



1	<b>Name of the Department</b>	Department of Zoology
2	<b>Year of establishment</b>	1927
3	<b>Is the Department part of a School/Faculty of the university?</b>	<b>YES, School of Life Sciences</b>
4	<b>Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)</b>	M.Sc. (Zoology) M. Phil. (Zoolology) Ph.D. <b>Diploma:</b> 1. P.G. Dip. in Immunotechnology 2. P.G. Dip. in Stem Cell Technology and Tissue Engineering
5	<b>Interdisciplinary programmes and departments involved</b>	a) UGC-UPE Programme involving Departments of Life Sciences and Basic Medical Sciences b) UGC-CPEPA Programme involving School of Life Sciences
6	<b>Courses in collaboration with other universities, industries, foreign institutions, etc.</b>	a) Post Graduate Diploma in Immunotechnology in collaboration with M/S Mediclone Biotech Pvt. Ltd., Chennai. b) Post Graduate Diploma in Stem Cell Biology and Tissue Engineering in collaboration with Frontier Lifeline Hospitals, Chennai.
7	<b>Details of programmes discontinued, if any, with reasons</b>	M.Sc. Ocean Science and Technology – 2009
8	<b>Examination System: Annual/ Semester/ Trimester/Choice Based Credit System</b>	Choice Based Credit System
9	<b>Participation of the department in the courses offered by other departments</b>	a) Microbiology offered by CAS in Botany, University of Madras, Guindy, Chennai – 600 025.

		<p>b) Genetics offered by Department of Genetics, University of Madras, Taramani Campus, Chennai – 600 113.</p> <p>c) Biostatistics offered by Department of Statistics, University of Madras, Chepauk, Chennai -600 005.</p>
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**10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)**

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	3	3	5
Associate Professors	4	1	1
Asst. Professors	9	3	1
Others	2	2	2

**11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance**

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. M. Arumugam	Ph.D.	Professor & Head	Immunobiology	29	Ph.D – 2 M.Phil – 3
Dr. H. Devaraj	D.Sc.	Professor	Biochemistry	28	Ph.D – 7 M.Phil – 2
Dr. R. Ramani Bai	Ph.D.	Professor	Coastal Diversity and Management	27	Ph.D – 4 M.Phil – 5
Dr. N. Munuswamy	D.Sc.	Professor	Crustacean Physiology and Aquaculture	27	Ph.D – 7 M.Phil – 10
Dr. P. Mullainadhan	Ph.D.	Professor	Immunobiology	22	Ph.D – 3 M.Phil – 6
Dr. S. Janarthanan	Ph.D.	Associate Professor	Natural biopolymers with potential biomedical applications	14	Ph.D – 1 M.Phil – 6
Dr. C. Arulvasu	Ph.D.	Assistant Professor	Aquaculture and Nutritional Physiology	5	M.Phil – 6

**12. List of senior Visiting Fellows, adjunct faculty, emeritus professors Senior Visiting Fellows:**

1. Dr. L. Rajkumar, Asst. Professor, Department of Biomedical Sciences, Texas Tech University, EL Passo, Texas
  2. Dr. Lawrence Rajendran, Max Planck Institute for Molecular Cell Biology and Genetics, Dresden, Germany
  3. Dr. H. Krishnamurthy, National Centre for Biological Science (NCBS), UAS-GKVK Campus, Bangalore
  4. Dr. Govindan Dayanithi, Professor in Cellular Neurophysiology, Institute of Experimental Medicine, EU Centre of Excellence, Prague, Czech Republic.
  5. Prof. S. Ajmalkhan, CAS in Marine Biology, Annamalai University, Porto Nova
  6. Dr. Preethi Rajan, Centre for Stem Cell Research, Christian Medical College, Vellore
  7. Dr. Michael Swift, Olaf College, Minnesota, USA
  8. Dr. Anne Walter, Olaf College, Minnesota, USA
  9. Prof. G. Padmanaban, NASI – Platinum Jubilee Chair, Department of Biochemistry Indian Institute of Science, Bangalore
  10. Prof. S. K. Saidapur, Vice Chancellor, Karnatak University, Dharwad
  11. Dr. M. H. Ravindranath, Director, Terasaki Foundation, Los Angeles, USA
  12. Dr. M. K. Durga Prasad, Vice Chancellor, Krishna University, Andhra Pradesh
  13. Dr. K. K. Vijayan, Principal Scientist & Head, MBTD, CMFRI, Kochi
  14. Dr. S. Uthamasamy, Professor, Department of Agricultural Entomology, TNAU, Coimbatore
  15. Sri. S. Santhana Krishnan, Chief Executive, Marine Technologies & Founder President, Society of Aquaculture Professionals
  16. Dr. S. Krishnan, Member, Commission on Ecosystem Management – IUCN, Chennai
  17. Prof. V. K. Venkataramani, Dean, (Research) Fisheries College and Research Institute, Thoothukkudi
  18. Dr. R. J. Rabindra, Director, Project Directorate for Biological Control (ICAR), Bangalore (2007-2008)
- Adjunct faculty:** Dr. S. Sithanatham, Director, Sun Agro Biotech Research Centre, Chennai (2008-2010)
- Visiting Scientist:** Dr. Mepur H. Ravindranath, Terasaki Foundation Laboratory, Los Angeles, CA (2013).

**13. Percentage of classes taken by temporary faculty** – programme-wise information

80 : 20

**14. Programme-wise Student Teacher Ratio**

M.Sc.: 6 : 1, M.Phil: 1 : 1, Ph.D. : 8 : 1

**15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual**

	Sanctioned	Filled	Actual
Asst. Section Officer	1	1	
Technical Officer	2	1	
Attender	2	2	
Sweeper	1	1	
Driver	1	1	

**16. Research thrust areas as recognized by major funding agencies**

- Crustacean Physiology of culture and conservation.
- Biopolymers from Plant and marine organisms against diseases and pests.



