ANNEXURE

IQAC Report – Details, Part B

Department of Biochemistry

July 2013 – 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, honestly and the immediate solution to problems. Our curriculum has seen inclusion of new papers or deletion or 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 – <u>Attendance and Presentation of Papers</u>

1. 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.
2. **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.
3. 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.
4. 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 Chlamydomanas reinhardtii. 7th Annual Convention of ABAP and International Conference on Plant Biotechnology, Molecular Medicine and Human Health, 18-20 October, 2013 India
5. 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**)
6. 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).**
7. International Symposium on "Rotavirus Vaccines for India – The Evidence and the Promise" New Delhi, 14th & 15th May 2013. (**Prof. Anil K. Tyagi).**

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". **(Professor P.C. Ghosh).**
9. Pooja Tiwari and **Prahlad C. Ghosh. (2013).** Monensin encapsulated in poly-methyl methacrylate nanoparticles for anti-malarial therapy: at International Conference on Nanomedicie-2013, New Delhi, India, and 30-31 May, **2013**.
10. 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.
11. 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.

International Conferences – <u>Resource Person</u>

1. 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).**

National Conferences – <u>Attendance and Presentation of papers</u> :

1. Zoonotic Mycobacterial Infections and their Impact on Public Health, AIIMS, New Delhi, 25th-27th February **2013 (Professor Anil K. Tyagi)**.

2. 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)***.

3. 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).**

4. Zoonotic Mycobacterial Infections and their Impact on Public Health, AIIMS, New Delhi, 25th-27th February 2013. (**Prof. Anil K. Tyagi).**

5. 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**)

6. 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**).

7. 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**).

8. 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
9. Suneeta Basireddy, Sheetal Uppal, Amit Kumar Singh, Neha Jaiswal, **Alo Nag** and Suman Kundu (2014) "Assessing Disorderness 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)
10. 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).
11. 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 - <u>Resource Persons</u>

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. 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).**
3. Local Organizer, National Conference on Recent Trends in Protein Structural Biology, 16th-18th December, 2013, Jamia Milia Islamia, Delhi, India (Poster). (**Prof. Suman Kundu**)

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IQAC Report - Details
Part B, Criterion III
Department of Biochemistry
July 2013 – 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
Professor Vijay K. Chaudhary				
2.	High performing lateral-flow type assay concepts for cardiac and infectious disease testing	March 2010-Feb 2013	DBT	89 lakhs
3.	Development of reagents for simple and rapid immunochemical test for culture confirmation of *Mycobacterium tuberculosis* complex. + Evaluation trial	Sept 2006 to March 2014	DBT and Span Diagnostics Ltd.	269 lakhs
4.	DNA sequencing facility at UDSC Phase (IV)	2010 to 2014	DBT	160 lakhs
Professor Prahlad C. Ghosh				
5.	Carrier mediated delivery of anti-malarial drugs for the treatment of malaria	2009-2013	DU-DST Purse Grant	8.5 lakhs
Professor Debi P. Sarkar				
6.	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				
7.	Structure-function relationship in Dopamine Beta Hydroxylase and neuroglobin	Sept 2008-Sept 2013	DBT	39.90 lakhs
8.	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				
9.	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
10.	Role of human ADA3 protein in damaged DNA pathways	Sept 2010-Sept 2013	DST - SERC	17.48 lakhs
Dr. Suneel Kateriya				
11.	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
12.	Biochemical and biophysical characterization of small GTPase from *C. reinhardtii*	2010-2013	DST-SERB	20 lakhs
	Total			985.613 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 Phosphatidyl-choline-stearylamine liposome as antimalarial agent	December 2013 to November 2016	ICMR	24.12672 lakhs
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 *Chlamydomonas reinhardtii* using functional genomics methods. DST-India-RFBR-Russia (2014-16)	2014-2016	DBT-RFBR (Indo-Rusia)	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 *Mycobacterium tuberculosis*	2013-2014	R&D Grant Delhi University	2.8 lakhs
Professor Vijay K. Chaudhary				
2.	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				
3.	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
Professor Debi P. Sarkar				
4.	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				
5.	An Initiative into Three-Dimensional Structure Determination of Extremophilic Globins from Algae, their Mesophilic Counterparts and the Related Plant Hemoglobins	October 2013-May 2014	R&D Grant Delhi University	2.8 lakhs
Professor Alo Nag				
6.	Characterization of mammalian coactivator protein hADA3	October 2013-May 2014	R&D Grant Delhi University	2.8 lakhs
Dr. Suneel Kateriya				
7.	Biochemical Characterization of UV-B Photoreceptor from *Chlamydomonas reinhardtii*	October 2013-May 2014	R&D Grant Delhi University	2.8 lakhs
	Total			19.6 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 *M. tuberculosis* 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 Chlamydomonas reinhardtii	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 = 4)

