

## Evaluative Report of the Department

1. Name of the Department : **Biochemistry**
2. Year of establishment: **1971**
3. Is the Department part of a college/Faculty of the university?  
**Part of a College**
4. Names of programs offered (UG, PG, PharmD, Integrated Masters; M.Phil., Ph.D., Integrated Ph.D., Certificate, Diploma, PG Diploma, D.M./M.Ch., Super specialty fellowship, etc.) :**UG (MBBS) PG (MD Biochemistry ) and PhD Medical Biochemistry**
5. Interdisciplinary programs and departments involved: **Clinical Grand Rounds, Telemedicine; Faculty and students of all departments are involved**
6. Courses in collaboration with other universities, industries, foreign institutions, etc. :**None**
7. Details of programs discontinued, if any, with reasons: **NA**
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System : **Internal assessment is Semester based,University Examinations (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and final professional Examinations) are conducted annually**
9. Participation of the department in the courses offered by other departments: **Faculty members co-supervise theses of Post graduate and PhD students of other departments**
10. Number of teaching posts sanctioned, filled and actual(Professors/Associate Professors/Asst. Professors/others)

|                                    | <b>Sanctioned</b> | <b>Filled</b> | <b>Actual (including CAS &amp; MPS , DACP)</b> |
|------------------------------------|-------------------|---------------|--|
| <b>Professor</b>                   | <b>2</b>          | <b>2</b>      | <b>4(1Prof, 3 Director-Prof under DACP)</b>    |
| <b>Associate Professor/Reader</b>  | <b>3</b>          | <b>3</b>      | <b>1</b>                                       |
| <b>Assistant Professor</b>         | <b>6</b>          | <b>3</b>      | <b>2</b>                                       |
| <b>Lecturer</b>                    | <b>0</b>          | <b>0</b>      | <b>0</b>                                       |
| <b>Tutor / Clinical Instructor</b> | <b>0</b>          | <b>0</b>      | <b>0</b>                                       |
| <b>Senior Resident</b>             | <b>6</b>          | <b>6</b>      | <b>6</b>                                       |

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

| Name                  | Qualification | Designation        | Specialization   | No. of Years of Experience |
|-----------------------|---------------|--------------------|--|----------------------------|
| Dr. B D Banerjee      | M.Sc. PhD     | Professor          | Gene environment interaction                                       | 32                         |
| Dr. S B Sharma        | M.Sc. PhD     | Director-Professor | Isolation and purification of active principles from herbal plants | 35                         |
| Dr. Dinesh Puri       | MD, PhD       | Director-Professor | Medical Education  | 27 years and 11 months     |
| Dr. Rafat S Ahmed     | M.Sc. PhD     | Director Prof.     | Rheumatoid arthritis, phytotherapy.                                | 29                         |
| Dr. Seema Garg        | MD            | Asstt. Prof.       | Diabetes   | 12                         |
| Dr. Mohit Mehndiratta | MD            | Assoc. Prof        | IUGR & Cancer  | 10                         |
| Dr. Rajarshi Kar      | MD            | Asstt. Prof.       | Cancer Biology   | 8                          |

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors: **None**

13. Percentage of classes taken by temporary faculty - program-wise information: **None**

14. Program-wise Student Teacher Ratio: **10:1**

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual: Sanctioned:

|  | Sanctioned | Filled | Actual (including CAS & MPS) |
|--|------------|--------|------------------------------|
|  | 588        | 406    | 182                          |

16. Research thrust areas as recognized by major funding agencies

- a. **Study of Biochemical and genetic risk factors in coronary artery disease, Diabetes mellitus and chronic kidney disease.**
- b. **Medicinal plants in the treatment of diabetes mellitus and dyslipidemia.**
- c. **Autoimmune disorders and Phytotherapy**
- d. **Environmental Biology**
- e. **Immunology**
- f. **Cancer genetics**

