

CURRICULUM VITAE

Name Prof. DR. ZAHOOR QADIR SAMRA (Ph.D)
Designation Professor
Chair Director IBB, Oct. 2019 to Nov.2020 (Retired)



Addresses: School of Biochemistry and Biotechnology
(Previous Place) (Old name, Institute of Biochemistry and Biotechnology),
Quaid-a-Azam campus, University of the Punjab
Lahore, 54590. Pakistan.

Home: House No. 20, Street 4, Mian Colony, Near Lalpul,
Mughalpura, Lahore, Pakistan

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Marital Status Married, Three children

Contact no. 0333-4755665

Specialization: **Biochemistry, Chemistry /Applied Biotechnology, Immunology,
Nanobiotechnology, Protein Chemistry and Molecular Biology**

Length of Service: **Thirty four years (35 years)**

Upgradation Academic Institutes:

Complete the process for upgradation and development of new two academic
Institutes at University of the Punjab, Lahore.

1. School of Biochemistry and Biotechnology, PU, Lahore
2. Centre for Bioinformatics and Drug Design, PU, Lahore

EDUCATION

1989-91 **Doctoral Fellowship** (Molecular Biology and Immunology,
Immunochemistry and Electron microscopy), Department of Pathology and
Laboratory medicine, **College of Medicine, University of Cincinnati, Ohio,
USA.**

April 2010 Ph.D, **Biotechnology**, University of the Punjab, Lahore, **Pakistan.**

1986 - 86 Research Fellowship, University Grants Commission, **Pakistan.**

1985 M.Sc.Chemistry (**Specialization in Biochemistry**), Silver Medal, Bahauddin
Zakariya University, Multan, **Pakistan.**

1982 B.Sc. (Bot, Zool, Chem), Bahauddin Zakariya University, Multan, **Pakistan.**

1979 F.Sc, Pre-Medical, Board of Int & Sec. Education, Multan, **Pakistan.**

1976 Matriculation, Science, Board of Int & Sec. Education, Multan, **Pakistan.**

JOB EXPERIENCES

- May 2014 to Nov.2020 **Professor**, Inst. of Biochemistry and Biotechnology, University of the Punjab, Lahore, 54590, Pakistan
- April 2010 to May 2014 **Assistant Professor**, Inst. of Biochemistry and Biotechnology, University of the Punjab, Lahore, 54590, Pakistan.
- August 2008 to April 2010 **Research Officer-cum Lecturer**, Inst. of Biochemistry and Biotechnology, University of the Punjab, Lahore, 54590, Pakistan.
- Dec. 2002 to August, 2008 **Research Officer**, Inst. of Biochemistry and Biotechnology, University of the Punjab, Lahore, 54590, Pakistan.
- Sept.1987 to Dec. 2002 **Research Officer**, Centre of Excellence in Molecular Biology, University of the Punjab, Lahore, Pakistan.
- Dec.1986 to Sept.1987 **Research Fellow**, Centre of Excellence in Molecular Biology, University of the Punjab, Lahore, Pakistan.
- Jan. 1986 to Dec. 1986 **Research Fellow** (University Grant Commission), Department of Chemistry, Bahauddin Zakariya University, Multan, Pakistan.

RESEARCH INTEREST

1. Vaccines and Diagnostic Immunity

- a). Development of recombinant oral / edible vaccines of SEB/SEC toxins of *Staphylococcus aureus*, toxins of *Ornithobacterium rhinotracheale* for poultry and surface proteins of *Helicobacter pylori*.
- b). Development of immunodiagnostic reagents / strips for SEB toxin of *Staphylococcus aureus* and gene in Bt cotton [Cry1A(C), Cry2a)].
- c). Development of egg IgY for passive immunity against recombinant SEB toxins.

2. Theranostic Nanomedicines

- a). Targeting drug delivery through nanocomposites (Magnetic/Cadmium/Zinc and gold nanoparticles) conjugated with ligands and monoclonal antibodies for cellular receptors for diagnosis and therapies.

TEACHING EXPERIENCES

1. At Ph.D / M.Phil/ MS Level, (Advance Immunology, Protein Chemistry, Stem cell and Nanobiotechnology, industrial biotechnology).
2. At M.Sc, B.Sc (Hons) Level (Basic and Molecular Immunology, Basic Molecular Biology, Metabolisms, Enzymology, Microbiology).
3. Thesis Supervision. Ph.D, MS/M.Phil, M.Sc, and B.S (Hons) level.

RESEARCH STUDENTS TRAINED

(Theses completed / in process under my supervision)

1. Ph.D 4 (in process), 3 completed
2. M.S / M.phil 32
3. M.Sc 59
4. BS (3 Hons) 3
5. BS (4 year) 40

DISTINCTION: HEC approved supervisor

RESEARCH EXPERIENCES

Theranostic Nanomedicines

Anticancer drugs (Doxorubicin and Methotrexate) were engineered onto magnetic nanoparticles alongwith transferrin, glutamine and folic acid for targeting drug delivery through their receptors. The binding activities and targeting delivery of prepared medicines towards receptors were checked on HeLa cells and normal B-cells.

NanoBiotechnology and Biotechnology

Methods were developed for immobilization of different ligands such D-mannosamine, cholesterol, galacturonic acid, sulfamethazine with magnetic nanoparticles for rapid one step affinity purification and characterization of beta-mannosidase, paraoxonase1 and polygalacturonase enzymes and immunoglobulins respectively. Further, recombinant human beta-mannosidase and native polygalacturonase enzymes were immobilized onto magnetic nanoparticles for degradation of mannose and galacturonate polymers in industrial bioprocess.

Recombinant DNA Technology Protein Chemistry

Heterologous expression and characterization of human beta-mannosidase enzyme, *Staphylococcus aureus enterotoxin* (SEB), *shigella* exotoxin (iPaH) and coat protein of potato virus Y were conducted. The expressed proteins are being used for the development of immunodiagnostic assay.

Ischemia, Xanthine Oxidase and Rat Heart

I developed the monoclonal and polyclonal antibodies against xanthine oxidase (X.O) to study the XO activity under different pathological conditions. Immunocytochemical, enzymehistochemical and immunogold labelling techniques were conducted at electron microscopic level on frozen, plastic and paraffin embedded tissues of normal, ischemia / reperfusion and calcium paradox rat hearts.

Antibody Production

Hepatitis B Virus and Humanized Antibodies

I developed the human hybridomas (MAbs) against HBsAg purified from Pakistani population. The extracted human B-lymphocytes from HBV positive blood by Panning or on histopaque gradient were immortalized and activated with Epstein Bar Virus and Pokeweed mitogen

and were fused with mouse myeloma cell lines P3653 and SP2/O to get the antibody for sorting out different epitopes of HBsAg.

