

<u>Dr. BUSHRA ALLAH RAKHA</u>			
Curriculum Vitae			
I. <u>PERSONAL DATA:</u>			
Name:	Bushra Allah Rakha		
Marital Status:	Married		
Father Name:	Haji Allah Rakha		
Husband Name:	Dr. Muhammad Sajjad Ansari		
Date of Birth:	21-09-1983		
Place of Birth:	Hasilpur Distt Bahawalpur		
Citizenship:	Pakistani		
National ID:	32103-1670611-2		
Passport No:	BX1746111		
Address:	Department of Wildlife Management, Pir Mehr Ali Shah, Arid Agriculture University Rawalpindi-46300 Pakistan		
Contact No.	Mobile: +923336341607, +923002020625, Office No: +92519291021		
E-mail:	arbushra@uaar.edu.pk ; bushrauaar@gmail.com		
II. <u>EDUCATION:</u>			
<u>Institution</u>	<u>Degree/Certificate</u>	<u>Major Subject</u>	<u>Year</u>
Pir Mehr Ali Shah Arid Agriculture University Rawalpindi	Doctor of Philosophy	Wildlife Management	2017
Pir Mehr Ali Shah Arid Agriculture University Rawalpindi	Master of Philosophy	Wildlife Management	2012
University of Arid Agriculture, Rawalpindi	Master of Science	Zoology	2005
Allama Iqbal Open University, Islamabad	Bachelor of Education	Zoology, Chemistry	2005
Government Degree College for women, Hasilpur	Bachelor of Science	Zoology, Botany Chemistry	2003
Government Degree College for women, Hasilpur	Higher Secondary school Certificate	Pre-Medical	2001
Government Girls High School No:1, Hasilpur	Secondary School Certificate	Science	1998





II. Publication Details: Number of Total Publications: 133 Citations: 676 (google.scholar)			
Total Impact Factor: 87.78			
Number of Publication in Impact Factor Journals:			67
Number of Publication in Proceedings of International Conferences:			18
Number of Publication in Proceedings of National Conferences:			47
Number of Books:			01
III. <u>DISSERTATION/THESIS:</u>			
<u>Degree</u>		<u>Title</u>	
Ph.D.		Semen characteristics, preservation and its use in artificial insemination of red jungle fowl (<i>Gallus gallus murghi</i>)	
M. Phil.		Evaluation of semen extenders for liquid storage of spermatozoa of Punjab urial (<i>Ovis vignei punjabiensis</i>)	
M. Sc.		Effect of soil macro-fauna variation in Margalla Hills National Park	
IV. <u>EXPERIENCE</u>			
<u>SN</u>	<u>Job Title</u>	<u>Employer</u>	<u>Duration</u>
1.	Lecturer	Pir Mehr Ali Shah Arid Agriculture University Rawalpindi	09, May 2007- To date
<u>V. Honour and Awards</u>		<u>List of honours or awards</u>	
1		HEC Approved PhD Supervisor (2018 – to-to date)	
2		Research Productivity Award (2012) by Pakistan Council for Science and Technology	
3		Listed at 14 among the list of Women Scientists in Pakistan	
4		Listed at 70 among the list of young scientists in the field of Biological sciences under the age of 40	
VI. <u>Trainings/workshops/Seminars/Conferences (International/National)</u>			
<u>International</u>			
1	The 55 th Annual Meeting of the Society for Cryobiology held in Madrid, July 10-13, 2018		
2	International Training on “Collection, Evaluation, cryopreservation and artificial insemination of pheasant semen” Institut De National Agromonique, Center De Tours, Nouzilly 37380 Nouzilly, France. 1 st February 2011 to 4 th March 2011.		
<u>National</u>			
1.	Training workshop “Design, Survey and Analysis of Wildlife Populations”		

	organized by Ministry of Climate change, Ministry of Science and Technology, Pakistan Museum of Natural History, Snow Leopard Foundation and UNDP, Pakistan held at National Information Technology Board, Islamabad, July 01-12, 2019.
2.	Participated in seminar “International Day for Biological Diversity 2019” organized by IUCN Pakistan & PMNH Islamabad, May 22, 2019
3.	Workshop on Standardization of Survey techniques for preparation of Red Data Book organized by Zoological Survey of Pakistan Islamabad, April 29, 2019
4.	Training of presiding officers and Sr. Assistant Presiding Officers-GE 2018, Held at Fatima Jinnah Women University, June 29-30, 2018
5.	Seminar on Inclusive Wildlife Conservation, Integrating Amphibians and Reptiles in Wildlife Conservation arranged by Deakin University Australia and PMAS-Arid Agriculture University Rawalpindi, March 29, 2018
6.	Chaired session during one of academic session in 38 th Pakistan Congress of Zoology (International) held at University of Punjab, Lahore February 27-March 01, 2018.
7.	Training activity on “Basic Life Support” as part of project in Outreach model to promote Basic Life Support arranged by Foundation University Islamabad in collaboration with HEC held at PMAS-Arid Agriculture University Rawalpindi February 2018
8.	Consultative session on sustainable transport for awareness Raising amongst students and academia held at PMAS-Arid Agriculture University Rawalpindi June 16, 2016
9.	Citation and referencing in research using EndNote X5. 25 August, 2011, Organized by Institute of Research Promotion and Quality Enhancement Cell. PMAS-AAUR
10.	Symposium on Biodiversity of Pakistan organized by Pakistan Museum of Natural History, Pakistan Science Foundation, Ministry of Science and Technology, Govt. of Pakistan. June 7-9, 2011
11.	Modern Techniques for the analysis of ecological data. September 29-30, 2009. Pakistan Museum of Natural History and Snow Leopard Trust Pakistan.
12.	Professional Competency Enhancement Program for Teachers (PCEPT) held at Pir Mehr Ali Shah Arid Agriculture University Rawalpindi. July 27-August 22, 2009.
13.	National Seminar on “Effect of Pollution on water quality and aquatic life” held at National Agricultural Research Centre, Islamabad, Pakistan June 26-27, 2007,
14.	Participated as resource person in “International conference on Biodiversity as Renewable Resource of Pakistan” held at PMAS-Arid Agriculture University Rawalpindi March 13-14, 2007.
VII. Memberships	<u>List Memberships in professional and learned Societies, indicating offices held, committees, other specific assignments</u>

1.	Remote Reviewer of Irish Research Council Laureate Awards Since 2017
2.	Member Zoological Society of Pakistan Since 2009
3.	Member Asian Reproductive Biotechnology Society (ARBS) Since 2012
4.	Member of Editorial Board of Journal of Physical Science and Environmental Studies
5.	Member Editorial Board of Journal of Austin Gynecology Case Reports
6.	Member Editorial Board of Independent Journal of Management and Production
7.	Associate Editor for Journal of Wildlife and Ecology
8.	Member, Society for the Study of Reproduction
9.	Member, Society of Conservation Biology

VIII. Courses taught

<u>S. No.</u>	<u>Course Title</u>	<u>Credit Hours</u>	<u>M. Sc.</u>
1	Introduction to Wildlife of Pakistan	3(2-2)	-do-
2	Reproductive Biology and Breeding	3(2-2)	-do-
3	Wild Fish Fauna of Pakistan	3 (3-0)	-do-
4	Captive Wildlife Management	3 (3-0)	-do-
5	Introduction to Wildlife	2(1-2)	-do-
6	Wildlife Management	3 (3-0)	-do-
7	Wildlife Study Techniques: Biological Aspect	3 (2-2)	<u>M. Phil.</u>
8	Wildlife Study Techniques: Management Aspect	3 (2-2)	-do-
9	Wildlife Diseases and their management	3 (3-0)	<u>Ph.D.</u>
10	Captive Breeding and Assisted Reproduction in Wildlife	3 (2-2)	-do-

IX. DETAILS OF IN SERVICE RESEARCH PROJECTS:

<u>SN</u>	<u>Project title and Designation</u>	<u>Status</u>	<u>Worth (Rs. million)</u>	<u>Funding Agency</u>
1	Preservation of bovine epididymal spermatozoa (As Co-PI)	Completed	0.094 (2007-2008)	PMAS-AAUR
2	Prevalence of Salmonellosis in rat at poultry farms of Rawalpindi/Islamabad (As PI)	Completed	0.098 (2007-2008)	PMAS-AAUR
3	Conservation of urial (<i>Ovis vignei punjabiensis</i>) through semen preservation (As Co-PI)	Completed	2.200 (2008-2010)	HEC-Pakistan
4	Isolation/Identification of pathogenic bacteria from	Completed	2.736	HEC-Pakistan

	buffalo bull semen: Development high efficiency antibiotic combination to improve fertility rate (As Co-PI)		(2008-2011)	
5	Comparison of plasma membrane integrity assessment techniques for urial spermatozoa (As PI)	Completed	0.115 (2010-2011)	PMAS-AAUR
6	Screening of different avian egg yolks for cryopreservation of buffalo semen: a step to improve fertility in buffaloes with frozen semen (As Co-PI)	Completed	4.75 (2011-2012)	HEC-Pakistan
7	Identification of chemically defined extenders for cryopreservation of buffalo bull spermatozoa (As Team Member)	Completed	1.3363 (2008-2011)	Pakistan Science Foundation
8	Evaluation of acrosomal status of Red Jungle Fowl Spermatozoa with bright field, phase contrast and differential interference contrast microscopy (As PI)	Completed	0.133 (2012-2013)	PMAS-AAUR
9	Establishment of aviary facility: wild birds (As PI)	Completed	0.149 2014-2015	PMAS-AAUR
10	Evaluation of Antifreeze proteins extracted from various Sources for cryopreservation of Buffalo Spermatozoa (As Co-PI)	On-going	2.4 2016-2018	HEC-Pakistan
11	Prevalence of endo-parasites and their control in various captive birds species (As PI)	On-going	199500/-	PMAS-AAUR
12	Genetic Diversity and Population structure of Markhor in Pakistan (As PI)	On-going	5012896/-	HEC-Pakistan
13	Developing reproductive technologies for conserving quail (As PI)	Awarded	8375187/-	HEC-Pakistan

