award of Excellence for Poster presentation** (2012), International Symposium on Cancer Biology, National Institute of Immunology, New Delhi, India, November 14-16, 2011.

National -

None

State –

University –

1. *Neha Jaiswal*, **Third Best Poster Award**, UGC-SAP Symposium, Dept. of Biochemistry, Univ. of Delhi South Campus, New Delhi India, 2012.
2. *Neha Jaiswal*, **Second Best Poster Award**, UGC-SAP Symposium, Dept. of Biochemistry, Univ. of Delhi South Campus, New Delhi India, 2011.

Dr. Suneel Kateriya

Faculty

International –

- Max Planck Visiting Fellowship (2012-2016) from Department of Science and Technology-India and Max Planck Group-Germany

International Fellowship

National – 3

- Indian Science Congress Young Scientist Award in New Biology Section for 2009
- Indian Biophysical Society Ratna Phadke Young Scientist Award for 2010
- Association of Microbiologist of India Young Scientist Award for 2011

State – None

University – None

Research fellow

International –

- Mayanka Awasthi, Travel Award, 15th International Conference on the Cell and Molecular Biology of Chlamydomonas, June 5-10, 2012, Potsdam, **Germany**
- Peeyush Ranjan, Travel Award, 15th International Conference on the Cell and Molecular Biology of Chlamydomonas, June 5-10, 2012, Potsdam, **Germany**
- Meenakshi Tanwar, Travel Award, 16th International Congress on Photobiology, September 8-12th, 2014, Cordoba, **Argentina**.

National –

- Mayanka Awasthi, Travel Award; 82nd Annual Meeting of Society of Biological Chemists, India, December 12-15th, 2013, University of Hyderabad, **India**.

University –

- Mayanka Awasthi, Peeyush Ranjan, Meenakshi Tanwar, Best Poster Award, National Science Day Symposium, 2011. **India**
- Peeyush Ranjan, Second Best Poster Award, UGC-SAP meeting UDSC, 17-18th March, 2011. **India**
- Mayanka Awasthi, Second Best Poster Award, UGC-SAP meeting UDSC, 17-18th March, 2011, **India**
- Meenakshi Tanwar, Second Best Poster Award, UGC-SAP meeting UDSC, 17-18th March, 2011. **India**

- Peeyush Ranjan, Third Best Poster Award, National Science Day Symposium, 28th February 2013. **India.**
- Peeyush Ranjan, Young Scientist Award, 7th Annual Convention of ABAP & International Conference on Plant Biotechnology, Molecular Medicine & Human Health, October 18th-20th, 2013, UDSC, New Delhi, **India.**
- Mayanka Awasthi, Second Best Poster Award, National Science Day Symposium, 28th February 2014. **India.**

3.18 Students registered

Professor Anil K. Tyagi

Five (05)

Professor Vijay K. Chaudhary

Four (04)

Professor Prahlad C. Ghosh

Seven (07)

Professor Debi P. Sarkar

Three (03)

Professor Suman Kundu

Five (05)

Professor Alo Nag

Four (04)

Dr. Suneel Kateriya

Three (03)

3.19 Ph.D. awarded –

Professor Anil K. Tyagi

S.No.	Name of Scholar	Whether JRF/ SRF	Date of Registration	Date of Thesis Submission	Degree Awarded
1	Bappaditya Dey	Yes / CSIR	Nov 4, 2004	June 2009	Feb. 2010
2	Vikram Saini	Yes / CSIR	July 29, 2004	June 2010	Sept. 2011
3	Vineel Reddy	No	Feb 28, 2006	Jan 2012	Aug 2012
4	Garima Khare	Yes / CSIR	Aug 4, 2006	Aug 2011	Jan 2012
5	Rupangi Verma	Yes / CSIR	Jan 24, 2008	July 2013	Feb 2014
6	Priyanka Chauhan	Yes / CSIR	May 13, 2008	July 2013	March 2014
7	Prachi Nangpal	Yes / CSIR	Jan 5, 2010	-	-
8	Ritika Kar	Yes / CSIR	July 19, 2010	-	-
9	Akshay Rohilla	No	Jan 27, 2012	-	-
10	Shubhita Mathur	JRF / DBT	July 25, 2013	-	-
11	Swati Singh	JRF / ICMR	Oct 23, 2013	-	-

Professor Vijay K. Chaudhary

S.No.	Name of Scholar	Date of Qualifying JRF	Whether JRF/ SRF	Date of Registration	Date of Thesis Submission	Degree Awarded
1.	Payal Grover	No	No	Nov 6, 2008	Dec 31, 2014	-
2.	Charanpreet Kaur	No	No	Feb 20, 2009	Sept 18, 2014	-
3.	Kapil Mathur	No	SRF	Jan 5, 2010	-	-
4.	Shikha Singh	Sept, 2012	SRF / Inspire	May 9, 2012	-	-
5.	Vaishali Verma	June 2011	SRF / CSIR	July 12, 2012	-	-
6.	Shruti Bakshi	Dec 2011	SRF / CSIR	July 12, 2012	-	-

