

Prof. Dr. Shahid Mahboob Rana

Former A / Vice Chancellor

Ph.D. (UAF) Post Doc. (Australia)

Career Summary

A long academic career spanning nearly three decades with experience in the University of Pakistan, Australia and Saudi Arabia. Presently working as **Professor of Zoology, Department of Zoology, King Saud University, Riyadh, Kingdom of Saudi Arabia**. My teaching career started in 1987 after Masters from University of the Agriculture, Faisalabad with a subsequent Ph.D. (UAF) and **Post Doctorate (Australia)**. In 29 years of academic service, I have produced over **209 research publications, 31 conference presentations**, and supervised the research of **03 PhD., 25 M. Phil. and 41 M. Sc. students**. **The current impact factor of my research publications is 144.882**. Besides curriculum development at various levels, I have authored **One Book** and won research and development grants from the Higher Education commission, Pakistan Science Foundation and British Council for the up-gradation of scientific facilities at GC University, Faisalabad. As an aquaculture scientist, I contributed in the development of aquaculture in the Central Punjab. I introduced the concept of composite culture among the fish farmers to get maximum benefits with minimum inputs. My current research focus is on the ecotoxicology, nutrition and monitoring of fish health and quality of fish meat.

Extensive administrative experience at the University includes Chairmanship and membership in Departmental, College and University Committees. I have been the **Vice Chancellor** of GC University, Faisalabad from 06-03-2009 to 24-10- 2010 and also **Dean, Faculty of Science & Technology** with additional charge of Faculty of Management and Administrative Sciences and Faculty of Law for **04 years** and also chaired the Department of Zoology as **Chairperson** and **Head of Board of Studies** for **08 years**.

I effectively chaired and the member of various statutory bodies of the University, like **Board of Studies, Board of Adv. Studies and Research Finance and Planning Committee, Selection Board, Quality enhancement Cell, Examination Committee** and **Syndicate**.

I have been **Productive Scientist in Pakistan**, secured **Best Teacher Award (2003)** from the **Higher Education Commission and Education Department, Government of Punjab**, recipient of **Dr. Mirza Azhar Gold Medal** as a young Fisheries Scientist.

Bio Data

Name	Shahid Mahboob Rana
Father's Name	Rana Muhammad Siddique
Nationality / Religion	Pakistani/ Islam
Email:	shahidmahboob60@hotmail.com; rmahboob1@yahoo.com



Personal

Date of Birth: 10-04-1960 (Kamalia Distt. T.T.Singh)
Good health
Traveling, Music, TV

Academic Record

TERTIARY EDUCATION:

Graduation:

B. Sc (Botany, Zoology & Chemistry) from Punjab University, Pakistan in 1983.

Post-Graduation:

M.Sc in Zoology with specialization in Limnology from the University of Agriculture Faisalabad, Pakistan in 1986.

PhD in Zoology: specialization in nutrition of freshwater carps under composite culture system in 1992.

Post Doc: Department of Aquatic Sciences, Muresk Institute of Agriculture, Curtin University of Technology, Australia in 2002.

Distinctions

Awarded Prof. *Mirza Azhar Beg* Gold Medal 2002 as a Young Researcher in Fisheries by the Zoological Society of Pakistan.

Visiting Fellow Curtin University, Perth and University of Sydney, Australia from July 07, 2002 to August 31, 2002. Best University Teacher Award for the year 2003 by Higher Education Commission of Pakistan. Best Teacher Award by Education Department Government of Punjab in 2004.

Research Productivity Award for the year 2011-12 by Pakistan Council of Science & Technology

Research Interests

Fish Nutrition, Production Biology of carps, Limnology of Rivers & Lakes, Fish meat quality, Toxicology, Bacterial fermentation.

No. of Research Papers (National /International):	209
Conference Presentations (National / International):	31

Professional Experience and Current Responsibility

26 years of administration, teaching and research (Detail as below)

Academic Experience

Twenty-nine (29) years' experience of teaching advances in aquaculture, aquatic toxicology genetics and biodiversity to postgraduate classes by using modern AV aids for interactive and participative teaching and conduct of practical research work.

PAST EMPLOYMENT:

(1987 – 94)

Lecturer in Zoology Government College Shorkot ; Government College Faisalabad.