X. RESEARCH GRANTS (Training/Collaboration/Travel Grants)

S. No	Project No.	Title of Research Project	Name of Donor Agency	Duration	Worth Rs.	Completed/ Ongoing
1	259.149/TG/R&D/2017/26210	55 th Annual Meeting of the Society for Cryobiology. Scientific Challenges of	HEC-Pakistan	1Week 2018	0.324 million	Completed

		Cryobiology				
2	1- 5/HEC/R&D/POC R-NRPU-2010- 762	Collection, evaluation, cryopreservation and artificial insemination of avian semen	HEC- Pakistan	1 Month 2011	0.2248 million	Completed

XI. COLLABORATION/LINKAGES AT NATIONAL/INTERNATIONAL LEVEL

Sr. No.	Institution of Collaboration	National/ International
1.	INRA, Institut De National Agromonique, Center De Tours, Nouzilly 37380 Nouzilly, France	International
2.	INIA, National Institute for Agronomic Research, Avda. Puerta de Hierro, n°12, local 10. 28040 MADRID, SPAIN	International
3.	Royal Veterinary College, University of London, UK	International
4.	University College, Dublin, Ireland	International
5.	Semen Production Unit, Qadirabad, Sahiwal	National
6.	National Agricultural Research Centre	National

XII. Service Activity

List university and public service activities

1.	Member of Sports Committee of Faculty of Forestry Range Management and Wildlife, Pir Mehr Ali Shah Arid Agriculture University Rawalpindi
2.	Member of Media Club of the University of Pir Mehr Ali Shah Arid Agriculture University Rawalpindi
3.	Member of Departmental Board for evaluation of Research Proposal for M. Phil. And Ph.D. students
4.	Member/Vice Chancellor Nominee for Viva Voce Examination for M.Phil/Ph.D. students
5.	Member of Departmental Self Assessment Report

XIII. PUBLICATIONS

INTERNATIONAL REFREED JOURNALS:

S. No.	Author (S)	Year of Publication	Title of Article	Name of Journal	Page numbers
1.	R. Ishaq, M. S. Ansari, Bushra Allah Rakha , S. Qadeer, S. Akhter	2019	Enrofloxacin for Use in Cryopreservation of Zebu Bull (<i>Bos indicus</i>) Semen	Biobanking and Biopreservation	DOI: 10.1089/bio.2018.0133
2.	M.S. Ansari, Bushra Allah Rakha , S. Akhter, E. Blesbois,	2019	Effect of cryopreservation on lipid peroxidation, antioxidant	Biobanking and Biopreservation	DOI: 10.1089/bio.2018.0

	S.		potential, chromatin integrity and mitochondrial activity of Indian red Jungle fowl (<i>Gallus gallus murghi</i>) semen		111
3.	Bushra Allah Rakha , Ansari, M.S. and Blesbois, E.	2018	Cryoprotective effect of glycerol concentrations on Indian Red Jungle Fowl (<i>Gallus gallus murghi</i>) spermatozoa	Avian Biology Research.	11: 80-88
4.	Bushra Allah Rakha , Ansari, M.S., S. Akhter, S. Moreno, E. Blesbois	2018	Use of dimethylsulfoxide for semen cryopreservation in Indian red jungle fowl (<i>Gallus gallus murghi</i>)	Theriogenology	112:61-67
5.	Bushra Allah Rakha , Ansari, M.S., S. Akhter, S. Moreno, E. Blesbois	2018	Cryoprotectant effects of egg yolk on Indian red jungle fowl (<i>Gallus gallus murghi</i>) sperm	Theriogenology	119:150-155
6.	Awan, M.A., Akhter, S., Husna, A.U., Ansari, M.S., Bushra Allah Rakha , Azam, A. and Qadeer, S	2018	Antioxidant activity of Nigella sativa Seeds Aqueous Extract and its use for cryopreservation of buffalo spermatozoa	Andrologia	50: e13020
7.	S. Akhter, Ansari, M.S, Bushra Allah Rakha , S. Iqbal	2018	Evaluation of pigeon egg yolk for post thaw quality, enzyme leakage and fertility of buffalo (<i>Bubalus bubalis</i>) bull spermatozoa	Theriogenology	119:137-142
8.	S. Akhter, M. S. Ansari, Bushra Allah Rakha , A. U. Husna, S. Iqbal and M. Khalid	2017	Evaluation of quail and turkey egg yolk for cryopreservation of Nili-Ravi buffalo bull semen	Theriogenology	87: 259-269
9.	Bushra Allah Rakha , M. S. Ansari, I. Hussain, M. Anwar, S Akhter, Syed Qasim Raza and E. Blesbois	2017	Cryopreservation of Indian red jungle fowl (<i>Gallus gallus murghi</i>) spermatozoa: a first approach	Avian Biology Research	10: 1-6
10.	S. Qadeer, M. A. Khan, M. S. Ansari, Bushra Allah Rakha , R. Ejaz, A. U. Husna, A. Azam, N. Ullah, V. K.	2017	Cryopreservation of Nili-Ravi buffalo bull sperm in cryodiluent supplemented with <i>Lolim Perenne</i> Protein preparations	Cryoletters	(38): 43-50

	Walker, S. Akhter				
11.	AU, Husna, M. A. Awan, A. Mehmood, T. Sultana, Q. Shahzad, M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. S. Naqvi, S. Akhter	2017	Sperm sexing in Nili-Ravi buffalo through modified swim up: validation using SYBR [®] green real-time PCR	Animal Reproduction Science	(82):69-76
12.	<u>Bushra Allah Rakha</u> , M. S. Ansari, S. Akhter and E. Blesbois	2017	Effect of season and age on Indian red jungle fowl (<i>Gallus gallus murghi</i>) semen characteristics: A 4-year retrospective study	Theriogenology	(99): 105-110
13.	M. S. Ansari, <u>Bushra Allah Rakha</u> , S. Akhter	2017	Cryopreservation of Nili-Ravi buffalo (<i>Bubalus bubalis</i>) semen in AndroMed [®] extender: in vitro and in vivo evaluation	Reproduction in Domestic Animals	52(6):992-997
14.	<u>Bushra Allah Rakha</u> , M. S. Ansari, S. Akhter, Z. Zafar, J. S. Moreno, E. Blesbois	2017	Cryopreservation of Indian red jungle fowl (<i>Gallus gallus murghi</i>) semen with polyvinylpyrrolidone	Cryobiology	(78):27-33
15.	R. Ejaz, M. S. Ansari, Ansari, <u>Bushra Allah Rakha</u> , S. Qadeer, AU Husna and S. Akhter	2017	Evaluation of alpha-linolenic acid for freezability and <i>in vivo</i> fertility of Nili-Ravi (<i>Bubalus bubalis</i>) buffalo semen	Theriogenology	(104):1-6
16.	<u>Bushra Allah Rakha</u> , M. S. Ansari, S. Akhter, Z. Zafar, A. Naseer, J. S. Moreno, E. Blesbois	2017	Dimethyleacetamide improves the cryosurvivability of Indian red jungle fowl (<i>Gallus gallus murghi</i>) sperm	Theriogenology.	103:83-89
17.	M. S. Ansari, <u>Bushra Allah Rakha</u> , S. Akhter	2017	Cryopreservation of bull semen in OptiXcell [®] and conventional extenders: Comparison of semen quality and fertility	Animal Science Papers and Reports.	35(3):317-328
18.	M. S. Ansari, <u>Bushra Allah Rakha</u> , M.F. Malik, S. M. H. andrabi, N. Ullah, R. Iqbal., W. V. holt, and S Akhter	2016	Effect of cysteine addition to the freezing extender on the progressive motility, viability, plasma membrane and DNA	J. Applied Anim. Res	(44):36-41