**17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.**

S. No	Name of the faculty	Title of the project	Duration	Funding Agency	Amount
1.	Dr. M. Arumugam	Immuno-responsive components in tiger shrimp, <i>Penaeus monodon</i> , upon exposure to White Spot Syndrome Virus (WSSV) and immunostimulant.	2009-2012	DBT	34.00
2.	Dr. M. Arumugam	Studies on moult related changes in humoral and cellular immune responses in the mole crab, <i>Emerita asiatica</i>	2009-2012	UGC	05.00
3.	Dr. M. Arumugam	Studies on $\beta$ -1,3 glucan binding protein ( $\beta$ GBP) – Receptor mediated cellular immune responses in the marine mussel <i>Perna viridis</i> .	2010-2013	DST	35.00

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4.	Dr. H. Devaraj	Molecular signal intervention approach to improve ovarian maturation and spawning in commercial brooders of <i>P.monodon</i> – Phase II	2010-2013	DBT	62.39
5.	Dr. H. Devaraj	Bioactivity based screening of medicinal plants in south India for inflammation- associated cancer, chemoprevention- <i>invitro</i> and <i>invivo</i> studies	2008-2011	NMPB, Department of AYUSH	46.00
6.	Dr. H. Devaraj	Studies on nanomaterial based siRNA transfection system against angiogenic factor	2011-2014	NCNSNT-MHRD	05.11
7.	Dr. R. Ramani Bai	Sediment diatom stratigraphy for trophic prediction and paleolimnology of freshwater systems.	2010-2011	DST PILOT Project	3.00
8.	Dr. R. Ramani Bai (Co-investigator)	Integrated reservoir modeling for eutrophication management in Krishnagiri reservoir, South India	2011-2014	UGC	06.41
9.	Dr. N. Munuswamy	Cryobiology and nutritional quality of rotifers ( <i>Brachionus plicatilis</i> and <i>B. calyciflorus</i> )	2005-2008	DST	19.00
10.	Dr. N. Munuswamy	Effects of pollutants on biodiversity and reproductive dynamics of ecologically sensitive organisms in the estuarine coastal waters of Chennai	2008-2011	MoEF	36.00
11.	Dr. N. Munuswamy	Upscaling of <i>Artemia</i> cyst production for commercialization of	2008-201	MoES	17.08
12.	Dr. P. Mullainadhan	Cellular immune mechanisms in the tiger shrimp <i>Penaeus monodon</i>	2009-2012	UGC	10. 87
13.	Dr. P. Mullainadhan	Evaluation of immuno-compatibility of nanoparticulates with biomedical applications	2011-2014	NCNSNT-MHRD	05.13
14.	Dr. S. Janarathanan	Studies on the phylogenetic linearity of insects using 18S and 28S r RNA gene sequences and its validation up to the order level	2010-2013	UGC	05.42
15.	Dr. S. Janarathanan	Nanostructured silica, a novel insecticide for the control of the stored product pest, <i>Callosobruchus maculatus</i>	2011-2014	NCNSNT-MHRD	05.19

16	Dr. C. Arulvasu	Anti-tumor effects of biologically synthesized silver nanoparticles from leaf extracts of <i>Vitex negundo</i> : An <i>in vitro</i> and <i>in vivo</i>	2011-2014	UGC	09.84
<b>TOTAL</b>					<b>305.44</b>

### 18. Inter-institutional collaborative projects and associated grants received

- a) National collaboration -
- b) International collaboration –

#### Prof. M. Arumugam

1. Collaborating with Central Institute of Brackish water Aquaculture (CIBA) on developing and testing the efficacy of immunostimulants against WSSV – disease in shrimps
2. Collaborating with M/s. Mediclone Biotech Pvt. Ltd., Chennai on “Mapping poison glands for snake venom toxin” funded by Department of Biotechnology Govt. of India.

#### Dr. S. Janarthanan

Title of the Project	Funding Agency	Period (From - To)	Amount sanctioned	Amount received
Development of Bio-Product: An integrated Approach	M/s Aquagri Processing Pvt. Limited, New Delhi	May 2009 – October 2009	Rs.1,02,000/-	Rs.1,02,000/-

### 19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.

S. No.	Departmental Grants	Grant (in Rs. Lakh)
1.	UGC – SAP - DSA I (2007 - 2012) - I Phase	68.60*
2.	UGC – XI Plan	17.00**
3.	DST- FIST (2003-2008)	47.50
<b>Total</b>		<b>133.10</b>

\* Equipment: Rs. 33.00 Lakhs  
Building: Rs.10.00 Lakhs  
Recurring: Rs.16.00 Lakhs  
Manpower (2 Project Fellows): Rs. 9.60 Lakhs

\*\*Building: Rs. 8.50 Lakhs  
Books & Journals: Rs.1.00 Lakh  
Manpower (2 Lecturers): Rs.7.50 Lakhs

**20. Research facility / centre with** -

- state recognition
- national recognition
- international recognition

**21. Special research laboratories sponsored by / created by industry or corporate bodies -**

Animal Cell Line and Stem Cell Biology laboratory created by Lifeline Hospitals, Chennai

**22. Publications:**

- \* Number of papers published in peer reviewed journals (national / international) : 116
- \* Monographs : -
- \* Chapters in Books : 1
- \* Edited Books : -
- \* Books with ISBN with details of publishers : 2
- \* Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) :
- \* Citation Index – range / average :
- \* SNIP :
- \* SJR :
- \* Impact Factor – range / average :

Year	Impact factor		
	Thrust Areas	Non-Thrust Areas	Total
2007	17.827	8.869	26.696
2008	15.978	2.685	18.663
2009	4.732	10.121	14.853
2010	6.384	15.906	22.290
2011	6.554	16.789	23.343
2012	6.028	22.419	28.447
<b>TOTAL</b>			<b>134.292</b>

- \* h-index :

**23. Details of patents and income generated** -

S.No.	Name of the Professor	Patent	Patent Number
1.	Dr. P. Mullainadhan, Dr. M. Arumugam And Mr. Koodalingam (Research Scholar)	“A novel plant extract useful for controlling mosquitoes and a process for preparation of said plant extract”	1360/CHE/06, Dated, 26-09-2006

2.	Dr. H. Devaraj	“A novel compound useful for the treatment and prevention of atherosclerosis from the plant <i>Trigonella foenum graecum</i> and a process for its preparation”	1501/CHE/2006, Dated, 19-10-2006
3.	Dr. S. Niranjali Devaraj Professor & Head Dept. of Biochemistry, Dr. H. Devaraj and Ms. R. Jayalakshmi (Research Scholar)	“A novel compound useful for the treatment and prevention of ischemic heart disease from the plant <i>Crategus oxycantha</i> and a process for its preparation”	1502/CHE/2006, Dated, 19-10-2006

#### 24. Areas of consultancy and income generated -

##### Companies/ Industry to whom consultancy offered:

- a) Mediclone Biotech Pvt.Ltd., Chennai – PG Diploma in Immunotechnology
- b) Poseidon Biotech Pvt. Ltd., Chennai – Consultant in sea water circulation system
- c) Frontier Lifeline Hospitals, Chennai - PG Diploma in Stem Cell Biology & Tissue Engineering
- d) Sun Agro Biotech Research Centre, Chennai – Insect pest control

**Period of Collaboration:** 01 August 2008 to 31 January 2009/ May 2009 – Oct. 2009

**Research Personnel involved:** S. Sakthivelkumar, A. John Paul and V. Veeramani

**Fund provided:** 1. Sanction of Rs.1,08,000/- (@ Rs.6000/-consolidated)/each for 3 Project Fellows

##### Project Titles:

- i. Studies on Caterpillar Pests of Noni, *Morinda citrifolia* with Focus on their Improved Monitoring and Potential for different Eco-Friendly Management Strategies.
- ii. Studies on Fruit Infesting Pests of Noni, *Morinda citrifolia* with Focus on their Impact on Fruit Yield/Quality and Potential for their Preventive Management.
- iii. Spatial and Temporal Pattern of Fruit Fly Species Abundance in an Organic Mango Orchard System (Mother India Farms).
- iv. Development of Bio-Product: An integrated Approach.

e) M/s Aquagri Processing Pvt. Limited, New Delhi

Consultancy Project at the cost of Rs.1,02,000/- involving one project fellow.