- o Teaching of B.S., M.Sc, M. Phil/PhD Classes.
- o Use of fermentation technique for the production of enzymes
- o Study of seasonal variations in water quality of ponds and lakes.
- O Research and development of growth technologies for native freshwater fisheries
- o Dissemination of composite fish farming technology in rural areas.

(1994 – 98)

Assistant Professor, Government College, Faisalabad.

- O Teaching of B. Sc & M.Sc classes
- o Monitoring of quality of fish meat.
- o Planning and development of integrated fish farming.

(1998 – Sept. 2004):

Associate Professor, Government College, Faisalabad.

- o Teaching of B.Sc, M.Sc , M. Phil/PhD classes
- o Chairperson, Department of Zoology (01-01-2001 to date)
- o Director Research & Academics
- o Incharge, Planning and Development Cell
- o Chairman, University Semester Committee

(Sept. 2004 upto September 15, 2008)

Professor of Zoology, GC University, Faisalabad.

- o Dean Faculty of Sciences & Technology
- o Dean Faculty of Management & Administrative Sciences and Law
- O Chairperson, Department of Zoology (01-01-2001 to date)
- o Director Research & Academics
- o Incharge Planning and Development Cell
- o Chairman Quality Enhancement Cell
- o Chairman University Semester Committee
- o Editor-in-Chief Journal of Natural Sciences

Professor of Zoology, College of Science, King Saud University, Saudi Arabia

(March 06, 2009 upto 24-10-2010)

Vice Chancellor GC, University, Faisalabad.

(October 25-10-2010 upto 21-06-2012)

Professor of Zoology, GC, University, Faisalabad.

(June 22, 2012 till to date)

Professor of Zoology, College of Science, King Saud University, Saudi Arabia

Experience and Knowledge Areas

• Technical and commercial experience of dealing with species like *Catla catla*, *Labeo rohita*, *Cirrhina mrigala*, *Cyprinus carpio*, *Hypophthalmichthys molitrix* and *Ctenopharyngodon idella*

- Water quality management in aquaculture system
- Commercial feed formulation for aquaculture species
- Monitoring of quality of fish meat
- Water pollution and its effects on fish health
- Improvement in quality of fish feed.
- Project development and management
- Research management techniques like experimental designing and statistical analysis.
- Computer package like word, excel and other statistical packages.
- Preparation of funding applications to international agencies, Higher Education Commission and Pakistan Science Foundation.

Teaching and Research

Twenty five (29) years experience of teaching advances in aquaculture, aquatic toxicology genetics and biodiversity to postgraduate classes by using modern AV aids for interactive and participative teaching and conduct of practical research work.

1. Teaching under graduate and postgraduate students.
2. Chairman, post-graduate department of zoology.
3. Member, Faculty Postgraduate Seminar and research evaluation committee.
4. Supervised 41 M.Sc. Students.
5. Supervised 4 M. Phil. Students of University of Azad Jammu & Kashmir, Muzaffarabad.
6. Supervised 25 M. Phil students at GCU, Faisalabad
7. PhD thesis completed 03

Book Authored

Impact of fertilization and feed supplementation on growth of carps 2010 VDM-AMAZON Publishers 380p

Papers presented in Conferences

1. Participated and presented a paper entitled “Influence of water chemistry on the dryweight of planktonic biomass in brood stock pond II” in the 8th Pakistan Congress of Zoology held at the University of Peshawar from April 12-14, 1988.
2. Participated and presented a paper entitled “Limnological studies of fish ponds inhibiting major carps” in the 10th Pakistan Congress of Zoology held at Khanaspur from 26-27 May 1990.
3. Participated and presented a paper entitled “Optimization of fermentation conditions for better amino acid production” in the 20th Pakistan Congress of Zoology held at