			integrity of Nili Ravi buffalo (<i>Bubalus bubalis</i>) bull spermatozoa		
19.	Ansari, M. S., <u>Bushra Allah Rakha</u> , S Akhter, M. Ashiq	2016	OPTIXcell [®] improves the post thaw quality and fertility of buffalo bull sperm	Theriogenology	(85):528-532
20.	<u>Bushra Allah Rakha</u> , M. S. Ansari, I. Hussain, M. Anwar, S Akhter and E. Blesbois	2016	Comparison of extenders for liquid storage of Indian red Jungle fowl (<i>Gallus gallus murghi</i>) spermatozoa	Avian Biology Research	9(3):207-212
21.	S. Qadeer, M.A. Khan, Q. Shahzad, A. Azam, M.S. Ansari, <u>Bushra Allah Rakha</u> , R. Ejaz, A.U. Husna, J.G. Duman, S. Akhter	2016	Efficiency of beetle (<i>Dendroides canadensis</i>) recombinant antifreeze protein for buffalo semen freezability and fertility	Theriogenology	86:1662-1669
22.	M. S. Ansari, <u>Bushra Allah Rakha</u> , S. Akhter	2016	Effect of Thioglycol on fertility of frozen Nili-Ravi buffalo semen	Buffalo Bulletin	35(2):277-283
23.	R. Ejaz, M. S. Ansari, <u>Bushra Allah Rakha</u> , A. U. Husna, S. Qadeer, R. Iqbal, N. Ullah and S. Akhter	2016	Cholesterol supplementation in extender improves quality of frozen-thawed Nili-Ravi buffalo bull semen	Buffalo Bulletin	35(2):259-68
24.	S. Akhter, S. Qadeer, M. A. Khan, M. S. Ansari, B. A. Rakha	2016	Cryopreservation of Nili-Ravi buffalo bull sperm: The role of antifreeze glycoproteins (AFGPs)	Thai Veterinary Journal	46:91-94
25.	<u>Bushra Allah Rakha</u> , Muhammad Sajjad Ansari, S. Akhter, I. Hussain and E. Blesbois	2016	Cryopreservation of Indian red jungle fowl (<i>Gallus gallus murghi</i>) semen	Animal Reproduction Science	174:45-55
26.	U. Husna, R. Ejaz, S. Qadeer, A. Azam, <u>Bushra Allah Rakha</u> , M. S. Ansari, Q. Shahzad, M. Javed, M. H. Vazquez-Levin and S. Akhter	2016	A comparative analysis of sperm selection procedures prior to cryopreservation for Nili-Ravi buffalo (<i>Bubalis bubalis</i>) semen: Assessment of its impact on post-thaw sperm functional quality	Animal Reproduction Science	174:29-36
27.	Qadeer, S., M. A. Khan, M. S. Ansari,	2015	Efficiency of Antifreeze Glycoproteins for	Animal Reproduction	157:56-62

	<u>Bushra Allah Rakha</u> , R. Ejaz, R. Iqbal, M. Younis, N. Ullah, Arthur L. DeVries and S Akhter		Cryopreservation of Nili-Ravi (<i>Bubalus bubalis</i>) Buffalo Bull Sperm	Science	
28.	<u>Bushra Allah Rakha</u> , M. S. Ansari, I. Hussain, M. F. Malik, S Akhter and E. Blesbois	2015	Semen characteristics of the Indian Red Jungle Fowl (<i>Gallus gallus murghi</i>)	Eur J Wildl Res	61:379–386
29.	<u>Bushra Allah Rakha</u> , M. S. Ansari, I. Hussain, M. F. Malik and S Akhter	2015	Impact of Ejaculate Frequencies on the Quality of Red Jungle Fowl (<i>Gallus gallus murghi</i>) Semen	Avian Biology Research	8 (2):1-4
30.	S. Qadeer, M. A. Khan, M. S. Ansari, <u>Bushra Allah Rakha</u> , R. Ejaz, A.U. Husna, M. Ashiq, R. Iqbal, N. Ullah and S. Akhter	2014	Evaluation of Antifreeze Protein III for Cryopreservation of Nili-Ravi (<i>Bubalus bubalis</i>) Buffalo Bull Sperm	Animal Reproduction Science	148:26-31
31.	R. Ejaz, M. S. Ansari, B.A. Rakha, N. Ullah, A. U. Husna, R. Iqbal and S. Akhter	2014	Arachidic acid in extender improves post-thaw parameters of cryopreserved Nili-Ravi buffalo bull semen	Reproduction in Domestic Animals	49:122-125
32.	Akhter, S, M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. H. Andrabi, S. Qadeer, R. Iqbal, N. Ullah	2013	Efficiency of ciprofloxacin for bacterial control, post thaw quality and in vivo fertility of buffalo spermatozoa	Theriogenology	(80):378-383
33.	<u>Bushra Allah Rakha</u> , I. Hussain, S. Akhter, M. S. Ansari, N. Ullah and S.M.H. Andrabi	2013	Evaluation of tris-citric egg yolk, skim milk and egg yolk citrate extenders for the liquid storage Punjab urial (<i>Ovis vignei punjabiensis</i>) spermatozoa	Reproductive Biology	13:238–242
34.	S. Qadeer, A. Batool, K. Mehboob, M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. H. Andrabi, N. Ullah, R. Iqbal, S. Akhter	2013	Comparison of traditional antibiotic streptomycin with neomycin, polymyxin B or Colistin in extender for buffalo (<i>Bubalus bubalis</i>) bull	Journal of Applied Animal Research	41:289-293

			spermatozoa		
35.	S. Akhter, M. S. Ansari, S. M. H. Andrabi, <u>Bushra Allah Rakha</u> , N. Ullah, M. Khalid	2012	Soya-lecithin in extender improves the freezability and fertility of buffalo (<i>Bubalus bubalis</i>) bull spermatozoa	Reproduction in Domestic Animals	47:815-819
36.	Ansari, M. S., <u>Bushra Allah Rakha</u> , S. M.H. Andrabi, N.Ullah, R. Iqbal, W. V. Holt, S. Akhter	2012	Glutathione-supplemented tris-citric acid extender improves the post-thaw quality and in vivo fertility of buffalo (<i>Bubalus bubalis</i>) bull spermatozoa	Reproductive Biology	12:271-276
37.	Akhter, S., M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. H. Andrabi, N. Ullah and M. Khalid	2011	Effect of low density lipoprotein on freezability and fertility of buffalo (<i>Bubalus bubalis</i>) bull semen	Theriogenology	76(4):759-764
38.	Ansari, M. S., <u>Bushra Allah Rakha</u> , S. Akhter	2011	Effect of L-cysteine in extender on post-thaw quality of Sahiwal bull semen	Animal Science Papers and Reports,	29:197-203
39.	Ansari, M. S., <u>Bushra Allah Rakha</u> , S. M. H. Andrabi and S. Akhter	2011	Effect of straw size and thawing time on quality of cryopreserved buffalo (<i>Bubalus bubalis</i>) semen	Reproductive Biology	11:49-55
40.	Akhter, S., M. S. Ansari., <u>Bushra Allah Rakha</u> , N. Ullah, S. M. H. Andrabi, M. Khalid	2011	<i>In vitro</i> evaluation of liquid-stored buffalo semen at 5°C diluted in soya lecithin based extender (Bioxcell®), tris-citric egg yolk, skim milk and egg yolk-citrate extenders	Reproduction in Domestic Animals	46:45-49
41.	Akhter, S., M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. H. Andrabi and N. Ullah	2010	Cryopreservation of buffalo (<i>Bubalus bubalis</i>) semen in Bioxcell® extender	Theriogenology	74:951-955
42.	Ansari, M. S., <u>Bushra Allah Rakha</u> , S. M. H. Andrabi and S. Akhter	2010	Usefulness of powdered and fresh egg yolk for cryopreservation of Zebu bull spermatozoa	Reproductive Biology	10:235-240
43.	Akhter, S., <u>Bushra Allah Rakha</u> , S. M. H. Andrabi, M. S. Ansari	2010	Comparison of egg yolks from three avian species in extender for cryopreservation of	Animal Science Papers and Reports	29:131-138

			Sahiwal bull epididymal spermatozoa		
44.	Ansari, M. S., <u>Bushra Allah Rakha</u> , N. Ullah, S. M. H. Andrabi, S. Iqbal, M. Khalid and S. Akhter	2010	Effect of exogenous glutathione in extender on the freezability of Nili-Ravi buffalo (<i>Bubalus bubalis</i>) bull spermatozoa	Animal Science Papers and Reports	28:235-244
<u>National Refereed Journals</u>					
S. No.	Author (S)	Year of Publication	Title of Article	Name of Journal	Page numbers
1.	M.R. Khan, <u>Bushra Allah Rakha</u> , M. S. Ansari	2019	Diversity and Distribution of Genera Schizothorax and Schizothorichthyes in River Swat, Pakistan	Pakistan Journal of Zoology	Accepted for Publication
2.	Husna, M. S. Ansari, <u>Bushra Allah Rakha</u> , R. Iqbal, R. Ejaz, N. Ullah, S. Akhter	2017	Melatonin supplementation in extender enhances the post thaw quality of buffalo bull spermatozoa	Pakistan Journal of Zoology	49:163-167
3.	N.A.Qureshi, S. Ali, N.A. Abbasi and <u>Bushra Allah Rakha</u>	2016	Morphometrics of Common Quail (<i>Coturnix coturnix</i>) in Pothohar, Pakistan	Pakistan Journal of Wildlife	7:37-40
4.	Akhter S, M. S. Ansari, <u>Bushra Allah Rakha</u> , T. Aziz, S. M. H. Andrabi, N. Ullah, M. Anwar and M. Qayyum	2015	Effect of Milk Based Extenders on Motility and Acrosomal Integrity of Buffalo Bull (<i>Bubalus bubalis</i>) Spermatozoa at 5°C	Pakistan Journal of Zoology	47:1645-1648
5.	Fiza, Y., <u>Bushra Allah Rakha</u> , S. Akhter and M. S. Ansari	2015	Breeding Biology of Scaly-Bellied Woodpecker, <i>Picus squamatus</i> , in Margalla Hills National Park, Pakistan	Pakistan Journal of Zoology	(47):1003-1007
6.	M. S. Ansari, <u>Bushra Allah Rakha</u> , R. Iqbal, S. Akhter	2014	Effect of glutathione in extender on the Freezability of Sahiwal bull spermatozoa	Pakistan Journal of Zoology	(46):17-21
7.	S. Akhter, <u>Bushra Allah Rakha</u> , R. Iqbal, M. S. Ansari	2014	Effect of bovine serum albumin on motility, plasmalemma, viability and chromatin integrity of buffalo bull	Pakistan Journal of Zoology	(46):115-120