Professor Prahlad C. Ghosh

S.No.	Name of Scholar	Date of Qualifying JRF	Whether JRF/SRF	Date of Registration	Date of Thesis Submission	Degree Awarded
1.	Nikhil Tyagi	July 2005	Yes/ICMR	Aug 04, 2006	Jan 10, 2011	Sep 2011
2.	RanuSurolia	June 2007	Yes/CSIR	Feb 23, 2007	Mar 15, 2011	Nov 2011
3.	ManendraPachuari	Dec 2007	Yes/CSIR	Feb 20, 2009	Feb 19, 2014	Dec 2014
4.	Pooja Tiwari	Dec 2008	SRF/CSIR	July 21, 2010	-	-
5.	DeepaJha	Dec 2008	SRF/CSIR	Feb 02, 2011	-	-
6.	Vandana	July 2011	SRF/DBT	July 29, 2011	-	-
7.	VinothRajendran	Jan 2012	SRF/CSIR	Jan 27, 2012	-	-
8.	Mohsin Raza	June 2012	SRF/UGC	July 22, 2013	-	-
9.	Swati Singh	July 2012	JRF/ICMR	Oct 23, 2013	-	-
10.	Shivani Sharma	Dec 2014	SRF/CSIR	Dec 17, 2014	-	-

M.Phil. awarded

S. No.	Name of the Students	Title of the M.Phil. Thesis	Year of the Award
1.	Divya Pandey	Evaluation of anti-malarial activity of soya phosphatidylcholine-stearylamine liposomes for the treatment of murine model of malaria.	2011

Professor Debi P. Sarkar

S.No.	Name of Scholar	Date of Qualifying JRF	Whether JRF/SRF	Date of Registration	Date of Thesis Submission	Degree Awarded
1.	Md. Muntaz Khan	N/A	No	Jan 6, 2010	March 3, 2014	Yes
2.	Nirmalya Ganguli	N/A	No	Jan 6, 2010	July 1, 2014	Yes
3.	Sunandini Chandra		SRF / CSIR	July 27, 2010	-	-

Professor Suman Kundu

S.No.	Name of Scholar	Date of Qualifying JRF	Whether JRF/ SRF	Date of Registration	Date of Thesis Submission	Degree Awarded
1.	Deepak Kumar Jangir	Aug 2007	Yes / ICMR	Nov 6, 2008	July 4, 2012	Feb, 2013
2.	Amit Kumar	Dec 2006	Yes / CSIR	Jan 24, 2008	July 29, 2013	March, 2014
3.	Sheetal Uppal	Dec 2007	SRF / CSIR	Nov 6, 2008	Feb 4, 2014	-
4.	Manish Shandilya	Dec 2007	SRF / UGC	Feb 20, 2009	May 19, 2014	-
5.	Richa Arya	Dec 2010	SRF / UGC	July 29, 2011	-	-
6.	Sanjay Kumar Dey	June 2010	SRF / UGC	Nov 11, 2011	-	-
7.	Pushpanjali Dasauni	No	SRF / ICMR	Nov 7, 2013	-	-

Professor Alo Nag

S.No.	Name of Scholar	Date of Qualifying JRF	Whether JRF/ SRF	Date of Registration	Date of Thesis Submission	Degree Awarded
1.	Vaibhav Chand	25-10-2007	CSIR	Feb 20, 2009	August, 2014	-
2.	Rince John	23-05-2008	DBT	Feb 20, 2009	August 16, 2014	-
3.	Neha Jaiswal	14-09-2009	DBT	April 9, 2010	April 7, 2015	-
4.	Pallavi Singhal	05-05-2009	ICMR	April 13, 2010	April 6, 2015	-

Dr. Suneel Kateriya

S.No.	Name of Scholar	Date of Qualifying JRF	Whether JRF/SRF	Date of Registration	Date of Thesis Submission	Degree Awarded
1.	Peeyush Ranjan	2008	UGC-JRF	10 Nov 2008	Jan.2014	Oct.2014
2.	Mayanka	2009	UGC-JRF	27 July 2009	Jan.2014	Feb.2015

3.	Meenakshi	2009	UGC-JRF	06 Jan 2011		-
4.	Komal Sharma	2013	ICMR-JRF	06 May 2014		-
5.	Yama Atri	2014	UGC-JRF	16 July 2014		-