**Period of Collaboration:** May 2009 – Oct. 2009

##### Ongoing Project

**Period of Collaboration:** 01 August 2011 to till date

**Companies/ Industry to whom consultancy offering:** SunAgro Biotech Research Centre, Chennai & Department of Biotechnology, University of Madras

**Project Title:** Enhancing the Impact of Synthetic Insect Attractants for Trapping Fruit Flies through Nano-Technological Interventions



**25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad**

**Dr. R. Ramanibai**

<b>Country</b>	<b>Year</b>
France	July - 2007
Netherlands	Sept - 2007
France	Sept - 2007
France	June - 2008
Netherlands	June - 2008
Belgium	June - 2008
Thailand	July - 2008
Bangkok	July - 2008
Taiwan	Oct - 2009
Bangkok	Oct - 2009
Vietnam	Mar - 2010
Bangkok	Mar - 2010
Mauritius	Sep - 2010
Vienna	April - 2011
Czech	April - 2011
Poland	April - 2011
Italy	April - 2011
Australia	July - 2011
France	Sep - 2011
Italy	Sep - 2011

**Prof. N. Munuswamy**

1. Presenter in the International symposium on Environmental specimen banks at **Matsuyama, Japan** (December 3-5, 2009)
2. Presenter in the International symposium on Environmental specimen banks at **Berlin, Germany** (November 15-16, 2010).

**Prof. P. Mullainadhan**

Institute of Experimental Medicine, Prague (Czech Republic) to acquire training on calcium imaging in live neuronal and immune cells (May 13 to June 12, 2011).

**26. Faculty serving in**

**a) National committees b) international committees c) Editorial Boards d) any other (please specify)**

**a) National committees**

**Prof. M. Arumugam, National level, UGC – Nominee**

1. Faculty selection committee – Indian Universities.
2. Advisory committee member – SAP programmes in Universities.

3. Subject Expert – Award of major /minor research projects, UGC, DBT, CSIR.
4. SET – Examination, University of Pune, Maharashtra.
5. XI Plan – Assessment and Fund allocation committee, Andhra Pradesh
6. DBT, - Star Colleges programmes; Tamil Nadu
7. Editorial Member – Journal of Free radical Biology & Medicine; USA
8. Editorial Member – Journal of Nitric Oxide; USA

**Prof. H. Devaraj**

**UGC**

1. Nominee and Committee member for appointment of Vice-chancellor, Jiwaji University, Gwalior
2. Review Committee member to assess the Bureau of past performance of Maharashtra and Goa
3. Centre with potential for Excellence in particular area (CPEPA) Advisory Committee member of Gurunanak Dev University, Amritsar
4. Chairman of the Expert Committee to assess the proposals under the scheme of adding assistance to Colleges
5. Review Committee member of CAS in Biological Science at Madurai Kamaraj University
6. Moderation Committee Member in UGC-NET
7. UGC-UPE Review Committee member of North Eastern Hill University- Shillong
8. Chairman of Osmania University for UPE status, 2013
9. Chairman to Review CAS Phase I of Dept of Genetics, Osmania University, 2012
10. Chairman UGC Expert Committee for Assessment of physical and expert committee academic infrastructure of GLA University, Mathura, 2011
11. Expert Committee Member to give UPE status to Banaras Hindu University, Varanasi, University of Pune, Pune, and University of Karnataka, Dharwad, 2011.
12. Expert Committee Member to select Innovative programme from Colleges and University
13. Conference of the Vice- Chancellors of Central and State Universities March, 2011
14. **UGC, Vigyan Bhavan** Coordinator of Research and Innovation
15. UGC-UPE Advisory Committee member of Karnataka University, Dharwad
16. Autonomy Committee Member to grant autonomy to various colleges in India, 2010
17. Expert committee member to assess final review of the SAP of school of Biological Science, Maduraj Kamaraj University, 2010
18. Review Committee Member for SAP- Manipur University
19. Review Committee Member for Deemed Universities, 2010

20. Expert committee member to select and scrutinize project seeking financial assistance for Major research project, 2010
21. XI plan member to allocate funds to various Universities, 2009-2010
22. Member for XI plan grant allocation to Jai Narain Vyas University, Jodhpur, 2009
23. Member for **granting University status** to engineering colleges at Vijaywada, Kasalingam College, Tamil Nadu, 2008.

#### **DBT**

24. Task force member of Biotechnology Resources, 2012-2015
25. Task force member of Aquaculture and marine Biotechnology Resources, 2012-2015
26. Renominated as Task force member of Aquaculture and marine Biotechnology Resources, 2012-2015
27. Expert Committee member to examine the proposals for the support under **Star College scheme, DBT**, Ministry of Science and Technology, New Delhi, 2008.
28. Task force member to select and scrutinize project seeking financial assistance for Major research project in aquaculture biotechnology, 2009-2012

#### **DST**

29. Coordinator for the inspire programme of the Govt. of India to the southern states of India, 2010

#### **University of Madras**

30. Curriculum Statement development Committee for Vice Chancellor Nominee, 2010

#### **INTERNATIONAL**

##### **INSA – DFG (Indo German)**

31. Review Panel Member to review projects from India/ German Universities, 2010

#### **Prof. R. Ramani Bai**

##### **1. EGU – Complementary Member**

##### **2. Advisory Committee Member:**

1. Scientific Advisory Committee for “*National Conference on Global Warming – Now and Then (NCGW – 2010)*” organized by School of Marine Sciences, Alagappa University, Thondi Campus, Thondi. 18<sup>th</sup> and 19<sup>th</sup> March, 2010.
2. National advisory committee member for “*National Workshop on Quantitative Techniques in Biodiversity Assessment*”, organized by School of Life Sciences, Swami Ramanand Teerth Marathwada University Nanded-431606. 26<sup>th</sup> -27<sup>th</sup> February 2010.

3. National advisory Committee member “*International Conference on Molecular Tools in Environmental Toxicology*” NEERI Nehru Marg Nagpur 440 020 India. September 23rd – 24th, 2009.

