

## BIODATA

### Dr. KOTHUR RAGHAVENDER RAO

Head and Associate Professor  
Department of Zoology  
Coordinator –Department of Biotechnology  
Walchand College of Arts and Science,  
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#### Residence

H.No. - A, Block-2, Amruta Residency  
Near Ekta Nagar  
**Solapur - 413006** Maharashtra, India  
Tel No.: (0217) 2656218 (R)  
+91 9423068010 (Cell)  
**Date of Birth: 08/06/1961**

#### Academic Qualifications: M.Sc., Ph.D.

B.Sc.	Osmania University, Hyderabad, Andhra Pradesh, India.	1981
M.Sc.	Dr. B.R. A. Marathwada University, Aurangabad, Maharashtra, India.	1983
Ph.D.	Dr. B.R. A. Marathwada University, Aurangabad, Maharashtra, India. (Topic: Neuroendocrine regulation in reproduction of Lamellibranch Molluscs)	1989

#### Areas of Specialization

Toxicology, Endocrinology, Animal Physiology, Vermibiotechnology, Environmental Biology

#### Teaching Experience -- Total years – 26 ( Senior College )

1.	Jr. Lecturer, Department of Zoology, S.S. V P S Science College, Dhule from 1988 to 1989
2.	Sr. Lecturer, Department of Zoology, S.S. V P S Science College, Dhule from 1989 to 1995
3.	Lecturer/ Reader, Department of Zoology, Walchand College of Arts & Science, Solapur from 1996 to 2005
4.	Associate Professor, Department of Zoology, Walchand College of Arts & Science, Solapur from 2006 to 2010
5.	Head and Associate Professor, Department of Zoology, Walchand College of Arts & Science, Solapur from 2010 to till date

## Research Guidance

### Ph .D .(Zoology) students awarded under the guidance : Total 6 students

Sl.No.	Name of the student	Title of the Thesis	Awarded Year	University
1.	<b>Ms.Laxmi Chandrakant Mushan</b>	Vermicomposting in agriculture: Studies with leaf litter of Tendu, <i>Diospyros melanoxylon</i> , Roxb. used in the beedi industry.	2010	<b>Shivaji</b>
2.	<b>Mr. Kamble Vidhin Sunder</b>	Effect of some pesticides on the lamellibranch mollusc, <i>Lamellidens corrianus</i> found near Sangola and their impact on ecology.	2010	<b>Shivaji</b>
3.	<b>Mr.Kshirsagar Somnath Sushant</b>	Fluoride toxicity on freshwater edible fish, <i>Rita rita</i> ( Hamilton-Buchanan)	2010	<b>Solapur</b>
4	<b>Ms. Waghmare Padmashree Kallappa</b>	Ecophysiological variations of the freshwater mollusc, <i>Indonaia caeruleus</i> (Prasad,1918) from Bima river near Pandharpur, Maharashtra	2013	<b>Solapur</b>
5	<b>Ms. Ankaram Snehalata Ravindra</b>	A study of ecofriendly management of water hyacinth weed from fresh water Sambhaji tank, Solapur by vermicomposting technology	2013	<b>Solapur</b>
6	<b>Ms Shagalolu S Vidya</b>	Antibacterial and biochemical Activity of Housefly	2014	<b>Solapur</b>
7	<b>Ms. Gurav R Madhura</b>	Hydrobiological Studies of Hipparga tank near Solapur	2015	<b>Solapur</b>
8	<b>Ms. Kale Vijay Prajakta</b>	Toxicity of Copper Sulphate on Fresh water gastropod <i>Bellamya bengalensis</i>	2015	<b>Solapur</b>

### Doctor of Philosophy Ph D (Zoology) Ongoing: 03 students

Sl.No.	Name of the student	Title of the Thesis	Status
1	<b>Ms. Rangdal M Varsha</b>	Hydrobiology of Bhima river flowing through Gulbarga	Working
2	<b>Ms .Vijayalaxmi Bijja</b>	Recycling of poultry waste by using vermin biotechnology :An ecofriendly approach	Working
3	<b>Ms Sujata Madikhambe</b>	Heavy metal assessment of vermicompost produced from water hyacinth :A solid waste management approach	Working

## Research Projects

Sl.No.	Title of the project	Funding Agency	Duration	Amount sanctioned
<b>Completed</b>				
1.	Production of vermicompost from leaf litter generated from beedi industry. ( <b>Co investigator</b> )	UGC	02 Years Completed	50,000/-
2.	Diversity of spiders ( <i>Archnida : Araneae</i> ) from southern tropical thorn forest habitat in and around Solapur, Maharashtra. . ( <b>Co investigator</b> )	UGC	02 Years Completed	1,30,000/-

### Fellowships

1. Junior and Senior research Fellowship award by Indian Agricultural Research Institute, New Delhi ,1984-1988.

### Honours , Awards & Achievements

1. Patenting registered for A method for vermicomposting of solid waste generated from beedi industry in form of *Diospyros melanoxylon* leave litter 2013 Application No.2393/MUM/2012 A Publication Date : 07/09/2012
2. Shriman Bhausahab Gandhi SEVABHAVI PURASKAR 2013

### Administrative Experience / University Work Examination, Curriculum, Administration, Extension, etc.:

1. **Co-ordinator** Walchand Centre for Biotechnology Walchand College of Arts & Science, Solapur from 2008 onwards
2. **Head** of the department of Zoology, Walchand College of Arts and Science ,SOLAPUR from August 2010 onwards
3.
  - **Chairman of board of studies in Zoology**, Solapur university ,Solapur 2014
  - **Member of board of studies in Zoology** , North Maharashtra university, JALGAON 2011 onwards
  - **Member of Board of Studies in Zoology**, Dr. B. Ambedkar Marathwada university, AURANGABAD 2011 onwards
  - **Member of Academic council** , Solapur university ,Solapur 2014
  - **Member of faculty of science** , Solapur university ,Solapur 2014
  - **Member of Research and Recognition Committee** , Solapur university ,Solapur 2014
  - **Member of Board of University for Teaching and Research ( B U T R )** , Solapur university ,Solapur 2014

