ANNEXURE

IQAC Report – Details, Part B

Department of Biochemistry
July 2015 – June 2016

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

1.2. 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 **who** are more mature and are ready to give **significant** 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 **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 – 09

Assistant Professor - (1) Dr. Suneel Kateriya (2) Dr. GarimaKhare
Associate Professor – (1) Dr. Amita Gupta
Professors - (1) Dr. Anil K Tyagi (2) Dr. Vijay K Chaudhary (3) Dr. Prahlad C Ghosh (4) Dr. Debi P Sarkar (5) Dr. Suman Kundu and (6) Dr. Alo Nag

2.5 Faculty participation in conferences and symposia

International Conferences – <u>Attendance and Presentation of Papers - 06</u>

1. International Conference on Cardiovascular Translational Research and 13th Annual Conference of International Society for Heart Research (ISHR, Indian Section), January 22-24, 2016, IIT Madras, Chennail, India**(Prof. Suman Kundu)**

2. Yama Atri**,** Deeptashree Nandi, Pradeep Singh Cheema and **Alo Nag**(**2016**). *'Maneuvering Cellular Cul4A and FoxM1 in Virus coerced Carcinogenesis'*at theInternational Symposium on HIV and Hepatitis, organized by the Life Sciences and Biotechnology departmenton 1st September, 2016 at South Asian University, New Delhi, India. (Poster presentation)

3. Invited to deliver a lecture on *"Insights into Novel Oncogenic Mechanisms of Human Papillomavirus"* in the International Symposium organized by ICAR-Conference of Asian Clinical Oncology Society (ACOS)on the theme "Cancer in Asia; Bridging the Gaps" held from 8th-10th April, **2016** at Ashok Hotel, New Delhi, India.(**Prof. Alo Nag**).

4. Invited for a talk on *"Novel Insights into the Role of Cytoglobin as a Tumor Suppressor"* in the International Symposium on "Role of Herbals in Cancer Prevention and Treatment" held on February 9-10, **2016**, at the Shool of Life Sciences, Jawaharlal Nehru University (JNU), New Delhi, India. (**Prof. Alo Nag**).

5. Invited for a lecture on *"Oncogenic Strategies of Human Papillomavirus"* at ICGEB, New Delhi on 6th August, **2015. (Prof. Alo Nag)**

6. *International symposium on emerging discoveries in microbiology- 56th Annual conference of Association of Microbiologists of India (AMI)- December 7-10, 2015 held at Jawaharlal Nehru University, New Delhi, India.(Dr. GarimaKhare)

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

None

National Conferences – <u>Attendance and Presentation of papers</u>: - 04

1. Global Biotechnology Summit, Celebrating Biotechnology: Destination India, Completion of 30 years of DBT, 5-6 February, 2016, Plenary Hall, VigyanBhawan, New Delhi. (National) **(Prof. Suman Kundu)**

2. "Novel features of an age-old classical biomolecule, hemoglobin, and applications thereof", BioEpoch-2016, School of Biotechnology, Jawaharlal Nehru University, (March 15, 2016). **(Prof. Suman Kundu)**

3. "Novel features of an age-old classical biomolecule, hemoglobin, and applications thereof", Annual Meeting of the Indian Biophysical Society (8-10th Feb, 2016) on Molecules in Living Cells: Mechanistic Basis of Function, Indian Institute of Science (IISc.), Bangalore (Feb 10, 2016). **(Prof. Suman Kundu)**

4. *National Science Day symposium held at University of Delhi South Campus. February 29th, 2016. (Dr. GarimaKhare)

National Conferences - <u>Resource Persons - 01</u>

1. National Organizing Committee Member, 6th World Congress on Biotechnology, October 5-7, 2015, Crowne Plaza, Rohini, New Delhi, India **(Prof. Suman Kundu)**

IQAC Report - Details
Part B, Criterion III
Department of Biochemistry
July 2015 – June 2016