### 3. Editorial Board Member

Editor- Journal of Environmental biology - November 2009

### 4. Research Article Reviewer

- a. LIFA- Sep 2010. Gender dimensions of knowledge, physical and psychosocial burden due to lymphatic received by residents of endemic communities in benue state. Nigeria.
- b. Journal of Environmental Biology (JOEB) October 2010.
- c. Journal of Experimental Sciences (JES) October 2010. As Guest Editor
- d. Subject Editor - Journal of Threatened Taxa “ A NEW SPECIES OF GENUS *LASIOPTERA* MEIGEN (DIPTERA: CECIDOMYIIDAE: LASIOPTERIDI) FROM MAHARASHTRA, INDIA”
- e. International Journal of Fisheries and Aquaculture
- f. JECE

### 5. Project Proposal Reviewer

- a. Ministry of Environment and Forest New Delhi. - Aug 2010.OASTC BU.
- b. Intertidal macrofaunal diversity of the western coast of gulf of Khambhat Gujarat-
- c. Dr. Bharatsinh Gohil.

### Dr. S. Janarthanan

1. **Member, Audio/Visual Presentation Committee**, UPE Advisory Committee Meeting, University of Madras, 28-30 July 2011.
2. **Member, Auditorium Arrangement Committee**, Science Day Celebrations, University of Madras, 29 February, 2012.
3. **Member - Internal Expert, Institutional Biosafety Committee (IBSC)**, Department of Biotechnology, Government of India for Entomology Research Institute, Loyola College, Chennai for 2 years (July 2012 – June 2014).
4. Internal Subject Expert for selection of Research Fellows under the scheme of UGC-BSR Fellowship “UGC research fellowship in science for meritorious students (March 2012).

5. Internal Subject Expert for selection of Research Fellows under the scheme of UGC-BSR Fellowship “UGC research fellowship in science for meritorious students (January 2013).
6. Elected and Serving as **Secretary, Entomology Academy of India**, March 2011
7. Editorial Board, Hexapoda Journal (2013)
8. Member, Editorial Board, International Journal of Pure and Applied Zoology (2013)

**Peer reviewing of research articles from International Journals**

1. 2008 Transnational Journal of Agriculture and Soil Sciences
2. 2010 Journal of Modern Science & Journal of Humanities and Social Science (Tamil Nadu State council for Higher Education)
3. 2011 Journal of Hazardous Materials
4. 2011 Recent Research in Science and Technology
5. 2012 Environment & We : An International Journal of Science & Technology (EWIJST)
6. 2012 African Journal of Biotechnology
7. 2012 Journal of Medicinal Plants Research
8. 2012 African Journal of Plant Science
9. 2013 African Journal of Agricultural Research
10. 2013 African Journal of Microbiology Research

**27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).**

**Prof. M. Arumugam**

1. National conference on “Recent trends in animal physiology, 19 20<sup>th</sup> October 2009, Department of Zoology, University of Mysore.

**Prof. H. Devaraj**

1. Poster presentation on “Expression pattern of Oct-4 and CD44 in precancerous lesions and carcinoma of oral squamous epithelium- An Immunohistochemical study supporting stem cell theory of carcinogenesis”, **Cancercon**, February 18<sup>th</sup>-20<sup>th</sup> 2010, IIT, Madras.
2. Poster presentation on “Aberrant expression of the pluripotent marker Oct-4 and its correlation with CD44, involucrin and clinicopathological factors in oral squamous cell Carcinoma”, **NCEBR’11**, February 21<sup>st</sup> and 22<sup>nd</sup> 2011, University of Madras.

3. Poster presentation on “Notch signaling and nerve growth factor regulates adult hippocampal stem cell differentiation”, **Cancercon**, February 18<sup>th</sup>-20<sup>th</sup>, 2010, IIT, Madras.
4. Poster presentation on “Notch signaling maintains sub granular zone neural stem cell population in adult mice hippocampus”, **Neucell'2011**, February 11<sup>th</sup>-12<sup>th</sup> 2011, University of Madras.
5. Poster presentation on “Wnt signaling regulates subgranular zone neural stem cell proliferation in adult mice hippocampus”, **NCEBR'11**, February 21<sup>st</sup> and 22<sup>nd</sup> 2011, University of Madras.
6. Poster presentation on “Notch 1 plays important role in vasculogenesis in early embryonic development of mice”, **NCEBR'11**, February 21<sup>st</sup> and 22<sup>nd</sup> 2011, University of Madras.
7. Poster presentation on “Expression of putative stem cell marker musashi-1 and transforming growth factor beta 1 in human colorectal adenocarcinoma”, **NCEBR'11**, February 21<sup>st</sup> and 22<sup>nd</sup> 2011, University of Madras.
8. Poster presentation on “Effect of phosphoERK inhibitors on vitellogenin mRNA expression in ovary and hepatopancreas of the giant tiger prawn *Penaeus monodon*”, **NCEBR'11**, February 21<sup>st</sup> and 22<sup>nd</sup> 2011, University of Madras.
9. Paper presentation on “Notch-1 and  $\beta$ -catenin expression during progression of normal gastric mucosa to chronic gastritis and gastric cancer”, **ISGCON**, November 21<sup>st</sup> and 25<sup>th</sup> 2010, Hyderabad.
10. Poster presentation on “SDF-1 $\alpha$  and CXCR4 expression during the progression of normal gastric epithelium to chronic gastritis and gastric cancer”, **NCEBR'11**, February 21<sup>st</sup> and 22<sup>nd</sup> 2011, University of Madras.
11. Paper presentation on “Study on differential expression pattern of epithelial transition marker TGF $\beta$ 1 and E-cadherin in human normal gastric mucosa and gastric cancer”, **ISGCON**, November 21<sup>st</sup> and 25<sup>th</sup> 2010, Hyderabad.
12. Poster presentation on “Study on differential expression pattern of cancer stem cell marker TGF $\beta$ 1 and E-cadherin in human normal gastric mucosa and gastric cancer”, **NCEBR'11**, February 21<sup>st</sup> and 22<sup>nd</sup> 2011, University of Madras.
13. Poster presentation on “Expression pattern of TGF $\beta$ 2 and SMAD in chronic pancreatitis and pancreatic cancer”, **ISGCON**, November 21<sup>st</sup> and 25<sup>th</sup> 2010, Hyderabad.
14. Poster presentation on “Understanding the cross talk between  $\beta$  Catenin and NF $\kappa$ B in chronic pancreatitis and pancreatic cancer”, **IAP 2011**, February 10<sup>th</sup> to 13<sup>th</sup> 2011, Kerala.
15. **Invited Speaker-** International Anatomical Sciences and Cell Biology Conference, National University of Singapore-May 2010.