4	<b>External Referee</b> for Ph.D. open defence exam for Dr. B.A.M.University., <b>Aurangabad</b> ,S R T M University. <b>Nanded</b> and S G M Amravati University , <b>Amravati</b> , Shivaji University, <b>Kolhapur</b>
5	SET Observer,
6	Admission committee member from 2004 to 2010
7	Examination & Result analysis committee member from 2004 to 2005
8	IQAC Steering committee member from 2006 onwards
9	Tour committee member from 2007 onwards
10	Cultural activities and Youth festival committee member from 2005 to 2007
11	Discipline & Academic observation committee member from 2005 to 2007
12	Publicity committee member from 2006 to 2007
13	Prize Distribution committee member from 2008 to 2009, convener in 2013-2014 year
14	Grievance Redressal Committee member, Solapur University, Solapur from 2006
15	Departmental research committee member, Solapur University, Solapur
16	Faculty Development program conducted by ICFAI – Participated from 2006 to 2007
17	Worked as senior supervisor– Solapur University, Solapur. At Walchand College of Arts and Science, Solapur
18	Worked as <b>flying squad Chairman</b> and member of Solapur University, Solapur
19	Worked as external internal senior supervisor– Solapur University, Solapur.
20	Teaching staff selection committee member and VC nominee of Solapur University, Solapur
21	External expert-SWOC college IQAC NAAC member
22	Resource Person ---Refresher course in Life Sciences, Academic Staff College, Dr. B. Ambedkar Marathwada university, AURANGABAD.
23	Paper assessment for theory in undergraduate (B .Sc) and postgraduate (M .Sc) – Zoology , Genetics and Bioinformatics
24	Local enquiry committee member, Solapur university, Solapur, affiliation for lab recognition
25	Syllabus framing sub-committee member of the university for PG and UG
26	Judge and Resource person –Avishkar research festival Solapur university, Solapur
27	Ph D laboratory recognition committee member Solapur university ,Solapur
28	Chairman ,M Sc Biotechnology , Genetics and Bioinformatics Solapur university ,Solapur 2014,2012 and 2012, respectively
29	Convener and member of scrutiny for PBAS and CAS from 2011 onwards
30	Coordinator ,International conference on Chemical ,Materials and Biosciences for sustainable developments, 8 th to 10 <sup>th</sup> January 2015,Walchand college of Arts and Science ,Solapur

## BOOKS PUBLISHED

1.	A textbook of Animal diversity I (Zoology) B.Sc. Part I Paper I Section I (According to Shivaji University,
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	Kolhapur , Nirali Prakashan Pune) 2003
2.	A textbook of CELL BIOLOGY AND GENETICS B.Sc. Part I Paper I Section I I (According to Shivaji University, Kolhapur , Nirali Prakashan Pune) 2003
3.	A textbook of Animal diversity I (Zoology) B.Sc. Part I Paper I I Section I (According to Shivaji University, Kolhapur , Nirali Prakashan Pune) 2003
4.	A textbook of ECOLOGY, ETHOLOGY, EVOLUTION AND APPLIED ZOOLOGY B.Sc. Part I Paper II Section II (According to Shivaji University, Kolhapur , Nirali Prakashan Pune)