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

| S. no | Principal Investigator  | Title of the Project  | Years        | Funded by | Grant Rs.                     |
|-------|---|---|--------------|-----------|-------------------------------|
| 1     | Dr. BD Banerjee   | (1) A study on gene-environment interaction and high risk phenotypes in the etiology of preterm birth in North Indian population.   | 2012-2015    | ICMR      | Rs.50 lakh                    |
|       |   | (2)Gene –Environment Interaction and identification of high risk phenotype in the etiology of epithelial ovarian cancer.  | 2014-2017    | DBT       | Rs. 56 lakhs                  |
| 2     | Dr SB Sharma  | 1.Studies on molecular mechanism of anti diabetic compound isolated from E. Jambolana in type 2 diabetes mellitus: an experimental study.   | 2013-2015    | ICMR      | Rs.24 Lakhs                   |
|       |   | 2.Effect of germinating <i>Glycine max</i> seeds on GPR55 gene expression – A potential receptor for type 2 diabetes  | 2015-18      | ICMR      | Approx Rs. - (approx 17 lakhs |
|       |   | 3.Design and synthesis of alpha hydroxysuccinamic -----<br>-STZ induced diabetic rats   |              | ICMR      | 28Lakhs                       |
|       |   |   | -            | -         | -                             |
| 3     | Dr. A. K. Tripathi (Superannuated on 31 <sup>st</sup> Jan., 2016) | 1.Chronic kidney disease: A study on polymorphism of xenobiotic metabolizing enzymes dealing with persistent organic compounds and development of therapeutic interventions in vitro. | 2013-2016    | DST       | Rs. 53 lakhs                  |
| 4     | Dr. Rafat S Ahmed   | 1.Effect of different extracts of <i>Withaniasomnifera</i> in the treatment of rheumatoid arthritis:  | (2012-2015)  | DBT       | Approx Rs. 25 lakhs           |
| 5     | Dr. RimmiShukla (Superannuated on 30 <sup>th</sup> April, 2016)   | 1.Mechanism of Hepatoprotective effect of leaves of <i>Ficusinfectoria</i> in rats intoxicated with Ethanol”. Awarded to Senior Research Fellow                                       | 2013 to 2016 | ICMR      | Approx 14 lakhs               |

|    |                       |  |              |     |             |
|----|-----------------------|--|--------------|-----|-------------|
| 6. | Dr. Rajarshi Kar      | 1."Primary cultures of epithelial ovarian cancer as a tool to detect resistanceto chemotherapeutic agents – a pilot study" | 2014-2017    | DBT | Rs.25 lakhs |
| 7. | Dr. Mohit Mehndiratta | Molecular biology and genetics   | 2014 to 2015 | -   | -           |

18. Inter-institutional collaborative projects and associated grants received  
a) National collaboration b) International collaboration : **Nil**
19. Departmental projects funded by ICMR; DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.  
**Total no of projects 09+ Total grant Rs.2.92Crore**
20. Research facility / centre with **NA**
- state recognition
  - national recognition
  - international recognition :
21. Special research laboratories sponsored by / created by industry or corporate bodies: **NA**
22. Publications:
- \* Monographs None
  - \* Number of papers published in peer reviewed journals (national / international)
- National/International- 42 (Annexure 1)**
- \* Chapters in Books: Nil
  - \* Books edited **Nil**
  - \* Books with ISBN with details of publishers: **Nil**
  - \* Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, Medline, etc.)
  - \* Citation Index – range / average
  - \* SNIP
  - \* SJR
  - \* Impact Factor – range / average
  - \* h-index
23. Details of patents and income generated: **Nil**
24. Areas of consultancy and income generated: **Nil**
25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad -nil
26. Faculty serving in  
a) National committees **NA**

b) International committees NA

c) Editorial Boards:

**Prof D. Puri**

**Reviewer**

Indian Journal of Laboratory practices  
Indian Journal of Clinical Biochemistry  
Indian Journal of Medical Biochemistry  
Indian Journal of Experimental Biology

**Prof. S.B.Sharma**

**Reviewer (Research Project)-**

Indian Council of Medical research, New Delhi.