16. **Organized-Indo-Norway review committee meeting and workshop** on Aquaculture and Marine Biotechnology, Department of Biotechnology, new Delhi.13<sup>th</sup> and 14<sup>th</sup> March, 2010.
17. **Organized-Taskforce Meeting** on Aquaculture and Marine Biotechnology, Department of Biotechnology, new Delhi.9th &10th July, 2009.
18. **Invited Speaker**, National conference on Biotechnology organized by the Department of Biotechnology, Jawaharlal Nehru University, New Delhi.2009.
19. **Invited lecture**, Stem cells – Nerve muscle tissue engineering, organized by Frontier lifeline hospitals (A Unit of cherian heart foundation) Ticelpark, june 2009.
20. **Organised**-National conference on New Frontiers and current Trends in Biotechnology; Department of Biochemistry and Biotechnology, University of Madras;October 2008 funded by UGC under SAP.
21. **Invited Speaker**, National Conference on current trends in Biomaterials, organized by Department of Biotechnology, Sri Venkateswara college of Engg., Sriperumbudur 18<sup>th</sup> July 2008.
22. **Invited Plenary Speaker** – International Conference on advance in neurosciences& XXVI annual meeting of Indian academy of neurosciences, Cochin University, Kerala- December 2008.
23. **Plenary Lecture** - Indo-UK Biotechnology Summit- Jointly organized by Anna University-Chennai and British Council -Chennai, October 2008.
24. **Organizing Secretary** – National conference on New Frontiers and current Trends in Biotechnology, organized by Department of Biochemistry and Biotechnology, University of Madras, October 2008.
25. **Invited lecture** – National symposium on “Global perspectives in biological Sciences, Department of Biochemistry, Periyar University, Salem, March 2008.
26. **Endowment lecture** - Hon’ble Justice Thiru S. Jagadeesan Endowment Lecture, Annamalai University, March 2008.
27. **Invited Lecture** 95<sup>th</sup> Indian Science Congress, Vishakapatnam, January 2008.
28. **Chair Person** Indo – UK seminar on Regenerative Medicine and Stem Cell Applications, November 2007.

#### **Prof. R. Ramani Bai**

1. R.Ramanibai.2010. Presentation of the Survey findings of European Researchers in India (including Europeans commuting between Europe and India)-Towards developing a Network of European Researchers in India. New Delhi – June 4,
2. K.Rajubunizal and R.Ramanibai. 2010 Influence of climatic change on the zooplankton biodiversity (copepods) from Velachery lake Chennai India Goethe Institute. Max Muller bhavan Chennai 22 – 24 June 2010.
3. R.Ramanibai. 2010. Workshop on Menstrual Hygiene Management Consortium (MHMC). Department of Education. Subramaniapuram, Trichy. July 14- 15 GRT Grand Convention Centre. Chennai-17.

4. R.Ramanibai. 2010. International Conference on Environmental Pollution Water Conservation and Health. Bangalore university- Bangalore. - July 29- 31, 2010.
5. K.Rajabunizal and R.Ramanibai. 2010. Biodiversity Conservation of Zooplankton from Lake Velachery Chennai India. South North Development Foundation (SNDF), Joint Forest Management Training Centre. Chennai, Velachery. July 30 & 31.
6. A.Madavarani and R.Ramanibai. 2010. Cytotoxic Effect of *Kappaphycus alvarezii* extract on lung cancer cell line (NCIH 460) In the “National conference on”- Bioprospecting of marine resources with special reference to marine natural products and drug discovery”, Alagappa University. Karaikudi, Aug 25 – 27 2010.
7. K.Rajabunizal and R.Ramanibai .2010 ‘Consequences of climatic change for the zooplankton biodiversity (copepods) from lake Velachery – Chennai. National conference on the biodiversity for sustainable development, threats, indicators, climate change, poverty alleviation and targets for safeguarding Biodiversity. Aug 25-27- 2010, Madurai Kamaraj University, Madurai.
8. Indra.V and R.Ramanibai. 2010. “Planktonic diversity with special reference to heavy metal distribution in the Chennai Coast, Tamil Nadu. National Conference on Marine diversity, present status and prospectus (MABPSAP-2010). September-16 – 18.
9. M.Shanthi and R.Ramanibai. 2010.”Distribution and abundance of copepods from Chennai coast Bay of Bengal, India” Pg-49. National Conference on Marine Diversity, present status and prospectus (MABSAP-2010). September-16-18.
10. Chitra.J and Ramanibai.R. 2010. Seasonal Occurrence of Three dominant Copepods at Muttukadu Backwater. National Seminar on Recent trends in aquaculture. Organized by Department of Zoology, SRR & CVR Govt. College, Vijaywada. Jan-7- 8
11. R.Ramanibai and S. Jeyanthi. 2010. Benthic diatom diversity of Krishnagiri reservoir. “Lake 2010” IISc Bangalore Dec 22 -24.
12. Chaithanya Sudha, S.Ravichandran and R.Ramanibai. 2010. Water quality assessment of tanks in urban-rural gradient of South Chennai, Tamil Nadu. “Lake 2010” IISc, Bangalore. Dec 22-24.
13. A.Madhavarani and R.Ramanibai. 2010. In vivo immuno modulatory activity of *Cassia auriculata* extract in swiss albino mice. 2nd International seminar on Medicinal plants and Herbal products organized by Department of Botany, S.V.University, Tripathi. December 27 – 29.
14. K.Vikram and R.Ramanibai 2011 Post monsoonal migratory birds survey from Pallikaranai wetland of Chennai Tamil Nadu. Krishna University Andhra Pradesh. Feb 2-3.



15. S.Kanniga and R.Ramanibai. 2011. Comparison of Predation capacity of Copepods on Mosquito *Aedes aegypti*. National seminar on spatial strategies for sustainable management, Department of Environmental science, Bharathidasan University, Trichy, Feb 14 -16.
16. T. R. Kameswaran, A.Madhavarani and R. Ramanibai, 2011. Cytotoxicity of flavonoidal fraction of *Indigofera tinctoria* against Lung Cancer Cell Line (A549). Second national Seminar on “Recent Biotechnological Perspectives in Disease Diagnosis and Therapy: Genes in Genomics- Proteins in proteomics. Mediclone, Chennai. Feb 18t – 19
17. S.Jeyanthi, R.Ramanibai and S.Ravichandran. 2011. Climate change influence of sediment diatom diversity in Krishnagiri reservoir. International seminar on Climate change and sustainable resources management organized by Department of Geography, University of Madras. Feb 25 - 26.
18. S.Jeyanthi and R.Ramanibai 2011. National workshop on applied Multivariate Statistical Analysis using SPSS and AMOS organized by Department of Statistics, Presidency College , March 4– 5 .
19. A.Madhavarani and R.Ramanibai. 2011 participated in the Workshop on “Animal Ethical issues and GLP for Animal Handling” organized by institutional animal ethical committee, University of Madras. March 17 - 18.
20. J.Gobinath and R. Ramanibai. 2011 participated in the Workshop on “Animal Ethical issues and GLP for Animal Handling” organized by institutional animal ethical committee, University of Madras. March 17 - 18.
21. R. Ramanibai, R. Sonia and R. Bharathi. 2010. Effect of cyanobacterial toxins on *Poecilia sphenops* (Molly fish). 3rd International congress of Environmental Research- 16 to 18 September 2010, University of Mauritius, Mauritius Reudit. **(International Conference)**
22. R.Ramanibai and M.Shanthi. 2011. Seasonal profile of copepod abundance and diversity along the Chennai coast, Bay of Bengal, India. EGU assembly meeting, Vienna, April 8 -11 **(International Conference)**
23. Invited Talk
  - a. Poland – Institute of Water Studies, Poland, Warza
  - b. Italy – CNR lab Italy
  - c. Ramanibai, R. October 6<sup>th</sup> -8<sup>th</sup> 2009. “Ecological dynamics of some dominant copepod taxa in coastal habitats of Tamilnadu during last two decades” International Conferences on “*Dormancy in Crustaceans: Basic Research and Applied Science, Zooplankton*” Keelung University, Taiwan.