### RESEARCH PUBLICATIONS IN JOURNALS / PROCEEDINGS

1.	Akarte, S.R., <b>K.R.Rao</b> and D.A.Kulkarni, 1986. Acute toxicity of metasytox to lamellibranch mollusc, <i>Paphia laterisulca</i> from Ratnagiri coast, India. <i>Int. J. Ecol. Environ. Sci.</i> , 12:125-129 ISSN: 0377-015X. ( <b>National</b> )
2.	Kulkarni, D.A., <b>K.R.Rao</b> , D.V.Muley and U.H.Mane. 1986. Biochemical reserves of mantle and adductor muscles of three freshwater molluscs. <i>U P J. Zool.</i> 6(1)134-141.1986 ISSN: 0256-971X. ( <b>National</b> )
3.	Mane, U.H., S.R.Akarte, K.S.Pillai, D.A.Kulkarni and <b>K.R.Rao</b> 1987. Changes in metabolites and physiological activities in a freshwater mussel, <i>Indonaia caeruleus</i> (Prashad) due to short term exposure to fluoride. <i>Fluoride</i> , 20 (2) : 84-91 (ISSN0015-4725), impact factor 0.824( <b>International</b> )
4.	Muley, D.V., S.R.Akarte, D.A.Kulkarni and <b>K.R.Rao</b> 1987. Acute toxicity of metasytox to wedge clam, <i>Donax cuneatus</i> from west coast. <i>Fishery Technology</i> , 24 (1) : 27-30 ISSN: 0015-3001 ( <b>National</b> )
5.	<b>Rao K.R.</b> , D.A.Kulkarni, K.S.Pillai and U.H.Mane, 1987. Effect of fluoride on the freshwater bivalve mollusc, <i>Indonaia caeruleus</i> (Prashad, 1918) in relation to the effect of pH : Biochemical approach. <i>Proc. Nat. Symp. Ecotoxic</i> , pp 13-20 ( <b>National</b> )
6.	<b>Rao K.R.</b> , D.A. Kulkarni, K.S .Pillai and U.H. Mane, 1987. Effect of fluoride on the freshwater bivalve mollusc, <i>Indonaia caeruleus</i> (Prashad, 1918) in relation to the effect of pH : Accumulation, Detoxification and Respiration. <i>Proc. Nat. Symp. Ecotoxic</i> , pp 21-26 ( <b>National</b> )
7.	<b>Rao K.R.</b> , S.D.Muley and U.H.Mane, 1987. Impact of some ecological factors on cholesterol content from soft tissues of fresh water bivalve, <i>Indonaia caeruleus</i> . <i>J. Hydrobiol.</i> , 3(b) : 67-69 ( <b>National</b> )
8.	Kulkarni D.A., <b>K.R.Rao</b> , A.N.Vedpathak and U.H.Mane, 1988. Effect of temperature and pH. on the ascorbic content of the freshwater mussel, <i>Indonaia caeruleus</i> (Prashad,1918). <i>J .Adv. Zool.</i> , 9(1) ; 20-24 ISSN: 0253-7214 <b>impact factor 0.020</b> ( <b>National</b> )
9.	Mane U.H., and <b>K.R.Rao</b> , 1988. Effect of cerebral ganglia removal on the gonad of fresh water bivalve mollusc, <i>Lamellidens marginalis</i> (Lamarck). <i>Proc. Nat. Symp. Endocrinol.</i> , PF 3 : 3-4 ( <b>National</b> )
10.	Mane U.H., <b>K.R.Rao</b> , A.N.Vedpathak and A.A.Gokhale, 1988. Changes in the biochemical composition from hepatopancreas and gonads of the freshwater bivalve, <i>Lamellidens marginalis</i> (Lamarck) : Effect of cerebral and visceral ganglia removal. <i>Proc. Nat. Symp. Cur. Stat. Gen. Comp. Endocrinol.</i> , PS 31, pp 95-96 ( <b>National</b> )
11.	<b>Rao K.R.</b> , A.N.Vedpathak, S.D.Kulkarni and U.H.Mane, 1988. Mercuric chloride induced alterations in the respiration of the freshwater bivalve mollusc, <i>Indonaia caruleus</i> (Prashad. 1918) . <i>Proc. Nat. Symp. Cur. Stat. Gen. Comp. Endocrinol.</i> , PS 31, pp 95-96 ( <b>National</b> )
12.	Kulkarni D.A., <b>K.R.Rao</b> , S.D.Muley and U.H.Mane, 1989. Acute toxicity of endocel (endosulfan) on estuarine edible lamellibranch mollusc, <i>Paphia laterisulca</i> from west coast of India. <i>Comp. Physiol. Ecol.</i> , 14 (4) : 174-197_ ISSN: 0379-0436. ( <b>National</b> )
13.	Mane U.H., <b>K.R.Rao</b> , S.D.Muley and A.N.Vedpathak 1990. Probable role of nerve ganglia in respiration of the estuarine clam, <i>Katelysia opima</i> . <i>Indian J. Comp. Anim. Physiol.</i> 8(2) : 21-27 ISSN: 0255-7150 ( <b>National</b> )