Monoclonal and Polyclonal Antibodies

I raised and characterized the monoclonal antibodies against *Bacillus thuringensis* protein. Human monoclonal antibodies were developed against purified HBsAg by activating human B-Cells. The purified human monoclonal antibodies were also checked by immunoassays by using patient's sera.

Polyclonal antibodies against *Bacillus thuringensis* proteins, recombinant HBsAg, interferon-alpha 2b, neomycin transferase-II were also developed and characterized. Immunoassays were also developed for checking the genetic expression of NPT-II, Bt proteins (CryIAC and Cry2A) in genetically modified cotton and rice plants.

Mammalian Cell Culture and Diagnostic Dipstick immunoassay

I cultured the human mammalian B-lymphocytes for checking the enzyme level of xanthine oxidase under different pathological conditions (HBV infection, Typhoid and Malaria).

Human Gallstones Analysis

Human gallbladder stones were analyzed using biochemical, Infrared and atomic absorption spectrophotometric techniques.

ADMINISTRATIVE DUTIES

2023,

1. Member, Technical Committee, Pakistan Science Foundation,
2. Member, Board of Faculty, University of Central Punjab
3. Member, Board of Study, CEMB, University of Punjab
4. Member, Board of Study, Dept. Bioinformatics and drug design, PU
5. Visiting Faculty for Academics, School of Chemistry, PU

2022,

1. Member, Technical Committee, Pakistan Science Foundation,
2. Member, Board of Faculty, University of Central Punjab
3. Member, Board of Study, CEMB, University of Punjab
4. Member, Board of Study, Dept. Bioinformatics and drug design, PU
5. Visiting Faculty for Academics, School of Chemistry, PU

2021,

1. Member, Technical Committee, Pakistan Science Foundation,
2. Member, Board of Faculty, University of Central Punjab
3. Member, Board of Study, CEMB, University of Punjab
4. Member, Board of Study, Dept. Bioinformatics and Drug Design, PU

2020, (IBB, PU, Lahore)

- 1 Director, IBB 2019 to 2020

2. Member, Senate, Punjab University
3. Member, Academic Council, Punjab University
4. Member, Board of Faculty, Punjab, University
5. Member, Board of Studies, Punjab, University
6. Member, purchase committee
7. All major assignments assigned by PU for IBB
8. Member, Board of Faculty, University of Central Punjab

2019, (IBB, PU, Lahore)

1. Director, IBB
2. Member, Senate, Punjab University
3. Member, Academic Council, Punjab University
4. Member, Board of Faculty, Punjab, University
5. Member, Board of Studies, Punjab, University
6. Member, purchase committee
7. Member, Board of Faculty, University of Central Punjab

2018, (IBB, PU, Lahore)

1. Member, Academic Council, Punjab University
2. Member, Board of Faculty, Punjab, University
3. Member, Board of Studies, Punjab, University
4. Coordinator, BS Programme,(Biochemistry / Biotechnology), (Morning and Evening)
5. Member, admission committee
6. Member, purchase committee
7. Member, Departmental Examination Committee

2017, (IBB, PU, Lahore)

1. Member, Board of Faculty, Punjab, University
2. Member, Board of Studies, Punjab, University
3. Coordinator, BS Programme,(Biochemistry / Biotechnology), (Morning and Evening)
4. Member, admission committee
5. Member, purchase committee
6. Member, examination committee
7. Incharge, Audit and store supervisory committee

2016, (IBB, PU, Lahore)

1. Coordinator, BS Programme,(Biochemistry / Biotechnology), (Morning and Evening)
2. Member, admission committee
3. Member, purchase committee
4. Member, examination committee
5. Member, research project committee
6. Incharge, Audit and store supervisory committee
7. Incharge, sports coordinator committee

2015, (IBB, PU, Lahore)

1. Member, admission committee
2. Member, purchase committee
3. Member, dept. doctoral programme committee
4. Member, examination committee
5. Member, research project committee
6. Incharge, research wing II

2014, (IBB, PU, Lahore)

1. Member, admission committee
2. Member, purchase committee
3. Member, Dept. Doctoral Programme Committee
4. Member, examination committee
5. Member, purchase committee
6. Member, research project committee
7. Incharge, research wing II

2012 to 2013, (IBB, PU, Lahore)

1. Chairman, maintenance research and teaching labs
2. Member, dept. doctoral programme committee
3. Member, disciplinary committee
4. Member, curriculum development committee
5. Member, main purchase committee
6. Member, examination committee
7. Member, Dept. scholarship / fee concession committee
8. Member, admission committee

2010 to 2011, (IBB, PU, Lahore)

1. Chairman, maintenance research and teaching labs
2. Chairman, Store supervisor committee
3. Member, admission committee
4. Member, main purchase committee
5. Member, Dept. scholarship / fee concession committee
6. Deputy director research and focal person

2007 to 2009, (IBB, PU, Lahore)

1. Chairman, maintenance research and teaching labs
2. Chairman, Store supervisor committee
3. Chairman, Student advisory committee
4. Member, admission committee
5. Incharge, sports / tour

004 to 2006, (IBB, PU, Lahore)

1. Chairman, maintenance research and teaching labs

2003, (IBB, PU, Lahore)

1. Member, Syllabus committee (BS, Hons, M.Sc and MSc (Hons))

1995 to 2002, (CEMB, PU, Lahore)

1. Incharge, guest house committee
2. Incharge, antibody production and mammalian cell culture lab
3. Incharge, animal house of experimental animals

1994, (CEMB, PU, Lahore)

1. Administrator of common pool lab materials
2. Incharge, animal house of experimental animals

1993, (CEMB, PU, Lahore)

1. Incharge, animal house for experiments and tissue culture lab

1992, (CEMB, PU, Lahore)

1. Administrator to establish mammalian tissue culture lab

1989 to 1991, (Dr. Ashraf Lab, University of Cincinnati, USA)

1. Ischemic heart disease lab supervised by Prof. Dr. M. Ashraf, USA.

REVIEWER OF JOURNALS

1. J. of Education Research
2. Pakistan J of Scientific and Industrial Research
3. African J of Environmental Science and Technology
4. Clinica Chimica Acta
5. J. Medicinal Plant Research
6. J Paedatric Biochemistry
7. Advancement in life Science, Pakistan
8. Anatolian J Cardiology

FELLOWSHIPS / SCHOLARSHIP / AWARDS

1. Doctoral Fellowship (1989 to 1991), Department of Pathology and Laboratory Medicine, College of Medicine, University of Cincinnati, Cincinnati, Ohio, USA.
2. University Grants Commission's Research Fellowship for year 1986.
3. Silver Medal in M.Sc. Bahauddin Zakariya University, Multan, Pakistan.
4. Secondary School Scholarship, Board of Int. & Sec Education, Multan.