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)

National – Peer Review Journals None

International – e-Journals (total = 6)

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)

National – e-Journals - None

International – Conference proceedings - None

National – Conference proceedings - None

Professor Vijay K. Chaudhary

International – Peer Review Journals (total = 4)

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)]

National – Peer Review Journals Nil

International – e-Journals (total = 2)

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]

International – Conference proceedings Nil

National – Conference proceedings None

Professor Prahlad C. Ghosh

International – Peer Review Journals (total = 03)

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)

National – Peer Review Journals (Total = 1)

1. Tyagi, N., Rathore, S. S. and **Ghosh P. C**. (2013). Efficacy of liposomal monensin on the enhamceemnt of the anti0tumor 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 = 1)

1. 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**

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 = 4)

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**

National – Peer Review Journals (total = 2)

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**

International – e-Journals (total = 2)

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**

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 = 5)

1. Jaiswal, N., Chakraborty, S. and ***Nag A.*****(2014**) "Biology of FOXM1and 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. 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**

National – Peer Review Journals (total = 1)

1. Jaiswal, N., Chakraborty, S. and ***Nag A.*****(2014**) "Biology of FOXM1and its Emerging Role in Cancer Therapy". ***J. Proteins and Proteomics***, 5(1): 249. **Impact Factor : 0.5**

International – e-Journals (total = 4)

1. 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**
2. 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**
3. 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**
4. 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 = 1)

1. 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 = 5)

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 amoeboflagellate 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 amoeboflagellate 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 amoeboflagellate Naegleria gruberi NEG-M strain. Chemical Physics 423, 192-201. **Impact Factor : 2.1**

National – Peer Review Journals (total = 1)

1. 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

None

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 (2013-2014)

Professor Anil K. Tyagi

Range : 3.194 – 5.778
Average : 4.11 (total IF – 41.147, total publications – 10)
h-index : 20 (Last 5 years), 31 (overall) (Google Scholar)
Nos. in SCOPUS …..Citations - 275

Professor Vijay K. Chaudhary

Range 1.958-3.73
Average 2.546 (total IF = 15.28; total publications = 6)
h-index 14 (Last 5 years); 34 (overall) (Google Scholar)
Nos. in SCOPUS …..Citations – 122

Professor Prahlad C. Ghosh

Range (of IF) 0.3 – 3.7
Average 2.36 (total IF = 11.8; total publications = 5)
h-index 9 (Last 5 years); 16 (overall) (Google Scholar)
Nos. in SCOPUS …..Citations - 45

Professor Debi P. Sarkar

Range 3.3 – 6.4
Average 4.85 (total IF = 9.7; total publications = 2)
h-index 11 (last 5 years); 20 (overall)
Nos. in SCOPUS Citations- 62

Professor Suman Kundu

Range 0.25 – 4.2
Average 2.637 (total IF = 26.37; total publications = 10)
h-index 16 (Last 5 years); 22 (overall) (Google Scholar)
Nos. in SCOPUS Citations – 144

Professor Alo Nag

Range 0.5 – 5.6
Average 3.21 (total IF = 35.30; total publications = 11)
h-index 13 (Last 5 years); 15 (overall) (Google Scholar)
Nos. in SCOPUS ……Citations – 70

Dr. Suneel Kateriya

Range 0.5 – 6.8
Average 2.89 (total IF = 20.21; total publications = 7)
h-index 09
Nos. in SCOPUS …..Citations – 322

3.7 No. of books published

Professor Suman Kundu

With ISBN No. / Chapters in Edited Books –

1. 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

3.11 No. of conferences organized by the institution

International
None

National –
None
State
None

University:

1. "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.

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- 2014.
2. Member of Expert Committee for North Eastern Region Biotechnology Programmes, Department of Biotechnology, Government of India, 2009-2014.

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, 2013-2014

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, Doctoral Committee, Dept. of Biochemistry, Indira Gandhi National Open University (IGNOU), New Delhi for the last several years for several Ph.D. Scholars.
3. Member, Doctoral committee, School of Biotechnology, JNU, New Delhi, for the last several years for several Ph.D. Scholars.
4. 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.
5. 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.