**Reviewer (Research Paper)-**

1. Indian Journal of Medical Research, New Delhi
2. Current Pharmaceutical design, Spain
3. Medical Principals and Practice, Kuwait
4. Indian Journal of Clinical Biochemistry, India
5. Indian Journal of Experimental Biology, India

**DrSeemaGarg**

**International Journal of Clinical Biochemistry and Research)**

d) Any other (specify)

27. Faculty recharging strategies (Refresher / orientation programs, workshops, training programs and similar programs). Nil

None

28. Student projects

- Percentage of students who have taken up in-house projects including inter-departmental projects: **All PG students require doing a research project and writing a thesis as a mandatory requirement.**
- Percentage of students doing projects in collaboration with other universities / industry / institute
  - **UG students take up project through ICMR STS. All PG students undertake thesis projects funded by IMRG**

29. Awards / recognitions received at the national and international level by

- Faculty :

**Professor BD Banerjee-**

- Chairing Session, IMMUNOCON, 2014 Madurai Kamaraj University.

**Prof. S.B.Sharma**

**Chairing Session**

1. ACBICON 2015 held on 26-28<sup>th</sup>, Nov 2015 PGI, Chandigarh
2. ISARCON, 2015 held on 29-31st Nov. 2015, Hamdard, Institute of Medical Sciences, New Delhi
3. ACBICON 2014 held on 10<sup>th</sup>-13th Dec, 2014 Jodhpur
  - S.B.Sharma, ArchanaSingal, KumariAsha, AmiteshAggarwal. Psoriasis and Atherosclerosis: Shared Pathogenesis and Diagnostic Approach. 41st National Conference

1) **President-** Indian Society of Atherosclerosis Research (2015-2017)

**Prof. Dinesh Puri**

Chaired a session and delivered a lecture at AMBICON 2015, 23<sup>rd</sup> Annual National Conference of AMBICON held at 20<sup>th</sup> to 21<sup>st</sup> Nov. **2015**, Rohtak, India.

- Doctoral / post doctoral fellows:NA
  - Students
30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.NIL
  31. Code of ethics for research followed by the departments : **All research projects are approved by Institutional Ethics Committee- Animal research and Human research**
  32. Student profile program-wise:NA

| Name of the Program<br>(refer to question no. 4) | Applications received | Selected |        | Pass percentage |        |
|--|-----------------------|----------|--------|-----------------|--------|
|  |                       | Male     | Female | Male            | Female |
|  |                       |          |        |                 |        |
|  |                       |          |        |                 |        |

33. Diversity of students

| Name of the Program<br>(refer to question no. 4) | % of students from the same university                | % of students from other universities within the State | % of students from universities outside the State | % of students from other countries |
|--|---|--|---|------------------------------------|
| All courses                                      | Selection from all across country for Indian citizens |  |   | 0                                  |

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE, USMLE, PLAB, GPAT, NCLEX, CGFNS, IELTS and other competitive examinations? Give details category-wise. NA

35. Student progression

| Student progression   | Percentage against enrolled  |
|---|--|
| UG to PG  | Percentage against enrolled<br>As per national and state<br>entrance examination |
| PG to M.Phil,DM / M Ch / DNB                                      |  |
| PG to Ph.D.   |  |
| Ph.D. to Post-Doctoral  |  |
| Employed<br>• Campus selection<br>• Other than campus recruitment | DU selection committee   |
| Entrepreneurs   | NA   |

36. Diversity of staff

| Percentage of faculty who are graduates  |     |
|--|-----|
| of the same university                   | 11% |
| from other universities within the State | 0   |
| from universities from other States      | 89% |
| from universities outside the country    | 0   |

37. Number of faculty who were awarded M.Phil.,DM, M Ch, Ph.D., D.Sc. and D.Litt. during the assessment period: Nil

38. Present details of departmental infrastructural facilities with regard to

a) Library

**There are 108 books in the departmental library**

b) Internet facilities for staff and students

**All faculty members have internet facility. Separate internet for residents has also been provided**

c) Total number of class rooms

**1 Demo room**

d) Class rooms with ICT facility and 'smart' class rooms

**Not available**

e) Students' laboratories:

**One Undergraduate and one post graduate lab**

f) Research laboratories:

1. **Molecular biology lab**
2. **Immunology lab**
3. **Environmental biology lab**
4. **Cell culture lab**