3. Research, Consultancy and Extension

3.2 Details regarding major projects

Completed

No.	Name of Project	Duration	Funding Agency	Budget
Prof. Anil K. Tyagi				
1.	Development and evaluation of an alpha-crystallin based prime boost vaccination strategy against TB by employing MVA	May 2012 to November 2015	DBT	Rs.80.89 lacs
	Total			Rs.80.89 lacs

Ongoing

No.	Name of Project	Duration	Funding Agency	Budget
Prof. Anil K. Tyagi				
1.	A Virtual Centre of Excellence for Co-ordinated Research on Tuberculosis :Development of Alternate Strategies (Phase II)	September 2011 to September 2017	DBT	Rs.484.77 Lakhs
Prof. Vijay K. Chaudhary				
2.	DNA Sequencing facility at UDSC (Phase V)	June 2014 to May 2017	DBT	111 lakhs
3.	Development of reagents for simple immunochemical tests for the detection of Chikungunya infection	March 2014 to Feb 2017	DBT	86 lakhs
Prof. Prahlad C. Ghosh				
4.	Evaluation of soya phosphatidylcholine-stearylamine liposome as anti-malarial agent.	April 2014 to March 2017	ICMR	25.0 lacs
Prof. Suman Kundu				
5.	Development of potent small molecule inhibitors against dopamine beta-hydroxylase to combat cardiovascular diseases	15-06-2015 to 14-06-2018 (3 years)	DBT	78.903 Lakhs

Dr. Amita Gupta				
6.	Identification and characterization of promoters of toxin anti-toxin loci in *Mycobacterium tuberculosis*	April 2014 – March 2017	CSIR	25.63 lacs
Dr. GarimaKhare				
7.	Understanding the VirS mediated acid induced responses of Mycobacterium tuberculosis in maintaining the pH homeostasis invitro and in host.	August 2014-July 2017	DBT	Rs. 50 Lakhs
	Total			Rs.861.303 lacs

Sanctioned

No.	Name of Project	Duration	Funding Agency	Budget
Prof. Suman Kundu				
1.	Systems biology of complex diseases: From genetic findings to lead molecule development for Rheumatoid arthritis- Centre of Excellence in Genome Sciences and Predictive Medicine (Phase II)	21.12.2015 to 20.12.2020 (5 years)	DBT	60.62 Lakhs
	Total			Rs.60.62 lacs

Submitted

No.	Name of Project	Duration	Funding Agency	Budget
Prof. Suman Kundu				
1.	Screening Lead Molecules Identified by Structure-based Rational Drug Design Methods against Cytochrome b5 Reductase 3 and Dopamine Beta Hydroxylase in Spontaneously Hypertensive Rat Models for Antihypertensive Effects	3 years	DBT	80 Lakhs
	Total			Rs.80 lacs

3.3 Details regarding minor projects

Completed

No.	Name of Project	Duration	Funding Agency	Budget

Ongoing

No.	Name of Project	Duration	Funding Agency	Budget
Prof. Vijay K. Chaudhary				
1.	Production of Reagents for simultaneous immunochemical detection M. tuberculosis Complex (MTC) and Non Tuberculous Mycobacteria (NTM)	October 2015 to Sept. 2016	R&D Grant Delhi University	3.0 lakhs
Prof. Prahlad C. Ghosh				
2.	Whole cell based and structure based drug screening of NCI compounds and other potent chemically synthesized small inhibitors for the treatment of malaria	October 2015 to Sept. 2016	R&D Grant Delhi University	3.0 lakhs
Prof. Debi P. Sarkar				
3.	Effect of host cell factors in Sendai virus mediated membrane fusion with liver cells: dissecting the molecular mechanism of membrane fusion	October 2015 to Sept. 2016	R&D Grant Delhi University	3.0 lakhs
Prof. Suman Kundu				
4.	Understanding the structure of Leishmania major phosphopantetheinyl transferase (LmjPPTase) and its interaction with cognate ACP	27.03.2015 to 26.03.2018 3 years	UGC-DAE	7.902 Lakhs
5.	Engineering stable recombinant haemoglobin for use as artificial blood substitute and amyloidogenecity of neuroglobin with relevance to neuro-degenerative diseases	October 2015 to Sept. 2016	R&D Grant Delhi University	3.0 lakhs
Prof. Alo Nag				
6.	Investigation of the link between mammalian coactivator hADA3 and Promyelocytic Leukemia protein	Oct. 2015-Sept. 2016	R&D Grant Delhi University	3.0 lakhs