3.20 Research Scholars receiving fellowships (newly enrolled + existing ones)

Professor Anil K. Tyagi

JRF (2) – Shubhita Mathur, Swati Singh

SRF (7) – Prachi Nangpal, Ritika Kar, Priyanka Chauhan, Rupangi Verma, Garima Khare, Vikram Saini, Bappaditya Dey

Project fellows (2) - Akshay Rohilla, Vineel Reddy

Any other – None

Professor Vijay K. Chaudhary

JRF – None

SRF (4) – Kapil Mathur, Shikha Singh, Vaishali Verma, Shruti Bakshi

Project fellows- None

Any other - None

Professor Prahlad C. Ghosh

JRF (1) – Swati Singh

SRF (6) - Pooja Tiwari, Deepa Jha, Vandana, Vinoth Rajendran, Mohsin Raza, Shivani Sharma

Professor Debi P. Sarkar

JRF- None

SRF (1) - Sunandini Chandra

Project fellows (1)- Deepa Singh

Any other – none

Professor Suman Kundu

JRF – None

SRF (5) – Sheetal Uppal, Manish Shandilya, Richa Arya, Sanjay Kumar Dey, Pushpanjali Dasauni

Project fellows (3) – Varun Chhabra, Ankur Srivastava, Priya Kumari

Any other – none

Professor Alo Nag

JRF (1) – Puneet Sharma

SRF (4) – Vaibhav Chand, Rince John, Neha Jaiswal, Pallavi Singhal

Project fellows (3) – Om Singh Rathore, Vandana Kumari, Pranay Goel

Any other - none

Dr. Suneel Kateriya

JRF (2) – Komal Sharma and Yama Atri

SRF (1) – Meenakshi Tanwar

Project fellows -None

IQAC Report - Details
Part B, Criterion IV
Department of Biochemistry
July 2009 – June 2014

4.1 Details of infrastructure facilities – Class rooms and Laboratories

Number of class rooms: Two class rooms are available for M.Sc., M. Phil. and Ph. D. teaching – One in the old Bachhawat Block and One in the new Biotech Centre.

Number of laboratories: Two laboratories are available for M.Sc. students – one for final year students and another for first year students. Each of the 7 faculties in the department supervises one laboratory each for Ph.D research work. CIF laboratories are available for common equipments. Besides, some specialized laboratories are available for facilities such as tissue culture, animal cell culture, radio-isotope facility, photographic dark, monoclonal antibody preparation, dedicated room for equipments requiring constant and low humidity, washing and autoclaving, bioinformatics sub-centre, DNA sequencing, etc. The department also has separate animal house and P3 facility for animal work.

Number of Seminar Halls: One seminar hall is available for conducting seminars

4.1 Details of infrastructure facilities – Equipments

**RECORD OF EQUIPMENT PURCHASED IN THE DEPARTMENT OF BIOCHEMISTRY
DURING LAST FIVE YEARS (2009 TO 2014)**

S.No.	Name of Equipment	Equipment Cost	Date of Purchase	Funding Agency
1.	Voltas vertis Gold 1.5 Ton Ac	Rs.42,800	12.03.2014	Deptt. Funds
2.	Micro Pulsar Electroporator	US\$ 3000 Rs.1,41,000	08.10.2009	-do-
3.	Radiation Survey Meter	Rs.31,499	19.12.2011	-do-
4.	Vest Frost Glass Door Refrigerator	Rs.53,156	24.03.2012	-do-
5.	Orbital Incubator Shaker	Rs.47,250	24.03.2012	-do-
6.	Kent RO System	Rs.44,000	14.08.2012	-do-
7.	Liquid Nitrogen gas Container	US\$ 4100 Rs.2,46,314	14.02.2013	-do-
8.	TFT Monitor	Rs. 6,100	26.09.2014	-do-
9.	Sartorius Electronic Analytical Balance	Rs.74,250	22.02.2014	-do-
10.	01 No. Dancing Shaker	Rs.18,309	07.08.2009	Excellence Grant 49.5 lakh
11.	Heating Block	Rs.14,985	03.08.2009	-do-
12.	Water Bath	Rs.19,125	01.10.2009	-do-
13.	PCR Machine	US\$ 7,700	24.11.2009	-do-

