

## EVALUATIVE REPORT OF THE DEPARTMENT

Compiled data for the last five financial years  
Apr1- Mar 31- 2012-13, 2013-14, 2014-15, 2015-16, 2016-17  
Year wise, wherever applicable, and Total

Name of the Department: BIOCHEMISTRY

S.No	New format	Information	
1.	Year of Establishment	1984	
2.	Is the Department part of a School/Faculty of the University	Faculty of Interdisciplinary & Applied Sciences (FIAS)	
3.	Names of programmes offered	M.Sc. Biochemistry (PG Programme), M.Phil. (Biotechnology) jointly with other Departments of FIAS (PG programme),; Ph.D. (Biochemistry) (Doctoral programme)	
4.	Number of teaching posts Sanctioned/Filled	<b>Sanctioned</b> Professors – 03 Associate Professor – 04 Assistant Professor – 02	<b>Filled</b> Professors – 02 Associate Professor – 04 Assistant Professor – 02
5.	Number of Research Projects: Total grants received	16  Total grants received - Rs. 80,505,2016	
6.	Inter–institutional collaborative projects and Associated grants received  National collaboration  International collaboration	-  -	
7.	Departmental projects funded by DST-FIST, UGC-SAP/CAS,DPE, DBT, ICSSR, AICTE etc., : Total grants received	Rs. 14,96,4936 (UGC-SAP)	
8.	Special research laboratories sponsored by / created by industry or corporate bodies	None	
9.	Publications: Number of Papers published Number of Books with ISBN Number of Citation Index – range / average Number of Impact Factor – range / average Number of h-index	101 3 Range: 180-1581; Average: 813 per faculty  Range: Lowest IF = 0.45; Highest IF = 9.6; Average:3.5 per publication	

<p><b>10.</b></p>	<p>Details of patents and income generated</p>	<p>Mutants of mycobacteria and process thereof, <b>Anil K. Tyagi</b>, Ramandeep Singh, Vivek Rao, Vadakkuppattu Devasenapathi Ramanathan, Chinnambedu Nainarappan Paramasivan, ParANJI Ramaiyengar Narayanan, Yogendra Singh, Patent No.259594, National, Applied 9<sup>th</sup> July, 2003, Granted on 19<sup>th</sup> March, 2014</p> <p>A process of producing orf-enriched phage display library and uses thereof, <b>Amita Gupta, Vijay K. Chaudhary</b> and Nimisha Shrivastave, National, Indian Patent 2346/DEL/2013dated 06.08.2013</p>
<p><b>11.</b></p>	<p>Areas of consultancy and income generated</p>	<p>-</p>
<p><b>12.</b></p>	<p>Awards/Recognitions received at the National and International level by : Faculty Doctoral/Post doctoral fellows Students</p>	<p><b>Faculty</b> Prof. Suman Kundu, Suresh C. Tyagi Oration Award, Jan 2017, International Academy of Cardiovascular Sciences (Indian Section), National, For Accomplishments in Research and Oration in the area of cardiovascular diseases</p> <p>Prof. Vijay K Chaudhary shared with Dr. Amita Gupta, Visitor's Award for Innovation 2014 in Central Universities, Feb, 2015, Hon'ble President of India, Innovation and Developing a Rapid Test for Tuberculosis</p> <p>Prof. P.C. Ghosh shared with Dr. Shailendra Singh Rathore, Dr. Nikhil Tyagi , Prof. M.L. Khorana Memorial Prize 2013, June 5, 2015, Indian Pharmaceutical Association (IPA), Publishing best paper in the field of Pharmacology &amp; Clinical Pharmacy in Indian Journal of Pharmaceutical Science for the year 2013.</p> <p>Prof. D. P. Sarkar, Platinum Jubilee Lecture in the Section of New Biology (including Biochemistry, Biophysics &amp; Molecular Biology and Biotechnology), Jan, 2015, 102<sup>nd</sup> Indian Science Congress held at University of Mumbai, Mumbai, Excellence in biological research</p> <p>Prof. Vijay K Chaudhary, Biotech Product and Process Development and Commercialization Award 2014, 2014, Department of Biotechnology, Govt of India, conferred on 11<sup>th</sup> May 2015 by Hon'ble Minister of Science &amp; Technology, Excellence in Biotech product &amp; process development &amp; commercialization</p> <p>Dr. Suneel Kateriya, Max Planck India Fellowship, 2012-2016, Department of Science and Technology, India and Max Planck Group-Germany, International, For short term research based on competitive grant writing</p> <p>Dr. Garima Khare, Indian Young Biotechnologist Award 2013, 2013, Department of Biotechnology, Government of India, Innovative research by young scientists through competitive grant writing</p>