			spermatozoa		
8.	Ansari, M. S., <u>Bushra Allah Rakha</u> , S. M. H. Andrabi, N. Ullah, R. Iqbal, W. V. Holt and S. Akhter	2014	Thioglycol in extender improves the post-thaw quality of buffalo (<i>Bubalus bubalis</i>) bull spermatozoa	J. Anim. Plant Sci	24:1256-1259
9.	Zia, U., M. S. Ansari, S. Akhter and <u>Bushra Allah Rakha</u>	2014	Breeding biology of red vented bulbul (<i>Pycnonotus cafer</i>) in the area of rawalpindi/Islamabad	J. Anim. Plant. Sci	24:656-659
10.	Akhter S, M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. H. Andrabi, M. Qayyum and N. Ullah	2014	Effect of Fructose in Extender on Fertility of Buffalo Semen. Short Communication	Pakistan Journal of Zoology	46:279-281
11.	Ali, S, <u>Bushra Allah Rakha</u> , I. Hussain, M. S. Nadeem and M. Rafique	2013	Ecology of Feral Pigeon (<i>Columba livia</i>) in Urban Areas of Rawalpindi/Islamabad, Pakistan	Pakistan Journal of Zoology	45:1229-1234
12.	Mehmood, A., M. S. Ansari, S. Akhter, A. A. Khan, I. Hussain, Shams-ul-Hassan, T. Z. Qureshi and <u>Bushra Allah Rakha</u>	2012	Ocuurence of Pathogenic bacteria in small mammals-inhabiting poultry farms of Rawalpindi/Islamabad, Pakistan	Pakistan Journal of Zoology	44(4):1185-1187
13.	Mehmood, A., M. S. Ansari, T. Hussain, S. Akhter, S. A. Khan, S. Hassan, A. A. Khan and <u>Bushra Allah Rakha</u>	2012	Common shrew (<i>Suncus murinus</i>): A potential reservoir of pathogenic bacteria at poultry farms, Rawalpindi, Pakistan	Pakistan Journal of Zoology	44(3):879-880
14.	N. A. Qureshi, M. S. Ansari, S. Akhter, A. A. Khan, I. Hussain and <u>Bushra Allah Rakha</u>	2012	Feeding Habits of Common Quail (<i>Coturnix coturnix</i>) migrating through Rawalpindi, Pakistan	Pakistan Journal of Zoology	44(6):1760-1762
15.	Batool, K. Mehboob, S. Qadeer, M. S. Ansari, <u>Bushra Allah Rakha</u> , N. Ullah, S. M. H. Andrabi, S. Akhter	2012	Effect of α -tocopherol acetate and ascorbic acid in extender on quality of Zebu bull spermatozoa	Pakistan Journal of Zoology	44(6):1487-1491
16.	Ansari, M. S., <u>Bushra Allah Rakha</u> , S. Akhter	2011	Effect of butylated hydroxytoluene in extender on motility,	Pakistan Journal of Zoology	43:311-314

			plasmalemma and viability of Sahiwal Bull Spermatozoa		
17.	Akhter, S., <u>Bushra Allah Rakha</u> , M. S. Ansari, S. M. H. Andrabi, N. Ullah	2011	Effect of glucose supplementation in skim milk diluter on motility, plasma membrane and acrosomal integrity of Nili-Ravi buffalo bull spermatozoa stored at 5°C	Pakistan Journal of Zoology	43:291-294
18.	Akhter, S., <u>Bushra Allah Rakha</u> , M. S. Ansari, S. M. H. Andrabi and N. Ullah	2011	Storage of Nili-Ravi buffalo (<i>Bubalus bubalis</i>) semen in skim milk extender supplemented with ascorbic acid and α -tocopherol	Pakistan Journal of Zoology	43:273-277
19.	Ansari, M. S., <u>Bushra Allah Rakha</u> , N. Ullah, S. M. H. Andrabi and S. Akhter	2011	Glutathione addition in tris-citric egg yolk extender improves the quality of cooled buffalo (<i>Bubalus bubalis</i>) bull semen	Pakistan Journal of Zoology	43:46-55
20.	Mehmood, A., M. S. Ansari, T. Hussain, S. Akhter, S. A. Khan, S. Hassan, A. A. Khan and <u>Bushra Allah Rakha</u>	2011	Bandicoot rat (<i>Bandicota bengalensis</i>): A Novel Reservoir of Pathogenic Bacteria at Poultry Farms, Rawalpindi/Islamabad, Pakistan	Pakistan Journal of Zoology	43:201-202
21.	Ansari, M. S., <u>Bushra Allah Rakha</u> , N. Ullah, S. M. H. Andrabi, M. Khalid, S. Akhter	2011	Effect of L-cysteine in tris-citric egg yolk extender on post thaw quality of Nili-Ravi buffalo (<i>Bubalus bubalis</i>) bull spermatozoa	Pakistan Journal of Zoology	43:41-47
22.	Akhter, S., M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. H. Andrabi M. Anwar and N. Ullah	2010	Effect of fructose addition in skim milk extender on the quality of liquid Nili-Ravi buffalo (<i>Bubalus bubalis</i>) semen	Pakistan Journal of Zoology	42:227-231
23.	Ansari, M. S., <u>Bushra Allah Rakha</u> , S. M. H. Andrabi, N. Ullah and S. Akhter	2010	Cryopreservation of Sahiwal bull epididymal spermatozoa	Pakistan Journal of Zoology	42:241-243
<u>XIV. Conference Papers</u>					

Abstracts in International Conferences				
S. No.	Author (s)	Conference paper	Name of conference / Venue	Date
1.	Bushra Allah Rakha	Identification of Environmental stressors and climate change impacts on avian population ecology	3 rd World Summit on Climate Change and Global Warming, Prague, Czech Rrepublic	February 27-28, 2019
2.	Bushra Allah Rakha , Javeria Batool, Komal Shakeel, Faryal Akhter, Muhammad Sajjad Ansari	Breeding biology of Himalayan Bulbul (<i>Pycnonotus leucogenys</i>) in Margalla Hills National Park, Pakistan	2 nd Wildlife Reintroduction Conference Lincoln Park Zoo, 2001 North Clark Street Chicago	November 13-16, 2018
3.	M. S. Ansari, Bushra Allah Rakha , S. Akhter	Effect of cryodiluents on quality, enzyme leakage and fertility of Zebu bull spermatozoa	International Agricultural, Biological & Life Science Conference, Edirne, Turkey Trakya University Edirne, Turkey.	September 2-5, 2018
4.	M. S. Ansari, Bushra Allah Rakha , S. Akhter	Semen quality and fertility of liquid-store buffalo semen in AndroMed [®] , skim milk and tris-citric egg yolk extender	International Agricultural, Biological & Life Science Conference, Edirne, Turkey. Trakya University Edirne, Turkey.	September 2-5, 2018
5.	Bushra Allah Rakha , M. S. Ansari, S. Akhter	Morphometry of Indian red jungle fowl (<i>Gallus gallus murghi</i>) spermatozoa	International Agricultural, Biological & Life Science Conference, Edirne, Turkey. Trakya University Edirne, Turkey.	September 2-5, 2018
6.	M. S. Ansari, Bushra Allah Rakha , M. Zohaib	Breeding biology of purple sunbird (<i>Cinnyris asiaticus</i>) in district Okara, Pakistan	Fifth Regional Meeting of the Society for Conservation Biology Asia Section. Mainstreaming Conservation in a Changing Asia American University of Central Asia. Bishkek, Kyrgyz Republic	6-10 August, 2018
7.	Bushra Allah Rakha , M. S. Ansari, S. Akhter, S. Bashir	Effect of dietary vitamin E on semen quality of Indian red jungle fowl (<i>Gallus gallus murghi</i>): An ex situ cryoconservation prespective	Fifth Regional Meeting of the Society for Conservation Biology Asia Section. Mainstreaming Conservation in a Changing Asia. American University of Central Asia. Bishkek, Kyrgyz Republic	6-10 August, 2018
8.	Bushra Allah Rakha , M. Z Waseer, M. S.	Breeding Biology of red vented bulbul (<i>Pycnonotus cafer</i>) in District Okara, Pakistan	7 th International Conference on Biodiversity Conservation and Ecosystem Management, Melbourne, Australia	July 26-27, 2018