		Rs.3,99,635		
14.	01 No. Poly bag Sealer	Rs. 3,150	01.10.2009	-do-
15.	01 No. 10 KVA On Line UPS System	Rs.1,69,000	24.11.2009	-do-
16.	01 No. Gel Rocker	Rs.21,938	16.11.2009	-do-
17.	01 No. Vacuum Pump	Rs.48,849	25.09.2009	-do-
18.	01 No. Refrigerated Centrifuge	US\$ 30,287 Rs.15,53,054	30.11.2009	-do-
19.	01 No. Microfuge with Rotor	Rs.1,99,412	26.10.2009	-do-
20.	01 No. Sonicator	US\$ 6,260 Rs. 3,30,013	23.10.2009	-do-
21.	Electrophoresis	US\$ 5,065 Rs.2,46,906	26.09.2009	-do-
22.	01 No. Spectrophotometer	US\$ 23,300 Rs.11,53,523	14.09.2009	-do-
23.	Inverted Phase Contrast Fluorescence Microscope with Digital Camera	JP¥ 14,62,728 Rs.7,61,062	17.06.2010	-do-
24.	Laserjet Color Printer	Rs.24,900	15.07.2009	UGC-Infrastructure Grant
25.	Multispin- Motorless Magnetic Stirrer	Rs.14,963	23.11.2009	-do-
26.	Almirah	Rs.5,000	16.11.2009	-do-
27.	Desktop Computer	Rs.61,500	11.01.2010	-do-
28.	Aquaguard Water Purifier	Rs.8,490	14.01.2010	-do-
29.	Aquaguard Water Purifier	Rs.8,490	18.01.2010	-do-
30.	02 No. Voltas vertis Gold 1.5 ton Ac	Rs.62,110	27.01.2010	-do-
31.	02 No. Desktop Computer	Rs.57,700	01.02.2010	-do-
32.	HP Scanner	Rs.9,200	01.09.2009	-do-
33.	Aquaguard Water Purifier	Rs.9,490	04.03.2010	-do-
34.	Voltas vertis Plus Window type 1.5 ton Ac	Rs.15,586	03.11.2009	-do-
35.	Voltas vertis Plus Window type 1.5 ton Ac	Rs.15,586	20.11.2009	-do-
36.	Voltas vertis Plus Window type 1.5 ton Ac	Rs. 15,586	24.11.2009	-do-
37.	Rocker Shaker	Rs.10,688	08.03.2010	-do-
38.	Upright Cooler	Rs. 53,179	15.03.2010	-do-
39.	Voltas vertis Gold 1.5 ton Split Ac	Rs.26,654	25.07.2009	-do-
40.	02 No. On line UPS 10 KVA	Rs.2,90,000	24.03.2010	-do-
41.	Network Switch 48 Port	Rs.80,000	15.04.2010	-do-
42.	HP Laptop	Rs.38,500	03.09.2012	-do-
43.	Hot Air Oven	Rs. 67,095	03.10.2012	-do-
44.	Liquid Nitrogen Container	Rs.32,025	29.10.2012	-do-
45.	02 No. Vertis Gold 2 ton Split Ac	Rs.66,240	08.07.2009	OBC- Special Grant
46.	Vertis Gold 1.5 ton Split Ac	Rs.29,754	25.07.2009	-do-
47.	Vertis Gold 1.5 ton Split Ac	Rs.29,754	28.07.2009	-do-
48.	02 No. Vertis Gold 2 ton	Rs. 66,240	08.09.2009	-do-

	Split Ac			
49.	Multimedia Projector CPX-4020 with Accessories	Rs.1,97,437	13.09.2010	XI Plan
50.	UV-Vis Spectrophotometer System	US\$ 19,200 Rs. 9,32,976	14.09.2009	UGC-SAP
51.	Gel Documentation System	US\$ 19,100 Rs. 8,90,715	24.07.2009	-do-
52.	Weighing Balance	Rs.1,36,200	19.07.2010	-do-

**RECORD OF EQUIPMENT PURCHASED IN THE DEPARTMENT OF BIOCHEMISTRY
DURING LAST FIVE YEARS (2009 TO 2014) (More than ` 1Lakh)**