Dr. Amita Gupta				
7.	Cloning, hyper-expression, purification and production of antibodies to the Tet Repressor protein encoded by Transposon Tn10	October 2015 to Sept. 2016	R&D Grant Delhi University	3.0 lakhs
Dr. GarimaKhare				
8.	To study the role of LprA in the survival and virulence of *Mycobacterium tuberculosis*	Oct. 2015 – Sept. 2016	R&D Grant Delhi University	3.0 lacs
	Total			Rs.28.902 lacs

Sanctioned

No.	Name of Project	Duration	Funding Agency	Budget

Submitted

No.	Name of Project	Duration	Funding Agency	Budget

3.4 Details on research publications (impact factor included)

Professor Suman Kundu

International- Peer Review Journals– 07

1. Mukhi, N., Dhindwal, S., Uppal, S., Kapoor, A., Arya, R., Kumar, P., Kaur, J. and **Kundu, S.** (2016) "Structural and functional significance of the N- and C-terminal appendages in *Arabidopsis* truncated hemoglobin". ***Biochemistry***. 55, 1724-1740. **Impact Factor:2.876**
2. Jebamercy, G., Durai, S., Prithika, U., Marudhupandiyan, S., Dasauni, P., **Kundu, S.** and Balamurugan, K. (2016) "Role of DAF-21 protein in *Caenorhabditis elegans* immunity against *Proteus mirabilis* infection". ***J Proteomics***. 145, 81-90. **Impact Factor: 3.867**
3. Vigneshkumar, B., Durai, S., **Kundu, S.** and Balamurugan, K. (2016) "Proteome analysis reveals translational inhibition of *Caenorhabditis elegans* enhances susceptibility to *Pseudomonas aeruginosa* PAO1 pathogenesis". ***J Proteomics***. 145, 141-152. **Impact Factor:3.867**
4. Yadav, R., **Kundu, S.** and Sarkar, S. (2015) "*Drosophila* glob1 expresses dynamically and is required for development and oxidative stress".***Genesis.***53**,** 719-737. **Impact Factor: 2.3**
5. Kumar, A., Arya, R., Makwana, P., Dangi, R., Yadav, U., Surolia, A., **Kundu, S.** and Sundd, M. (2015) "The structure of the holo-acyl carrier protein of *Leishmania*

*major*displays a remarkably different phosphopantetheinyl transferase (PPT) binding interface". ***Biochemistry***. 54, 5632-5645. **Impact Factor:3.015**

6. Sharma, S., Kumar, A., **Kundu, S.,*** and Bandhopadhyay, P.* (2015). "Molecular dynamics simulations indicate that TyrosineB10 limits motions of distal Histidine to regulate CO binding in soybean leghemoglobin". ***Proteins: Struc. Func. Bioinform***. 83, 1836-1848. (* - joint corresponding author) **Impact Factor: 2. 627**
7. Seal, M., Uppal, S., **Kundu, S.** and Dey, S.G. (2015) "Interaction of ApoNeuroglobin with Heme-Aβ Complexes Relevant to Alzheimer's Disease". ***J BiolInorg Chem.*** 20, 563-574. **Impact Factor : 3.2**

National – Peer Review Journals - **None**

International – e-Journals– 01

1. Singh, K., Shandilya, M., **Kundu, S.*** and Kayastha, A.M.* (2015) "Heat, acid and chemically induced unfolding pathways, conformational stability and structure-function relationship in wheat α–amylase". ***PLoS One***. 10(6):e0129203. (*-joint corresponding authors). **Impact Factor : 3.27**