	Ansari			
9.	M. S. Ansari, Bushra Allah Rakha , S. Akhter, E. Blesbois, J. Santiago-moreno	Lipid peroxidation, antioxidant potential, DNA integrity and mitochondrial activity of Indian redjungle fowl (<i>Gallus gallus murghi</i>) semen	55 th Annual Meeting of the Society for Cryobiology. Scientific Challenges of Cryobiology, Madrid, Spain.	10-13 July, 218
10.	M. S. Ansari, Bushra Allah Rakha , S. Akhter, J. Santiago-moreno, E. Blesbois	Cryopreservation of Indian red jungle fowl semen with dimethylformamide	55 th Annual Meeting of the Society for Cryobiology. Scientific Challenges of Cryobiology. Madrid, Spain.	10-13 July, 2018
11.	S. Akhter, M. S. Ansari, Bushra Allah Rakha , M. Khaild	Avian egg yolk and cryopreservation of buffalo semen	14 th symposium of animal biology and nutrition / Ramada Plaza Bucharest Str. Poligrafiei nr. 3-5, Sectorul 1 Bucharest, Romania, 013704	28-29, September 2017.
12.	Bushra Allah Rakha , M. S. Ansari, I. Hussain, A. Maqsood, S. Akhter and E. Blesbois	Evaluation of extenders for short and long-term storage of Indian red jungle fowl (<i>Gallus gallus murghi</i>) spermatozoa	The 6 th congress on the “Asia Pacific Initiative on Reproduction”/ Aspire, Jakarta, Indonesia	8-10, April 2016
13.	S. Akhter, S. Qadeer, M. A. Khan, M. S. Ansari, Bushra Allah Rakha	Cryopreservation of Nili-Ravi buffalo bull sperm: The role of antifreeze glycoproteins (AFGPs)	The 15 th Chulalongkorn University Veterinary Conference CUVAC 2016: Research in Practice, , Bangkok, Thailand	April 20-22, 2016
14.	Bushra Allah Rakha	Evaluation of tris-citric acid, skim milk and sodium citrate extenders for liquid storage of Punjab urial (<i>Ovis vignei punjabiensis</i>) spermatozoa	Proceedings of International Conference and exhibition on Tissue Preservation and Bio-Banking, Barcelona Spain	July 20-22, 2015
15.	S. Akhter, Bushra Allah Rakha , M. S. Ansari, N. Kamal, S. Rani, S. Bibi, S. Naz, S. Qadeer, and M. Khalid	Effect of amino acid supplementation of extender on post-thaw quality of sahiwal bull spermatozoa.	The 11th Annual Conference Asian Reproductive Biotechnology Society ARBS 2014. Thailand, Sukosol Hotel, Bangkok	November 3-8, 2014
16.	S. Akhter, M. S. Ansari, Bushra	Evaluation of ciprofloxacin for cryopreservation of	16 th Annual conference of “European society for domestic animal	29 th August-1 st September

	Allah Rakha , S. M. H. Andrabi, S. Qadeer, N. Ullah	buffalo spermatozoa.	reproduction”, Dublin, Ireland	2012
17.	S. Akhter, M. S. Ansari, S. Andrabi, Bushra Allah Rakha , N. Ullah, and M. Khalid	Soya-lecithin in Extender Improves the Freezability and Fertility of Buffalo (<i>Bubalus bubalis</i>) Bull Spermatozoa.	The 15th Annual Conference of “the European Society for Domestic Animal Reproduction (ESDAR)”/ Antalia, Turkey	15-17 September 2011
18.	S. Akhter, M. S. Ansari, Bushra Allah Rakha , N. Ullah, S. M. H. Andrabi, S. Iqbal, and M. Khalid.	Glutathione supplementation in extender improves the quality of cryopreserved buffalo (<i>Bubalus bubalis</i>) bull semen.	Annual Conference of “Society for Reproduction and Fertility” / Oxford, UK.	12-14 July, 2009
<u>Abstracts in National Conferences</u>				
S. No.	Author (s)	Conference paper	Name of conference / Venue	Date
1.	R. Ejaz, S. Qadeer, I. Maqsood, M. S. Ansari, <u>Bushra Allah Rakha</u> , A. Husna, A. Azam and S. Akhter	Fertility of cryopreserved buffalo semen can be improved by supplementation of arachidic acid in extender	Proceedings of the 39 th International Congress of Zoology held at Islamia College University-Peshawar	March 04-06, 2019
2.	Khursheed, F., <u>Bushra Allah Rakha</u> , S. Akhter, M. S. Ansari	Cryopreservation of Indian red jungle fowl (<i>Gallus gallus murghi</i>) with ethylene glycol	Proceedings of the 38 th International Congress of Zoology held at University of the Punjab-Lahore	February 27-March 01, 2018
3.	Akhter, A., <u>Bushra Allah Rakha</u> , S. Mehmood, T. Mahmood, I. Hussain, N. Munawar and M. S. Ansari	Impact of habitat manipulation on rodent population in wheat cropping system of Rawalpindi	Proceedings of the 38 th International Congress of Zoology held at University of the Punjab-Lahore	February 27-March 01, 2018
4.	Naseer, A., <u>Bushra Allah Rakha</u> , S. Akhter and M. S. Ansari	Effect of feeding on growth of ring-necked pheasant (<i>Phasianus colchicus</i>)	Proceedings of the 38 th International Congress of Zoology held at University of the Punjab-Lahore	February 27-March 01, 2018
5.	Mahboob. N., <u>Bushra Allah Rakha</u> , S. Akhter and M. S. Ansari	Influence of group size and environmental conditions on breeding performance of Indian Peafowl (<i>Pavo cristatus</i>) in captivity	Proceedings of the 38 th International Congress of Zoology held at University of the Punjab-Lahore	February 27-March 01, 2018
6.	Waseer, Z., M. S.	Breeding biology of	Proceedings of the 38 th	February 27-

	Ansari and <u>Bushra Allah Rakha</u>	laughing dove (<i>Spilopelia senegalensis</i>) in District Okara, Pakistan	International Congress of Zoology held at University of the Punjab-Lahore	March 01, 2018
7.	Hussain, A., S. Ullah and <u>Bushra Allah Rakha</u>	Diversity and distribution of avian fauna Tehsil Matta, Swat, Pakistan	Proceedings of the 38 th International Congress of Zoology held at University of the Punjab-Lahore	February 27-March 01, 2018
8.	Ishfaq, K., M. Anwar, M. Rais, T. Mahmood and <u>Bushra Allah Rakha</u>	Population density and habitat association of Himalayan Ibex (<i>Capra Ibex</i>) in Qurumber National Park, Gilgit-Baltistan	Proceedings of the 38 th International Congress of Zoology held at University of the Punjab-Lahore	February 27-March 01, 2018
9.	Basit, A., M. Anwar, M. Rais, T. Mahmood, I. Ashraf and <u>Bushra Allah Rakha</u>	Population density and habitat association of black partridge (<i>Francolinus francolinus</i>) in Kala Chitta National Park	Proceedings of the 38 th International Congress of Zoology held at University of the Punjab-Lahore	February 27-March 01, 2018
10.	M. S. Ansari, <u>Bushra Allah Rakha</u> , S. Akhter and E	Effect of Season and age on Indian red jungle fowl (<i>Gallus gallus murghi</i>) semen characteristics: A 4-year retrospective study	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
11.	Qadeer, S., M. A. Khan, M. S. Ansari, <u>Bushra Allah Rakha</u> , R. Ejaz, A. U. Husna, N. Ullah, V. K. Walker and S. Akhter	A novel recombinant eel pout (<i>Macrozoarces americans</i>) type III antifreeze protein improve cryosurvival of buffalo sperm	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
12.	<u>Bushra Allah Rakha</u> , M. S. Ansari, I. Hussain, M. Anwar, S. Akhter and E. Blesbois	Cryo-protective effect of glycerol concentrations of Indian red jungle fowl (<i>Gallus gallus murghi</i>) spermatozoa	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
13.	S. Nasreen, M. A. Awan, A. U. Husna, <u>Bushra Allah Rakha</u> , M. S. Ansari, and S. Akhter	Evaluation of honey as alternative to antibiotics in extender for cryopreservation of buffalo bull semen	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
14.	Bashir, S., <u>Bushra Allah Rakha</u> , M. S.	Effect of vitamin E in extender on	Proceedings of the 37 th International Congress of	February 28-March 02,