S.No.	Name of Equipment	Equipment Cost	Date of Purchase	Funding Agency
1.	Micro Pulsar Electroporator	US\$ 3000 Rs. 1,41,000	08.10.2009	Deptt. Funds
2.	Liquid Nitrogen gas Container	US\$ 4100 Rs. 2,46,314	14.02.2013	-do-
3.	PCR Machine	US\$ 7,700 Rs. 3,99,635	24.11.2009	Excellence Grant 49.5 lakh
4.	01 No. 10 KVA On Line UPS System	Rs. 1,69,000	24.11.2009	-do-
5.	01 No. Refrigerated Centrifuge	US\$ 30,287 Rs. 15,53,054	30.11.2009	-do-
6.	01 No. Microfuge with Rotor	Rs. 1,99,412	26.10.2009	-do-
7.	01 No. Sonicator	US\$ 6,260 Rs.3,30,013	23.10.2009	-do-
8.	Electrophoresis	US\$ 5,065 Rs. 2,46,906	26.09.2009	-do-
9.	01 No. Spectrophotometer	US\$ 23,300 Rs.11,53,523	14.09.2009	-do-
10.	Inverted Phase Contrast Fluorescence Microscope with Digital Camera	JP¥ 14,62,728 Rs. 7,61,062	17.06.2010	-do-
11.	02 No. On line UPS 10 KVA	Rs. 2,90,000	24.03.2010	UGC- Infrastructure Grant
12.	Multimedia Projector CPX-4020 with Accessories	Rs. 1,97,437	13.09.2010	XI Plan
13.	UV-Vis Spectrophotometer System	US\$ 19,200 Rs. 9,32,976	14.09.2009	UGC-SAP
14.	Gel Documentation System	US\$ 19,100 Rs. 8,90,715	24.07.2009	-do-
15.	Weighing Balance	Rs. 1,36,200	19.07.2010	-do-
16.	Electroporation System	US\$ 10,880 Rs. 5,27,809	08.02.2011	DST-JC Bose Prof. Anil k. tyagi
17.	Homogeniser	CHF 6,850 Rs. 3,19,375	24.07.2010	DBT-rBCG85C Prof. Anil K. Tyagi
18.	Nikon Trinocular Microscope	JP¥ 5,09,527 Rs. 3,01,790	23.09.2010	-do-
19.	Blotting & Power Supply	US\$ 5,404 Rs. 2,63,904	08.02.2011	DBT-rBCG85C Prof. Anil K. Tyagi
20.	Electroporation System	US\$ 6,274 Rs. 3,00,316	08.02.2011	-do-
21.	Electrophoresis and power supply	US\$ 5,280 Rs. 2,40,116	08.02.2011	-do-
22.	Innova Shaker	US\$ 16,268 Rs. 7,82,897	31.03.2011	-do-

23.	Heraeus Fresco 21 Microcentrifuge	Euro 6,971 Rs. 4,80,026	22.02.2011	-do-
24.	CO ₂ Incubator	US\$ 6,813 Rs. 3,21,957	25.03.2011	-do-
25.	On Line UPS System	Rs. 2,75,100	07.04.2011	-do-
26.	Servo Voltage Stabilizer	Rs. 2,91,600	16.09.2013	DBT- Development and Evaluation Prof. Anil K. Tyagi
27.	Beadbeater	US\$ 3,351 Rs. 2,09,824	07.09.2013	-do-
28.	BSL3 Facility	Rs. 89,23,880	25.05.2009	DBT-COE Prof. Anil K. Tyagi
29.	Refrigerated Shaker Incubator	US\$ 6,682 Rs. 3,50,259	05.12.2009	-do-
30.	Biosafety Cabinet Exhaust System	Rs. 5,31,190	13.09.2010	-do-
31.	Fluorescence Spectrophotometer with Microplate reader	Rs. 8,80,000	17.03.2012	DBT-COE- Phase-II Prof. Anil K. Tyagi
32.	Ultra low temperature Freezer -86 ^o C	US\$ 7,650 Rs. 4,27,882	28.04.2013	-do-
33.	Fluorescence Research Microscope	JP¥ 11,70,494 Rs. 7,64,788	19.04.2012	-do-
34.	DNA Sequencer 96 Capillary	Rs. 99,34,452	31.01.2011	DBT-DNA Prof. V.K. Chaudhary
35.	Nanodrop Spectrophotometer	Rs. 6,90,613	04.04.2012	-do-
36.	Ultra water purification system	Rs. 4,82,437	21.09.2011	CSIR- Development Prof. V.K. Chaudhary
37.	High-pressure Homogenizer	Rs. 12,38,214	28.03.2012	-do-
38.	Ultra Low Temperature Freezar-86 ^o C	Rs. 4,28,374	28.04.2012	-do-
39.	MiSeq System	Rs. 89,19,578	23.05.2013	-do-
40.	25 ^o C Vertical Deep Freezer	Rs. 1,35,000	04.02.2014	-do-
41.	CCD Camera	Rs. 2,36,250	06.02.2014	-do-
42.	Spectrophotometer	Rs. 5,49,021	22.05.2014	-do-
43.	Biosafety Cabinet	Rs. 6,29,083	14.04.2012	DBT-Indo-Finland Prof. V.K. Chaudhary
44.	Bio-Safety Hood	Rs. 1,21,331	09.03.2009	DBT (Role) Dr. Alo Nag
45.	02 Nos. CO ₂ Incubator	Rs. 7,28,171	01.05.2009	-do-
46.	Microscope	Rs. 2,13,137	29.06.2009	-do-
47.	Chromatography	Rs. 8,00,728	24.03.2009	-do-
48.	Refrigerated High speed centrifuge & Microcentrifuge	Rs. 4,77,694	11.11.2009	-do-
49.	PCR Machine	Rs. 1,98,476	18.01.2011	-do-