National – e-Journals - **None**
International – Conference proceedings - **None**
National – Conference proceedings - **None**

Professor Alo Nag

International – Peer Review Journals (total = 5)

1. Uppal S, Singh AK, Arya R, Tewari D, Jaiswal N, Kapoor A, Bera AK, **Nag A**, Kundu S.(2016) "Phe28B10 Induces Channel-Forming Cytotoxic Amyloid Fibrillation in Human Neuroglobin, the Brain-Specific Hemoglobin." ***Biochemistry.*** 13;55(49):6832-6847. **Impact factor : 2.876**

2. Chand V, Nandi D, Mangla AG, Sharma P, **Nag A**. (2016) "Tale of a multifaceted co-activator, hADA3: from embryogenesis to cancer and beyond." ***Open Biol.*** 6(9). pii: 160153. doi: 10.1098/rsob.160153. Review. **Impact factor : 4.8**

3. Singhal P, Sharma U, Hussain S, **Nag A**, Bharadwaj M.(2016) "Identification of genetic variants in TNF receptor 2 which are associated with the development of cervical carcinoma." ***Biomarkers.*** 21(7):665-72. **Impact factor : 2.0**

4. Kumar S, **Nag A**, Mandal CC. (2015) "A Comprehensive Review on miR-200c, A Promising Cancer Biomarker with Therapeutic Potential." ***Curr Drug Targets.*** 16(12):1381-403. Review. **Impact factor : 3.52**

5. Pallavi S, Anoop K, Showket H, **Alo N**, Mausumi B.(2015) "NFKB1/NFKBIa polymorphisms are associated with the progression of cervical carcinoma in HPV-infected postmenopausal women from rural area." ***Tumour Biol.*** 36(8):6265-76. **Impact factor : 3.6**

National – Peer Review Journals- None

International – e-Journals - None

National – e-Journals – None

International – Conference proceedings (total = 3)

1. Yama Atri**,** Deeptashree Nandi, Pradeep Singh Cheema and **Alo Nag**(**2016**).*'Maneuvering Cellular Cul4A and FoxM1 in Virus coerced Carcinogenesis'*at theInternational Symposium on HIV and Hepatitis, organized by the Life Sciences and Biotechnology department on 1st September, 2016 at South Asian University, New Delhi, India
2. **Alo Nag***"Insights into Novel Oncogenic Mechanisms of Human Papillomavirus"* in the International Symposium organized by ICAR-Conference of Asian Clinical Oncology Society (ACOS) on the theme "Cancer in Asia; Bridging the Gaps" held from 8th-10th April, **2016** at Ashok Hotel, New Delhi, India.
3. **Alo Nag***"Novel Insights into the Role of Cytoglobin as a Tumor Suppressor"* in the International Symposium on "Role of Herbals in Cancer Prevention and Treatment" held on February 9-10, **2016**, at the School of Life Sciences, Jawaharlal Nehru University (JNU), New Delhi, India**.**

National – Conference proceedings- 01

1. Yama Atri, Vaibhav Chand and **Alo Nag (2015).*"****Human paillomavirus, an oncogenic Sumo wrestler!"*** entitledabstract was published as research news in Virus Research News, published by the Indian Virological Society, ISSN: 2394-4536 (Print), Vol4, No. 2 December, 2015.

<u>Dr. GarimaKhare</u>

International- Peer Review Journals -1

1. Deepak Kumar, GarimaKhare, Beena, SaqibKidwai, Anil K. Tyagi, Ramandeep Singh and Diwan S. Rawat. (2015). Novel isoniazid–amidoether derivatives: synthesis, characterization and antimycobacterial activity evaluation. Med. Chem. Commun. 6: 131-137.**Impact factor : 2.495**

National – Peer Review Journals - ***None***

International – e-Journals - ***None***

National – e-Journals- **None**

International – Conference proceedings- **None**

National – Conference proceedings - **None**

3.5 Details on Impact factor of publications (2015-2016)

Professor Suman Kundu

Range 2.3 – 3.8
Average 3.128
h-index 16
Nos. in SCOPUS ……170

Professor Alo Nag

Range 2.0– 4.8
Average 3.36 (total IF = 16.79; total publications = 5)
h-index 17
Nos. in SCOPUS ……Citations – 80

Dr. GarimaKhare

Range 2.495
Average 2.495 (total IF = 2.495; total publications = 1)
h-index 10
Nos. in SCOPUS ……Citations – 05

3.7 No. of books published –

i) With ISBN No. Chapters in Edited Books – 01*
ii) Without ISBN No.