## 5. Central research laboratory

39. List of doctoral, post-doctoral students and Research Associates

a) From the host institution/university

### List of Doctoral (Ph.D)

- |                         |                            |
|-------------------------|----------------------------|
| 1. MythilySubramanayaan | 11. Praveen Deshmukh       |
| 2. KumariAsha           | 12. NehaTawar              |
| 3. Aiman Abbas Jafri    | 13. KanuMegha              |
| 4. Mahmood Ahmad Khan   | 14. Taminani Krishna Latha |
| 5. Richa Gupta          | 15. MohdJahid              |
| 6. Tusha Sharma         | 16. Ranjeet Kumar          |
| 7. Mohini Sharma        | 17. Gaurav Kumar Thakur    |
| 8. VipinTyagi           | 18. RashmiGhanshela        |
| 9. Pawan Kumar Kare     | 19. Rishila Gosh           |
| 10. Mool Kumar Tyagi    | 20. Neeru Sing             |

### MD Students

1. DrDivyaNarang
2. DrDivesh Sharma

b) From other institutions/universities **NIL**

40. Number of post graduate students getting financial assistance from the university. **Nil**

41. Was any need assessment exercise undertaken before the development of new program(s)? If so, highlight the methodology. **NA**

42. **Does the department obtain feedback from**

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

**There are regular meetings amongst the faculty to discuss the problems faced in teaching and evaluation and ways to improve them. Pre-practical and Pre-tutorial meetings are done to ensure uniform teaching**

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

**Yes after each lecture block. The feedbacks are taken by the teacher concerned and evaluated systemically and the problems faced by most students are addressed in the next lecture block. The problems are also discussed with other teachers so that they can also incorporate the same in their lectures.**

c. Alumni and employers on the programs offered and how does the



department utilize the feedback?

**No**

43. List the distinguished alumni of the department (maximum 10)

**List not available**

44. Give details of student enrichment programs (special lectures / workshops / seminar) involving external experts.

**Symposium- Application of Flow Cytometry in Clinical/Biomedical Research- 1<sup>st</sup> May 2014**

45. List the teaching methods adopted by the faculty for different programs including clinical teaching.

- **Blackboard teaching**
- **Power point presentations**
- **Problem based learning**
- **Clinical case discussion**

46. How does the department ensure that program objectives are constantly met and learning outcomes are monitored?

- **Students feed back through questionnaires.**
- **Written tests and Viva at regular intervals**

47. Highlight the participation of students and faculty in extension activities.

**Students are required to visit and work in Primary health centre as a part of community medicine**

48. Give details of “beyond syllabus scholarly activities” of the department.

**Students are members of literary clubs and dramatics and participate and win prizes in several inter college competitions.**

49. State whether the program/ department is accredited/ graded by other agencies? If yes, give details.

**No**

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

**The department has published both basic and translational research results in highly rated peer reviewed journals.**

**Faculty holds both national international patents for newly developed active principle.**

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

**Strengths**

1. Highly qualified and dedicated faculty members

2. Hard working and sincere students and research scholars
3. Very good research environment
4. Regular and high quality academic activities
5. Participation in extracurricular activities like, sports, music, literary and art societies

### **Weaknesses**

1. Less number of post graduate students
2. Less number of technical staff
3. Lack of coordination between clinical lab and department
4. Shortage of lab attendants
5. Need of renovation of undergraduate labs

### **Opportunities**

1. Research facility
2. Freedom in work place
3. Funding to disseminate research results by attending conferences, both national and international
4. Enough budget to procure non planned items throughout the year for the department
5. Good library

### **Challenges**

1. Infrastructure
2. Improving Power supply
3. Improving the Clinical lab
4. Space constraints
5. Difficulty in organizing national level conferences

### 52. Future plans of the department.

**The department has contributed immensely in establishing the Multi-disciplinary research unit funded by ICMR. The central research lab developed under this scheme has state of the art instruments which will give the faculty, students and research scholar a solid platform to carry out research of international standards. The department plans to shift the focus from animal studies to cell cultures.**

**The department also plans to incorporate newer teaching methods in the undergraduate and post graduate curriculum. The high end instruments available to the department will allow us to improve the practical course for post graduate students so that they are trained to work in these instruments.**

## Annexure-1

(List of publications from the department of Biochemistry from 2014 to 2015)