50.	UVC-5000-230V, Digital dry bath, Dual benchtop transilluminator	Rs. 3,17,419	31.03.2011	-do-
51.	Shaking Incubator	Rs. 2,00,000	21.05.2010	DST (SERC) Dr. Alo Nag
52.	Spectrofluorometer	Rs. 11,43,162	09.07.2011	-do-
53.	Alpha RA8 Water Bath	Rs. 1,30,500	18.06.2010	DBT (Development) Dr. Suneel Kateriya
54.	Spectrophotometer System	Rs. 10,04,327	14.08.2010	-do-
55.	Light Spectrometer	Rs. 27,98,400	12.05.2009	DBT (COE- Structure function) Dr. Suman Kundu
56.	Fourier Transform infrared (FTIR) Spectrometer	Rs. 15,09,990	21.04.2009	DBT (Spectroscopic) Dr. Suman Kundu
57.	Mini Electrophoresis apparatus	Rs. 1,91,669	11.05.2011	DU/DST- Dr. Suman Kundu
58.	Mini Electrophoresis apparatus	Rs. 1,91,669	11.05.2011	DU/DST- Dr. Alo Nag
59.	Spectrophotometer	Rs. 2,38,410	22.03.2010	-do-
60.	Digital camera	Rs. 1,80,583	08.04.2010	DU/DST- Prof. P.C. Ghosh
61.	Zetasizer	Rs. 20,09,133	22.12.2003	DBT (Biodegradable) Prof. P.C. Ghosh
62.	HPLC	Rs. 15,18,285	22.12.2009	-do-
63.	Sonicator	Rs. 3,45,467	26.01.2009	DBT (Biodegradable) Prof. P.C. Ghosh
64.	Spectrometer	Rs. 4,22,776	25.02.2009	-do-
65.	Combi Harvester,(220v) (SK 11025) with pressure/Vacuum system for combi 12-well cell harvester0	Rs. 6,00,631	09.10.2009	-do-
66.	Ultra Low Temperature & Chromatography Refrigerators	Rs. 19,93,094	07.12.2011	DBT (Novel) Prof. D.P. Sarkar
67.	Imac Computer	Rs. 1,27,951	20.01.2011	DST-JC Bose Prof. D.P. Sarkar
68.	Electrophoresis Systems	Rs. 3,87,379	04.11.2011	-do-
69.	06 Nos. Platinim 4 star split air conditioners	Rs. 3,25,640	14.05.2012	-do-
70.	Elix Water Purification system	Rs. 8,29,821	22.05.2012	-do-
71.	Refrigerated Orbital shaker	Rs. 4,90,629	03.02.2011	-do-
72.	Sonicator	Rs. 2,34,378	09.12.2011	-do-
73.	On line UPS	Rs. 2,90,000	30.01.2009	DBT (Utilization) Prof. D.P. Sarkar
	Total	Rs.6,71,03,832		

4.3 Library services

List of Books Purchased through UGC SAP Project during Last Four Years (2009-10, 2010-11, 2011-12 & 2012-13) for the Department's Library; Total Amount 1.94 Lakhs

a) The Following Books Purchased by the Department for the year of 2009-10 through UGC SAP Project

Sr.No	Name of the Book	Author	No of Copies
1)	Biochemistry, 6 th Ed,2007	Berg	1
2)	Introduction of Protein Structure, 2 nd Ed,1999	Branden C.	1
3)	Genomes 3, 2007	Brown	1
4)	Cellular Microbiology, 2 nd Ed, 2005	Cossart P.	1
5)	Proteins : Structures and Molecular Properties, 2 nd Ed, 1993	Creighton	1
6)	Biochemistry, 2010 ,4 th Ed	Garrett	1
7)	Developmental Biology , 8 th Ed,2008	Gilbert	1
8)	Mass Spectrometry : Principles and Applications, 2 nd ed, 2001	Hoffmann	1
9)	Kuby Immunology, 6 th Ed, 2007	Kindt	1
10)	Genes IX, 2008	Lewin B.	1
11)	Molecular Cell Biology, 6 th Ed, 2008	Lodish	1
12)	Bioinformatics: Sequence and Genome Analysis,2 nd Ed,2010	Mount D.W.	1
13)	Lehninger Principles of Biochemistry, 5 th Ed, 2008	Nelson Vau	1
14)	Principles of Genome Analysis and Genomics, 3 rd Ed, 2007	Primrose S.	1
15)	Crystallography made crystal clear,3 rd Ed,2006	Rhodes G.	1
16)	Biochemical Calculations, 2 nd Ed,2004	Segel	1
17)	Physical Biochemistry: Principles & Application, 2/Ed	Sheehan	1
18)	Matabolome Analysis : An Introduction, 2007	Villas-Boas	1
19)	Recombinant DNA, 3 rd Ed, 2007	Watson	1
20)	Molecular Biology of the Gene, 5 th Ed,2009	Watson J.D.	1
21)	Molecular Biology, 3 rd Ed, 2005	Weaver R.F.	1