*__GarimaKhare__, Priyanka Chauhan, PrachiNangpal, RitikaKar and **Anil K. Tyagi**. (2016). Tuberculosis: current situation, challenges and intervention strategies. In A. Datta and V. P. Sharma (Eds.), Recent advances in communicable and non-communicable diseases. Capital Publishing group (pp 77-109). New Delhi, India.

3.11 No. of conferences organized by the institution

International
None

National –
None

State
01

Professor Suman Kundu

"Frontiers in Proteomics Research" March 18, 2016, at S.P. Jain Centre Auditorium, UDSC, (part sponsor- R&D Grant, DU).

Sponsoring agency: Proteomics Society, India and Department of Biochemistry, UDSC

University: None

College: None

3.12 Served as experts, chairpersons or resource persons

Prof. Suman Kundu

- Member, Board of Management of the Interdisciplinary Biotechnology Unit, Aligarh Muslim University, Aligarh (June 2016 – June 2021)
- Expert Technical Committee Member, Procurement of mass spectrometric systems at CSIR-IGIB, 20th of October, 2015, at CSIR-Institute of Genomics and Integrative Biology, Mathura Road Campus
- Advisory Committee Member, P.G. Diploma Course in Molecular and Biochemical Technology, Sri Venkateswara College, Delhi University, 8th Oct, 2015.
- University Representative on the Governing Body of Acharya Narendra Dev College, Delhi University, 28.9.2015 to 27.9.2016 and then 28.9.2016 to 27.9.2017
- Advisory Committee Meeting, for Ph.D student of Prof. Rajiv Bhat, JNU, August 12th, 2015
- Judgment (member of Jury) of KVS National level Science Exhibition under INSPIRE Programme launched by Dept. of Science & Technology {DST} at KendriyaVidyalaya, INA Colony on 18th August 2015
- External Expert for Viva Voce and Thesis Examiner, M.Tech in Bioinformatics Course, Department of Biotechnology, Delhi Technological University, Delhi, July 30th, 2015 (ten students).
- External Expert, Satyam Tiwari's DAC II presentation for Ph.D., 3rd August 2015, CSIR-IGIB, Mathura Road Campus, New Delhi.
- Member of Selection Panel for M.Phil.in Biotechnology in University of Delhi South Campus, July 21, 2015, in Genetics Department, UDSC
- Judgment (member of Jury) of KVS Regional level Science Exhibition under INSPIRE Programme launched by Dept. of Science & Technology {DST} at KendriyaVidyalaya, INA Colony on 13th July 2015
- Expert/reviewer for the Innovation Projects from the Life Sciences category for undergraduates, University of Delhi, April 8, 2016, Centre for Science Education and Communication, 2nd Floor, ARC Building, Opposite Khalsa College, University of Delhi, Delhi 110007
- National Organizing Committee Member, 6th World Congress on Biotechnology, October 5-7, 2015, Crowne Plaza, Rohini, New Delhi, India
- External Member of Oral Examination Board (OEB) of Ms. Shweta Agarwal, AcCSIR-Ph.D. student at NPL, on 30th Dec 2015..