MEMBERS

1. Zakaryian Chemist Organization, (ZACHO)
2. Pakistan Society for Biochemist and Molecular Biology

3. Academic Staff Association, University of the Punjab, Lahore.

COURSES / WORKSHOPS / SYMPOSIA ORGANIZED /ATTENDED

1. 38th Pakistan Congress of Zoology (International Congress), Feb.27, to March 1, 2018, organized by Zoological Society of Pakistan, University of the Punjab, Lahore.
2. International conference on “Trends and Prospects in Molecular Bioscience” organized by IBB, PSBMB and Pakistan Academy of Science, Pakistan. October 23 to 24, 2017.
3. International conference on “Application of molecular biology in medicine and agriculture” organized by BAQI, Pakistan. August 20 to 22, 2013.
4. Computational resources for protein modeling, March 14 to 18, 2011 by Pakistan Academy of Sciences and Pakistan society for Biochemistry and Molecular Biology held at Institute of Biochemistry and Biotechnology, University of the Punjab, Lahore.
5. International symposium on Nanochemistry, 2008, (Chemistry, Biochemistry, Molecular Biology and Bioinformatics of enzymes sponsored by Pakistan Academy of Sciences organized by School of Biological Sciences, University of the Punjab, Lahore.
6. 26th Pakistan Congress of Zoology (International Congress), April 4-6, 2006, organized by Zoological Society of Pakistan, University of the Punjab, Lahore.
7. Workshop, Biochemical Engineering and Fermentation Applications, 19th August, 2006 organized by Institute of Biochemistry and Biotechnology, University of the Punjab, Lahore and Bioengineering, Switzerland.
8. Attended three weeks workshop (January, 2003) entitled “ Genetics in medicine ” organized by Yale University, School of Medicine, New Haven and King Edward Medical College, Lahore, Pakistan and Institute of Biochemistry and Biotechnology, University of the Punjab, Lahore.
9. 7th Biennial conference on “ Trends in Biochemistry and Molecular Biology ” (2003), Institute of Biochemistry and biotechnology, University of the Punjab, Lahore, Pakistan.
10. Fourth international symposium workshop on “Application of molecular biological research in Agriculture, Health and Environment” CEMB, University of the Punjab, Lahore, Pakistan.
11. SAARC training workshop on Gene cloning, (1994), CEMB, University of the Punjab, Lahore, Pakistan.
12. Third international symposium / workshop on “Application of DNA technology to agriculture and health“, (1992), CEMB, University of the Punjab, Lahore, Pakistan.
13. Attended three weeks practical training course (1986) entitled "Advanced Microbial Techniques” organized by Johns Hopkins University, Baltimore, USA, and CEMB.
14. SAARC symposium / workshop on “Application of Genetic Engineering” (1986), CEMB, University of the Punjab, Lahore, Pakistan.

GRANTS / RESEARCH PROJECTS

1. Development of Diagnostic kit for identification of breast cancer, **Co-principal Investigator**, (1992 to 1994), Research Grant, **USAID** Mission to Pakistan under Institutional Excellence Programme (IEP) between Pakistani universities and local industries, Lahore.(1.0 million US dollar).
2. Role of Paraoxonase1 (PON1) in Cardiovascular Diseases, **Principal Investigator**, 2007, Research Grant, University of the Punjab, Lahore.(0.125 million rupees).
3. Anti-cancer Drug Delivery through Magnetic Nanoparticles, **Principal Investigator**, 2009, Research Grant, University of the Punjab, Lahore. (0.125 million rupees).
4. Surface layer proteins as nanocarrier for therapy and diagnosis. **Principal Investigator**, 2010, Research Grant, University of the Punjab, Lahore. (0.15 million rupees).
5. Nanoengineering of Exo-polygalacturonase onto Magnetic Nanoparticles for Industrial Process. **Principal Investigator**, 2014, Research Grant, University of the Punjab, Lahore. (0.15 million rupees).
6. Nanocomposites of CdS Quantum dot and Anticancer Drug for Therapy and Imaging. **Principal Investigator**, 2015, Research Grant, University of the Punjab, Lahore. (0.15 million rupees).

PATENT.

1. A novel method of affinity purification and characterization of polygalacturonase of *Aspergillus flavus* by galacturonic acid engineered magnetic nanoparticle
No. ZL 2021 1 0030728.9

PUBLICATIONS (45)

(Impact Factor = IF)

1. Amina Hussain, Zahoor Qadir Samra, Aroosha Hussain. *Helicobacter Pylori* Prevalence and Associated Risk Factors in Individuals with Recurrent Epigastric Pain, Lahore, Pakistan. Pak-Euro Journal of Medical and Life Sciences. Vol 6, No.3, pp, 165-174, **2023**.
2. Aroosha Hussain, Zahoor Qadir Samra, Amina Hussain. Detection and Characterization of *Ornithobacterium Rhinotracheale* in Commercial Layer Poultry of Metropolitan Lahore, Pak-Euro Journal of Medical and Life Sciences Pakistan. Vol 6, No.3, pp, 199-208, **2023**.

3. Fariha Javaid, Zahoor Qadir Samra, Madeeha Shahzad Lodhi, Aroosha Hussain and Gulnaz Pervaiz (2022), Purification and Characterization of Bromelain from Waste Parts of *Ananas comosus* for its Application in Detergent Industry. Pakistan J. Zool., pp 1-8, **2022**. DOI: <https://dx.doi.org/10.17582/journal.pjz/20220407200451>
(IF, 0.687)
4. Madeeha Shahzad Lodhi, Muhammad Tahir Khan, Saira Aftab, Zahoor Qadir Samra, Heng Wang and Dong Qing Wei. A novel formulation of theranostic nanomedicine for targeting drug delivery to gastrointestinal tract cancer. Cancer Nano (**2021**) 12:26..
(IF,7.917)