		<p>Prof. Alo Nag, Appreciation Award 2012, Nov.2012, Carcinogenesis Foundation, USA, International, Organizing Carcinogenesis international conference in New Delhi, India, Nov, 2012</p> <p><b>Doctoral / Post-Doctoral Fellows</b></p> <p>Pradeep Singh Cheema, 2017, Local / University, Third Best Oral Presentation Award. Identification of novel small molecule inhibitors against FoxM1 with implications in cancer therapy. 7<sup>th</sup> National Science Day Symposium, 28<sup>th</sup> February 2017, University of Delhi South Campus, New Delhi.</p> <p>Sanjay Kumar Dey, 2017, National, Poster Presentation Award for Sanjay Kumar Dey, in Indian Biophysical Society Annual Meeting, at IISER Mohali, March 23-25, 2017.</p> <p>Sanjay Kumar Dey, 2017, National, Travel award for attending Indian Biophysical Society Annual Meeting, at IISER Mohali, March 23-25, 2017.</p> <p>Richa Arya, 2017, National, Travel award for attending Indian Biophysical Society Annual Meeting, at IISER Mohali, March 23-25, 2017.</p> <p>Md. Asim Khan, 2017, National, Travel award for attending Indian Biophysical Society Annual Meeting, at IISER Mohali, March 23-25, 2017.</p> <p>Richa Arya, 2017, International, Oral Presentation Award (2<sup>nd</sup>) in Indo-US conference on "Advances in Enzymology: Implications in Health, Disease and Therapeutics", ACTREC, Mumbai, Jan 17-19, 2017.</p> <p>Manendra Pachauri and P.C. Ghosh, 2016, International, <b>Prof. A. R. Rao Researcher Award for the best oral presentation</b> at International Symposium on "Role of Herbals in Cancer Prevention and Treatment" at School of Life Sciences, Jawaharlal Nehru University, New Delhi, India, dated 9<sup>th</sup>-10<sup>th</sup> February 2016.</p> <p>Vinoth Rajendran, Mohsin Raza and P.C. Ghosh, 2016, Local / University, <b>Second Oral Presentation Award</b>. Liposome mediated delivery of anti-malarial drugs for the treatment of malaria 6<sup>th</sup> National Science Day Symposium, 29<sup>th</sup> February 2016, University of Delhi South Campus, New Delhi.</p> <p>Yama Atri, 2016, International, <b>Best Essay Award</b>, on 'Cancer Genomics: An Approach to Personalized Therapy' in IACR-ACOS International Conference, 8-10 April, 2016, New Delhi.</p> <p>Sanjay Kumar Dey, 2015, International, <b>Boehringer Ingelheim Fonds (BIF) Travel Grant Award</b> for Short Term Research Work in Germany</p> <p>Swati Singh, Garima Khare and Anil K. Tyagi, 2015, Local / University, <b>Best Poster Award</b>. Identification of biotin</p>
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	<p>biosynthesis inhibitors for inhibition of <i>Mycobacterium tuberculosis</i>. 5<sup>th</sup> National Science Day Symposium, 27<sup>th</sup>-28<sup>th</sup>February, 2015, University of Delhi South Campus, New Delhi.</p> <p>Sanjay Kumar Dey, 2015, National, <b>Travel Grant from ICMR, DST and Immunology Foundation</b> to attend Conference on Hypertension by Council of Hypertension and American Heart Association, USA, 2015.</p> <p>Sanjay Kumar Dey, 2015, International, <b>Young Scientist Fellow</b>, American Heart Association.</p> <p>Neha Jaiswal, Pradeep Singh Cheema, Rince John, Vaibhav Chand and Alo Nag, 2015, National, <b>Best Poster Award</b>. Viral onco protein HPV16E7 perturbs SUMOylation of FoxM1 to induce oncogenesis, International Symposium on Current Advances in Radiobiology, Stem Cells and Cancer Research, 19<sup>th</sup>-21<sup>st</sup>Feb, 2015, JNU, New Delhi.</p> <p>Sanjay Kumar Dey, Toyanji Joseph, Santosh Kumar, A. Kamaladevi, Nabanita Sarkar, Surajit Sarkar, K. Balamurugan, B.K. Thelma and Suman Kundu, 2015, National, <b>Best Poster Award</b>. Experimental validation of new inhibitors identified through rational structure based design against Dopamine-<math>\beta</math>-hydroxylase to combat cardiovascular diseases, Cardiovascular Research Convergence 2, 17<sup>th</sup>January, 2015, All India Institute of Medical Sciences, New Delhi, India.</p> <p>Richa Arya, 2015, Local / University, <b>Third Best Oral Presentation Award</b>. Insight into ACP-PPTase interaction essential for Fatty acid synthesis in <i>Leishmania major</i> with application in drug design. 5<sup>th</sup> National Science Day Symposium, 27<sup>th</sup>-28<sup>th</sup>February, 2015, University of Delhi South Campus, New Delhi.