Professor Alo Nag

Experts

1. External examiner, including viva-voce, for Ph.D. Degree in Life Sciences, JNU, New Delhi,
2. (18^{th} Jan, 2016).
3. External examiner, including viva-voce, for Ph.D. Degree in Biotechnology, IIT Madras, Department of Biotechnology (30^{th} Sept. 2015).
4. Examiner, for Ph.D. Degree in Biochemistry, University of Calcutta. (18^{th} Jan, 2016).
5. Reviewed grant applications for DST and CSIR (2012-2016).
6. Peer Reviewed articles for Molecular Cancer (USA), Tumor Biology (USA), eCancer (UK), eCancer Medical Science (UK), PLoS One, PLASMID (USA), Current Cancer Drug Targets (USA), Genetics Research International (USA) and Molecular Cancer Biology (USA). (2009-2016).
7. Examiner, Practical for Diploma in Biotechnology, Sri Venkateswara College, New Delhi (2012-2016)

Resource persons

1. **Training PG students with research skills** by serving as mentor in theSummer Research Fellowship Programmejointly sponsored by the three National Science Academies, India. (2012-2016).
2. **Teacher-in-Charge** for Phosphoimager, LAS-4000 Imager, CIF, University of Delhi South Campus (2009-2016).

Dr. Amita Gupta

Experts

1. External examiner, One year P.G. Diploma Course in Molecular and Biochemical Technology Semester –II, Sri Venkateswara College, New Delhi, 2015.

Dr. GarimaKhare

Experts

2. External examiner, One year P.G. Diploma Course in Molecular and Biochemical Technology Semester –II, Sri Venkateswara College, New Delhi, 2015.

3.13 Number of Collaborations

(a) National collaboration - 04

Name of the Faculty	Collaborated Agency
Prof. Anil K. Tyagi	Collaboration with Prof. Diwan S. Rawat, Department of Chemistry, University of Delhi

Prof. Alo Nag	1. Biomarker Discovery in Cervical Cancer in collaboration with Dr. MausumiBharadwaj, ICPO, Noida. 2. Micro RNA roles in Glioblastoma in collaboration with Dr. RavindraPolyshetty, Department of Biochemistry, Venkateshwara College, delhi University.
Dr. GarimaKhare	Collaboration with Prof. Diwan S. Rawat, Department of Chemistry, University of Delhi

(b) International Collaboration - None

3.16 No. of patents received this year

Professor Suman Kundu and Prof. Alo Nag

National Patent (Applied – 01)

Novel therapeutic agents useful for human papilloma virus induced cervical cancer therapy (provisional), **Alo Nag, Suman Kundu,** Vaibhav Chand and Abhijeet Kapoor, No. 201611003939 dated 04.02.2016,

3.17 Research awards / recognitions

Professor Alo Nag - None

Research fellow

International – 01

1. **Yama Atri** won the **best essay award** (2016) on 'Cancer Genomics: An Approach to Personalized Therapy' at the International Symposium on "Cancer in Asia; Bridging the Gaps" at Ashok Hotel, New Delhi, India, 8th-10thApril **2016**.

National – None
State – None
University – None

3.18 Students registered (July 2015– June2016)

Professor Suman Kundu

Four (04) - MdAsim Khan, Gaurav Kumar, Sanjeev Kumar Yadav, Manisha Saini

Professor Alo Nag

Two (02) Hina Bharti and Deeptashree Nandi

3.19 Ph.D. awarded(July 2015– June 2016)Names in italics in table below

None

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

Total : 18

Prof. Anil K. Tyagi

JRF - None

SRF (3) – AkshayRohilla, ShubhitaMathur and Swati Singh

Project fellows - None

Any other – None

Professor Vijay K. Chaudhary

JRF - None

SRF (1) - VaishaliVerma

Project fellows - None

Any other - None

Prof. Suman Kundu

JRF (2) - Gaurav Kumar, Sanjeev Kumar Yadav

SRF (1) – PushpanjaliDasauni

Project fellows (2) –Richa Arya, Sanjay Kumar Dey

Any other – **UGC non-NET**(2) :MdAsim Khan, Manisha Saini

Professor Alo Nag

JRF (5) – Pradeep Singh Cheema, Yama Atri, Simran Kaur, Hina Bharti, Deeptashree Nandi