5. Lodhi Madeeha Shahzad; khan M; Bukhari Syed Mulazim; Sabir Sajjad; Samra Zahoor; Butt Haider; Akram M (2021). Probing Transferrin receptor overexpression in Gastric Cancer Mouse Model. **Accepted, ACS Omega.** (IF, 3.512)
6. Madeeha Shahzad Lodhi, Ayesha Shaheen , Muhammad Tahir Khan, Muhammad Imtiaz Shafq, Zahoor Qadir Samra , Dong-Qing Wei. (2021). A novel method of affinity purification and characterization of polygalacturonase of *Aspergillus flavus* by galacturonic acid engineered magnetic nanoparticle. **Food Chemistry**, doi.org/10.1016/j.foodchem.2021.131317. (IF, 7.514)
7. Lodhi M., Samra Z.Q. (2020). Engineering Quantum Dot (Cadmium Sulfide) on antibodies for Fluoroimmunoassays. **J of Nanomaterials**, DOI 10.1155/2020/4707123, (10): 1-12. (IF, 2.986)
8. Lodhi M., Samra Z.Q. (2019). Purification of transferrin by magnetic nanoparticles and conjugation with cysteine capped gold nanoparticles for targeting diagnostic probes **Preparative Biochemistry and Biotechnology**, DOI:10.1080/10826068.2019.1643736 (IF, 2.162)
9. Chughtai R.A, Samra Z.Q. (2018). Identification and characterization of antimicrobial peptide. **Intl J Clin and Exp Med Res (IJCEMR)**, 2(6), 84-89. (IF in process)
10. Ahmed S, and Samra, Z.Q. (2016). Engineering transferrin and epirubicin onto magnetic nanoparticles for targeting drug delivery through transferrin receptors. **Pak. J. Zool**, 48(4), 1117-1124. IF, 0.831
11. Ahmed M, Qadir M. A, Shafiq M. I, Muddassar M, Samra Z.Q, Hameed A.(2016). Synthesis, characterization, biological activities and molecular modeling of Schiff bases of benzene sulfonamides bearing curcumin scaffold. **Arabian Journal of Chemistry**, 12(1): 41 -53. IF, 5.165
12. Shafiq MI, Ahmed M, Rasul A, Samra ZQ, Qadir MA, Mazhar S, Ali A.(2016). Chemical composition of essential oils of Nutmeg and Mace by GC-FID/MS indigenous to Pakistan and evaluation of their biological activities. **Latin Am J Phar**, 35 (10): 2176 – 2184. IF, 0.372
13. Arooj N, Dar N, Samra, Z.Q. (2014). Stable Silver Nanoparticles synthesis by *Citrus Sinensis*(Orange) and assessing activity against food poisoning microbes. **Biomed Environ Sci**, 27(10): 815-818. IF, 1.917
14. Khokhar. Z, Syed Q. Nadeem M. Irfan M, Jing Wu, Samra ZQ. Gul I and Athar M. A (2014). Enhanced Production of Cellulase by *Trichoderma reesei* using wheat straw as a carbon source. **World Applied Sciences Journal** 30 (9): 1095-1104. IF, 0.7 (Idosi)

15. Samra, Z.Q, Ahmed S, Javed M, Dar M, Gull I, Aslam M.S, Ahmad M. M.Ahmad, (2013). Aanticancer medicines (doxorubicin and methotrexate) conjugated with magnetic nanoparticles for targeting drug delivery through iron. **Preparative Biochem. Biotech**, 43:781-797. **IF, 2.162**
16. Dar, N, Javed M, Samra Z.Q. (2013). Imunochemical and PCR analysis of *Staphylococcus aureus enterotoxin B* (SEB) in milk and fruit juices collected in Lahore city, Pakistan. **Arch Biol Sci**, 65(3):1113-1121. **IF, 0.96**
17. Pervaiz S, Shaheen T, Shaheen S, Dar N and Samra Z. Q. (2013) Purification, characterization and preparation immunomatrixes of S-layer proteins of *Thermobifida fusca*. **J Appl Micro**, 115(3):735-43. **IF, 3.772**
18. Aziz H, Raza A, Murtaza S, Waheed Y, Khalid A, Irfan J, Samra Z, Athar MA. (2013). Molecular epidemiology of hepatitis C virus genotypes in different geographical regions of Punjab Province in Pakistan and a phylogenetic analysis. **Int J Infect Dis**. 17(4): 247-53. **IF, 3.5381**
19. Gull I, Samra ZQ, Aslam, MS and Athar MA. (2013), Heterologous expression, immunochemical and computational analysis of recombinant human interferon alpha2b. **Springer plus**, 2(1):264-271. **IF, 1.846**
20. Shahbaz A, Akhtar M, Raheema R, Samra Z. Q, Gull I, and Athar, M.A. (2012), Identification and purification of antigen 34 KDa outer membrane protein of *salmonella typhi*. **Clin Lab**, 58(9-10):1071-7. **IF, 1.138**
21. Shahbaz A, Aishy A, Samra Z. Q, Gull I, and Athar, M.A. (2012), Identification, purification and characterization of novel extracellular laccase from *cladosporium cladosporioides*. **Biotechnol and Biotechnolog Equip J**, 26(6);3345-3350. **IF, 1.632**
22. Gull I, Samra Z. Q, Aslam S, Athar, M.A. (2012). Inhibitory effect of allium sativum and zinger officinale extract on clinically important drug resistant pathogenic bacteria. **Annals of Clin Micro and Antimicrob**, 11:8. **IF, 3.944**
23. Samra, Z.Q, Dar N and Athar, M.A. (2012). Biocatalytic activity of recombinant human beta-Mannosidase immobilized onto magnetic nanoparticles for bioprocess. **Preparative Biochem. Biotech**. 42:97-112. **IF, 2.162**
24. Samra, Z.Q, Pervaiz, S, Shaheen, S, Dar, N and Athar, M.A. (2011). Determination of Oxygen Derived Free Radicals Producer (Xanthine oxidase) and Scavenger (Paraoxonase1) Enzymes and lipid parameters in different cancer patients, **Clin. Lab**. 57:741-747. **IF, 1.138**
25. Samra, Z.Q, and Athar, M.A. (2011). Computational Comparison of β -Mannosidases of Animals, Human, Microbes and Plants. **Turk J Vet. Ani. Sci**. 35(6), 395-404. **IF, 0.581**
26. Samra, Z.Q, Javaid, U, Ghafoor, S, Batool, A, Dar N and Athar, M.A. (2010). PCR Assay Targeting Virulence Genes of *Helicobacter pylori* Isolated from Drinking Water and Clinical Samples in Lahore Metropolitan, Pakistan. **J Water and Health**. 9:1, 208–216. **IF, 1.744**
27. Samra, Z.Q, Sana, A, Bano, S, Farooq M, Dar, N. Athar, M.A, (2010), Immunobiochemical analysis of paraoxonase1 (anti-oxidant), xanthine oxidase (oxidant)