- University of Sindh, Jamshoro March 28-30, 2000.
4. Participated and presented a paper entitled “Mutation studies for enhanced lysine production” in the 20th Pakistan Congress of Zoology held at University of Sindh, Jamshoro March 28-30, 2000.
 5. Participated and presented a paper entitled “Detection of mycotoxins and microbiological studies in food and feed” in the 21st Pakistan Congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
 6. Participated and presented a paper entitled “Detection of mycotoxins and microbiological studies in food and feed” in the 21st Pakistan Congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
 7. Participated and presented a paper entitled “Comparative evaluation of rabbit anti-human globulins by ammonium sulphate and poly ethylene glycol technique, physico-chemical characterization and their conjugation with peroxidase.” in the 21st Pakistan congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
 8. Participated and presented a paper entitled “Influence of Bio-Mix on the visceral organs during bacterial enteritis in broiler chickens.” in the 21st Pakistan congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
 9. Participated and presented a paper entitled “Evaluation of various microorganisms for the production of bioactive metabolites” 21st Pakistan congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
 10. Participated and presented a paper entitled “Influence of Bio-Mix on the intestinal microorganisms in mycotoxicosis induced broiler chickens” 21st Pakistan congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
 11. Participated and presented a paper entitled “Effect of Bio-Mix on the pathological lesions caused by mycotoxicosis in broiler chickens” 21st Pakistan Congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
 12. Participated and presented a paper entitled “Influence of Bio-Mix on the hematological parameters in broiler chicks from mycotoxicosis” 21st Pakistan Congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
 13. Participated and presented a paper entitled “Influence of Bio-Mix on hematological parameters in the broiler chickens induced with bacterial enteritis” 21st Pakistan congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
 14. Participated and presented a paper entitled “Role of Bio-Mix in the growth performance during bacterial enteritis broiler chickens” 21st Pakistan Congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
 15. Participated and presented a paper entitled “Effect of Bio-Mix on the pathological lesions during bacterial enteritis in broiler chicks” 21st Pakistan Congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.

16. Participated and presented a paper entitled “Efficacy of Bio-Mix against *E. coli* and *Salmonella* based bacterial enteritis in broiler chicks” 21st Pakistan Congress of Zoology (International) held at University of Agriculture, Faisalabad March 15-17, 2001.
17. Participated and presented a paper entitled “Studies on the natural food of major, common and some Chinese carps as influenced by fertilization in composite culture practices” in *Aquaculture Europe 2001 held at NTNU, Trondheim, Norway Aug 4-7, 2001*.
18. S. H. Raza., **S. Mahboob.**, M.S. Khan. and A. Iqbal. 2001. Growth rate of buffalo female calves on urea treated low quality roughages. J. Anim. Sci. 79, Suppl. 1/ J. Dairy Sci., 84, Suppl. 1/Poult. Sci. 80: 423.
19. **S. Mahboob** and A. N. Sheri. 2001. Relationships among gonad weight, liver weight and body weight of major, common and some Chinese carps under composite culture system with special reference to pond fertilization. 6th Asian Fisheries Forum Book of Abstracts. p. 164. 2001.
20. S. H Raza., A. Iqbal., M.S. Khan. and **S. Mahboob.** 2001. Effect of seasons on milk production and calving pattern in nili ravi buffaloes. J. Anim. Sci. 79, Suppl. 1/ J. Dairy Sci., 84, Suppl. 1/Poult. Sci. 80: 317
21. Participated and presented a paper entitled “Studies on the natural food of major, common and some Chinese carps as influenced by fertilization in composite culture practices” in *Aquaculture Europe 2003 held at NTNU, Trondheim, Norway Aug 8-12, 2003*.
22. Participated and presented a paper entitled “Identification and measurement of pesticide residues in flesh from farmed and wild *Cirrhina mrigala*” in *8th International Conference on Shellfish Restoration held at Brest, France October 2-5, 2005*.
23. Participated and presented a paper entitled “Estimation of volatile constituents in the fish meat from wild and farmed *Cirrhina mrigala*” in *Aquaculture 2007 February 26-March 2, 2007 at San Antonio, Texas, USA*
24. Participated and presented a paper entitled “Proximate composition and dressing losses in wild and farmed *Catla catla* and *Hypophthalmichthys molitrix*” *AQUACULTURE AMERICA 2008 - "Beyond Magic - Competing in World Markets"* February 09-12, 2008.
25. Participated and presented a paper entitled “Isolation and Characterization of collagen from skin, scales and fins of *Cyprinus carpio* and *Hypophthalmichthys molitrix*” *AQUACULTURE -2013 "Strike a chord – for sustainable Aquaculture"* February 21-25, 2013, Nashville, Tennessee, USA.
26. Participated and presented a paper entitled “Health risks associated with pesticide residues in water, sediments and the muscle tissues of *Catla catla* at Head Balloki on the River Ravi ” *Western Division of the American Fisheries Society April 7 – 11, 2014 Mazatlan, Mexico*.
27. Participated and presented a paper entitled “A study on the effect on the effect of poultry droppings on the primary productivity, and growth of major carps in polyculture system ” *Western Division of the American Fisheries Society April 7 – 11, 2014, Mazatlan, Mexico*.