SRF – None

Project fellows -none

Any other – none

Dr. GarimaKhare

JRF (1)- Simran Kaur

SRF – None

Project fellows (1) -Neha Lalwani

Any other – None

IQAC Report - Details
Part B, Criterion IV
Department of Biochemistry
July 2015 – June 2016

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 astissue 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 HOF EQUIPMENT PURCHASED IN THE DEPARTMENT OF BIOCHEMISTRY DURING LAST YEAR (2015 to 2016) (Less than 1 Lakh)

S No.	Name of Equipment	Equipment Cost	Date of Purchase	Funding Agency
1.	Water Cooler	23,390	12.08.2015	Antardhvani award Money
2.	10 KVA Stabilizer	20,000	15.03.2016	XIIth Plan (65 Lakhs)
3.	Helogen Heater	5,006	27.01.2016	University Grant

RECORD HOF EQUIPMENT PURCHASED IN THE DEPARTMENT OF BIOCHEMISTRY DURING LAST YEAR (2015 to 2016) (More than 1 Lakh)

S No.	Name of Equipment	Equipment Cost	Date of Purchase	Funding Agency
1.	Ultra Low Temperature Deep Freezer	Rs. 5,49,675	11.03.2016	XIIth Plan (65 Lakhs)
2.	UV-Visible Spectrophotometer	Rs. 5,14,500	17.03.2016	XIIth Plan (65 Lakhs)
3.	Micro-volume Spectrophotometer	Rs. 6,98,250	28.03.2016	XIIth Plan (65 Lakhs)
4.	Incubator Shaker (Refrigerated) Floor Model	US$ 14,600.00 Rs. 9,91,410	03.03.2016	XIIth Plan (65 Lakhs)
5.	Floor Model high speed Refrigerated Centrifuge with optional accessories	US$ 25,988 Rs.17,23,942	17.05.2016	XIIth Plan (65 Lakhs)

6.	Ice Flaking Machine	EURO 3,168.00 Rs. 2,49,142	08.03.2016	XIIth Plan (65 Lakhs)
7.	Premium U410 Upright Freezer, -86^{0}C Ultra-Low temperature	Rs. 4,99,800	18.12.2015	Antardhvani award Money
8.	Ice Flaking Machine	Rs. 2,45,242	21.01.2016	-do-

4.6 Amount spent on Maintenance

LIST OF AMC DETAILS ALL FACULTIES & DEPARTMENT GRANT

Name of the Equipment	3rd Year (2011-12)	4th Year 2012-13)	5th Year (2013-14)	4th Year 2014-15)	5th Year (2015-16)	Total
DEPARTMENT (AMC)						
100 KVA & 125 Servo Voltage Stabilizer	27,200	27,200	27,200	27,200	27,200	1,36,000
UV-Vis Spectrophotometer	11,030	11,236	-	-	-	22,266
Automatic fire Alarm Systems	9,000	9,720	9,720	9,720	10,692	48,852
RC 5C Plus	49,635	24,818	-	-	-	74,453
UPS 10KVA	10,679	10,679	-	-	-	21,358
Water Purifier System	3150	1450	-	-	-	4,600
Ultra Centrifuge L-90K		39316	-	-	-	39,316
Liquid Scintillation Beta 2900 TR Counter	32,298	50562	-	-	-	82,860
Multimedia Projector Model CPX-4011	8988	12360	22,743	24,045	13,858	81,994
225 KVA DG Set	58924	56682	61,168	64,347	67,638	3,08,759
Water Purification System	-	92,428	50,155	50,665	56,073	2,49,321
UV-Vis Spectrophotometer & Fluorescence Spectrophotometer	-	83,146	-	-	-	83,146
Inverted Phase Contrast Fluorescence Microscope with Digital Camara	-	27,000	-	-	-	27,000
Gel Documentation System		12,000	-	-	-	12,000
Uniline on line 10KVA UPS	14,900	14,900	22,000	24,500	24,500	1,00,800
R.O. Systems	6,000	2,000	2,500	6,000	2,000	18,500
Waters HPLC System			28,090			28,090
Panasonic System		7,282	8,009	8,009	8,198	31,498
09 Nos. Air Conditioners	6,969	20,232	51,537	24,645	24,645	1,28,028
04 Nos. Pentium PC	8,000	8,000	8,000	8,000	8,000	40,000
						15,38,841
PROF. ANIL K. TYAGI LAB (AMC)						
1.5 Ton & 2.0 Ton Air conditioner	3,699	4,991	21,953	-	-	30,643
03 Nos. Computers, printers, UPS & Scanner	9,550	9,550	9,550	-	-	28,650