- enzymes and lipid profile of cardiac disease patients in Lahore metropolitan, Pakistan. **J Clin Lab Anal**, 24, 348-356. **IF, 2.352**
28. Samra, Z.Q, Shabir S, Rehmat Z, Zaman M, Nazir A, Dar N and Athar, M.A, (2010). Synthesis of Cholesterol-Conjugated Magnetic Nanoparticles for Purification of Human Paraoxonase 1. **Appl. Biochem. Biotech.** 162:671- 686. **IF, 2.926**
29. Khokhar Z, Syed Q, Nadeem M, Baig, Irfan M, Gull I, Tipu I, Aslam S, **Samra ZQ**, Athar MA (2010). Delignification of Wheat Straw with Acid and Hydro-Steam under Pressure. **World Applied Sciences Journal**, 11(12): 1524-1530. **IF, 0.6 (idosi)**
30. Samra Z.Q, Naseem M, Khan S.J, Dar N, Athar M.A. (2009). PCR Targeting of Antibiotic Resistant Bacteria in Public Drinking Water of Lahore Metropolitan, Pakistan. **Biomed. Environ, Sci.** 22; 269-277. **IF, 3.118**
31. Samra, Z.Q, Athar, M.A, (2009), Noval Synthesis of Mannosamine Conjugated Magnetic Nanoparticles for Purification and Stabilization of Human Lysosomal β -Mannosidase. **Biotech. Biopro. Engg**, 14: 651-661. **IF, 2.836**
32. Samra, Z.Q, Athar, M.A, (2008), Cloning, sequence, expression and characterization of human β -mannosidase. **Acta Biochim. Pol.** 55 (3); 479–490. **IF, 2.149**
33. Ashraf, M. and Z. Q. Samra. (1993). Subcellular distribution of xanthine oxidase during cardiac ischemia and reperfusion: An immunocytochemical study. **J. Submicroscopic Cytology & Pathology.** 25 (2): 193-201. **IF, 0.70**
34. Samra, ZQ. T. Oguro, RN. Fontaine, M. Ashraf. (1991). Immunocytochemical localization of xnthine oxidase in rat myocardium.**J. Submicrosc. Cytology & Pathology.**23(3): 379-393. **IF, 0.70**
35. Samra, Z.Q, Athar, M.A, (2008), Production and immunocomparative study of human lysosomal β -mannosidase antibodies. **Pak.J. Zool** , 40(3): 185-192. **IF, 0.831**
36. Samra, Z.Q, Aslam, M.S, Shaukat, H, Dar, N and Athar, M.A, (2007), Development of diagnostic dipstrip immunoassay using antibodies of PreS2 region of Hepatitis B surface Antigen. **Pak.J. Zool** , 39 (3): 185-190. **IF, 0.831**
37. Samra, Z.Q, Siddique Z., Dar, N and Athar, M.A, (2006), Immunochemical detection of PreS2 epitope of Hepatitis B surface Antigen. **Pak.J. Zool** , 38 (4): 291-296. **IF, 0.831**
38. Samra, Z.Q, Mirza, S. N, Dar, N, Mahmood, Z and Athar, M.A, (2006), Characterization of Lactate dehydrogenase enzyme immobilized to Magnetic Nanoparticles, **Pak.J. Zool**, 38 (4): 327-332. **IF, 0.831**
39. Athar, M A, Mirza S, Samra Z. Q, (2002), Subcellular distrubution of steroid hormone receptors function, **Pak.J. Zool**, 34 (1):35-41. **IF, 0.831**
40. Samra, Z. Q. and Z. Siddique. (2000). Production of human MAbs against hepatitis B surface antigen. **Pak. J. Zool**, 31(3):252-256. **IF, 0.831**
41. Siddique, Z. and Z. Q. Samra. (1999). Establishment of human B-lymphoblastoid cell lines against HBsAg. **Pak. J. Zool.**, 31(2): 121-127. **IF, 0.831**

42. Samra, Z.Q, Athar, M.A, Mirza, S. Saeed, A and Mahmood K. (2004), Immunoprobng of Aminoglycoside-3-Phosphotransferase II Using Mouse Polyclonal antibodies. **J. Pure and Applied Sciences**. 23(2):27-38.
43. Samra, Z. Q. and Siddique, Z. (1998). Distribution of Xanthine oxidase in Calcium paradox conditioning of rat heart. **Punjab Univ. J. Zool.**, 13: 89-98.
44. Samra, Z. Q. and Cross, K. J. (1995). Purification and Characterization of NPT-II **Proceedings**, Genetic Engineering and Medical Molecular Biology. pp 137-139.
- 45 Samra, Z. Q., N. Ikram, R. Parveen, M.I. Akhtar and A.M. Khan, (1987), Composition of Gallstones of Patients of Multan region. **J. Pure and Applied Sciences**. 7 (1): 1-9.

Oral presentation / Poster presentation / Abstracts

1. Samra, Z.Q. ASCB meeting, Dec.9-13-90, (San Diego, USA). Abstract No. 2479.
2. Samra, Z.Q. Federation of American Societies for Experimental Biology, 75th annual meeting. Atlanta, Georgia, April 21-25, 1991. Abstract No.5252.
3. Samra, Z.Q. Federation of American Societies for Experimental Biology, 75th annual meeting. Atlanta, Georgia, April 21-25, 1991. Abstract No.5142.
4. Samra, Z.Q. Federation of American Societies for Experimental Biology, 75th annual meeting. Atlanta, Georgia, April 21-25, 1991. Abstract No.5288.
5. Samra Z Q, Frough Aslam, Sadia aslam, Fareha Sabir, Athar MA, 7th, PSBMB, conference, April 2-5, 2003, Lahore-Pakistan, pp72.
6. Samra ZQ, and Athar MA, 7th, PSBMB, conference, April 2-5, 2003, Lahore-Pakistan, pp113.
7. Samra ZQ, Int'l conference on the application of molecular biology in medicine and agriculture, August 20 – 22, 2013, Islamabad, Pakistan.
8. Nawaz S, Samra ZQ, Nisa Z. Trends and Prospects in Molecular Bioscience, Oct, 23-24 2017, IBB, Lahore, Pakistan.
9. Nisa Z, Samra ZQ, Nawaz S. Trends and Prospects in Molecular Bioscience, Oct, 23-24 2017, IBB, Lahore, Pakistan.
10. 38th Pakistan Congress of Zoology (International Congress), Feb.27,to March1, 2018, organized by Zoological Society of Pakistan, University of the Punjab, Lahore.