### **Name of faculty**

#### **Prof SB Sharma**

1. Santosh Kumar Shukla, **Suman Bala Sharma**, Usha Rani Singh, Sayeed Ahamad, Shridhar Dwivedi. Terminalia arjuna (Roxb.) wight & Arn. Augments cardio protection via antioxidant and anti-apoptotic cascade in isoproterenol induced cardiotoxicity in rats. Ind Jr of Exp. Boil 2015; 53: 810-818.
2. Kapil Dev, **Suman B Sharma**, Seema Garg, Amitesh Aggarwal and Madhu SV: Glycated apolipoprotein B- A surrogate marker of subclinical atherosclerosis. Diabetes & metabolic syndrome: clinical research & reviews . online 9<sup>th</sup> Oct 2015
3. Suruchi Vohra, Archana Singal, **Suman Bala Sharma**. Cinical and serological efficacy of topical calcineurin inhibitors in oral lichen planus: a prospective randomized controlled trial. International Journal of Dermatology. doi: 10.1111/ijd.12887.
4. Kapil Dev, Seema Garg, **Suman B Sharma**, Amitesh Aggarwal and Madhu SV. Study on Association of APOB Gene Polymorphism with Glycation of Low Density Lipoprotein in Type 2 Diabetes J Diabetes Metab 2015, 6:6 . <http://dx.doi.org/10.4172/2155-6156.1000553>
5. Azaz Siddique, SV Madhu, **SB Sharma**. Endocrine stress responses and risk of type 2 diabetes. Jr of STRESS.DOI:10.3109/10253890.2015.1067677
6. Santosh Kumar Shukla, **Suman Bala Sharma**, Usha Rani Singh.  $\beta$ -adrenoreceptor Agonist Isoproterenol Alters Oxidative Status, Inflammatory Signaling, Injury markers and Apoptotic Cell Death in Myocardium of Rats. IJCB 2015;30(1):27-3
7. Santosh k Shukla, **Suman B Sharma**, Usha R Singh. Pretreatment with  $\alpha$ -tocopherol and Terminalia arjuna ameliorates, pro-inflammatory cytokines, cardiac and apoptotic markers in myocardial infarcted rats. Redox report, 2015;20(2);49-59
8. Chhonker D, Faridi MM, Narang M, **Sharma SB**. Does type of feeding in infancy influence lipid profile in later life? Indian J Pediatr. 2015;82(4):345-8.
9. **S.B. Sharma** and Richa Gupta. Drug Development from Natural Resource: A Systematic Approach. Mini-Reviews in Medicinal Chemistry,. 2015;15; DOI:10.2174/1389557515011224160518 page no.52-57

**Prof Dinesh Puri.**

10. Mehndiratta M and **Puri D.** Adopting role play for training medical interns about sample collection and processing for laboratory investigations. *Ind j of Med Biochem* 2015;19(1),24-27.
11. Mehndiratta M, Gupta S and **Puri D.** Roleplay: a method of teaching biochemistry to medical undergraduates. *Ind j of Med Biochem* 2015;19(1),39-41.

**Prof Rimmi Shukla** (Superannuated on 30<sup>th</sup> April, 2016)

12. Dikshit P, Tyagi MK, Shukla K, Gambhir JK, **Shukla R,** Antihypercholesterolemic and antioxidant effect of sterol rich methanol extract of stem of *Musa sapientum* (banana) in cholesterol fed wistar rats. *Journal of Food Science and Technology*; pp 1-8; 12 November 2015. 2.32 Impact Factor.
13. Stuti Gupta, Mohit Mehndiratta, Sarathi Kalra, Om P. Kalra, **Rimi Shukla,** Jasvinder K. Gambhir. Association of Tumor Necrosis Factor (TNF) promoter polymorphisms with plasma TNF- $\alpha$  levels and susceptibility to diabetic nephropathy in North Indian population. *Journal of Diabetes and its Complications* 01/2015; 29(3). DOI:10.1016/j.jdiacomp.2015.01.002 · 1.93 Impact Factor.
14. Kirtikar Shukla, Piyush Dikshit, **Rimi Shukla,** Sonal Sharma, Jasvinder K Gambhir. Hypolipidemic and antioxidant activity of aqueous extract of fruit of *Withania coagulans* (Stocks) Dunal in cholesterol-fed hyperlipidemic rabbit model. *Indian journal of experimental biology* 09/2014; 52(9):870-5. · 0.75 Impact Factor