28. Participated and presented a paper entitled "Replacing fish meal with a blends of alternative plant proteins on the growth performance of *Catla catla* and *Hypophthalmichthys molitrix*" **WORLD AQUACULTURE ADELAIDE 2014 June 7-11, 2014 Adelaide, South Australia, Australia.**
29. Participated and presented a paper entitled "**Isolation** and characterization of collagen from fish waste material-skin, scales and fins of *Catla catla* and *Cirrhinus mrigala*". **Aquaculture America 2015 February 19-12, New Orleans, Louisiana, USA.**
30. Participated and presented a poster entitled "Biomarkers of oxidative stress as indicators of water pollution in common carp, *Cyprinus carpio* from wadi Namra in Riyadh, Saudi Arabia". **Aquaculture America 2015 February 19-12, New Orleans, Louisiana, USA.**
31. Participated and presented a poster entitled "*Cholinesterases: Cholinergic biomarkers for the detection of sublethal effects of organophosphorous and carbamates in Catla catla.*". **Aquaculture America 2016 February 22-26, Las Vegas, USA.**

Research Publications

International:

1. **S. Mahboob.**, A.N. Sheri, and S.H. Raza. 1996. Proximate composition of major, common and some Chinese carps as influenced by pond fertilization and feed supplementation in composite culture system. J. Aqua. Trop. 11: 227-284.
2. **S. Mahboob.** and A.N. Sheri. 1997. Relationship among ovary weight liver weight and body weight in the grass carp *Ctenopharyngodon idella*. J. Aqua. Trop. 12 (1997): 255-259.
3. **S. Mahboob.** and A.N. Sheri. 1997. Growth performance of major, common and some Chinese carps as influenced by pond fertilization and feed supplementation in composite culture system. J. Aqua. Trop., 12: 201-207.
4. **Mahboob, S.** and A.N. Sheri. 1998. Proximate composition of viscera of major, common and some Chinese carps under the effect of different fertilization schemes and feed supplementation in composite culture system. J. Asian-Australian. Anim. Sci. 11(2): 196-200. IF 0.854
5. **Mahboob, S.** and A.N. Sheri. 1998. Biomass conversion efficiencies of fish under pond fertilization and feed supplementation. J. Asian-Australian. Anim. Sci. 11 (2): 192-195. IF 0.854
6. S.H. Raza. and **S. Mahboob.** 2000. Influence of fertilizers and artificial feed on the total dressing losses and meat: bone ratios of major, common and some Chinese carps under composite culture practices. Asian-Aus. J. Anim. Sci., 13: 190
7. **S. Mahboob.** and A.N. Sheri. 2001. Studies on the natural food of major common and some Chinese carps as influenced by fertilization in composite culture practices. EAS. Special Pub. 29: 277-278.