Total no Books = 21

b) The Following Books Purchased by the Department for the year of 2010-11 through UGC SAP Project

Sr.No	Name of the Book	Author	No of Copies
1)	Introduction to bioinformatics, 2009 (Spl India Reprint)	Tramontano Anna	1
2)	Animal cell culture and technology, Edi-II, 2008	Butler M	1
3)	Bioinformatics : A practical guide to the analysis of genes and proteins , Edi-III, 2006	Baxevanis	1
4)	World of the Cell, Edi VII, 2009	Becker	1
5)	Stem cells, Edi-VII, 2011	Ariff Bongso	1

6)	Developmental Biology, 9 th Ed,2010	S.F. Gilbert	1
7)	Medical Microbiology, 25 th ed	Jawetz, ME	1
8)	Enzymes : Biochemistry, Biotechnology, Clinical chemistry	Palmer	1
9)	Immunology essential and fundamental , Edi - II, 2005	Pathak, S.	1
10)	Enzyme kinetics : Catalysis & Control, Edi-1, 2010	Daniel L.Parich	1
11)	Basic Neurochemistry, Edi-VII, 2006	Siegel	1
12)	Physical Biochemistry Principles and Applications ,2 nd Ed, 2009	Sheehan	1
13)	Metabolome Analysis,2005	Vaidyanathan,	1
14)	Metabolomics,2007	Wolfran Weckwerth	1
15)	Principles of Development, 3 rd Ed	Lewis Wolpert	1
16)	Understanding Bioinformatics	M.Zvelebil	1

Total no Books = 21(C/F) +16 =37

c) The Following Books Purchased by the Department for the year of 2011-12 through UGC SAP project

Sr.No	Name of the Book	Author	No of Copies
1)	Fundamental Molecular Biology, 2 nd Ed	Allison	1
2)	Proteins : Structures and Molecular Properties, 2nd Ed 1993	Creighton	1
3)	Immuno Biology 8/Ed	Janeway	1
4)	Medical Microbiology, 25 th ed	Jawetz, ME	1
5)	Genes X, 2011	Lewin B.	1
6)	Genes X, 2011	Lewin B.	1
7)	Methods in Enzymology	Murray	1
8)	Fundamentals of Enzymology	Nicholas C	1
9)	Lehninger Principles of Biochemistry, 5 th Ed, 2011	Nelson & Cox	1
10)	Principles of Gene Manipulation and Genomics, 3rd Ed, 2007	Primrose S.	1
11)	Physical Biochemistry: Principles & Application, 2/Ed	Sheehan	1
12)	Molecular Cloning (Vol-I)	Sabbrook	1
13)	Molecular Cloning (Vol-II)	Sabbrook	1
14)	Molecular Cloning (Vol-III)	Sabbrook	1
15)	Understanding Bioinformatics,2008	M.Zvelebil	1

Total no Books =37(C/F) + 15=52

d) The following Books Purchased by the Department for the year of 2012-13 through UGC SAP Project:

S.No.	Name of Books	Author's Name	No. of copies
1.	Introduction to Experimental Biophysics	Nadeau Jay	1
2.	Physical Biochemistry: Principles & Application, 2/Ed	Sheehan	1

3.	Principles of Development, 4 th Ed	Lewis Wolpert	2
4.	Biochemical Calculations, 2 nd Ed, 2010	Segel	5
5.	Enzymes Biochemistry	Palmer	1
6.	Biotechnology Clinical Chemistry	Slack	1
7.	Lewin's Genes X, 2011	Krebs, J.E.	1
8	Introduction to Protein Structure ,2ed, 1999	Branden, C.I.	1
9.	Physical Biochemistry: Principles & Application, 2/Ed	Sheehan	1
10	Principles of Development, 4 th Ed	Lewis Wolpert	4
11	Principles of Gene Manipulation and Genomics, 3rd Ed, 2007	Primrose S.	1
12	Proteins: Structure and Molecular Properties, 2/e 1993	Creighton, T.E.	1
13.	Understanding Bioinformatics, 2008	M.Zvelebil	1

Total no Books = 52(C/F) + 21=73

4.6 Amount spent on Maintenance

LIST OF AMC DETAILS (FROM ALL FACULTIES & DEPARTMENT GRANT)