14.	<b>Rao K.R.</b> , P.N.Patil, T.R.Chaudhari, S.R.Sasane and A.N.Vedpathak, 1990. Impact of Cythion – Malathion and Endosulfan on the rate of respiration on the gastropod, <i>Thiara lineata</i> from Panzara river, Dhule. <i>Biol. Ind.</i> , 1(2) : 55-57 ( <b>National</b> )
15.	Patil P.N., T.R.Chaudhari, S.B.Deshmukh, <b>K.R.Rao</b> , A.N.Vedpathak and M.L.Jadhav 1991. Effect of organophosphate pesticides on respiration of freshwater gastropod, <i>Thiara lineata</i> . <i>Proc. Environ. Pollu. Resources of Land and Water</i> , pp. 229-232 ( <b>National</b> )
16.	Chaudhari T.R., P.N.Patil, <b>K.R.Rao</b> , M.Subhash and K.B.Shejule, 1992. Toxicity of fencel and sevin to the freshwater gastropod, <i>Thiara lineata</i> and its impact on respiration. <i>Ind. J. Environ. Toxicol</i> , 2(1) ; 45-48 ISSN: 0971-2127. ( <b>National</b> )
17.	Chaudhari T.R., <b>K.R.Rao</b> , M.Subhash, S.B.Deshmukh and P.N.Patil, 1993. Changes in the levels of DNA and RNA due to different kinds of pesticidal stress in <i>Thiara lineata</i> (gastropod-mollusc). <i>Proc. Acad. Environ. Biol.</i> 2(2) : 187-192 ( <b>National</b> )
18.	Patil P.N., <b>K.R. Rao</b> , S.R. Sasane, A.N. Vedpathak, K.B.Shejule and T.R.Chaudhari, 1993. Impact of Zolone on the organic constituents of the freshwater gastropod, <i>Thiara lineata</i> from Panzara river at Dhule. <i>Proc. Acad. Environ. Biol.</i> , 2(2) : 193-197 ( <b>National</b> )
19.	Mane U.H. and <b>K.R.Rao</b> , 1994. Behaviour and respiration of the freshwater bivalve mollusc, <i>Lamellidens marginalis</i> after removal of cerebral ganglia. <i>Ind. J. Comp. Anim. Physiology</i> , 12(2) : 71-76., ISSN 0255-7150 ( <b>National</b> )
20.	Chaudhari T.R., M.Subhash, P.N.Patil, <b>K.R.Rao</b> and K.B.Shejule, 1995. Impact of sodium pentachlorophenate on lipid and Cholesterol contents of the gastropod, <i>Indoplanorbis exustus</i> . <i>Trends in Life sciences</i> , 10(1), 35-37 ( <b>National</b> )
21.	<b>Rao K.R.</b> , M.Subhash, P.N.Patil, T.R.Choudhari, S.N.Nandan and A.N.Vedpathak 1995. Effect of fluoride toxicity on the carbohydrate metabolism of the freshwater crab, <i>Barytelphusa cunicularis</i> . <i>Trends in life sciences</i> , 10(2) : 65-69 ( <b>National</b> )
22.	<b>Rao K.R.</b> , K.B. Shejule, S.R.Sasane, M.Subhash, P.N.Patil and T.R.Chaudhari, 1995. Impact of Decis on carbohydrate metabolism of the gastropod, <i>Indoplanorbis exustus</i> , from Panzara river, Dhule . <i>Proc. Acad. Environ. Biol.</i> , 4(1) : 31-34 ( <b>National</b> )
23.	Patil P.N., T.R.Chaudhari, M.Subhash, S.B.Deshmukh, A.N.Vedpathak and <b>K.R.Rao</b> , 1995. Effect of Endocel and Sevin on biochemical constituents of gastropod, <i>Thiara lineata</i> . <i>Proc. Acad. Environ. Biol.</i> , 4(1) : 109-112 ( <b>National</b> )
24.	<b>Rao K.R.</b> , P.N.Patil, T.R.Chaudhari and M.Subhash, 1996. Effect of fluoride on lipid and cholesterol levels in freshwater crab, <i>Barytelphusa cunicularis</i> from Dhule.In : “ <i>Assessment of water pollution</i> ” – chapter – 15 Ed. S.R.Mishra APH publisher, New Delhi, pp 271-277 , ISBN <b>_8170247101</b> ( <b>National</b> )
25.	Patil P.N., M. Subhash, <b>K.R.Rao</b> , T.R.Chaudhari, S.R.Sasane and S.B.Deshmukh, 1996. Phytoecdysone induced histopathological changes in some male reproductive organs of the grasshopper, <i>Poeciloceris pictus</i> . <i>Trends in Life Sciences</i> , 11, (1) : 53-55 ( <b>National</b> )
26.	Mane, U.H. and <b>K.R. Rao</b> , 1997. Effects of cerebral gangliectomy on the bio-chemical constituents of the fresh water bivalve mollusc, <i>Lamellidenes marginalis</i> (Lamark) . <i>J. Aqua Biol.</i> , 12 (1&2) :71-81_ ISSN : 0971 – 4235 ( <b>National</b> )
27.	Chaudhari T.R., P.N.Patil, <b>K.R.Rao</b> and M.Subhash, 1998. Effect of sodium pentachlorophenate on protein metabolism of the gastropod, <i>Indoplanorbis exustus</i> . <i>Uttar Pradesh J. Zool.</i> , 18(2) : 87-90 ISSN: 0256-971X ( <b>National</b> )
28.	<b>Rao, K.R.</b> , T.R. Chaudhary, M. Subash. and P.N. Patil 1998. Impact of fluoride on the nucleic acid contents of the freshwater crab, <i>Barytelphusa cunicularis</i> . <i>J. Aqua Biol.</i> , 13. (1&2):104 –106_ ISSN : 0971 – 4235 ( <b>National</b> )