8. **S. Mahboob** and A.N. Sheri. 2002. Influence of fertilizers and artificial feed on the total dressing losses, meat: bone ratios, specific gravity and density of fish and regression studies of dry weight of planktonic biomass on physico-chemical parameters. *J.Aqu.Trop.*, 17: 43-58
9. **S. Mahboob.** and A.N. Sheri. 2002. Relationships among gonad weight, liver weight and body weight of major, common and some Chinese carps under composite culture system with special reference to pond fertilization. *J. Asian-Australasian. Ani. Sci.* 15 (5): 740-744. IF 0.854
10. **S. Mahboob** and R.M. Rafique. 2002. The Anatomical heterogeneity in the proximate composition, amino acid and fatty acid profile of muscle of Indian major carp *Labeo rohita*. *Proc-ang. 1st Int. Aq. Fish-Tech. Envior.* 1: 194-199.
11. **Mahboob, S.** and A.N. Sheri. 2003. Regression studies of dry weight of planktonic biomass on physioc-chemical parameters of ponds with special reference to fertilization. *J. Asian-Australian. Ani. Sci.* 16 (2): 172-175. IF 0.854
12. **S. Mahboob.**, S. Kanwal., M. Hassan., A. Hussain and S. Nadeem. 2003. Fatty acid composition in muscle, liver and gonad from wild and farmed *Cirrhina mrigala* (mori) EAS. *Special Pub.* 33: 258-259.
13. Khosa, M. K., M. Mazhar., S. Ali., S. Dastgir., M. Parvez., F. Shaheen., A., Mmalik. And **S, Mahboob.** 2006. Synthesis, spectral and in vitro biological bis-triorganogermery (substituted) propionates of triarylantimony (V) X-ray studies of triphenylgermyl-n-propyl propionic acid. *Synth. And React. Inorg. Metal and Metal Chem.*, 36:575-584. Impact factor: 0.729
14. Badaruddin, A. H., A. Muhamma., R. N. Hasan., M. M.Aslam. and **S, Mahboob.** 2007. A convenient synthesis of 6, 8-dimethoxy -3- [(2-(4-methoxyphenyl) ethyl) isocoumarin. *Chinese J. Chem.*, 25: 102-104.; Impact Factor (ISI JCR 2006) = 0.819
15. T. Ali., J. A. Bhali., **S. Mahboob.** And Q. Khan. 2008. Cytogenetic damage in female Pakistani agricultural workers exposed to pesticides. *Environ. And Molecular Mutagenesis* 49: 374-380 IF 2.59
16. **S. Mahboob.**, I. M. Hussain., Z. Iqbal. 2009. Estimation of volatile organic compounds in wild and farmed rohu, *Labeo rohita*. *Iranian J. Fish.*, 8 (1): 65-72. IF (0.158)
17. S. Mahboob., Ghazala., S. Sultana., M. R. Asi., S. Nadeem. and A.S. Chaudhry. 2009. Determination of organochlorine and nitrogen containing pesticide residues in water, sediments and fish samples by reverse phase high performance liquid chromatography. *Agri. Sci. Technology* 10: 9-12.
18. **S. Mahboob.**, B. Hussain.,Z. Iqbal. and A. S. Chaudhry. 2009. Estimation of volatile constituents in the fish meat from wild and farmed *Cirrhina mrigala* and *Cyprinus carpio*. *Acta Hydrobiol Sincia* 33:484-491
19. A. Asma., **S. Mahboob.**, M. S. Shah. And S. Nadeem. 2009. Analysis of outer membrane proteins of *Pasterulla multocida* strains isolated from buffaloes affected with hemorrhagic septicemia. *Aust. J. of Basic & Appl. Sci.*, 3:2360-2365
20. M. Nawaz., S, A. Hussain., I. Ullah., M. Younis., M, Z. Iqbal. and S. Mahboob. 2009. Estimation of genetic in wheat using DNA markers. *A-Eurasian J. Sust. Agri.* 1: 1-7. (IF 0.03)