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).

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. Teacher-in-Charge, CD, MALDI and DIGE Based Proteomics, CIF, University of Delhi South Campus (2009-2013)
6. Indian Academy of Sciences (IAS) mentor to Summer Trainees (2011-2014)

Professor Alo Nag

Experts

1. Examiner, M.Phil. Dissertation (including viva-voce), for M.Phil Degree in Life Sciences, Gujrat Central Universityof Gujrat, Gandhinagar (December, 2013).
2. Reviewed grant applications for DST and CSIR (2012-2014).
3. Peer Reviewed articles for Molecular Cancer, Tumor Biology, eCancer Medical Science, Plasmid, Plos One. (2009-2014).
4. Examiner, Practical for Diploma in Biotechnology, Sri Venkateswara College, New Delhi (2012-2014)

Resource persons

1. **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).
2. **Teacher-in-Charge** for Phosphoimager, LAS-4000 Imager, CIF, University of Delhi South Campus (2009-2014).

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

Chairpersons

None

Resource persons

1. Indian Academy of Sciences (IAS) mentor to Summer Trainees (2011-2014)

3.13 Number of Collaborations

(a) National collaboration Total = 07

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 JIIT, 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 *M. tuberculosis* 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 Nonmescle 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, Total = 05

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 : 02

Type of Patent		Number
National	Applied	Nil
	Granted	1 (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	Nil
	Granted	Nil

3.17 Research awards / recognitions (total = 10)

Professor Anil K. Tyagi

Research fellow-

National –

1. **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***.

State – None

University - None

Professor Vijay K. Chaudhary

Faculty

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 – None

Professor Prahlad C. Ghosh

Research Fellows:

International

1. **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***.

National

1. **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 Suman Kundu

Research fellow

International – None
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.

State –

1. *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 – None

Dr. Suneel Kateriya

Faculty

International –

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

Research fellow

International – None

National –

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

University –

1. 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.**
2. Mayanka Awasthi, Second Best Poster Award, National Science Day Symposium, 28th February 2014. **India.**

3.18 Students registered (July 2013 – June 2014)

Total = 06

Professor Anil K. Tyagi

Two (02) Shubhita Mathur, Swati Singh

Professor Prahlad C. Ghosh

Two (02) Mohsin Raza, Swati Singh

Professor Suman Kundu

One (01) Pushpanjali Dasauni

Dr. Suneel Kateriya

One (01) Komal Sharma

3.19 Ph.D. awarded (July 2013 – June 2014) Names in italics in table below

Total = Eight (08)

Professor Anil K. Tyagi

S.No.	Name of Scholar	Whether JRF/ SRF	Date of Registration	Date of Thesis Submission	Degree Awarded
1	*Rupangi Verma*	*Yes / CSIR*	*Jan 24, 2008*	*July 2013*	*Feb 2014*
2	*Priyanka Chauhan*	*Yes / CSIR*	*May 13, 2008*	*July 2013*	*March 2014*
3	Prachi Nangpal	Yes / CSIR	Jan 5, 2010	-	-
4	Ritika Kar	Yes / CSIR	July 19, 2010	-	-
5	Akshay Rohilla	No	Jan 27, 2012	-	-
6	Shubhita Mathur	JRF / DBT	July 25, 2013	-	-
7	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.	*Manendra Pachuari*	*Dec 2007*	*Yes/ CSIR*	*Feb 20, 2009*	*Feb 19, 2014*	*Dec 2014*
2.	Pooja Tiwari	Dec 2008	SRF/CSIR	July 21, 2010	-	-
3.	DeepaJha	Dec 2008	SRF/CSIR	Feb 02, 2011	-	-
4.	Vandana	July 2011	SRF/DBT	July 29, 2011	-	-
5.	VinothRajendran	Jan 2012	SRF/CSIR	Jan 27, 2012	-	-
6.	Mohsin Raza	June 2012	SRF/UGC	July 22, 2013	-	-
7.	Swati Singh	July 2012	JRF/ICMR	Oct 23, 2013	-	-
8.	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	-
5.	Pradeep Singh Cheema		CSIR	Dec 17, 2014	-	-

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)

Total = 28 (The source of fellowship mentioned in Table above)