Thesis Supervision

Ph.D (7)

| <u>Name</u> | <u>Titles</u> | <u>Inst./Year</u> | <u>Status</u> |
|------------------|--|-----------------------|---------------|
| 1. Fariha Javed | Production of Recombinant Phyto Bromelain from <i>Ananas comosus</i> for Industrial Applications | IBB/2019 (in 2023) | Completed |
| 2. Fatima Khalid | Molecular Analysis and Development of | | |

| | | | |
|-------------------|---|--------------------|-----------|
| | Theranostic Nanomedicine Targeting c-MET in Induced Mouse Colon Cancer | IBB/2019 | Continue |
| 3. Saba Iqbal | Heterologous Expression of Fructosyl Transferase for Prebiotic Production and its Assessment against Induced Gastric Cancer in Mice | IBB/2019 | Continue |
| 4. Gulnaz Pervaiz | Production of Recombinant Superantigen Vaccine of <i>Staphylococcus aureus</i> for Immunotherapy | IBB/2019 (in 2023) | Completed |
| 5. Amina Hussain | Molecular characterization of Recombinant Flagellin Protein of <i>Helicobacter pylori</i> for Immunotherapy | IBB/2018 | Completed |
| 6. Aroosa Hussain | Recombinant Vaccine Against Surface Antigen of <i>Ornithobacterium rhinotracheale</i> for Chickens In Process | IBB/2018 | Completed |
| 7. Madeha Lodhi | Development of theranostic nanomedicines to study the induce gastric cancer in mouse Model | IBB/2015 (in 2020) | Completed |

M.S/M.Phil (Total, 38)

| | | | |
|-------------------|---|----------|-----------|
| Kanwal Nawaz | Immobilization and characterization of Protease from grape fruit for industrial Applications | IBB/2020 | Completed |
| Ayesha Basharat | Development of antibodies against purified anticancer peptide from soyabean | IBB/2020 | Completed |
| Kibria Shahzadi | Development of mouse stomach cancer By methyl-nitroso urea and its curcurim base treatment | IBB/2020 | Completed |
| Khizra Nasir | Purification and immune-characterization of Surface protein from staphylococcus aureus | IBB/2020 | Completed |
| Syeda Adila Rubab | Effect of Cadmium on Heart and Liver of Mice: Histochemical and Biochemical Studies | IBB/2019 | Completed |
| Hafsa Yasin | Immunochemical Identification of <i>S. aureus</i> in Drinking Water of Lahore Metropolitan Area | IBB/2019 | Completed |
| Saba Iqbal | PCR analysis of species specific meat product of goat and buffalo | IBB/2017 | Completed |
| Summiya Khalid | Development and characterization of egg yolk | IBB/2017 | Completed |

| | IgY against oral vaccine of <i>ornithobacterium rhinotracheale</i> | | |
|------------------|--|----------|-----------|
| Naila Bashir | Production and characterization of antibodies against <i>ornithobacterium rhinotracheale</i> for immunoassays | IBB/2017 | Completed |
| Natasha Javed Ch | Biochemical analysis of <i>Aeromonas hydrophila</i> In fish samples | IBB/2017 | Completed |
| Mehreen Fatima | Coating anticancer drug and folate onto CdS Quantum dot for imaging and targeting drug delivery | IBB/2016 | Completed |
| Fatima Khalid | Nanoengineering of anti-folate antibodies and methotrexate onto magnetic nanoparticles for antibody mediated drug delivery | IBB/2016 | Completed |
| Ammara Liaqat | Preparation of DNA probes for Cry1Ab gene For characterization of its expression | IBB/2016 | Completed |
| Madiha Riaz | Development and analysis of oral vaccine for Hemolysine of <i>Aeromonas Hydrophila</i> | IBB/2016 | Completed |
| Fatima Zahid | Identification and characterization of <i>ornitho Bacterium Rhinotracheale</i> in Gallus domesticus | IBB/2016 | Completed |
| Ramsha Sohail | Development and neutralizing efficacy of chicken IgY against food poisoning <i>S. aureus</i> | IBB/2016 | Completed |
| Rabia Sumreen | Encapsulation and characterization of Bromelain Enzyme for industrial use | IBB/2016 | Completed |
| Rooha Chughtai | Development and characterization of vaccine against <i>Aeromonas hydrophila</i> for fish | IBB/2015 | Completed |
| Maryam Arshad | Development of immunoassays against recombinant N-terminal region of SEB toxin | IBB/2015 | Completed |
| Aqsa Tabassam | Subcloning and purification of coat protein of potato virus Y for immunoassay | IBB/2015 | Completed |
| Aneeqa Arshad | Engineering magnetic nanoparticles with doxorubicin and folate for targeting folate receptors in mammary tumours | IBB/2014 | Completed |
| Nimra Mansoor | Recombinant expression of coat protein Y of potato virus | IBB/2014 | Completed |
| Shafaq Nawaz | Expression of engineered N-terminal region Of SEB toxin for immunoassays | IBB/2014 | Completed |

| | | | |
|-------------------|---|-----------|-----------|
| Mehak Saeed | Identification and characterization of staphylococcus enterotoxin B in food samples | IBB/2013 | Completed |
| Rabia Jamil | Immobilization of anticancer drug onto folate Conjugated magnetic nanoparticles for drug delivery | IBB/2013 | Completed |
| Ayesha Shaheen | Purification and characterization of polygalacturonase | IBB/2013 | Completed |
| Snober Ahmed | Immobilization of epirubicin onto compatible nanovehicles for target drug delivery | IBB/2012 | Completed |
| Naila Arooj | Biosynthesis of silver nanoparticles and its assessment for antimicrobial activity | IBB/2012 | Completed |
| Mehwisj Javed | Development of immunodiagnostic assay for <i>Staphylococcus aureus</i> enterotoxin B antigen | IBB/2012 | Completed |
| Nasir Mehmood | Development of immunodiagnostic assay of Shigella <i>iPaH</i> antigen | IBB/2012 | Completed |
| Usman Ahmed | Purification, overexpression and characterization of fungal polygalacturonase | IBB/2012 | Completed |
| Amir Abdul Hakeem | Development of human monoclonal antibodies and characterization against allergens of <i>Broussonetia papyrifera</i> | IBB/2012 | Completed |
| Zaib-un-Nisa | Heterologous expression and characterization Of <i>sec</i> antigen of <i>Staphylococcus aureus</i> | IBB/2012 | Completed |
| Shumaila Shaheen | Characterization and expression of fungus glutaminase enzyme | IBB/2011 | Completed |
| Sumaira Pervez | Purification of S-layer protein for the production of nanotemplate for diagnostic assays. | IBB/2011 | Completed |
| Tayyeba Shaheen | Cloning and characterization of <i>iPaH</i> gene for diagnostic assays | IBB/2011 | Completed |
| Saba Ghazanfar | Heterologous expression of <i>seb</i> gene of <i>Staphylococcus aureus</i> for diagnostic assays | IBB/2011 | Completed |
| Zahida Siddique | Production of human monoclonal antibodies against hepatitis B surface antigen | CEMB/1996 | Completed |

M.Sc (Hons) (Total 3)

| | | | |
|------------------|---|----------|-----------|
| Sabeen Naz Mirza | Binding and characterization of lactate dehydrogenase to magnetic nanoparticles | IBB/2006 | Completed |
|------------------|---|----------|-----------|

| | | | |
|-----------------|---|----------|-----------|
| Huma Akbar | Production and characterization of anti-Bacitracin antibodies | IBB/2006 | Completed |
| M.Shahbaz Aslam | Development of dipstrip immunoassays for Detection of hepatitis B surface antigen | IBB/2006 | Completed |