	Ansari, and S. Akhter	cryopreservation of Indian red jungle fowl sperm	Zoology held at Government College, University Faisalabad	2017
15.	Ejaz, R., M. S. Ansari, <u>Bushra Allah Rakha</u> , S. Qadeer, A. U. Husna, A. Azam and S. Akhter	Linoleic acid supplementation in extender improves sperm progressive motility and plasma membrane integrity of cryo-preserved nili-ravi buffalo spermatozoa	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
16.	Basharat, H., R. Ejaz, M. S. Ansari, <u>Bushra Allah Rakha</u> , and S. Akhter	In vitro longevity of cryopreserved semen from various cattle breeds	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
17.	Zafar, Z., <u>Bushra Allah Rakha</u> , M. S. Ansari, S. Akhter, M. Anwar, A. Naseer and E. Blesbois	Effect of antibiotics in extender on bacterial control and spermatozoa quality of Indian red jungle fowl (<i>Gallus gallus murghi</i>)	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
18.	Khan, M. I., M. A. Awan, R. Ejaz, <u>Bushra Allah Rakha</u> , M. S. Ansari, F. Tahir and S. Akhter	Acrosomal and DNA integrity of spermatozoa from patients visiting NIH, Islamabad	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
19.	Naseer, A., <u>Bushra Allah Rakha</u> , M. S. Ansari, M. Anwar and Z. Z. Butt	Population density and habitat preferences of red fox (<i>Vulpus vulpus</i>) in Chakwal, Pakistan	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
20.	Zaman, M., <u>Bushra Allah Rakha</u> , M. Anwar and M. S. Ansari	Population density and habitat of cape hare (<i>Lepus capensis</i>) in Shigar Valley, CKNP, Pakistan	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
21.	Khan, M. R., W. A. Shah, <u>Bushra Allah Rakha</u> and M. S. Ansari	Study on diversity and distribution of genera <i>Schizothorax</i> and <i>Schizothorichthyes</i> in River Swat	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
22.	Awan, M. A., S. Nasreen, A. U. Husna, S. Ahmad, <u>Bushra Allah Rakha</u> , M. S. Ansari, and S.	Antioxidant activity of Nigella Sativa seeds extract and its use for cryopreservation of nili-ravi buffalo bull spermatozoa	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017

	Akhter			
23.	Munir, S., M. Rais, S. Abbasi, M. Razzaq, A. Ibrahim, A. Hussain, A. Asadi and <u>Bushra Allah Rakha</u>	A note on morphometric measurements of burrowing frog (<i>Sphaerotheca breviceps</i>) from North Punjab	Proceedings of the 37 th International Congress of Zoology held at Government College, University Faisalabad	February 28-March 02, 2017
24.	M. S. Ansari, <u>Bushra Allah Rakha</u> , M. Anwar and S. Akhter	Effect of Cryopreservation on Indian Red Jungle Fowl (<i>Gallus gallus mgrghi</i>) Spermatozoa.	Proceedings of the 36 ^h International Pakistan Congress of Zoology held at University of Sindh, Jamshoro	16-18, February 2016
25.	Rasool, A., M. Anwar, I. Hussain, M. S. Nadeem and <u>Bushra Allah Rakha</u>	Prevalence and Habitats of Carnivore Species in Riverine Forest of Dera Ghazi Khan Forest Sub-Division	Proceedings of the 36 ^h International Pakistan Congress of Zoology held at Centre of excellence in marine biology, University of Karachi	1-4, March 2015
26.	Asadi, M. A., M. Rais, <u>Bushra Allah Rakha</u> , A. Saleem, M. Anwar, I. Hussain, T. Mahmood, M. Saeed and M. J. Jilani	Breeding and Spatio-Temporal Variations in Abundance and Red-Wattled Lapwing (<i>Vanellus lildicus</i>) in North Punjab, Pakistan	Proceedings of the 36 ^h International Pakistan Congress of Zoology held at Centre of excellence in marine biology, University of Karachi	1-4, March 2015
27.	Saeed, M., M. Anwar, M. Rais, I. Hussain, <u>Bushra Allah Rakha</u> , T. Mahmood and A. R. Kayani.	Baseline Study on Abundance and Habitat of White-Breasted Waterhen (<i>Amaurornis phoenicurus</i>) in Rawalpindi-Islamabad Area, Pakistan	Proceedings of the 36 ^h International Pakistan Congress of Zoology held at Centre of excellence in marine biology, University of Karachi	1-4, March 2015
28.	, S., M. Anwar, I. Hussain, T. Mahmood, M. Rais and <u>Bushra Allah Rakha</u>	Identification of Threats to Grey Partridge (<i>Francolinus pondicerianus</i>) in Salt Range, Punjab Pakistan	Proceedings of the 36 ^h International Pakistan Congress of Zoology held at Centre of excellence in marine biology, University of Karachi	1-4, March 2015
29.	M. Jabbar, M. S. Ansari, <u>Bushra Allah Rakha</u> , R. Iqbal R. Ejaz, A. U. Husna, N. Ullah, and S. Akhter	Melatonin in extender improves the freezability of Sahiwal bull semen	Proceedings of the 33 nd International Pakistan Congress of Zoology held at Pakistan Museum of Natural History, Islamabad	2-4 April 2013
30.	Husna, A. U., M. S. Ansari, <u>Bushra Allah Rakha</u> , R.	Melatonin supplementation of extender improves the	Proceedings of the 33 nd International Pakistan Congress of Zoology held at	2-4 April 2013

	Iqbal, M., Jabbar , R. Ejaz , N. Ullah and S	post thaw quality of buffalo bull spermatozoa	Pakistan Museum of Natural History, Islamabad	
31.	Ansari, M. S., <u>Bushra Allah Rakha</u> , S. M. H. Andrabi, N. Ullah and S	Use of powder egg yolk in extender for cryopreservation of buffalo bull spermatozoa	Proceedings of the 32 nd International Pakistan Congress of Zoology held at Government College University, Lahore	6-8 March 2012
32.	<u>Bushra Allah Rakha</u> , S. Akhter, M. S. Ansari, N. Ullah, S. M. H. Andrabi and I. Hussain	Evaluation of tris-citric egg yolk, skim milk and egg yolk-citrate extenders for the liquid storage of urial (<i>Ovis vignei punjabiensis</i>) spermatozoa	Proceedings of the 32 nd International Pakistan Congress of Zoology held at Government College University, Lahore	6-8 March 2012
33.	N. Ullah, M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. H. Andrabi and S. Akhter	Effect of cysteine in extender on motility, viability, plasma membrane integrity and DNA integrity of Nili- Ravi buffalo (<i>Bubalus bubalis</i>) bull semen	Proceedings of the 31 st International Pakistan Congress of Zoology held at University of Azad Jammu and Kashmir, Muzaffarabad	19-21 April, 2011
34.	S. Akhter, M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. H. Andrabi and N. Ullah. 2011	Effect of thioglycol in extender on quality of buffalo (<i>Bubalus bubalis</i>) bull spermatozoa	Proceedings of the 31 st International Pakistan Congress of Zoology held at University of Azad Jammu and Kashmir, Muzaffarabad	19-21 April, 2011
35.	E. Rabea, S. Basit, M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. H. Andrabi, N. Ullah and S. Akhter	Anatomical studies on Jattal goat cervix for artificial insemination	Proceedings of the 31 st International Pakistan Congress of Zoology held at University of Azad Jammu and Kashmir, Muzaffarabad	19-21 April, 2011
36.	S. Qadeer, A. Batool, K. Mehboob, M. S. Ansari, <u>Bushra Allah Rakha</u> , S. M. H. Andrabi, N. Ullah and S. Akhter	Effect of streptomycin, neomycin, polymyxin B and E with penicillin in extender on bacterial control and quality of buffalo spermatozoa	Proceedings of the 31 st International Pakistan Congress of Zoology held at University of Azad Jammu and Kashmir, Muzaffarabad	19-21 April, 2011
37.	Mehmood A., <u>Bushra Allah Rakha</u> , M. S. Ansari, T. Hussain, S. Akhter, S. A. Khan, S. Hassan and A. A. Khan	Occurrence of Salmonella spp. In black rat (<i>Rattus rattus</i>), house mouse (<i>Mus musculus</i>) and mangoes (<i>Herpestes javanicus</i>) at poultry farms of	Proceedings of the 30 th International Pakistan Congress of Zoology held at University of Agriculture, Faisalabad	2-3 March, 2010

		Rawalpindi/Islamabad, Pakistan		
38.	Mehmood A., <u>Bushra Allah Rakha</u> , M. S. Ansari, T. Hussain, S. Akhter, S. A. Khan, S. Hassan and A. A. Khan	Common shrew (<i>Suncus murinus</i>): Potential reservoir of pathogenic bacteria at poultry farms, Rawalpindi, Pakistan	Proceedings of the 30 th International Pakistan Congress of Zoology held at University of Agriculture, Faisalabad	2-3 March, 2010
39.	Mehmood A., <u>Bushra Allah Rakha</u> , M. S. Ansari, T. Hussain, S. Akhter, S. A. Khan, S. Hassan and A. A. Khan	Bandicoot rat (<i>Bandicota bengalensis</i>): A novel reservoir of pathogenic bacteria at poultry farms, Rawalpindi/Islamabad	Proceedings of the 30 th International Pakistan Congress of Zoology held at University of Agriculture, Faisalabad	2-3 March, 2010
40.	Qureshi, N. A., <u>Bushra Allah Rakha</u> , M. S. Ansari, S. Akhter, S. A. Khan and T. Hussain	Feeding habits of common quail (<i>Coturnix coturnix</i>) in Rawalpindi, Pakistan	International Pakistan Congress of Zoology held at University of Agriculture, Faisalabad	2-3 March, 2010
41.	Ali, S., <u>Bushra Allah Rakha</u> , M. S. Ansari, T. Hussain, S. A. Khan and S. Akhter	Ecology of blue rock pigeon (<i>Columbia livia</i>) in urban areas of Rawalpindi/Islamabad	Proceedings of the 30 th International Pakistan Congress of Zoology held at University of Agriculture, Faisalabad	2-3 March, 2010
42.	Akhter, S., M. S. Ansari, <u>Bushra Allah Rakha</u> , S. Iqbal, S. M. H. Andrabi and N. Ullah	Cryopreservation of buffalo (<i>Bubalus bubalis</i>) semen in Bioxcell [®] extender.	Proceedings of the 30 th International Pakistan Congress of Zoology held at University of Agriculture, Faisalabad	2-3 March, 2010
43.	Ali, S., M. S. Ansari, <u>Bushra Allah Rakha</u> , S. Akhter, N. Ullah and S. M. H. Andrabi	Effect of feeding on reproductive performance of Nili-Ravi buffalo bulls	Proceeding of 28 th International Pakistan congress of Zoology held at Government College University, Faisalabad	2008
44.	Ejaz, R., S. Jabeen, M. S. Ansari, <u>Bushra Allah Rakha</u> , S. Akhter and S. A. Khan	Lead concentration in goat blood	Proceeding of 28 th International Pakistan Congress of Zoology held at Government College University, Faisalabad	2008
45.	Nisa, Z., <u>Bushra Allah Rakha</u> , M. S. Ansari and S. Akhter. 2008.	Effect of soil pH and temperature on occurrence of invertebrate species in	Proceeding of 28 th International Pakistan Congress of Zoology held at Government College	2008