**Prof. Rafat Ahmed**

15. Kumar V, Banerjee BD, Datta SK, Yadav CS, Singh S, **Ahmed RS,** Gupta S. Association of CYP1A1, CYP1B1 and CYP17 gene polymorphisms and organochlorine pesticides with benign prostatic hyperplasia. **Chemosphere.** 2014;108:40-5.
16. Siddarth M, Datta SK, Mustafa M, **Ahmed RS,** Banerjee BD, Kalra OP, Tripathi AK. Increased level of organochlorine pesticides in chronic kidney disease patients of unknown etiology: role of GSTM1/GSTT1 polymorphism. **Chemosphere.** 2014;96:174-9.
17. Suke SG, Banerjee BD, Tripathi AK, **Ahmed RS.** Attenuation of propoxur induced oxidative stress and immunotoxicity in rats treated with dietary ginger (*Zingiber officinales* Rosc). **The IIS university Journal of Science and Technology.** 2014; 3(1):43-47.
18. Banerjee BD, Mustafa MD, Sharma T, Tyagi V, **Ahmed RS,** Tripathi AK, Guleria K. Assessment of toxicogenomic risk factors in etiology of preterm. **Reproductive System and Sexual disorders** 2014; 3:129.
19. Khan MA, Subramanayan M, Arora VK, Banerjee BD, **Ahmed RS.** Effect of *Withania somnifera* (Ashwagandha) root extract on amelioration of oxidative stress and

autoantibodies production in collagen-induced arthritic rats. **J Complement Integr Med.** 2015;12(2):117-25..

20. Deshmukh PS, Nasare N, Megha K, Banerjee BD, **Ahmed RS**, Singh D, Abegaonkar MP, Tripathi AK, Mediratta PK. Cognitive Impairment and Neurogenotoxic Effects in Rats Exposed to Low-Intensity Microwave Radiation. **Int J Toxicol.** 2015;34(3):284-90.
21. Sharma T, Banerjee BD, Mazumdar D, Tyagi V, Thakur G, Guleria K, **Ahmed RS**, Tripathi AK. Association of organochlorine pesticides and risk of epithelial ovarian cancer: A case control study. **Journal of Reproductive Health and Medicine.** 2015 (In Press).

### **Dr Mohit Mehndiratta**

22. Association of Tumor Necrosis Factor (TNF) promoter polymorphisms with plasma TNF- $\alpha$  levels and susceptibility to diabetic nephropathy in North Indian population. Gupta S, **Mehndiratta M**, Kalra S, Kalra OP, Shukla R, Gambhir JK. *J Diabetes Complications.* **2015** Jan 9.
23. Phenotypic expression and polymorphism of Glutathione S Transferase gene in materno-fetal dyads with idiopathic fetal growth restriction. Chandra, N., **Mehndiratta, M.**, Banerjee, B. D., Guleria, K., & Tripathi, A. K. (2015). *Journal of Reproductive Health and Medicine, 1*(1).
24. Idiopathic Fetal Growth Restriction: Repercussion of Modulation in Oxidative Stress. Chandra, N., **Mehndiratta, M.**, Banerjee, B. D., Guleria, K., & Tripathi, A. K. *Indian Journal of Clinical Biochemistry*, **2015**;1-8.
25. Cadmium exposure affects expression of antioxidant enzymes in mice Liver, Rajarshi Kar, Seema Garg, Sumita Halder, Vikas Galav, Nilesh Chandra, and **Mohit Mehndiratta.** *International Journal Of Clinical Biochemistry Research (IJCBR).* Accepted on 08/05/2015.
26. Garg S, Malik P, Kar R, Sankar V, **Mehndiratta M.** Expression of Lipoprotein associated phospholipase A2 enzyme in medical undergraduate students with metabolic syndrome. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews.* 2015 Oct 3.
27. **Mehndiratta M** and Puri D. Adopting role play for training medical interns about sample collection and processing for laboratory investigations. *Ind j of Med Biochem* 2015;19(1),24-27.
28. **Mehndiratta M**, Gupta S and Puri D. Roleplay: a method of teaching biochemistry to medical undergraduates. *Ind j of Med Biochem* 2015;19(1),39-41.