M.Sc (Total 62)

| | | | |
|----------------|--|----------|-----------|
| Ayesha | Development of Anti-ORT Antibodies against <i>Ornithobacterium rhinotracheale</i> as Vaccine | IBB/2019 | Completed |
| Sadaf Tahir | Purification and Characterization of Proteases from Citrus Fruit use as Detergent | IBB/2019 | Completed |
| Sana Ali | Purification and Characterization of Proteases from Kiwi Fruit use in Dairy | IBB/2019 | Completed |
| Komal | Cloning and Characterization of 16S RNA Probes of <i>Ornithobacterium rhinotracheale</i> | IBB/2018 | Completed |
| Sibgha Aslam | Cloning and Preparation of Probes for <i>Capra hircus</i> specific mitochondrial cytochrome B Gene | IBB/2018 | Completed |
| Bushra Naeem | Fruits and vegetable wastes for Protease Production (Project report,) | IBB/2018 | Completed |
| Aqsa Hadyat | Production of Dietary Fibres from Fruits and Vegetables (Project report,) | IBB/2018 | Completed |
| Mehwish Fatima | Production of Flavanoids from Agriculture Wastes (Project report,) | IBB/2018 | Completed |
| Sadia Jabar | Role of helicobacter pylori in gastric cancer (Project report,) | IBB/2017 | Completed |
| Aqsa Mansha | Industrial production of Bacitracin (Project report,) | IBB/2017 | Completed |
| Iqra Altaf | Prevalence of Diphtheria disease in Pakistan (Project report,) | IBB/2016 | Completed |
| Sana Gulzar | Algal mass as a Bioenergy resources (Project report,) | IBB/2016 | Completed |
| Shanza Munir | Isolation and characterization of <i>H. Pylori</i> | IBB/2015 | Completed |

| | | | |
|------------------|---|----------|-----------|
| Pareesa Tariq | Effect of Acetamiprid on cardiac and liver Activity in mice: Bio-histochemical study | IBB/2015 | Completed |
| Roop Gul | Preparation, binding and characterization of folate-conjugated magnetic nanoparticles on cancer cell | IBB/2015 | Completed |
| Fazeela Ijaz | Isolation and characterization of antibiotic resistant plasmid from <i>Aeromonas hydrophila</i> | IBB/2015 | Completed |
| Hifza Shoukat | Carrot and Potato as model of edible vaccine in humans (Project report) | IBB/2014 | Completed |
| Ifra Qamar | <i>Helicobacter pylori</i> in gastrointestinal infection (Project report) | IBB/2014 | Completed |
| Mehwish Younas | Binding and characterization of conjugated Transferrin with doxorubicin on normal mouse hepatocytes | IBB/2014 | Completed |
| Roha Ashraf | Identification and characterization of anti-microbial peptide | IBB/2013 | Completed |
| Zahra Khaliq | Ovarian cancer among women in Lahore Metropolitan (Project report) | IBB/2013 | Completed |
| Tanzela Javed | Rotavirus infection among children in Lahore Metropolitan (Project report) | IBB/2013 | Completed |
| Mariam Saghir | Purification and characterization of fungal glutaminase utilizing glutamate conjugated magnetic nanoparticles | IBB/2012 | Completed |
| Quratulain Amjad | Nanoparticles as vehicles for diagnosis and therapeutics | IBB/2012 | Completed |
| Shafaq Nawaz | Characterization of Nigella sativa extract For antimicrobial and immunity enhancing activity | IBB/2012 | Completed |
| Maria Saeed | Pollen allergens in hypersensitivity type 1 (Project report) | IBB/2012 | Completed |
| Ambreen Kanwal | Environmental factors for epilepsy (Project report) | IBB/2012 | Completed |
| Iqra Aroob | Stem cell as remedy for leukemia (Project report) | IBB/2012 | Completed |
| Ayesha Samreen | -----do----- (Joint thesis) | IBB/2011 | Completed |
| Aasimah | Purification and characterization of enetro- | IBB/2011 | Completed |

toxin B protein *staphylococcus aureus*

| | | | |
|------------------|---|----------|-----------|
| Iram Butt | -----do----- (Joint thesis) | IBB/2011 | Completed |
| Amina Khatoon | Purification and characterization of coat protein of potato virus | IBB/2011 | Completed |
| Zaib-un-Nisa | Prevalence of hepatitis B virus in Pakistani population (Project report) | IBB/2010 | Completed |
| Samina Aziz | Immobilization of alpha and beta amylase on nanomaterials for industrial process (Project report) | IBB/2010 | Completed |
| Anum Farooqi | Anticancer drug delivery by nanoparticles (Project report) | IBB/2010 | Completed |
| Ayesha Shaheen | Development of magnetic nanoparticles linked immunosorbant assay for hepatitis B surface antigen analysis | IBB/2010 | Completed |
| Sadia Akhtar | Preparation and quality control of Fexofenadine-Cl for allergy (Project report) | IBB/2010 | Completed |
| Mehwish Javed | Immunochemical analysis of methotrexate conjugated with magnetic nanoparticles | IBB/2010 | Completed |
| Shumaila shaheen | Analysis of antibiotics and analgesics effect on paraoxonase I | IBB/2009 | Completed |
| Sumaira Perveez | Quantitative analysis of PON1 in cancer patients and healthy persons | IBB/2009 | Completed |
| Sadia Akhtar | Preparation and quality control of Fexo- | IBB/2009 | Completed |
| Amina Bashir | Development of magnetic nanoparticles linked immunosorbant assays for Cry1Ac analysis | IBB/2009 | Completed |
| Aleeza Batool | Detection and characterization of <i>H. pylori</i> in food and drinking water samples | IBB/2008 | Completed |
| Mariam Farooq | Paraoxonase and xanthine oxidase activities in cardiac patients | IBB/2008 | Completed |
| Sadia Bano | -----do----- (Joint thesis) | IBB/2008 | Completed |
| Hina Jabbar | Purification of chicken liver B-Mannosidase Protein in breast cancer | IBB/2007 | Completed |
| Amina Tasghir | Comparative B-mannosidase activity in cancer patients and normal persons | IBB/2007 | Completed |