**Prof. N. Munuswamy**

1. Organizer of Sixth International symposium on “Large Branchiopod”, Acharya nagarjuna University, **A.P, India** (September 16-20, 2007).
2. Chaired a session and presented a lead lecture at the **International conference on “Biodiversity and Aquatic Toxicology”** at the Department of Zoology, Acharya Nagarjuna University, Nagarjunanagar, Andhra Pradesh, during 12-14<sup>th</sup> February 2011.
3. Chaired a session at the National conference on “Emerging trends in Biological Research (**NCEBR’11**)”, Department of Zoology, University of Madras, Guindy Campus, Chennai, during 21-22<sup>nd</sup> February 2011.
4. Co-Chair person and presenter in the **International symposium on “Environmental Specimen Banks”** at Berlin, Germany (November 15-16, 2011).

**International:**

1. Presenter in the International symposium on Environmental specimen banks at **Matsuyama, Japan** (December 3-5, 2009)
2. Presenter in the International symposium on Environmental specimen banks at **Berlin, Germany** (November 15-16, 2010).

**Prof. P. Mullainadhan**

1. Chaired a Session in the National conference on ‘Emerging Trends in Biological Research’ held at Department of Zoology, University of Madras, **NCEBR’11** (February 21 & 22, 2011)
2. Regional Symposium on ‘*Newer Challenges in Laboratory Diagnosis for Life Style Diseases*’ held in Loyola College, Chennai (December 17-18, 2008).
3. National Seminar on ‘*Biotechnological Approaches for Eco-friendly Insect Pest Management*’ held in Department of Zoology, University of Madras, Chennai (February 27-28, 2009).
4. National Seminar on ‘*Recent Biotechnological Perspectives in Diseases diagnosis and Therapy*’ held in Mediclone Academy of Biosciences (Mediclone Research Centre), Chennai (October 23-24, 2009).
5. National Seminar on ‘*Bioresources and their Management*’, held in Central Institute of Fisheries Education, Mumbai (December 29-31, 2009).
6. International conference on ‘*Neuroscience and Neuroimmunology*’ held in Slovak Academy of Sciences, Smolenice, Slovakia (May 18-21, 2011).
7. National Seminar on ‘*Current Trends in Biotechnological Strategies for Eco-friendly Crop Protection*’ held in Department of Zoology, University of Madras, Chennai (December 16-17, 2011).

**Dr. S. Janarthanan**

1. Co-Chaired a Session in the National conference on 'Emerging Trends in Biological Research' held at Department of Zoology, University of Madras, **NCEBR'2011** (February 21 & 22, 2011).
2. Poster presentation entitled "Antibacterial activity of some selected seaweeds from Tuticorin Coastal Region, Tamil Nadu, India", National conference on "Emerging Trends in Biological Research (**NCEBR'2011**)" February 21 & 22, 2011, organized by Department of Zoology, University of Madras, Chennai-25.
3. Presented a paper entitled "Antibacterial Activity of the sea weeds, *Chaetomorpha linum* and *Padina gymnospora* on selected gram-negative and gram-positive human bacterial pathogens", **National Conference on "Natural Products Research"** March 25 & 26, 2011, organized by Department of Biotechnology, Kumaraguru College of Technology, Coimbatore (**received first prize**).
4. Presented a paper entitled "Spatial and Temporal pattern of Fruit fly species abundance in an Organic Mango Orchard system" in **National Conference on Biotechnological Approaches for Eco-friendly Insect Pest Management** held on February 27-28, 2009, conducted by Department of Zoology, University of Madras.
5. Presented a paper entitled "*In vitro* screening of *Beauveria bassiana* (Balsamo) (Deuteromycotina:Hyphomycetes) strains as an Entomopathogen against Coffee Berry Borer, *Hypothenemus hampei* (Ferrari) (Coleoptera: Scolytidae)" in **National Conference on Biotechnological Approaches for Eco-friendly Insect Pest Management** held on February 27-28, 2009, conducted by Department of Zoology, University of Madras.
6. Presented a poster entitled "Antibacterial activity of some selected seaweeds from Tuticorin Coastal Region, Tamil nadu, india" in the **National Conference on "Emerging Trends in Biological Research (NCEBR'2011)"** February 21<sup>st</sup> & 22<sup>nd</sup> organized by Department of Zoology, University of Madras, Chennai-25.
7. Presented a paper entitled "Antibacterial activity of the seaweeds, *Chaetomorpha linum* and *Padina gymnospora* on selected gram-negative and gram-positive human bacterial pathogens" in **National Conference on Natural Products Research for Health and Biopharma Industry**, March 25 & 26, 2011 organized by Department of Biotechnology, Kumaraguru College of Technology, Coimbatore.
8. Presented a paper entitled "Nanosilica as a novel insecticide for the control of stored product pest, *Callosobruchus maculatus*" **National Seminar on Current Trends in Biotechnological Strategies for Eco-friendly Crop Protection**, December 16-17, 2011 organized by Sun Agro Biotech Research Centre, Chennai and Department of Zoology, University of Madras.
9. Presented a paper entitled "Exploring alternative strategies to improve parapheromone dispenser-trap systems for fruitflies" **National Seminar on Current Trends in Biotechnological Strategies for Eco-friendly Crop Protection**, December 16-17, 2011 organized by Sun Agro Biotech Research Centre, Chennai and Department of Zoology, University of Madras.
10. Poster presentation on "Molecular phylogeny based on PCR-RAPD and 28S rDNA D<sub>2</sub> expansion segment sequences in regionally separated populations of *Culex quinquefasciatus* Say (Diptera: Culicidae) from Tamil Nadu, South India" in the **International Conference on Entomology**, February 17-19, 2012,

Organized by Department of Zoology & Environmental Sciences, Punjabi University, Punjab, India.