### **Dr. Rajarshi Kar**

29. Garg S, **Kar R**, Madhu SV. High density lipoproteins are significantly reduced in early stages of untreated type 2 diabetes mellitus. *International Journal of Clinical Biochemistry and Research*, 2015; 2:13-17.

30. **Kar R**, Garg S, Halder S, Galav V, Chandra N, Mehndiratta M. Cadmium exposure induces oxidative stress by decreasing expression of antioxidant enzymes in mice liver. *International Journal of Clinical Biochemistry and Research*, 2015; 2: 89-96
31. **Kar R**, Palanichamy JK, Banerjee A, Chattopadhyay P, Jain SK, Singh N. Survivin siRNA increases sensitivity of primary cultures of ovarian cancer cells to paclitaxel. *Clin Transl Oncol*. 2015;17:737-42.
32. **Kar R**. Sharma C, Sen S, Jain SK, Dutta Gupta S, Singh N. Response of primary culture of human ovarian cancer cells to chemotherapy: *In vitro* individualized therapy. *Journal of Cancer Research and Therapeutics*. 2015 (Ahead of Print) Accepted on 17/7/2015.
33. Halder S, **Kar R**, Galav V, Mehta AK, Bhattacharya SK, Mediratta PK, Banerjee BD. Cadmium exposure during lactation causes learning and memory-impairment in F1 generation mice: amelioration by quercetin. *Drug Chem Toxicol*. 2015; 7:1-7.
34. Halder S, **Kar R**, Mehta AK, Bhattacharya SK, Mediratta PK, Banerjee BD. Quercetin Modulates the Effects of Chromium Exposure on Learning, Memory and Antioxidant Enzyme Activity in F(1) Generation Mice. *Biol Trace Elem Res*. 2015. [Epub ahead of print]
35. Ghosh SK, Rudra O, **Kar R**, Ghosh A, Agarwal M. A curious case of blue-green discoloration in a middle-aged Indian man: Chromhidrosis. *Dermatol Online J*. 2015 18;21(11)
36. Garg S, Malik P, **Kar R**, Sankar V, Mehndiratta M. Expression of Lipoprotein associated phospholipase A2 enzyme in medical undergraduate students with metabolic syndrome. *Diabetes Metab Syndr*. 2015 Oct 3. pii: S1871-4021(15)30039-4.
- Dr. Seema Garg**
37. Dev K, Garg S, Sharma SB, Aggarwal A, Madhu SV. Glycated apolipoprotein B—a surrogate marker of sub clinical atherosclerosis *Diabetes and Metabolic Syndrome: Clinical Research and Reviews* (In Press, available online 9 Oct,15)
38. Garg S, Malik P, Kar, R, Shankar V, Mehndiratta M. Expression of lipoprotein associated phospholipase A2 enzyme in medical undergraduate students with metabolic syndrome. *Diabetes and Metabolic Syndrome: Clinical Research and Reviews* (In Press, available online 3 Oct,15) (Accepted on 27.09.15)
39. Dev K, Garg S, Sharma SB, Aggarwal A, Madhu SV. Study on Association of APOB Gene Polymorphism with Glycation Of Low Density Lipoprotein in Type 2 Diabetes. *Journal of Diabetes and Metabolism*. (J Diabetes Metab 2015, 6:553 <http://dx.doi.org/10.4172/2155-6156.1000553> (Accepted )

40. Kar R, Garg S, Halder S, Galav V, Chandra N, Mehndiratta M. Cadmium exposure affects expression of antioxidant enzymes in mice Liver, International Journal Of Clinical Biochemistry Research (IJCBR). 2015;2: 89-96. (Accepted on 08/05/2015).

**41. Garg S, Kar R, Madhu SV.** High density lipoproteins are significantly reduced in early stages of untreated type 2 diabetes mellitus. International Journal of Clinical Biochemistry and Research (IJCBR). 2015, 2 (1): 13-17

**42. Garg S, Madhu SV, Suneja S.** Lipoprotein associated phospholipase A2 activity and its correlation with ox LDL and glycemic status in early stages of type-2 diabetes mellitus. Indian Journal of Medical Research 2015: 141; 107-114 (IF-1.66 in 2013)