| | | | |
|-----------------|--|----------|-----------|
| Haleema sadia | Immunodetection of expressed tumour marker Protein in breast carcinoma | IBB/2007 | Completed |
| Iffat Mehmooda | Purification and characterization of B-mannosidase | IBB/2007 | Completed |
| Tayyba Naseer | Isolation and PCR analysis of <i>Shigella</i> in Water samples | IBB/2006 | Completed |
| Mariam Naseem | Isolation and PCR analysis of kanamycin resistant microbes in drinking water | IBB/2006 | Completed |
| Sumaira Khan | Isolation and PCR analysis of ampicillin resistant microbes in drinking water | IBB/2006 | Completed |
| Umber javed | Characterization and PCR analysis of VacA gene of helicobacter pylori | IBB/2006 | Completed |
| Sadia Ghafoor | PCR analysis of cagA gene of helicobacter pylori | IBB/2006 | Completed |
| Zainab Siddique | Immunochemical detection of preS2 epitopes In hepatitis B surface antigen | IBB/2005 | Completed |
| Saima Perveen | Purification and characterization of B-mannosidase | IBB/2004 | Completed |
| Syed Asim Iqbal | Characterization of xanthine oxidase activity In white blood cells under two pathological conditions | IBB/2004 | Completed |
| Hina Mushtaq | Purification and characterization of antibodies | IBB/2004 | Completed |
| Hina Shoukat | Purification and characterization of immune-gold complexes of anti-preS2 antibodies of hepatitis B | IBB/2004 | Completed |
| Sadia Aslam | Development of antibodies against oncogenic Protein in breast cancer | IBB/2003 | Completed |
| Frough Aslam | Immunochemical detection of xanthine oxidase In breast carcinoma | IBB/2003 | Completed |
| Fariha Sabir | Immunodetection of expressed tumour marker Protein in breast carcinoma | IBB/2003 | Completed |

BS 4 years (Total 41)

| | | | |
|---------------|--|----------|-----------|
| Tehreem Ahmed | Conjugation of Quantum Dot (CdS) with Antibodies for Identification of | IBB/2019 | Completed |
|---------------|--|----------|-----------|

| | | | |
|-----------------|---|----------|-----------|
| Sadia Ghazanfar | Immunochemical Identification of <i>Ornithobacterium rhinotracheale</i> in Poultry Feeds | IBB/2018 | Completed |
| Zeeba Saeed | Effect of <i>Ornithobacterium rhinotracheale</i> Infection in Poultry Industry (Project report) | IBB/2018 | Completed |
| Naima Amjad | Solid State Fermentation for production of Polygalacturonase by <i>aspergillus flavus</i> On agriculture wastes | IBB/2017 | Completed |
| Hanfa Ashfaq | Identification of natural immunity in egg yolk against <i>staphylococcus aureus</i> | IBB/2017 | Completed |
| Maira Tariq | Identification of mitochondrial dysfunction during bone stem cell differentiation | IBB/2017 | Completed |
| Jaweria Zubair | Immunodetection of SEB toxin of <i>staphylococcus aureus</i> in different food samples (Project report) | IBB/2017 | Completed |
| Muhammad Shoaib | Industrial importance of microbial phospho-Phroctokinase (Project report) | IBB/2016 | Completed |
| Palwasha Dar | Survey of prevalence of Lung cancer in Pakistan (Project report) | IBB/2016 | Completed |
| Iqra Sohail | Human monoclonal antibodies against recombinant staphylococcus enterotoxin B | IBB/2015 | Completed |
| Bisma Bashir | Purification and immobilization of poly-galacturonase onto magnetic nanoparticles | IBB/2015 | Completed |
| Maha Mubashar | Purification and characterization of egg yolk immunoglobulins Y | IBB/2015 | Completed |
| Faiza Mukhtar | Study of immune response against chemical treated <i>staphylococcus aureus</i> vaccine | IBB/2015 | Completed |
| Kubra Sarwar | Isolation and histochemical localization of doxorubicin binding protein in mouse tumour | IBB/2015 | Completed |
| Saba Altaf | Biodiesel: An alternative source of conserved energy (Project report) | BB/2014 | Completed |
| Mehreen Fatima | Treatment of breast cancer by nanomedicine biomolecules (Project report) | IBB/2014 | Completed |
| Maleeha Imtiaz | Microorganism in myocardial injury (Project report) | IBB/2014 | Completed |
| Tooba Zahid | Purification of immunoglobulins by Sulfamethazine conjugated magnetic | IBB/2014 | Completed |

Nanoparticles

| | | | |
|--------------------|--|----------|-----------|
| Maryam Aslam | Immunological identification of <i>shigella</i> iPaH antigen in samples | IBB/2013 | Completed |
| Maryam Arshad | Carbon nanotubes for immobilization of biomolecules (Project report) | IBB/2013 | Completed |
| Maham Omar | Maninginitis disease in children (Project report) | IBB/2013 | Completed |
| Ayisha Ayub | Characterization of expression of poly-galacturonase from <i>Aspergillus flavus</i> | IBB/2012 | Completed |
| Aneeqa Arshad | Dendritic cells in clinical diagnosis and treatment (Project report) | IBB/2012 | Completed |
| Sarah Sharjeel | Nanoparticles for gene and drug delivery (Project report) | IBB/2012 | Completed |
| Quratulain Shahid | Immobilization and characterization of glucose oxidase onto magnetic nanoparticles | IBB/2011 | Completed |
| Hafiza rashida | -----do----- (Joint thesis) | IBB/2011 | Completed |
| Rafia Ashraf | Prevalence of tuberculosis in Pakistan (Project report) | IBB/2010 | Completed |
| Snober Ahmed | Immunochemical analysis of doxorubicin conjugated with magnetic nanoparticles | IBB/2010 | Completed |
| Sana Tahir | Hepatitis C virus in Pakistan; Prevalance and risk factor (Project report) | IBB/2010 | Completed |
| Aneeza Jamil | Isolation and characterization of <i>Bacillus thuringiensis</i> | IBB/2009 | Completed |
| Hafiz Adnan Tufail | Drug delivery by nanoparticles to treat liver disorder functions (Project report) | IBB/2009 | Completed |
| Maidha Zainab | Purification and characterization of gluco-amylase in alginate conjugated magnetic nanoparticles | IBB/2008 | Completed |
| Bisma Raouf | Expression and characterization of semi-conserved reagon of beta-mannosidase | IBB/2008 | Completed |
| Adeela Sana | Comparative paraoxonase activity in cardiac patients and normal persons | IBB/2008 | Completed |
| Sadaf Shabir | Purification and characterization of human | IBB/2008 | Completed |

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|---------------|---|----------|-----------|
| | paraoxonase 1 on deoxycholate conjugated magnetic nanoparticles | | |
| Mariam Zaman | Purification and characterization of paraoxonase enzyme | IBB/2008 | Completed |
| Zainab Rehmat | -----do----- (Joint thesis) | IBB/2008 | Completed |
| Aqsa Nazeer | -----do----- (Joint thesis) | IBB/2008 | Completed |
| Adila Shahid | Purification and characterization of glucosylase from <i>trichoderma viride</i> | IBB/2008 | Completed |
| Fariha Ashraf | -----do----- (Joint thesis) | IBB/2008 | Completed |