</p> <p>Sanjay Kumar Dey, Himanshu Meghwani, Pankaj Prabhakar, Subir Kumar Maulik and Suman Kundu, 2015, International, <b>Selected among the best five posters and for Oral presentation</b>. Dopamine-<math>\beta</math>-hydroxylase inhibitor UDSC171 can prevent isoproterenol induced cardiac hypertrophy in rats. 12<sup>th</sup> Annual Conference of International Society for Heart Research (Indian Section), 14<sup>th</sup>-15<sup>th</sup> March, 2015, Jawaharlal Nehru University, New Delhi, India</p> <p>Garima Khare, Prachi Nangpal, Anil K. Tyagi, 2014, National, <b>Best Poster Award</b>. 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”, held at Mahatma Gandhi Institute of Medical Sciences, Sevagram, 27-29<sup>th</sup> Jan 2014.</p> <p>Vinoth Rajendran, Mohsin Raza, Shilpa Rohra and Prahlad C. Ghosh, 2014, International, <b>Best Poster Award</b>. Evaluation of liposomal monensin in combination with artemisinin on growth inhibition of blood stages of <i>Plasmodium falciparum</i> (3D7) <i>in vitro</i>. International</p>
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		<p>conference on “Emerging trends of Nanotechnology in drug discovery”, held at University of Delhi South Campus. 26-27 May.</p> <p>Vinoth Rajendran, Manendra Pachauri, Mohsin Raza, 2014, National, <b>Travel fellowship award to the team</b>. Selected for Biotechnology Entrepreneurship student team at “ABLE-BEST INDIA 2014”, held at Fortune Select Trinity Hotel, Bangalore. 13-17 October.</p> <p>Neha Jaiswal, 2014, International, <b>Young Scientist Travel Award by DST and ICMR, Govt. of India</b> for 4th World Congress on Cancer Science and Therapy, Chicago, USA, 20-22 October, 2014.</p> <p>Neha Jaiswal, 2014, International, <b>Selected for Oral Presentation in Young Scientist Forum</b>. Modulation of FoxM1b SUMOylation by High-Risk HPV and its significance in cervical cancer. 4th World Congress on Cancer Science and Therapy, Chicago, USA, 20-22 October, 2014.</p> <p>Amit Kumar, Suneel Kateriya, SumanKundu,2014, International, <b>Selected for Oral presentation</b>. Hemoglobins from extremophilic and mesophilic algae: a comparative study, XVIII International Conference on Oxygen-binding and sensing proteins, 6<sup>th</sup>-10<sup>th</sup> July, 2014, University of Sheffield, Sheffield, United Kingdom.</p> <p>Akshay Rohilla, 2014, International, <b>Best Poster Award</b>. Disruption of mycobactin biosynthesis leads to attenuation of <i>Mycobacterium tuberculosis</i> for growth and virulence, International Conference on Recent advances in Structural Biology and Drug discovery, IIT Roorkee, 9<sup>th</sup>-11<sup>th</sup> October, 2014</p> <p>Peeyush Ranjan, Mayanka Awasthi and Suneel Kateriya, 2013, Local / University, <b>Third Best Poster Award</b> Microalga:mimicking the mammalian like IFT mediated trafficking of rhodopsin, National Science Day Symposium, University of Delhi South Campus, 28th February 2013, New Delhi</p> <p>Priyanka Chauhan, 2013, Local / University, <b>Best Oral Presentation Award</b>. Mycobactin biosynthesis is essential for the growth and virulence of <i>Mycobacterium tuberculosis</i>: An attractive target for therapeutic interventions. National Science Day Symposium, 28th February 2013, held at University of Delhi South Campus.</p> <p>Ritika Kar, Priyanka Chauhan, Garima Khare, Prachi Nangpal, Anil K. Tyagi, 2013, Local / University, <b>Best Poster Award</b>. rBCG85C – A Superior Vaccine than BCG: Modifications for Human Clinical Trials. National Science Day Symposium, 28th February 2013, held at University of Delhi South Campus.</p> <p>Sanjay Kumar Dey, B.K. Thelma and Suman Kundu, 2013, National, <b>Third Best Poster award</b>. Dopamine-β-</p>
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		<p>hydroxylase as a novel drug target for cardiovascular diseases: <i>In silico</i> identification and <i>in vitro</i> validation of novel inhibitors. Conference on Recent Advances in Computational Drug Design, Indian Institute of Science, Bangalore, 16-17 September, 2013.</p> <p>Peeyush Ranjan, Mayanka Awasthi, Sindhu Kandoth Veetil and Suneel Kateriya, 2013, International, <b>Junior Scientist Award</b>. Cellular trafficking of phototropin and novel modular rhodopsin is mediated by animal like IFT machinery in <i>Chlamydomonas reinhardtii</i>, 7th Annual Convention of ABAP &amp; International Conference on Plant Biotechnology, Molecular Medicine &amp; Human Health, New Delhi, India, October 18th-20th, 2013.</p> <p>Sanjay Kumar Dey, 2013, National, <b>Ratna Phadke Young Scientist Award (Oral)</b>. Identification of Novel Inhibitors against Human Dopamine-<math>\beta</math>-Hydroxylase, a Drug Target for Cardiovascular Diseases. National Symposium on Frontiers of Biophysics, Biotechnology and Bioinformatics and 37<sup>th</sup> Annual Meeting of Indian Biophysical Society (IBS), University of Mumbai, Kalina Campus, Mumbai, India, 13-16 January, 2013.