29.	Subhash, M., T.R. Chaudhary, <b>K.R. Rao</b> and P. N. Patil, 1998. Altered levels of lipid and cholesterol in the gastropod, <i>Indoplanorbis exustus</i> due to Decis toxicity. <i>J. Aqua Biol.</i> , 13. (1&2):107-109_ ISSN : 0971 – 4235 ( <b>National</b> )
30.	Chaudhary, T.R., P. N. Patil, <b>K.R. Rao</b> , S.B. Deshmukh and S.G. Diwate, 1999. Effect of Pesticide Rogor on some biochemical constituents in freshwater snail, <i>Thiara lineata</i> . <i>Environment and Ecology</i> , 17 (1): 146-148 , ISSN: 0970-0420 ( <b>National</b> )
31.	Khatavkar, R S., Shah, N V., <b>Rao, K R</b> and Navale, R A (2004) Variations in physico chemical parameters in fresh water tanks in and around Solapur city Maharashtra <i>J. Aqua Biol.</i> 19(1) : 111-114 ISSN : 0971 – 4235 ( <b>National</b> )
32.	Khatavkar, R S., Shah, N V., <b>Rao, K R</b> , and Chavan, M. D (2006) Vermicomposting from tendu leaves garbage :A microbial approach. <i>J. Microb. World.</i> 8(2):243-245 ( <b>National</b> )
33.	Battul, P. N., <b>Rao, K R.</b> , Navale, R A., Bagale, M. B and Shah, N V (2007). Fish diversity from Ekrukh lake near Solapur, Maharashtra. <i>J. Aqua Biol.</i> 22(2),68-72;ISSN : 0971 – 4235 ( <b>National</b> )
34.	Khatavkar, R S., Shah, N V., Chavan, M. D and <b>K R RAO</b> (2008).Production of Vermicomposting from leaf litter generated by Beedi (hand made Indian cigarette) industry. <i>Asian Jr. of Microbiol.Biotech.Envi.Sc.</i> ,10(1):67-69 ISSN: 0972-3005 ( <b>Inter National</b> )
35.	Khatavkar, R S., Shah, N V., <b>Rao, K R.</b> , Chavan, M. D and Mushan, L. C (2008). Vermicomposting of Beedi (Indian cigarette) leaf litter and its bioadsorbant utility. <i>Eco. Env.&amp; Cons.</i> 14(4):110-113 ISSN 0971-765X ( <b>Inter National</b> )
36	Shah, N. V., <b>Rao, K .R.</b> , Mulani, A C., Shaikh, T A and Pawar, V S (2008) Diversity of butterflies from solapur city. <i>Indian J. Tropical Biodive.</i> 16(1):182-187. ISSN 0971-4642. ( <b>National</b> )
37	Kamble, V. S., <b>Rao, K R</b> ,Pawar, C .B and Jawale, C A (2009).Study on molluscan diversity from fresh water reservoir at Chincholi near Sangola in Solapur District (MS) ,India. <i>Bionano Frontier, Science day special issue</i> (28 FEB 2009): 87-88, ISSN 0974-0678 ( <b>National</b> )
38.	<b>Rao, K.R.</b> , Shah, N.V and Mushan, L.C (2010) Vermibiotechnology is a boon for recycling of beedi litter waste of Solapur. (M.S.) <i>Agrobios Newsletters.</i> 9(1): 37_ ISBN . 978-3-659-29388-7. 2.
39.	Mushan, L.C., Shah, N.V and <b>Rao, K. R</b> (2010) Bioaccumulation of certain heavy metals by the Earthworm, <i>Eudrilus eugeniae</i> from the soil. <i>Journal of Aquatic Biology</i> vol 25(1): 97-102_ ISSN : 0971 – 4235 ( <b>National</b> )
40.	Battul, P.N., <b>Rao, K.R.</b> , Mulani, A.C and Shah, N.V (2010) Acute toxicity impact of sodium fluoride on rate of oxygen consumption from freshwater fish, <i>Tilapia Mossambica (Oreochromis Mossambicus)</i> from Bheema river, Solapur during monsoon. <i>J. Aqua. Biol</i> 25(1): 135-140_ ISSN : 0971 – 4235 ( <b>National</b> )
41.	<b>Rao, K. R.</b> , Shah, N. V and Kamble, V. S (2010) Bioaccumulation of Thiodon from different organs of fresh water bivalve, <i>Lamellidenes corrianus</i> under sub-lethal stress during monsoon season. <i>Journal of Aquatic Biology</i> 25(1):159-163_ ISSN : 0971 – 4235 ( <b>National</b> )
42.	<b>Rao, K R.</b> , Kambale, V S., Kshirsagar, S S., Shah, N V and Pawar, C B (2010) Sub leathal effects of thiodon bioaccumulation from a fresh water bivalve mollusc, <i>Lamellidens corrianus</i> during winter season. <i>Bionano Frontiers.</i> 3(2):215-218 ISSN 0974-0678 ( <b>National</b> )
43.	<b>Rao, K.R.</b> , Mushan, L.C., Khatavkar, R.S., Parlekar, G.Y and Shah, N.V (2010) Effect of vermicompost on growth and yield of onion ( <i>Allium cepa</i> ). <i>Karnataka J. of Agri. Science.</i> 23(2):361-363 ISSN: 0973-6719. 31. ( <b>National</b> )
44.	Mulani, A.C., <b>Rao, K.R.</b> , Battul, P.N and Shah, N.V (2010) Changes in microbial population from sugarcane Pressmud after vermicomposting. <i>Karnataka J. of Agri. Science.</i> 23(3):511-513 ISSN: 0973-6719. 31. ( <b>National</b> )
45.	Bagale, M.B., <b>Rao, K.R.</b> , Rokade.AU and Shah, N.V (2011) Sodium fluoride induced

	histopathological changes in oesophagus and intestine of freshwater fish, <i>Tilapia mossambica</i> ( <i>Oreochromis mossambicus</i> ). <i>J. Experim. Zool India</i> 14(1):203-208. ISSN : 0972 – 0030 ( <b>National</b> )
46.	Kamble,V.S and <b>K.R.Rao</b> (2011) Pesticide induced alterations in biochemical compositions in fresh water bivalve mollusc <i>Lamellidens corrianus</i> . <i>Bionano Frontier</i> . 216-218 ISSN O974-0678 ( <b>National</b> )
47.	Mulani, A.C., <b>K.R.Rao</b> and Shah.N.V (2011) Application of vermicompost produced from sugar industrial waste on Onion ( <i>Allium cepa</i> ) crop. <i>Agrobios Newsletter</i> . 9(11):26-27_ ISBN :. 978-3-659-29388-7. 2. ( <b>National</b> )
48.	Hippargi,R.V.,Bodkhe,A.K.,Chikale,M.P.,Santape,G.B.,Behere,R.M.,Bolde,P.M.,Manthen,S., <b>K.R.Rao</b> and Shah,N.V (2011) Spider ( <i>Archnida: Araneae</i> ) Families of three ecosystems of Maharashtra, India. <i>E-International Scientific Research Journal</i> . 3(1):23-32 (ISSN : 2094-1749) ( <b>Inter National</b> )
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57	Mushan,L C and <b>Rao K R</b> (2012) Physico chemical analysis of tendu leaf litter-vermicompost processed by <i>Eurilus euginae</i> , <i>DAV International J of Science</i> . 1(2):100-102 , ISSN 2277-5641 ( <b>Inter National</b> )
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82	D.S. Nikam ,P.S. Salunkhe ,A.L. Shaikh ,A.B. Kamble and <b>K.R. Rao</b> , 2014,Ichthyofaunal Diversity of Ashti Lake, Tal. Mohol, Dist. Solapur (M.S.) Global Journal for Research Analysis vol 3 issue 12 , PP 1-5,ISSN : 2277-8160 <b>Impact factor 1 .580</b> ( <b>National</b> )
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85	M K Gurav ,Sunetra S Kshirsagar, K Vijay kumar and <b>K R Rao</b> 2015,Diversity of zooplankton from Ekruk tank ,Solapur,M S ., <b>Proc</b> ,Int .Conf. on Chemi. Material and Bio.Sci.for Sus.Dev. ,pp 37-40 ISSN No: 2249-894X ( <b>Inter National</b> )
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	<i>mossambicus</i> ) exposed to sodium fluoride , <b>Proc</b> ,Int .Conf. on Chemi. Material and Bio.Sci.for Sus.Dev. , pp 6-9 ISSN No: 2249-894X. ( <b>Inter National</b> )
88	Rangdal and <b>K R Rao</b> 2015,Ichthyofaunal diversity and conservational status of Bheema river near Kollakur ,Jewari,Gulbarga , <b>Proc</b> ,Int .Conf. on Chemi. Material and Bio.Sci.for Sus.Dev. ,pp91-93. ISSN No: 2249-894X ( <b>Inter National</b> )
89	Shagalolu V V , E Bhikshapati and <b>K R Rao</b> 2015, Anti tumor activity of housefly larvae in various seasons <b>Proc</b> ,Int .Conf. on Chemi. Material and Bio .Sci. for Sus .Dev. ,pp 94-98. ISSN No: 2249-894X ( <b>Inter National</b> )
90	Salunkhe P S ,A L Shaikh, D S Nikkam and <b>K R Rao</b> ,(2015) Assessment of water quality of Ashti lake with the help of some chemical parameters ,Parex –Indian journal of research ,4(1),64-65, ISSN 2250-1991,Impact factor ,1.6714 ( <b>National</b> )
91	M K Gurav , <b>K R Rao</b> , S. S Kshirsagar, and K. Vijay Kumar 2015,Diurnal variation in physic chemical parameters from Sambhaji tank in Solapur, Maharashtra , <b>Bionano frontiers</b> , ISSN O974-0678 vol 8(1) pp 92-97 ( <b>National</b> )
92.	Rao, K. R., Ankaram, S. R. and Mushan L. C. (2015): Effect of tendu litter on vermicompost on physico-chemical properties of soil. International Journal of Pharmaceuticals Research and Bio-science. 4 (4): 24-35. IF: 4.208 ( <b>Inter National</b> )
93	M. B. Bagale, <b>K. R. Rao</b> , S. S. Kshirsagar and N. V. Shah ( 2015) : Sodium fluoride induced histo-chemical changes in the liver of freshwater fish, <i>Tilapia mossambica</i> ( <i>Oreochromis mossambicus</i> ) The Bioscan, 9(3) : 1089-1092, ISSN: 0973-7049 ( Original peer reviewed/refereed research Journal <a href="http://www.thebioscan.in">www.thebioscan.in</a> ) ( <b>Inter National</b> )
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### Membership of Professional Organizations / Membership of Academic, Social, Professional, Corporate Bodies, NGOs