Professor Anil K. Tyagi

JRF (2) – Shubhita Mathur, Swati Singh
SRF (2) – Prachi Nangpal, Ritika Kar
Project fellows (1) - Akshay Rohilla,
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 (3) – Richa Arya, Sanjay Kumar Dey, Pushpanjali Dasauni
Project fellows – None
Any other – none

Professor Alo Nag

JRF (2) – Puneet Sharma, Pradeep Singh Cheema
SRF (2) – Neha Jaiswal, Pallavi Singhal
Project fellows -none
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 2013 – 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 finaly 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 YEAR (2013 TO 2014) (Less than 1 Lakh)

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
8.	TFT Monitor	Rs. 6,100	26.09.2014	-do-
9.	Sartorius Electronic Analytical Balance	Rs.74,250	22.02.2014	-do-

RECORD OF EQUIPMENT PURCHASED IN THE DEPARTMENT OF BIOCHEMISTRY DURING LAST YEAR (2013 TO 2014) (More than ` 1Lakh)

S.No.	Name of Equipment	Equipment Cost	Date of Purchase	Funding Agency
1.	Servo Voltage Stabilizer	Rs. 2,91,600	16.09.2013	DBT-Development and Evaluation Prof. Anil K. Tyagi
2.	Beadbeater	US$ 3,351 Rs. 2,09,824	07.09.2013	-do-
3.	Ultra low temperature Freezer -86^0 C	US$ 7,650 Rs. 4,27,882	28.04.2013	-do-

4.	25^0C Vertical Deep Freezer	Rs. 1,35,000	04.02.2014	-do-
5.	CCD Camera	Rs. 2,36,250	06.02.2014	-do-
6.	Spectrophotometer	Rs. 5,49,021	22.05.2014	-do-
	Total	**Rs. 18,49,577**		

4.6 Amount spent on Maintenance

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

Name of the Equipment					**(2013-14)**	**Total**
DEPARTMENT (AMC)						
100 KVA & 125 Servo Voltage Stabilizer					27,200	27,200
Automatic fire Alarm Systems					9,720	9,720
R.O. Systems					2,500	2,500
Waters HPLC System					28,090	28090
04 Nos. RAC 1.5 Ton Air Conditioner					51,537	51,537
02 Nos. Pentium PC					28,100	28,100
					Total	**147147**
PROF. ANIL K. TYAGI LAB (AMC)						
1.5 Ton & 2.0 Ton Air conditioner					21,953	21,953
03 Nos. Computers, printers, UPS & Scanner					9,550	9,550
ELEX-10 Water Purification System					16,101	16,101
NBS Shaker Model No. 4330					16,181	16,181
R.O. Plan 100 LPH					18,989	18,989
250KVA DG Set					57,590	164396
30KVA UPS					45,061	185703
High Pressure Horizontal Rectangular sliding door Sterilizer					76,405	76405
04 Nos. Deep Freezer					49,438	122915
IVC Ventilator maximum (cagin systems)					1,17,978	414084
Computer Printer					21,850	21,850
BSL3 Facility at animal house					11,00,000	11,00,000
15KVA UPS					39,428	39,428

System						
					Total	**2207555**
PROF. V.K. CHAUDHARY LAB (AMC)						
Nat Steel high Pressure Horizontal Cylindrical Sterilizer					14,607	14,607
RC 5C+ & Evolution RC					54,776	54,776
BOHN Make Refrigeration Split Unit (For 2 unit)					59,551	59,551
Panasonic KTS (KXES824)					7,282	7,282
R.O. Water Purification Plant (250 Litre per hours)					20,393	20,393
UPS 10KVA					58,579	58,579
UPS 15KVA					78,856	78,856
DNA Sequencer Model ABI 3730XL and 3130XL					6,34,834	6,34,834
AKTA Explorer (2 Nos) and BIA Core 3900					495376	495376
Air Conditioners					1,69,048	1,69,048
					Total	**1593302**
PROF. P.C. GHOSH LAB (AMC)						
04 Nos. Air Conditioners					15,220	15,220
Kent Grand Plus Mineral R.O. System					2,000	2000
					Total	**17,220**
DR. SUMAN KUNDU LAB (AMC)						
Spectrometer, FTIR					44,944	44,944
10 KVA UPS					14,950	14,950
					Total	**59894**
DR. ALO NAG LAB (AMC)						
Air conditioners					3,024	3,024
					Total	**3024**
					Total AMC all Labs & Departmental	**40,28,142**