		Shakespearian, Pakistan	University, Faisalabad	
46.	Zulfiqar, M., <u>Bushra Allah Rakha</u> , M. S. Ansari and S. Akhter. 2008	Effect of soil ph and temperature on occurrence of invertebrate species in Khewra salt range, Pakistan	Proceeding of 28 th International Pakistan Congress of Zoology held at Government College University, Faisalabad	2008
47.	<u>Bushra Allah Rakha</u> , A. Batool, M. S. Ansari and A. Mian. 2007	Soil macrofauna variation in Margalla Hill National Park, Pakistan	Proceeding of International conference on biodiversity as renewable resource of Pakistan held at University of Arid Agriculture, Rawalpindi	March 13-14, 2007

XV. RESEARCH SUPERVISION

S. No.	Student Name	Arid Number	Year	Title	Degree	Status
1.	Sidra Jabeen Akhter	06-arid-553	2008	Penetrance and transmission of salmonella in meat of broiler	M.Sc.	Supervisor
2.	Ume Habiba	06-arid-560	2008	Penetrance and transmission of salmonella in poultry eggs	M.Sc.	Supervisor
3.	Gul-E-Rana	06-arid-590	2008	Diversity of Soil Fauna in different areas of Rawalpindi/Islamabad	M.Sc.	Supervisor
4.	Nasra Ashraf	06-arid-593	2008	Incidence of salmonella in the oviduct of hen	M.Sc.	Supervisor
5.	Sara Shabbir	06-arid-608	2008	Transmission of salmonella in poultry through rodents	M.Sc.	Supervisor
6.	Zeb-Un-Nisa	06-arid-573	2009	Diversity of soil invertebrates species of Shakarparian, Pakistan	M.Sc.	Supervisor
7.	Mahjabeen Zulfiqar	06-arid-586	2009	Diversity of soil invertebrate species of Khewra Salt Range, Pakistan	M.Sc.	Supervisor
8.	Sakhawat Ali	07-arid-1106	2009	Ecological factors facilitating city-dwelling in blue rock pigeon (<i>Columba livia</i>)	M.Sc.	Supervisor
9.	Naveed Ahmed Qureshi	07-arid-1103	2009	Morphometrics and feeding habits of common quails (<i>coturnix coturnix</i>) in pothohar area.	M.Sc.	Supervisor
10.	Abid Mehmood	07-arid-1105	2009	Prevalence of Salmonella in small mammals inhabiting poultry farms of Rawalpindi/ Islamabad	M.Sc.	Supervisor
11.	Zamran Aasi	08-arid-815	2010	Effect of site, time and light on bat activity in urban area of Rawalpindi and Islamabad	M.Sc.	Supervisor

12.	Muhammad Hanif	08-arid-818	2010	Breeding biology of greater yellow bat(<i>scotophilus heathoo</i>) in the urban area of Rawalpindi / Islamabad	M.Sc.	Supervisor
13.	Yasir Fiza	08-arid-820	2010	Field observation on breeding of scaly-bellied woodpecker (<i>picus squamatus</i>) in the margallah hills national park Islamabad	M.Sc.	Supervisor
14.	Zeenat	09-arid-380	2011	Study of Roosting sites of Indian flying fox (<i>Pteropus giganteus</i>) in the areas of Rawalpindi and Islamabad	M.Sc.	Supervisor
15.	Kishwar Abbasi	09-arid-385	2011	Screening of blood samples for toxic materials of birds inhabiting Rawal Lake Islamabad	M.Sc.	Supervisor
16.	Sumbill Gill	13-arid-2520	2014	Time Budget of Common Ostrich in Main campus of PMAS-AAUR.	M.Sc.	Supervisor
17.	Asma Atta	13-arid-2509	2014	Time budget of Red Jungle Fowl in Main campus of PMAS-AAUR.	M.Sc.	Supervisor
18.	Huma Gull	13-arid-2512	2014	Foraging Behavior of common Geese in Main campus of PMAS-AAUR.	M.Sc.	Supervisor
19.	Saba Khaliq	13-arid-2516	2014	Ecology of Common Myna in Main campus of PMAS-AAUR	M.Sc.	Supervisor
20.	Sidra Tabbusum	13-arid-2514	2014	Time budget of Domisile Crane in Main campus of PMAS-AAUR.	M.Sc.	Supervisor
21.	Hira Yousaf	13-arid-2511	2014	Feather Morphology of Different birds in Main campus of PMAS-AAUR.	M.Sc.	Supervisor
22.	Aqsa Shakoore	14-arid-1081	2014	Time budget of captive golden pheasant (<i>Chrysolophus pictus</i>) at avian research station of PMAS AAUR.	M.Sc.	Supervisor
23.	Adrish Tasleem	14-arid-1080	2014	Time budget of captive common pheasant (<i>Phasianus colchicus</i>) at avian research station of PMAS AAUR.	M.Sc.	Supervisor
24.	Kiran Afzal	14-arid-1083	2015	Breeding biology of lakka pigeon at avian research station-1 of PMAS AAUR	M.Sc.	Supervisor
25.	Maria Zafar	14-arid-1084	2015	Effect of different feed additives on white silky hen at avian research station-1 of	M.Sc.	Supervisor

				PMAS AAUR		
26.	Sadaf Bukhari	14-arid-1086	2015	Evaluation of commercial feeds on egg shell quality of captive Bantam hen at avian research station-1 of PMAS AAUR	M.Sc.	Supervisor
27.	Samina Salim Khan	14-arid-1087	2015	Digestibility of different commercial feeds by Captive Bantam hen at avian Research station of PMAS AAUR	M.Sc.	Supervisor
28.	Badar Khayam	09-arid-387	2014	Relation between avian diversity and small dam size in pothwar area	M.Sc.	Member
29.	Muhammad Arslan Asdi	10-arid-1244	2014	Spatio-temporal use of habitats by red-wetted lapwing in pothwar area	M. Phil.	Member
30.	Nida Amjad	11-arid-2721	2015	Habitat and breeding of south-east asian toad (<i>duttaphrynus melanostictus</i>) in Rawalpindi Islamabad area.	M. Phil.	Member
31.	Saba Yousaf	13-arid-3311	2015	Seasonal variation in spermatozoa quality of breeding buffalo bulls used for artificial insemination.	M. Phil.	Member
32.	Sabeen Toor	13-arid-3312	2015	Effect of L-carnitine in extender on post thaw quality of buffalo bull spermatozoa	M. Phil.	Member
33.	Saima Tahir	13-arid-3319	2015	Epidemiology of polycystic ovarian syndrome among patients visiting different hospitals/ diagnostics centers of Rawalpindi and Islamabad	M. Phil.	Member
34.	Zartasha Zafar	11-arid-2727	2016	Microbial characteristics of Indian red jungle fowl (<i>gallus gallus murghi</i>) spermatozoa in captivity	M. Phil.	Supervisor
35.	Muhammad Zaman	12-arid-722	2016	Population density and habitat association of capr hare (<i>lupes capensis</i>) in shigar valley, central karakoram national park	M. Phil.	Supervisor
36.	Sadia Munir	11-arid-2728	2016	Variations in morphometrics of burrowing frog <i>Sphaeratheca breviceps</i> (anura, dicroglossidae) in north Punjab and AJ&K	M. Phil.	Member
37.	Konish Kanwal	11-arid-2719	2016	Distribution and habitat association of Indian pangolin (<i>manis crassicaudata</i>) in district mansehra	M. Phil.	Member