1.	Indian Society For Comparative Animal Physiology (ISCAP), Tirupati
2.	Indian Association of Aquatic Biologists (IAAB), Hyderabad.
3.	Society of Fisheries Technology (India)
4.	Vihang Mandal (NGO)
5.	Board of study member (Zoology) 2010-2015, North Maharashtra University,Jalgaon
6.	Board of study member (Zoology) 2010-2015, Dr B R A Marathwada University, Aurangabad
7.	Maharashtra Pakshimitra
8.	Member of Andha Shraddha Nirmulan
9.	Member of Society of Fishery Technology, India, Cochin
10.	Member of International Journal of Basic and Applied Research

11	International Society of Zoological Sciences_ Institute of Zoology, Chaoyang District, Beijing, China
12	Reviewer of Bionano frontier scientific journals and Research Journal of Agricultural and Environmental Management (RJAEM)
13	Life member and fellow of International association of science impact FIASI,OF Global Education society
14	Life member Research Scholar hub RSH/IN/MH/LM-13/2014 dated 24 june 2014
15	Associate editor, Science impact news letters

### Seminars/Conferences/Workshops/Training Programmes organised

1.	Program Officer for seminar: Biodiversity at Walchand College of Arts and Science, Solapur, 6-8 Jan 2005
2.	Program Officer for seminar: Roll of Biotechnology for mankind held at Walchand College of Arts and Science, Solapur, 5-7 <sup>th</sup> Jan 2006
3.	Organizing Committee Member: Geo-Ecological Interventions in drought prone area at Walchand College of Arts and Science, Solapur, 23-24 Mar. 2007
4.	Convener: Biotechnology Opportunity & Challenges at Walchand College of Arts and Science, Solapur, 28 <sup>th</sup> Feb. 2008
5.	Organizing Committee Member: Recent Trends in Thin Film Technology at Walchand College of Arts and Science, Solapur, 14-15 Nov. 2008
6.	Organizing secretary ,National symposia cum workshop on” Arechnology with reference to spiders :Ecology biology and taxonomy “13-15 October 2011
7	Organizing Committee Member, of workshop on “Opto analytical instrumentals maintenance and repair” WRIC Mumbai,August,10-15,2012
8	Coordinator , International Confernce on “Chemical , Material and Bioscience for sustainable development” Walchand college of Arts and Science college , solapur ,8 th to 10 th 2015,

### Seminars/Conferences/Workshops/Training Programmes Attended / Presented papers

#### Participation in Orientation/Refresher Courses, Seminars, Workshops, Conferences, Symposia etc.:

1	National symposium on Assessment of environmental pollution due to industrialisation and urbanisation ,Departement of Zoology ,Marathwada University ,Aurangabad Paper presented :Nuvan toxicity of two species of edible bivalve molluscs from ratnagiri coast :changes in neuro secretory cells December 20-22,1984
2	National seminar on Marine intertidal ecology,Department of Zoology ,Andhra University ,Waltait , <b>Paper presented:</b> Effct of monocrotophos on the estuarine clam , <i>Meretrix meretrix</i> {Gmelin} February 14-16,1985
3	National seminar on “Environmental biology –Costal ecosystem” Department of Biosciences ,Mangalore University ,Mangalore, <b>Paper presented</b> <i>Metasystox</i> acute toxicity to the estuarine lamellibrnch mollusc, <i>Paphia laterisulca</i> from Ratnagiri coast November 21- 22 ,1985
4	National seminar on “Mussel Watch “ ,Department of Zoology ,Cochin university ,Cochin February 13-14 ,1984
5	International conference on “Marine biodeterioration – Advanced techniques applicable to Indian coasts ,at Goa January ,16-20,1986
6	56 th annual session of Indian academy of sciences ,Department of Zoology ,Jaipur university ,Jaipur October ,25-27,1986
7	7 th National symposium on “Recent advances in Life sciences” ,Gulbarga university ,Gulbarga, <b>Paper presented</b> Effect of cerebralectomy on edible lamellibranch molluscs , <i>Ketylaysia opima</i> from Ratnagiri west coast of India November ,10-12, 1986