</p> <p>Sanjay Kumar Dey, Abhishika Srivastava, Rachana Muley, B.K. Thelma and Suman Kundu, 2013, National, <b>Best Poster Award</b>. <i>In silico</i> identification and <i>in vitro</i> validation of novel inhibitors to combat cardiovascular diseases exploiting dopamine-<math>\beta</math>-hydroxylase as the drug target. SYSCON-2013 on Interfacing Basic and Translational Research, All India Institute of Medical Sciences, New Delhi, India, 23 August, 2013.</p> <p>Manish Shandilya, Ridhima Gomkale, Suneel Kateriya and Suman Kundu, 2013, National, <b>Selected for Oral presentation</b>. An insight into function of novel globins: Characterization of hemoglobins and their reductase partners from <i>Chlamydomonas reinhardtii</i>, National Conference on Recent Trends in Structural Biology, 16th-18th December 2013, Jamia Millia Islamia, New Delhi, India.</p> <p>Amit Kumar, 2013, National, <b>Oral Presentation Award</b>. Novel hemoglobins from plant and algae: Discovery to application, Biospark, School of Lifesciences, Jawaharlal Nehru University, February 16<sup>th</sup>, 2013.</p> <p>Amit Kumar, Manish Shandilya, Rudra Kashyap, Usha Yadav, V.A. Semionkin, M. I. Oshtrakh, Suneel Kateriya, Suman Kundu, 2013, International, <b>Poster Travel Award</b>. Discovery to applications: Snapshots of a globin journey. International Conference on Biomolecular Forms and Functions, A Celebration of 50 Years of the Ramachandran Map, Indian Institute of Sciences, Bangalore, January 8<sup>th</sup> - 11<sup>th</sup>, 2013.</p> <p>Garima Khare, 2012, National, <b>Best Oral Presentation Award</b>. Determination of the structure of Thiamin Phosphate Synthase (MtTPS) of <i>Mycobacterium</i></p>
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	<p><i>tuberculosis</i> 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.</p> <p>Manendra Pachauri and Prahlad C. Ghosh, 2012, International, <b>Award of Excellence</b>. Combination of Curcumin and Monensin Loaded Poly(lactic-co-glycolic acid) Nanoparticles for Cancer Therapy. 3rd International Conference of Carcinogenesis Foundation-Frontiers in Carcinogenesis and Preventive Oncology Molecular Mechanisms to Therapeutics, New Delhi, India, 19-21 November, 2012.</p> <p>Vaibhav Chand, Rince John, Neha Jaiswal, Vandana and Alo Nag, 2012, International, <b>Oral presentation and Excellence Award</b>. 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</p> <p>Neha Jaiswal, Rince John, Vaibhav Chand and Alo Nag, 2012, International, <b>Oral presentation and Excellence Award</b>. FoxM1: A Key Player in HPV-Mediated Oncogenesis, 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.</p> <p>Amit Kumar, 2012, International, <b>Boehringer Ingelheim Fonds Travel Fellowship</b> for visit to Ural Federal State University, Russia for 3 months (Oct-Dec) for research work.</p> <p>Pooja Tiwari and P.C. Ghosh, 2012, International, <b>Awarded International travel grant by ICMR, Government of India</b> for poster presentation entitled “Stearylamine loaded PLGA nanoparticle for treatment of malaria” at International conference “Colloids and Nanomedicine 2012” in July 2012 at Amsterdam, Netherlands.</p> <p><b>Post-Graduate Students</b></p> <p>Juhi Arora, 2016, National, <b>Indian Academy of Sciences Summer Fellowship</b> for short term research</p> <p>Gagandeep Kaur, 2015, Local / University, <b>Poster Prize</b>. Targeting Cytochrome b5 reductase3 to combat cardiovascular diseases, 5<sup>th</sup>National Science Day Symposium, 27<sup>th</sup>-28<sup>th</sup> February, 2015, University of Delhi South Campus, New Delhi</p> <p>Priyanka Chowdhury, 2012, National, <b>Indian Academy of Sciences Summer Fellowship</b> for short term research</p>
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		Pragya Sidhwani, 2012, International, <b>Khorana Summer Program for Scholars, Indo-US Science and Technology Forum</b> for short term research in Wisconsin, USA
<b>13.</b>	How many students have cleared Civil Services and Defense Services examinations, NET, SET (SLET), GATE and other competitive examinations	<b>2012-17</b> NET (CSIR+UGC) – 28 GATE – 30 GRE (USA) - 01
<b>14.</b>	List of doctoral, post-doctoral students and research associates From the host institution /university From other institutions/universities	<b>2012-17</b> *(List below)  24  46
<b>15.</b>	Number of Research Scholars/ Post Graduate students getting financial assistance from the University/State/ Central	45 (15 – Post Graduates; 30 – Research Scholars)