ELEX-10 Water Purification System	-	22,060	16,101	18,049	-	56,210
NBS Shaker Model No. 4330	-	-	16,181	16988	-	33,169
R.O. Plan 100 LPH	13,236	18,989	18,989	21,910	24,560	97,684
250KVA DG Set		54,965	57,590	64,262	68,314	2,45,131
Inhalation Exposure System	60,607	61,738	-	-	-	1,22,345
AKT Purifier	3,25,713	3,31,796	-	-	-	6,57,509
Flow Cytometer	1,10,300	1,12,360	-	-	-	2,22,660
30KVA UPS	47,461	45,061	45,061	45,290	48,200	2,31,073
High Pressure Horizontal Rectangular sliding door Sterilizer	-	-	76,405	-	-	76,405
04 Nos. Deep Freezer	36,399	37,078	49,438	49,438	50,160	2,22,513
IVC Ventilator maximum (cagin systems)	98,877	1,08,989	1,17,978	1,25,340	1,33,516	5,84,700
Fax Machine Panasonic	2,500	2,500	-	-	-	5,000
Computer Printer	24,850	12,425	21,850	21,850	20,850	1,01,825
BSL3 Facility at animal house	20,77,550	21,81,428	22,00,000	23,10,000	23,10,000	1,10,78,978
15KVA UPS System			39,428	39,629	42,174	1,21,231
						1,39,15,726
PROF. V.K. CHAUDHARY LAB (AMC)						
Nat Steel high Pressure Horizontal Cylindrical Sterilizer	16,545	13,236	14,607	15,730	17,506	77,624
RC 5C+ & Evolution RC	-	-	54,776	60,253	55,819	1,70,848
BOHN Make Refrigeration Split Unit (For 2 unit)	50,449	51,391	54,042	59,551	55,250	2,70,683
Panasonic KTS (KXES824)	7,282	7,282	8,009	8,162	8,198	38,933
R.O. Water Purification Plant (250 Litre per hours)	16,545	18,539	20,393	22,433	25,036	1,02,946
Xerox Printer	24,266	24,719	-	-	-	48,985
UPS 10KVA	-	63,266	58,579	59,142	59,535	2,40,522
UPS 15KVA	-	-	78,856	78,856	81,882	2,39,594
DNA Sequencer Model ABI 3730XL and 3130XL	-	-	12,69,668	13,37,084	14,65,600	40,72,352
AKTA Explorer (2 Nos) and BIA Core	11,97,407	10,55,089	4,95,376	6,07,761	-	33,55,633

3900						
Air Conditioners	-	-	1,69,048	-	-	1,69,048
						87,87,168
PROF. P.C. GHOSH LAB (AMC)						
02 Nos. Computer	9,500	9,500	9,500			28,500
04 Nos. Air Conditioners	8499	8499	8499	8499	8499	42,495
Kent Grand Plus Mineral R.O. System			2,000	2,000	2,000	6,000
						76,995
DR. SUMAN KUNDU LAB (AMC)						
02 Nos. Air conditioners	9,016	8,923	9,589	6,047	9,629	43,204
Spectrometer	35,296	43,708	44,944	47,192	47,192	2,18,332
10 KVA UPS	12,500		14,950	-	-	27,450
						2,88,986
DR. ALO NAG LAB (AMC)						
Air conditioners	3,070	3,070	3,024	3,024	-	12,188
Total AMC all Lab & Departmental						**2,30,81,063**