8	9 th All India symposium on “Comparative animal physiology “ Jawaharlal Nehru university ,New Delhi , <b>Paper presented</b> Biochemical changes due to temperature and pH in the fresh water bivalve mollusc , <i>Indonaia caeruleus</i> ,December 6-9 ,1986
9	National symposium on “Ecotoxicology “ Department of Zoology ,Marathwada university ,Aurangabad JUNE.18-20 1987.
10	National symposium on “Environmental Risk Assessment and Management” ,Jai Research Foundation, Vapi, <b>Valvada</b> (Gujarat)(Dec.29-31,1988).Paper Presented :Acute toxicity of mercury to the freshwater bivalve mollusc , <i>Lamellidens marginalis</i> from Godavari river at Kaygaon near Aurangabad(M.S.) (Dec.29-31,1988).
11	National symposium on “Environmental Pollution” ,Department of Zoology ,SSVPS science college ,Dhule (April 28-29,1990).
12	National symposium on “Environmental pollutants and Resources of Land and Water ”,Marathwada Univ . <b>Aurangabad</b> .(Dec.21-23,1990).
13	<b>Orientation course</b> ,organised by Academy staff college BAMU Aurangabad from 14-5-90 to 9-6-90 four weeks
13	National symposium on “Environmental Management Resource Status, conversation, pollution monitoring and abatement”, Department of Environmental Sciences, A.P.S. Univ. <b>Rewa</b> (M.P.)(Dec.23-25,1991).
14	National symposium on “Impact of environmental factors on physiology of aquatic animals”, Department of Zoology,Marathwada Univ. <b>Aurangabad</b> ).Paper Presented:1 Biochemical changes in the fresh water bivalve mollusk , <i>Lamellidens marginalis</i> from Godavari river at Pithan near Aurangabad :seasonal changes ,2)Changes in the protein metabolism of freshwater gastropod <i>Indoplanorbis exustus</i> due to Decis (pyrethroid) toxicity. (Mar.12-14,1993).
15	International symposium on “Recent Trends in Life Sciences”, Department of Zoology, Osmania Univ. <b>Hyderabad</b> (A.P.)(Nov.19-20,1993). Papers presented: 1 Impact of sodium penta chlorate on lipid and cholesterol contents of the gastropods , <i>Indo planorbis exustus</i> 2 Effect of fluoride toxicity on the carbohydrate metabolism of the fresh water crab, <i>Barytelphusa cunicularis</i>
16	<b>Refresher course</b> in Zoology, Department of Zoology ,Academic staff college ,Lucknow Univ. <b>Lucknow</b> (U.P.)(1 <sup>st</sup> to 30 <sup>th</sup> December,1993).
17	<b>Refresher course</b> in Zoology,School of Life Sciences, North Maharashtra Univ. <b>Jalgaon</b> (19 <sup>th</sup> Dec.1994 to 14 <sup>th</sup> Jan. 1995).
18	Workshop on “Instrumentation” ,Department of Zoology ,Pratap college , <b>Amalner</b> ,Jalgaon (M.S.)(20 <sup>th</sup> and 21 <sup>st</sup> Aug. 1995)
19	Workshop on “Mutual learning in Zoology Practical” Department of Zoology, Arts, Science & Commerce College , <b>Chopda</b> ,Jalgaon(M.S. ) ( Nov.1 <sup>st</sup> and 2 <sup>nd</sup> 1995)
20	16th Maharashtra state Friends of Birds Meet. Organized by ‘Vihang Mandal’ , <b>Solapur</b> .held from 11 <sup>th</sup> to 13 <sup>th</sup> Jan.1997.
21	Workshop on “Environmental Physiology of Aquatic Invertebrates” ,U.G.C.-special Assistance Programme ,Department of Zoology .Dr. Babasaheb Ambedkar Marathwada Univ., <b>Aurangabad</b> held from 17 <sup>th</sup> to 19 <sup>th</sup> October 1997.
22	<b>Refresher course</b> in ‘Environmental Sciences’ Academic Staff College and Department of Environmental Sciences,Dr.B.R. Ambedkar’s Marathwada University, <b>Aurangabad</b> held from 2 <sup>nd</sup> January to 30 <sup>th</sup> January 1998.