11. Poster presentation on “Detection and characterization of natural agglutinin in the fifth instar larval hemolymph of *Parasa lepida* (Lepidoptera: Limacodidae)” in the **International Conference on Entomology**, February 17-19, 2012, Organized by Department of Zoology & Environmental Sciences, Punjabi University, Punjab, India.
12. Paper presentation on “Bioactivity of various fractions of seaweed *Sargassum wightii* obtained through column chromatography on selected human bacterial pathogens” in the **National Conference on Recent Advances in Algal Biotechnology**, 16 & 17, February 2012, Organized by Centre for advanced Studies in Botany, University of Madras.
13. Coaching high school students through **Nehru Children’s Cultural Association for National Talent Search Examination (NTSE) conducted by NCERT**, New Delhi on General Zoology since 2008
14. Conducted a “**Workshop on Fruit fly Research Methodologies**” to Scientists and Research Scholars on 01 March, 2009 at the Department of Zoology, University of Madras in collaboration with Sun Agro Biotech Research Centre, Chennai
15. Instructed a **course on Economic Entomology** to Mr. Tysan Read, Undergraduate student from University of California, Berkeley Campus through ICOM, University of Madras during July to November 2009
16. **Co-coordinated** a Refresher Course in Life Science on the topic “**Recent Trends in Molecular Cell Biology**” – **Batch VII, held from 04 February 2009 to 24<sup>th</sup> February 2009** supported by UGC-Academic Staff College, University of Madras, Chennai.
17. Organized a **National Conference on “Biotechnological Approaches for Integrated Pest Management”** during 27 & 28, February 2009, Department of Zoology, University of Madras.
18. **Imparted a training** to Dr. Durgadas Ghosh, Professor of Zoology, Tripura University, Tripura on “**Molecular Markers and Phylogeny of Insects**” during 25 October 2010 to 02 November 2010
19. **Co-coordinated** a Refresher Course in Life Science on the topic “**Refresher Course in Life Sciences**” – **Batch IX, held from 02 February 2011 to 21 February 2011** supported by UGC-Academic Staff College, University of Madras, Chennai.
20. Organized a “**National Seminar on Current Trends in Biotechnological Strategies for Eco-friendly Crop Protection**” during December 16-17, 2011, Department of Zoology, University of Madras in collaboration with SunAgro Biotech Research Centre, Chennai.

**Dr. C. Arulvasu**  
International

1. Growth, survival and fatty acid composition of *Pocilia latipinna* fish fry fed with enriched *Artemia nauplii*. 6<sup>th</sup> International Large Branchiopod Symposium (ILBS-6). Department of Zoology and Aquaculture, Acharya Nagarjuna University, Nagarjuna Nagar, Andhra Pradesh, 16<sup>th</sup> to 20<sup>th</sup> September, 2007. (paper presented)
2. Effect of Organophosphorus Pesticide on the Reproductive Bionomics of Rotifer *Brachionus plicatilis* (O.F. Müller). International Colloquium on “Emerging Biotechnologies in Agriculture, Animal Health and Productivity” (ICEB’09). Schools of Biosciences, Alagappa University, Karaikudi, Tamilnadu, 22-26 February, 2009. (paper presented)

National

3. Training of Trainers (TOT) International Workshop in Disaster Management, Center for Natural and Disaster studies (CNHDS), University of Madras, 25<sup>th</sup> to 29<sup>th</sup> September, 2007.
4. Seminar and Workshop on “Recent advances in Advanced Laser Scanning Confocal Microscopy”. Department of Biotechnology, IIT Chennai, 22<sup>nd</sup> to 24<sup>th</sup> September, 2008.
5. Seminar on “Herbal Analysis and Applications”. Centre for Herbal Science, University of Madras, Chennai, 29<sup>th</sup> October, 2008.
6. Workshop on “Patent Awareness”. Organized by Patent Information Cell, University of Madras in association with Tamil Nadu State Council for Science and Technology. 17<sup>th</sup> April 2009.
7. Workshop on “Tools beyond the laboratory bench: International Workshop on scientific writing, IPR Productization and Research Ethics and Conference on Advanced Research Technologies for the Post-Genomics Era”. Centre for Biotechnology & Centre for International Affairs, Anna University, Chennai 14<sup>th</sup> to 19<sup>th</sup> December, 2009.
8. Efficacy oil emulsions on the growth of human lung adenocarcinoma epithelial cell line A549. National Conference on “Interplay of Biological and Chemical Sciences”, Department of Zoology, Thiruvalluvar University, Vellore, Tamilnadu, 06-08 January, 2010. (Paper presented)
9. Seminar on “Looking Forward: Challenges of Climate on Water and Land in commemoration of World Water Day and World Forest Day 2010”. Centre for Climate Change & Adaptation Research, Anna University, Chennai 22<sup>nd</sup> March, 2010.

10. Conference on “Frontiers in MS Technology and Emerging Applications”. Indian Institute of Chromatography and Mass Spectrometry, Gunidy, Chennai 28<sup>th</sup> November, 2011
11. National seminar on “Current Trends in Biotechnological Strategies for Eco-friendly Crop Protection”. Sun Agrao Biotech Research Centre, Chennai & Department of Zoology, University of Madras, Chennai 16<sup>th</sup> and 17<sup>th</sup> December, 2011

## 28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects – **100%**
- percentage of students doing projects in collaboration with other universities / industry / institute – 20%

## 29. Awards / recognitions received at the national and international level by

- Faculty –

### 1. Prof. H. Devaraj

- Tamil Nadu State Council for Higher Education- Member; 2012-2015.
- Member of UGC Singh-Obama initiative committee - to select teacher for USA- 2013
- Academic Achievement Award – University of Madras, Chennai (2012).
- UGC-BSR Distinguished Scientist Award - 2011



### 2. Prof. N. Munuswamy

- Awarded UGC – BSR Grant 2011, Government of India.