Name of the Equipment	1 st Year (2009-10)	2 nd Year (2010-11)	3 rd Year (2011-12)	4 th Year 2012-13)	5 th Year (2013-14)	Total
DEPARTMENT (AMC)						
100 KVA & 125 Servo Voltage Stabilizer	27,200	27,200	27,200	27,200	27,200	136000
UV-Vis Spectrophotometer		11,236	11,030	11,236		33502
Automatic fire Alarm Systems	7,500	7,500	9,000	9,720	9,720	43440
RC 5C Plus	49,635	24,818	49,635	24,818		148906
UPS 10KVA		10,679	10,679	10,679		32037
Water Purifier System	3900	4050	3150	1450		12550
Ultra Centrifuge L-90K	33090	33090		39316		105496
Liquid Scintillation Beta 2900 TR Counter	27,191	29,362	32,298	50562		139413
Multimedia Projector Model CPX-4011	9,927	11030	8988	12360		42305
225 KVA DG Set	43,000	44,000	58924	56682		202606
Water Purification System		35296		92,428		127724
UV-Vis Spectrophotometer & Fluorescence Spectrophotometer				83,146		83146

Inverted Phase Contrast Fluorescence Microscope with Digital Camara				27,000		27000
Gel Documentation System				12,000		12000
Uniline on line 10KVA UPS			14,900	14,900		29800
R.O. Systems		5,325	6,000	2,000	2,500	15825
PCR System				1,56,619		156619
Waters HPLC System					28,090	28090
Panasonic System				7,282		7282
04 Nos. RAC 1.5 Ton Air Conditioner	15,988	40,677	6,969	20,232	51,537	135403
02 Nos. Pentium PC	4,412	8,824	8,000	28,100	28,100	77436
						1596580
PROF. ANIL K. TYAGI LAB (AMC)						
1.5 Ton & 2.0 Ton Air conditioner	7026	11,744	3,699	4,991	21,953	49413
03 Nos. Computers, printers, UPS & Scanner		8,824	9,550	9,550	9,550	37474
ELEX-10 Water Purification System				22,060	16,101	38161
NBS Shaker Model No. 4330	11,030				16,181	27211
R.O. Plan 100 LPH	11,030	11,030	13,236	18,989	18,989	73274
UPS 2KVA & 3KVA	9,375	3,971				13346
250KVA DG Set		51,841		54,965	57,590	164396
Inhalation Exposure System			60,607	61,738		122408
AKT Purifier			3,25,713	331796		657509
Flow Cytometer			1,10,300	1,12,360		222660
30KVA UPS		48,120	47,461	45,061	45,061	185703
High Pressure Horizontal Rectangular sliding door Sterilizer					76,405	76405
04 Nos. Deep Freezer			36,399	37,078	49,438	122915
IVC Ventilator maximum (cagin systems)		88,240	98,877	1,08,989	1,17,978	414084
Fax Machine Panasonic	2,758	2,758	2,500	2,500		10516
02 Nos. UPS 1.5 KVA	3,971					3971
Computer Printer	5,570	5,570	24,850	12,425	21,850	70265

BSL3 Facility at animal house	27,46,374	20,00,000	20,77,550	21,81,428	11,00,000	10105352
15KVA UPS System					39,428	39428
						12434491
PROF. V.K. CHAUDHARY LAB (AMC)						
Elix-10 System	22,060					22060
Nat Steel high Pressure Horizontal Cylindrical Sterilizer		16,854	16,545	13,236	14,607	61242
RC 5C+ & Evolution RC					54,776	54776
Vesi Cooler	3,200					3200
BOHN Make Refrigeration Split Unit (For 2 unit)	45,863	50,449	51,391	54,042	59,551	261296
Synthesizer DNA/RNA Model 394	44,043					44043
Panasonic KTS (KXES824)		7,147	7,147	7,282	7,282	28858
R.O. Water Purification Plant (250 Litre per hours)			16,545	18,539	20,393	55477
Xerox Printer			24,266	24,719		48985
UPS 10KVA				63,266	58,579	121845
UPS 15KVA					78,856	78856
DNA Sequencer Model ABI 3730XL and 3130XL					6,34,834	634834
AKTA Explorer (2 Nos) and BIA Core 3900	447761	701244	1197407	1055089	495376	3896877
Air Conditioners					1,69,048	169048
						5481397
PROF. P.C. GHOSH LAB (AMC)						
02 Nos. Computer		4,412	9,500	19,000		32912
04 Nos. Air Conditioners		8,871	8499	8,335	15,220	40925
Kent Grand Plus Mineral R.O. System					2,000	2000
						75837
PROF. D.P. SARKAR LAB (AMC)						
ELIX-10 Water Purification System		22,060				22060
						22060
DR. SUMAN KUNDU LAB (AMC)						
02 Nos. Air	3,286	6,140	9,016	8,923		27365

conditioners						
Spectrometer		44,120	35,296	43,708	44,944	168068
10 KVA UPS		14,600	12,500		14,950	42050
						237483
DR. ALO NAG LAB (AMC)						
Air conditioners			3,070	3,070	3,024	9164
						9164
DR. SUNEEL KATERIYA LAB (AMC)						
Total AMC all Lab & Departmental						19857012