


Department of Animal Science
M. J. P. R. U. Bareilly.

	Dr.	Yogendra	Prasad		
Designation	Associate Professor				
Department	Department of Animal Science				
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Residence	A-4, T-4 Professor colony, University campus, MJP Rohilkhand University, Bareilly (UP) 243006				
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Education	Qualification (M. Sc. Onwards)				
Subject	Institution	Year	Details		
M. Sc. Zool.	Kumaun University, Nainital	1987	Zool. (Fish and Fisheries)		
Ph. D. Limnology	Barakatullha University, Bhopal	1992	Studies on Bacterial Fish Diseases, their prophylactic and therapeutic measures		
Carrier Profile					
Sl. No	Institution	Designation	Year		
i.	B. U., Bhopal.	JRF (ICAR)	1988 – 1992,	Research	
ii.	B. U., Bhopal.	R. A. (ICAR)	1992 – 1995,	Research	
iii.	B. U., Bhopal.	Research Scientist (DBT)	1995 – 1996,	Research	
iv.	M.J.P. R.U., Bly.	Lecturer, Animal Science	1996 – 2005,	Teaching & Research	
v.	M.J.P. R.U., Bly.	Reader, Animal Science	2005 – 2008,	Teaching & Research	
vi.	M.J.P. R.U., Bly.	Associate Professor, ,,	2008 – Cont.	Teaching & Research	

About Aquatic Biotechnology and Fish Pathology Laboratory

This lab is exclusively devoted and dedicated on isolation and molecular characterization of virulent bacteriophages. Outstanding attainments of this lab are the isolation and characterization of Lytic Bacteriophages (members of DNA virus, *Podoviridae*) of *Pseudomonas fluorescens* and *Flavobacterium columnare*, bacterial fish pathogens which have been proved to be efficacious and may be used as candidate species to combat with maladies of these pathogens in fish hatchery and aquaculture. Besides, *in vitro* cell culture of Fish macrophages, Neutrophils and Lymphocytes for the evaluation of humoral and cell mediated immune response, immunohistopathology, oxidative stress (SOD, LPO, Catalase), immunocompetence evaluation through serum lysozyme and proteins have important parameters of routine evaluation (see publication). Presently we are looking for Genomic and Kinetic evaluation of lytic phages to develop PHAGE THERAPY in aquaculture. This lab is having all facilities to facilitate the problem of aquatic biotechnology and equipped with BOD, Laminar Airflow (H&V), Lyophilizer, Refrigerated high speed centrifuge, ELISA, Electrophoresis, Deep freezer etc and looking for PCR and Gel Doc system very shortly.

Field of Interest

- (i) Phage therapy in Aquaculture
- (ii) Immunomodulation and Immunocompetence aspects of fish

Teaching Experience:

- (i) Limnology - Fish Biology and Aquaculture - 1992 – 1996
- (ii) Animal Science - Microbiology and Immunology, 1996 – cont.
Fisheries and Aquaculture,
Genetics and Environmental Biol.

Honours and Awards

Publications (Last five years)

J. Books

Year	Title	Publisher	Co-author
2009	Bacterial Fish Diseases Under Pub. (A Practical Approach)	NPH, Delhi	-

(II) In Indexed / Peer reviewed Journals (2005 onwards)

Sl. No.	Yr	Title	Journal	Co-authors
1	2005	Efficacy of selected antibiotics and leaves extract of neem (<i>Azadirchta indica</i>), on <i>Flavobacterium columnare</i> isolated from symptomatic cat fish (<i>Clarias batrachus</i>).	Biochem. Cell. Arch. 5(2): 153 – 160. ISSN	Verma, V and Singh, B R
2	2006	Histo-pathological investigation on <i>Clarias batrachus</i> and <i>Heteropneustes fossilis</i> artificially infected with <i>Flavobacterium columnare</i> and <i>Myxobacterium</i> .	Biochem. Cell. Arch. 6 (2): 329 – 338.	Verma, V, and Singh, R
3	2007	Characteristics of <i>Flavobacterium</i> and <i>Myxobacterium</i> isolated from the freshwater catfish	Biochem. Cell. Arch.6(2):9-21.	Verma, V and Singh, B R
4	2007	Serological and Epidemiological characterization of <i>Flavobacterium columnare</i> isolates isolated from infected catfish of sub-Himalayan region.	Biochem. Cell. Arch. 6(2): 45 – 55	Verma, V and Singh, B R
5	2007	Changes in haematological parameters of Indian catfish (<i>Heteropneustes fossilis</i>) subjected to artificial infection with <i>Flavobacterium columnare</i> and <i>Myxobacterium</i>	J. Aqua. Biol. 22 (1): 1- 6	Verma, V
6	2007	Level of Cd. And Pb in tissue of freshwater fish (<i>Clarias batrachus</i>) and chicken in Western U. P. India	Bulletin.Enviro nCont. Toxicol. 79: 396 – 400	Kumar, P, Patra, A K and Swarup, D
7	2007	<i>In vitro</i> lymphoproliferative responses of peripheral blood mononuclear cells of CdCl ₂ exposed Indian catfish (<i>Clarias batrachus</i>) treated with different anti oxidents.	Indian J. Comp. Microbial. Infect.Dis.27(1 & 2): 22 -26	Kumar, P Dhama, K and Nandi, D
8	2007	<i>In vitro</i> phagocytosis response of neutrophils of catfish (<i>Clarias batrachus</i> and <i>Heteropneustes fossilis</i>) subjected to <i>Flavobacterium columnare</i> and <i>Myxobacterium</i> .	Indian J. Comp. Microbial. Infect. Dis. 7(1 & 2): 27 -31	Verma, V