21. **S. Mahboob.**, B. Hussain., Al-Akel, A. S., Alkahem Al-Balawi, H. F. and Z. Iqbal. 2009. Volatile Aroma Compounds and Organoleptic Comparisons of Meat from Wild and Culured *Cirrhhina Mrigala* and *Cyprinus Carpio*. *Advances in Natural and Applied Sciences*, 3(1): 113-126. (IF 0.03)
22. K, M. Zia., M. Zuber., **S. Mahboob.**, T. Sultana. And S. Sultana. 2010. Surface characteristics of UV-irradiated chitin / dimethyl propionic acid-based shape memory polyurethane elastomers. *Carbohydrate Polymers* 80: 229-234 (IF 2.644).
23. **Al-Akel, A. S., Alkahem Al-Balawi, H. F., Al-Misned, F., S. Mahboob. Ahmad, Z. and El-amin. 2010.** Study on impact of dietary copper exposure on accumulation, growth and hematological parameters of *Cyprinus carpio*. *Toxicological & Environmental Chemistry*. 92:1865-1878.
24. K, M. Zia., M. Zuber., **S. Mahboob.**, M. Hassan. and I, A. Bhatti. 2010. Synthesis of chitin-bentonite clay based polyculture bio-nanocomposites. *Int. J. Bio. Macro.*, 47: 196-200. IF 1.876
25. A, I. Hussain., F. Anwar., S, A. S. Chatha., A. Jabbar., **S. Mahboob.** and P, S. Nigam. 2010. *Rosmarinus officinalis* essential oil: antiproliferative, antioxidant and antibacterial activities. *B. J. Micro.* 41: 1070-80. dx.doi.org/10.1590/S1517-83822010000400027 IF 0.6
26. Awan, M.S., S, A. Khan., Z, U. Rehman., A. Saleem., **S. Mahboob** and M, I. Rajoka. 2010. Influence of nitrogen sources on the production of β -glactosidase by *Aspergillus niger*. *Afr. J. Biotech.*, 9: 2918-2922 (IF 0.565).
27. Awan, M.S., N. Tabbasam., N. Ayub., M, E. Babar, M, U. Rehman., S. Mahboob and M, I. Rajoka. 2010. Gamma radiation induced mutagenesis in *Aspergillus niger* to enhance microbial fermentation activity for industrial enzyme production. *Mol. Biol Rep.* DOI: 10.1007/S11033-010-0239-3. (IF 2.038).
28. Bhatti, A.I., S. Ashraf., M. Shahid., M, R. Asi. and **S. Mahboob.** 2010. Quality index of oils extracted of oils extracted γ -irradiated peanuts (*Arachis hypogaea* L.) of the golden and bari varieties. *Appl., Radi., and Isotopes* 68: 2197-2201 (I.F 1.172)
29. Afzal, M., A, S. Mirza., S. Arshad., S, U. Din. S. Nadeem and **S. Mahboob.** 2010. Regenerating human mitochondrial genome from programmed microchip. *Euro. J. Sci. Res.*, 46: 266-274.
30. S. Arshad., A. Mumtaz., M, Afzal. F. Ahmad., S. Liaquat., S. Nadeem. and **S. Mahboob.** 2010. Mi-Discoverer: A bioinformatics tool detection of mi-RNA in human genome. *Bioinformation.* 5: 1-7.
31. M, S. Iqbal., **S. Mahboob.**, S. Nadeem., B. Niaz., A, S. Qureshi. and A. Ghafoor. 2010. Evaluation of *Nigella sativa* L., for genetic variation and ex-situ conservation. *Pak. J. Bot.*, 42: 489-2495 (I.F. 0.528).
32. M. Mudasar., S, A. S. Chatha. A, I. Hussain, M. R, Asi. **S. Mahboob.** 2010. Inter varietal variation in proximate composition and antioxidant potential of dry peas (*Pisum sativum*). *J. Chem, and Chem. Eng.*, 4: 7-15.
33. **S, Mahboob.** 2010. Studies on the natural food of major, common and some Chinese carps as influenced by fertilization in composite culture practices. *Thalassia Salentina* 33: 53-66.