38.	Muhammad Amjad Awan	12-arid-1065	2016	Effect of nigella sativa extract in extender on freezability of buffalo bull spermatozoa	M. Phil.	Member
39.	Shiza Nasreen	12-arid-1047	2016	Freezability of buffalo bull sperm in extender supplemented with honey	M. Phil.	Member
40.	Shumaila Nazir	10-arid-1757	2016	Prevalence cause and associated risk factors of anemia in pregnant women of tertiary care hospital of Rawalpindi	M. Phil.	Member
41.	Sidra Ikram	13-arid-2519	2017	Comparative morphology and ecological correlates of anuran tadpoles in Rawalpindi/ Islamabad	M. Phil.	Member
42.	Noreen Mehboob	15-arid-2860	2017	Influence of group size and environmental conditions on breeding performance of Indian peafowl (<i>pavo cristatus</i>) in Captivity	M. Phil.	Supervisor
43.	Ali Akhter	15-arid-2853	2017	Impact of habitat manipulation of rodent population inhabiting croplands of District Rawalpindi	M. Phil.	Supervisor
44.	Saqib Mehmood	13-arid-2517	2017	Impact of habitat manipulation on rodent population inhabiting croplands of district Chakwal	M. Phil.	Supervisor
45.	Amir Naseer	12-arid-721	2017	Effect of different feed on growth, breeding and rearing of Ring necked pheasant (<i>Phasianus colchicus</i>) in captivity	M. Phil.	Supervisor
46.	Marjan ali	08-arid-1802	2018	Identification of gastro-intestinal parasites in some ungulates	M. Phil.	Supervisor
47.	Sumbil Gill	13-arid-2520	2018	Description of taxonomic and morphological characteristics of tadpoles of murree hills frog (<i>nanorana vicinia</i>)	M. Phil.	Member
48.	Maria Mahnoor	13-arid-3380	2018	Isolation and identification of internal parasites from fecal pellets of Avian species in captivity	M. Phil.	Supervisor
49.	Farah Qayyum	14-arid-1082	2018	Breeding Success of white cheeked bulbul (<i>pycnonotus leucotis</i>) in Margalla Hills National Park	M. Phil.	Supervisor
50.	Nayab Zafar	14-arid-	2018	Breeding Success of Rose-	M. Phil.	Supervisor

		1085		ringed parakeet (<i>psittacula krameri</i>) in Margalla Hills National Park		
51.	Maria Zafar	14-arid-1084	2018	Hormonal profiles (stress and reproductive hormones) of bull frog (<i>hoplobatrachus tigerinus</i>) in relation to temperature variation	M. Phil.	Member
52.	Samina Salim khan	14-arid-1087	2018	Hormonal profiles (stress and reproductive hormones) of Common skittering frog (<i>euphlytis cynophlyctis</i>) in relation to temperature variation	M. Phil.	Member
53.	Luqman Ullah	16-arid-586	2018	Diversity and abundance of avifauna in manglot wildlife park, district Mansehra	M. Phil.	Member
54.	Sobya Zaman	16-arid-594	2018	Reproductive status of tadpoles of murree hills frog (<i>nanorana vicinia</i>) and hazara frog (<i>allopan hazarensis</i>)	M. Phil.	Member
55.	Rabia Nazir	17-arid-949	2018	Re-assessment the status of Indian Pangolin (<i>Manis crassicaudata</i>) in pothwar plateau	M. Phil.	Member
56.	Tariq Ahmed	17-arid-952	2018	Extent of illegal trade associated with Indian Pangolin (<i>Manis crassicaudata</i>) in pothwar plateau	M. Phil.	Member
57.	Ammara Saman	15-arid-2686	2018	Profile of female reproduction hormones of Indian gerbil (<i>Tatera Indica</i>) inhabiting agro-ecosystem of Pothwar plateau	M. Phil.	Member
58.	Anum Razzaq	15- arid-2842	2018	Dietary habits of Indian gerbil (<i>Tatera Indica</i>) inhabiting agro-ecosystem of Pothwar plateau	M. Phil.	Member
59.	Aqsa Shehzad	15-arid-2842	2018	Occupancy Modelling and conservation status of microhylid frog	M. Phil.	Member
60.	Rida Fatima	14-arid-2535	2018	Population dynamics of tadpoles of endemic anurans in different stream types	M. Phil.	Member
61.	Farhat Bibi	15-arid-2843	2018	Efficacy of various marking techniques for different life stages of amphibians and reptiles	M. Phil.	Member
62.	Humaira	14-arid-2479	2018	Role of L-Alanine in Amelioration of cryo-damages	M. Phil	Member

				and antagonizing cryopreservation of Indian Red Jungle Fowl Spermatozoa		
63.	Jawveria Sultan	13-arid-3514	2018	Evaluation of asphaltum for cryosurvivability of buffalo semen	M. Phil	Member
64.	Qurat-ul-Ain	14-arid-2534	2018	Effect of quercetin on crypreservability and oxidative of Indian Red Jungle Fowl semen	M. Phil	Member
65.	Syeda Anila Waqar	13-arid-3576	2018	Effect of summer stress on oxidative status and quality of cryopreserved buffalo bull semen	M. Phil.	Supervisor
66.	Anas Ilyas	15-arid-2650	2018	Distribution and habitat of northern palm squirrel (<i>Funambulus pennantii</i>) in the margalla Hills national park	M. Phil.	Supervisor
67.	Kianat Waseem	17-arid-947	2018	Season variation in semen characteristics of Ring-Necked pheasant (<i>Phasianus colchicus</i>)	M. Phil.	Supervisor
68.	Adil Baig	17-arid-943	2018	Breeding biology of mouse-tailed bat (<i>Rhinopomo microphylhum</i>) in district Swat	M. Phil.	Supervisor
69.	Arif Hussain	17-arid-944	2018	Distribution and habitat of Rhesus monkey (<i>Macaca mulata</i>) in district Swat	M. Phil.	Supervisor
70.	Tooba Javed	13-arid-3393	2018	Impact of environmental pollution on the breeding of collard dove (<i>Streptopelia decaocto</i>) in Rawalpindi Islamabad area	M. Phil.	Supervisor
71.	Rida Pervaiz	13-arid-3570	2018	Evaluation of extender for the cryopreservation of Ring-Necked pheasant (<i>Phasianus colchicus</i>)	M. Phil.	Supervisor
72.	Shahid Nawaz	17-arid-950	2018	Breeding biology of Kalij Pheasant (<i>Lophura leucomelanos</i>) in pir lasura national park, Azad jammu & Kashmir	M. Phil.	Supervisor
73.	Saif Ullah	14-arid-1097	2018-2021	Ecology of Markhor (<i>Capra falconeri cashmiriensis</i>) in District Swat and Chitral, Khyber Pakhtunkhwa, Pakistan	Ph.D.	Supervisor
74.	Imad-ul-Din Zangi	14-arid-1092	2018-2021	Ecology of Egyptian vulture (<i>Neophron percnopterus</i>) in Mirpur Division, Azad Jammu and Kashmir, Pakistan	Ph.D.	Supervisor

75.	Ali khter	15-arid-2853	2018-2021	Population, breeding and genetic diversity of kalij pheasant (<i>Lophura leucomelanos</i>) in Margalla Hills National Park, Pakistan	Ph.D.	Supervisor
76.	Konish Kanwal	11-arid-2719	2018-2021	Characterization and storage of Common quail (<i>Coturnix coturnix</i>) semen for conservation	Ph.D.	Supervisor
77.	M. Jibran Haider	10-arid-1250	2017-2020	Ecobiology and molecular taxonomy of flare horned markhor (<i>Capra falconeri</i>) in Gilgit-Baltistan, Pakistan	Ph.D.	Supervisor

XVI. REVIEWER OF INTERNATIONAL JOURNALS

<u>Sr. No.</u>	<u>Reviewer of International Journals</u>	<u>Year</u>	<u>National/ International</u>
1.	Tropical Animal Health and Production	2011	International
2.	The Journal of Applied Research	2010	International
3.	Journal of General Internal Medicine	2009	International
4.	Journal of Food Safety	2010	International
5.	Journal of Reproductive and Stem Cell Biotechnology	2010	International
6.	International Journal of Nutrition and Metabolism	2013	International
7.	Journal of Entomology and Nematology	2012	International
8.	African Journal of Food Science	2013	International
9.	African Journal of Microbiology	2010	International
10.	Animal Reproduction Science	2010	International
11.	Reproduction in Domestic Animals	2013	International
12.	Reproduction, Fertility and Development	2014	International
13.	Reproductive Biology	2014	International
14.	Biobanking and Biopreservation	2019	International

XVII. COMPUTER & STATISTICAL ANALYSIS SKILLS

- | | |
|---|--|
| <ul style="list-style-type: none"> • Microsoft Word (2005, 2007, 2010) • Microsoft Excel (2005, 2007, 2010) • Microsoft PowerPoint (2005, 2007, 2010) • Minitab (Statistical Package) • MegaStat (Statistical Package) | <ul style="list-style-type: none"> • SPSS (Statistical Package) • MstatC (Statistical Package) • Arc GIS • Distance Software • Estimate S • End Note |
|---|--|

XVIII. REFERENCES

Prof. Dr. Iftikhar Hussain Supervisor/ Ex-Dean/Chairman, Department of Wildlife Management, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi-Pakistan	Dr. Shamim Akhter Associate Professor, Department of Zoology, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi-Pakistan
--	--

E-mail: ifthussain@gmail.com Mobile: 0333-5163248	E-Mail: sashraf1993@gmail.com Mobile: 0333-5206056	
--	--	--