9	2008	Detection of <i>Flavobacterium columnare</i> in experimentally infected <i>Clarias batrachus</i> by using immunofluorescence technique.	J. Exp. Zool. India 11(1): 19 – 24.	Verma, V
10	2008	Accumulation pattern of Cadmium in tissues of Indian catfish, <i>Clarias batrachus</i> .	Anim. Nut. Feed Tech. 8 (2): 115 – 119.	Kumar,P,Ranjan,Swarup,D, Pattanaik, A K, Patra A K
11	2009	Prevalence surveillance and virulence characterization of <i>Flavobacterium columnare</i> and <i>F. psychrophilum</i> in Indian catfish of sub Himalayan region	Biochem. Cell. Archiv. 9 (1): 71-82	
12	2009	Ascorbic acid, garlic extract and taulene alleviate cadmium induced oxidative stress in freshwater catfish (<i>Clarias batrachus</i>).	Sci. Total Environ. 407: 5024 – 5030.	Kumar, Patra, A.K.,Ranjan,R. ,Patra,R. C., Swarup, D. and Satya Pal.
13	2009	PCR – RFLP analysis of IL-2R γ and IL-15R α genes in Kadkanath native chicken	J. Appl. Ani. Res. 36:239 – 242.	Jaiswal, G. Kumar, S and Singh, D P
14	2010	Isolation and efficacy characterizations of lytic bacteriophages against antibiotic resistant <i>Pseudomonas fluorescens</i> from Sub Himalayan region	Biochem. Cell. Archiv. 10 (1): 21-29.	Kumar, D. Disha. D. Sharma, A.K.
15	2010	Genetics of immunocompetence traits in white leghorn chickens divergently selected for humoral response to sheep erythrocytes.	Ind. J Poultry. Sci. 45 (1): 18-21	Gupta,T. Kumar, S. Kataria, M.C
16	2010	Efficacy of polyvalent bacteriophages P-27/HP to control multidrug resistant <i>Staphylococcus aureus</i> associated with human infections.	Curr. Microbiol. 233 in press	Gupta, R
17	2010	Genetics distance between divergent white leghorn chicken lines after three generation of selection for humoral response to sheep erythrocytes.	J. Appl. Ani. Res. 38(2): in press	Gupta,T. Kumar, S. Kataria, M.C.
18	2010	Isolation and efficacy evaluation of virulent bacteriophages specific to fish pathogenic bacterium, <i>Flavobacterium columnare</i>	J. Appl. Ani. Res. 38(3): in press.	Arpana & Kumar, D.

Ph. D. Theses Produced

- 1 Studies on the immune responses of freshwater Indian catfish (*Clarias batrachus* and *Heteropneustes fossilis*) in relation to cytophagan bacterial fish pathogens.
Vinay Verma, 2005
- 2 Immunotoxic and pro-oxidative effect of Cd and its amelioration with selected antioxidants on freshwater catfish, Puneet Kumar, 2007
- 3 Immunomodulatory effect of Levamisole, Vitamin –E and Chitin on the non specific immune response of Indian Major Carp against *Flavobacterium*.
Preeti Saxena, 2007
- 4 Clinico-immunomodulatory effect of Levamisole, Vitamin – E and Selenium on the non specific immune response of Indian catfishes against Pseudomonads.
A.K. Sharma, 2008
- 5 Isolation, Efficacy characterization and Kinetics of Bacteriophages against the fish pathogenic bacterium, *Flavobacterium columnare*, for the development of Phage Therapy in aquaculture. Arpana, 2009
- 6 Molecular genetics and immunological evaluation of divergent white Leghorn chicken lines based on humoral response to sheep erythrocytes. Taran Gupta, 2009
- 7 Candidate gene analysis of interleukin gene in kadaknath native chicken,
Gauri Jiswal, 2009
- 8 Dietary manipulation of external and internal egg quality of laying hens,
Shiv Kumar, 2009
- 9 Purification characterization and use of phage induced endolysin as therapeutic agent against *Staphylococcus aureus* of human origin, Ragini Gupta, 2010
- 10 Host range sensitivity of bacteriophages specific to virulent bacterial pathogen associated with columnaris disease of fish to develop phage therapy in aquaculture,
Dinesh Kumar, 2010

Conference Presentation

International	– Fifteen
National	- Twenty

Total publication profile

(i). Book	-
(ii). Indexed / Peer reviewed Journals	Thirty
(iii) Conference presentation	Thirty five
University Service / consulting activity	
Assistant Coordinator, Central Evaluation - Since 1996; Assistant Superintendent, Entrance Test; Assistant Superintendent, M. Sc. Entrance Test; Assistant Proctor	
Professional Societies Membership	
<ul style="list-style-type: none"> i. Life member of Indian Science Congress, India ii. Member of New York Academy of Science. iii. Life member of society for Bio-naturalists. iv. Life member of Society for Environment of India. v. Member of Society of Environmental Sciences, India vi. Member of Society for Sciences, India 	
Projects completed	
<p>(i) Principal Investigator, ICAR Project “Pathological and serological characteristics of certain bacterial fish pathogens in relation to selected catfishes of Himalayan and sub Himalayan regions.” (1998 – 2001) Cost: Rs. 14.00 lakhs</p> <p>(ii) Co-Principal Investigator, ICAR Project Investigations on the aetiological agents of EUS and the immune response shown against them by symptomatic fish species.”(2001-2004) Cost: Rs. 12.00 lakhs</p> <p>(iii) Principal Investigator, DBT Project “Isolation, characterization and efficacy of Bacteriophages against pathogenic <i>Pseudomonas</i> and <i>Flavobacterium</i> associate with bacterial fish diseases, for therapeutic uses in aquaculture.” (2005-2008) Cost of Rs 24.25 lakhs</p>	