34. Iqbal, M.S. S. Ndeem., **S. Mahboob.**, A. Ghafoor., M, I. Rajoka., A, S. Ansari. And B. Niaz. 2011. Exploration of genotype specific fingerprinting of *Nigella sativa* L. using RAPD markers. Turk J Agric. For. doi:10.3906/tar-1001-622 (IF 0.675)
35. S, A. Bukhari., M, I. Rajoka., Z. Ibrahim., F. Jalal., **S. Mahboob.** and S, A. Nagra. 2011. Oxidative stress elevated DNA damage and homocysteine level in normal pregnant women in a segment of Pakistani population. Mol. Biol. Report 38:2703-2710 (IF 2.12).
36. S. Mahboob. and Ghazala. 2011. Pesticide residue in flesh of *Cirrhinus mrigala* collected from commercial fish farm and river Chenab at Trimmu Head. Pak. J. Zool. 43: 97-101 (I.F 0.20).
37. Q, U. Ain., L. Ahmad., M, Hassan., **S. Mahboob.** and F. Jabeen. 2011. Prevalence of β -thalassemia and HCV antibody positivity-A cross sectional studies. Pakistan Journal of Zoology. 43: 29-36. (I.F 0.20)
38. S, Nadeem., B, Niaz., H, M. Muzammil., **S. Mahboob.**, M, I. Rajoka. nd A, R. Shakoori. 2011. Optimising carbon and nitrogen sources of L-glutamic acid production by Brevibacterium strain NIAB SS-67. Pak. J. Zool., 285-290 (I. F. 0.20).
39. B. Hussain., **S. Mahboob.**, M. Hassan. and F. Liaquat. 2011. Fatty acid profile of wild and farmed brooder and non-brooder fish *Labeo rohita*. Grasasy Acetis.62 (2): 206-212 IF 0.43
40. **S, Mahbob.**, F. Niazi., M, R. Asi., S. Sulatana., Ghazala., H, F. Alkhaem-Albalwai, K. AlGhanem. 2011. Determination of organochlorine and nitrogen containing psticide residues in *Labeo rohita*. Toxicolo. Environ. Chemist. 93: 1851-1855
41. B. Hussain., **S. Mahboob.**, M. Hassan., F. Liaquat. T. Sultana. And H. Tariq. 2011. Comparative analysis of proximate composition of head from wild and farmed *Catla catla*. Journal of Animal & Plant Sciences 21: 207-210 (I.F. 0.250).
42. B. Hussain., H. Tariq., T. Sultana., **S. Mahboob.**, and T. Niaz. 2011. In-silico molecular analysis of mutated Sequences of HFE1, HFE2, TFR2 and SLC40A1 causing hemochromatosis disease. INT. J. Bioautomation 15(1), 57-64.
43. **S. Mahboob.**, A. Rauf., M. Ashraf., T. Sultana. S. Sultana., F. Jabeen. M, I. Rajoka and H. F. Alkahem Al-Balawi and Khalid A. Al-Ghanim. 2012. High-density growth and crude protein productivity of a thermotolerant *Chlorella vulgaris*: Production kinetics and thermodynamics. Aquacult. Int. 20:455–466 (I.F 0.910)
44. **S. Mahboob.**, M. Farooq., S. Mahmood., N. Nasir., S. Sultana., A, S. Chaudhry. Al-Akel, A. S., Alkahem Al-Balawi, H. F. and Al-Misned, F. 2012. Phylogenetic relationship of cultured and wild *Labeo rohita* and *Cirrhinus mrigala* based on muscle proteins profile in different weight groups: a new tool in phylogenetic analysis. International Journal of Food Properties, 15:949–960 (IF 0.820)
45. Al-Ghanim, K. A. and **Shahid Mahboob.** 2012. Effect of sodium cyanide on the activities of some oxidative enzymes and metabolites in *Clarias gariepinus*. Africa. J. Biotech., 11: 9849-9854 (I. F 0.562)
46. Akhtar, M., **Shahid Mahboob**, S. Sultana. and T. Sultana. 2012. Assessment of

- Pesticide Residues in Sediments Collected from River Ravi and its Tributaries between its stretches from Shahdara to Balloki Headworks, Pakistan. 2: 127-133 (ICI 5.09)
47. Hmoud. F. A. Al-Balwi., F. Al-Misned., Z. Ahmad and **Shahid Mahboob**. 2013. Evaluation of bioaccumulation heavy metals in water, sediments and fish (*Poecilia latipinna*). Pak. J Zool., 45: 589-593. I. F 0.39
 48. Alkahem Al-balawi, H. F., Al-Akel, A. S., Al-Misned, F., Suliman, E. M., Al-Ghanim K. A., **S. Mahboob**. and Ahmad, Z. 2013. Effects of sub-lethal exposure of lead acetate on histopathology of gills, liver, kidney and muscle and its accumulation in these organs of *Clarias gariepinus*. Braz. Arch. Biol. Technol. 56: 293-302, IF 0.5
 49. **Shahid Mahboob**. 2013. Environmental pollution of heavy metals as a cause of oxidative stress in fish: a review. Life Science Journal. 10(10s); 336-347] IF 0.2
 50. **Shahid Mahboob.**, Zaib-U-Nisa, Alkahem Al-Balawi, H. F, Fahad Al-Misned, Z. Ahmad and S. Sultana. 2013. Study on avian diversity of thal desert (district Jhang), Punjab, Pakistan. Life Sci. J., 10:1-8. IF 0.2
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