\*List for Point No. 14:

### Doctoral students

From Host Institution / University				
2012-13	2013-14	2014-15	2015-16	2016-17
Sheetal Uppal	Mohsin Raza	Yama Atri	Sanjeev Kumar Yadav	Simran Kaur
Richa Arya	Swati Singh	Simran Kaur		Chetna Dhembla
Enna Dogra	Vaishali Verma			Aakriti
Vandana				
Prachi Nangpal				
Ritika Kar				
<b>Total = 06</b>	<b>Total = 03</b>	<b>Total = 01</b>	<b>Total = 02</b>	
From Other Institutions / Universities				
2012-13	2013-14	2014-15	2015-16	2016-17
Amit Kumar	Pushpanjali Dasauni	Pradeep Singh Cheema	Mohd. Asim Khan	Varsha Verma
Manish Shandilya	Deepa Jha		Manisha Saini	Ankit Pal
Deepak Jangir	Vinoth Rajendran	Komal Sharma	Gaurav Kumar	Prasidhi Tyagi
Sanjay Kumar Dey	Charanpreet Kaur	Shivani Sharma	Hina Bharti	
Vaibhav Chand	Payal Grover	Shubhita Mathur	Deeptashree Nandi	
Rince John	Kapil Mathur	Nidhi Gupta		
Neha Jaiswal	Shingar Sharma			
Pallavi Singhal	Akshay Rohilla			
Peeyush Ranjan				
Mayanka Awasthi				
Meenakshi				
Manendra Pachauri				
Pooja Tiwari				
Sunandini Chandra				
Nirmalya Ganguli				
Mumtaz Khan				



Ajay Singh				
Nimisha Srivastava				
Rupangi Verma				
Priyanka Chauhan				
<b>Total = 20</b>	<b>Total = 08</b>	<b>Total = 06</b>	<b>Total = 04</b>	<b>Total = 06</b>

### Post-doctoral students and Research Associates

<b>From Host Institution / University</b>				
<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>
GarimaKhare	RupangiVerma	P. Vineel Reddy	Charanpreet Kaur	Prachi Nangpal
	Priyanka Chauhan		Payal Grover	Ritika Kar
	Ajay Singh			
	Nimisha Srivastava			
<b>Total = 01</b>	<b>Total = 04</b>	<b>Total = 01</b>	<b>Total = 02</b>	<b>Total = 02</b>
<b>From Other Institutions / Universities</b>				
<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	
-	-	Alisha Dhiman	Pankaj Prabhakar	
-	-	Kalpana Sagar		
		<b>Total = 02</b>	<b>Total = 01</b>	