23	Seminar-cum-workshop on revised syllabus of B.Sc. 3 ZOOLOGY sponsored by UGC and organised by department of Zoology, kisan veer mahavidyalay , <b>WAI</b> , Dist. Satara ,held from Sept 27 <sup>th</sup> to 29 <sup>th</sup> .1998.
24	Seminar-cum-workshop on Recent Trends in Environmental Education ,sponsored by UGC and organized by Department of Zoology, Wlachand College of Arts and Science, <b>Solapur</b> held on 29 <sup>th</sup> ,30 <sup>th</sup> and 31 <sup>st</sup> Jan. 1999.
25	National Seminar on Perspectives of integrated coastal research :Basic and applies aspects of Biodiversity and Bio potential, organised by Marine Research Laboratory of Dr.B.R. Ambedkar Marathwada University and SAP of UGC ,New Delhi ,at <b>Ratnagiri</b> on October 23 <sup>rd</sup> and 24 <sup>th</sup> ,1999.
26	UGC Sponsored seminar cum workshop on “Applied Zoology”, organized by Department of Zoology, Walchand College of Arts & Science, <b>Solapur</b> on 11 <sup>th</sup> ,12 <sup>th</sup> & 13 <sup>th</sup> August 2001.
27	Research Methodology, Sangola College,Solapur University & Sangameshwar College, <b>Solapur</b> , 3 <sup>rd</sup> Sept. 2006
28	Frontiers in Applied Animal Science, Shivaji University, Kolhapur UGC & ISCAP, 16-18 <sup>th</sup> Oct. 2006 <b>Paper presented</b> 1 Generation of Vermicompost from Beedi leaf litter from Solapur: A chemical Approach 2 Study of fish diversity of the Hipparaga lake near Solapur
29	Geo-Ecological Interventions in drought prone area, WCS, <b>Solapur</b> UGC, 23-24 <sup>th</sup> Mar. 2007
30	Biotechnology Opportunity & Challenges, WCS <b>Solapur</b> , 28 <sup>th</sup> Feb. 2008
31	Water Quality Assessment, CCMB, Ratnagiri IAAB Hyd. & Dr. B.A.M.Univ. <b>Aurangabad</b> , 5 <sup>th</sup> - 6 <sup>th</sup> June 2008
32	Writing of Research Proposal & Research Papers, SAPDJ & HNCC, <b>Solapur</b> , 27 <sup>th</sup> July 2008
33	Recent Trends in Thin Film Technology, WCS, <b>Solapur</b> & UGC, 14-15 Nov. 2008
34	International conference on Technology for Mitigation of Environment Pollution, Dept. Of Zoology, Dr. B.A.M.Univ., <b>Aurangabad</b> Lublin Univ, Poland, 11-13 Dec. 2008 <b>Papers presented</b> Bio conservation of Pressmud waste into vermicompost Effect of NaF on O2 consumption from <i>Tilapia mossambica</i> The fish fauna of Hotgi irrigation tank from Solapur, Maharashtra, Molluscan diversity from Chincholi tank, Sangola, Solapur district,
35	Syllabus Discussion B.Sc- III Zoology, Solapur University, Solapur & S.M. College, <b>Akluj</b> , 2 <sup>nd</sup> Jan. 2009
36	Recent Trends in Life Sciences [Refresher Course], Dept. of Zoology, Dr. B.A.M.Univ., <b>Aurangabad</b> , 6 <sup>th</sup> Jan. 2009
37	Biodiversity and physiology of aquatic resources in sustainable development for rural livelihood, Dept. Of Zoology, Dr. B.A.M.Univ., <b>Aurangabad</b> , 25 <sup>th</sup> Oct.2009
38	Inter University Science Exhibition Solapur University , <b>Solapur</b> , 2010
39	National Conference on Biodiversity and Conservation, DBF Dayanand College <b>Solapur</b> , 2010
40	Biodiversity and physiology of aquatic resources in sustainable development for rural livelihood, Dept. Of Zoology, Dr. B.A.M.Univ., <b>Aurangabad</b> , 25 <sup>th</sup> Oct.2009
41	State level seminar on Application of aquabiology and biotechnology for improving agricultural trend in rural area, SMD Mohekar Mahavidyalaya <b>Kalamb</b> , Osmanabad, Feb 15,2010 <b>Papers presented</b> Effect of sodium fluoride on haematology of fish , <i>Rita rita</i>
42	National Symposium-cum workshop on Arachnology with reference to Spiders: Ecology, Biology and Taxonomy, WCAS (Organizing Secretary), <b>SOLAPUR</b> 13 <sup>th</sup> -15 <sup>th</sup> Oct. 2011
43	<b>International Brainstorming Workshop on Waste to Energy in India</b> in collaboration with , National Environmental Engineering Research Institute India and Earth Engineering Centre, Columbia University, USA, 2012 1st, 24-25 August 2012, <b>Worli, Mumbai</b>

	<b>Papers presented</b> “Municipal Solid Waste Management of Tendu Leaf Litter through Vermin-Composting Employing Exotic Species of Earthworms“ Vermicomposting Technology: An Approach for Solid Waste Management of Obnoxious Weed Water Hyacinth ( <i>Eichhornia crassipes</i> )”
44	<b>National</b> workshop on Hunan resource development , New Delhi , sponsored “ Terminology in biology in local language” Sangola college , <b>Sangola</b> 23 and 24 JULY 2014, Resource person
45	<b>International</b> Confernce on “Chemical , Material and Bioscience for sustainable development” Walchand college of Arts and Science college , <b>solapur</b> ,8 th to 10 th 2015, Coordinator, <b>Paper presented</b> : 1 .Variation in the primary productivity of Bhima River in Pandharpur (M.S.): A model study on environmental conservation , 2. Diversity of Zooplanktons from Ekruk tank, Solapur (M S ). 3. Ecotoxicity of Copper on Freshwater gastropod, <i>Bellamya bengalensis</i> : Histopathological approach,
46	<b>National</b> conference on U G C Sponsored ,“Recent advances in Applied Zoology” S M Mahavidyalay Akluj ,Chair person ,6 th February 2015
47	One day University level Workshop on “Discussion on practicals in B .Sc ZOOLOGY”, Sangola college SANGOLA , 8 th February 2015 Chair person
48	Two day workshop on Director of Higher Education , Govt of Maharashtra supported “Discontinuation of dissections” ,G .K. Khalasa college of arts ,commerce and science , Matunga ,Mumbai,21 st and 22 nd February 2015

Place:- Solapur

Date:-

Dr. K.R. RAO