- Doctoral / post doctoral fellows -

- 1. Snigdha Poddar: Awarded First prize in poster presentation- NCEBR'11
- 2. Shymi K: Awarded First prize in poster presentation - IAP 2011
- 3. D.Udaya kumar: Awarded second prize in poster presentation- Neucell 2011
- 4. R Nagaraj: Awarded First prize in paper presentation-ISGCON 2010
- 5. P. Ramaraj: Awarded second prize in poster presentation-International Conference on Entomology 2012

- Students

**30. Seminars/ Conferences/Workshops organized and the source of funding (national/ international) with details of outstanding participants, if any.**

**(Details furnished in Appendix II)**

**List of outstanding participants:**

- i. Vocational training programme on “**Molecular biology and Immunology**” for under- graduate biology students of colleges affiliated to University of Madras for 30 days during June 2008.
- ii. Organized a **National Conference on “Biotechnological Approaches for Integrated Pest Management”** during 27 & 28, February 2009, Department of Zoology, University of Madras.
- iii. **Workshop on Fruit flies Research Methodologies**, Department of Zoology, University of Madras, 1<sup>st</sup> March, 2009.
- iv. Organized a **National Conference on “Emerging Trends in Biological Research (NCEBR’2011)”** February 21<sup>st</sup> & 22<sup>nd</sup> organized by Department of Zoology, University of Madras, Chennai-25.
- v. Sensitizing meeting – Exposure to women scientists of career and funding opportunities, Funded by DST-WOS, New Delhi, 5<sup>th</sup> January 2011 at a cost of Rs.5 Lakhs.
- vi. Organized a **National Seminar on “Current Trends in Biotechnological Strategies for Eco-friendly Crop Protection”** during December 16-17, 2011, Department of Zoology, University of Madras in collaboration with Sun Agro Biotech Research Centre, Chennai.
- vii. DST Women Scientist Program -organized Sensitizing meeting–*Exposure to Women Scientists of career and funding opportunities*– Funded by DST-WOS New Delhi -5<sup>th</sup> January, 2011. ( Organizing Secretary : Prof. R. Ramani Bai) (Rs.4 00,000/).
- viii. National Conference on *Emerging trends in Biological Research (NCEBR’11)*, Department of Zoology, University of Madras, Maraimalai Campus (Guindy), Chennai-25 February, 21<sup>st</sup> & 22<sup>nd</sup>, 2011 (Organizing Secretary : Dr. C. Arulvasu).

**31. Code of ethics for research followed by the departments:**

UGC regulations on minimum standard and procedure for the award of M.Phil/Ph.D. degree – 2009 and guidelines of Institutional Animal Ethical Committee constituted by CPCSEA, New Delhi are followed.

### 32. Student profile programme-wise: 2011-12

Name of the Programme (refer to question no. 4)		Applications received	Selected		Pass percentage(%)	
			Male	Female	Male	Female
M. Sc.	2009 -2010	100	7	7	100	100
	2010 -2011	103	11	8	100	100
	2011 -2012	64	16	04	100	100
	2012 -2013	98	10	05		
M.Phil.	2009 -2010	40	07	03	100	100
	2010 -2011	39	02	07	100	100
	2011 -2012	27	03	07	100	100
	2012 -2013	36	05	05		
Ph.D	2009 -2010	22	02	08		
	2010 -2011	15	11	03		
	2011 -2012	19	04	05		
P.G. Dip. in Immunotechnology & P.G. Dip. in Stem Cell Technology and Tissue Engineering	2009 -2010	67	09	08	100	100
	2010 -2011	83	07	15	100	100
	2011 -2012	30	01	05	100	100

### 33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from universities outside the state	% of students from other countries
M. Sc.	45%	25%	5%	-
M.Phil.	70%	30%	-	-
Ph.D	-	-	-	-
P.G. Dip. in Immunotechnology	-	-	-	-
P.G. Dip. in Stem Cell Technology and Tissue Engineering	-	-	-	-

### 34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

#### CSIR-UGC (NET) qualified

1. Jobin Thorian, Ph.D. Scholar has been qualified for CSIR-UGC (NET), 2010.
2. Sangeetha Kumari, P.G. Diploma (Immunotech) student has been qualified for CSIR-UGC (NET), 2010.



3. Shiny, A., P.G. Diploma (Stem Cell) student qualified for CSIR-UGC (NET) and GATE, 2010.
4. Soumya, C. Iyer, Research Scholar qualified for CSIR-UGC (NET), 2010.
5. Karnan, C. M.Sc. – OST, II year has qualified for CSIR-UGC (NET), 2010.

**GATE qualified**

1. S. Radha, Ph.D. Scholar has been qualified for GATE-2011 (Score 72 percentile).
2. V. Vaishnavi, a former M. Sc. student of this department of (2008-2010) has been qualified for GATE-2011 (Score 86 percentile).
3. Geethanjali, D. P.G. Diploma (Stem Cell) student qualified for GATE, 2010.

**SET qualified**

1. P. Ramaraj, Ph.D. Scholar has been qualified for SET-2013
2. A. Athaullah, Ph.D. Scholar has been qualified for SET-2013
3. K. Hilda, M. Sc. student of this department for SET-2013

**35. Student progression**

Student progression	Percentage against enrolled
UG to PG	-
PG to M.Phil.	40%
PG to Ph.D.	50%
Ph.D. to Post-Doctoral	75%
Employed	-
<ul style="list-style-type: none"> <li>• Campus selection</li> <li>• Other than campus recruitment</li> </ul>	5- 10%
Entrepreneurs	

**36. Diversity of staff**

Percentage of faculty who are graduates	
of the same university	80
from other universities within the State	20
from universities from other States	-
from universities outside the country	-

**37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period**

1. **Prof. H. Devaraj**  
Awarded **Doctor of Science** (Nov. 2007) Contributions to Glycobiology – Mucin- dependent signal transduction events in cancer.

**2. Prof. N. Munuswamy**

**Awarded Doctor of Science (2007)** Contributions to Biodiversity, Biology and Aquaculture Potentials of Live Feed Organisms.

**38. Present details of departmental infrastructural facilities with regard to**

- a) Library
- b) Internet facilities for staff and students -
- c) Total number of class rooms -
- d) Class rooms with ICT facility -
- e) Students' laboratories -
- f) Research laboratories

S.No.	Space details	No. of Labs / Rooms	Area (Sq. ft)	Total Area (Sq. Ft.)
1.	Research Lab	5 Nos.	(1500 x 4) +(600 x 1)	6600
2.	Teaching Lab	3 Nos.	(1200 x 2) + (900 x 1)	3300
3.	Instrumentation facility	3 Nos.	170	640
4.	Faculty Room	7 Nos.	170	1190
5.	Seminar Hall	1 No.	1200	1200
6.	Conference Room	1 No.	340	340
7.	Store Room (Chemical)	1 No.	300	300
8.	Store Room ( Glassware)	1 No.	170	170
9.	Office Room	1 No.	300	300
10.	Library	1 No.	600	600
11.	ENVIS – Centre	1 No.	300	300
12.	Animal House	1 No.	800	800*
13.	Insectarium & Circulating Sea Water system	2 Floors	1800	3600*
14.	Tissue Culture	1 Nos.	660	660*
15.	HOD's Room	1 No.	340	340
<b>Total Area</b>				<b>20340</b>

**39. List of doctoral, post-doctoral students and Research Associates :**

- a) from the host institution/university

S.No.	Name	Designation	Institutions/Universities
<b>Doctoral students</b>			
<b>Prof. M. Arumugam</b>			
1.	S.D. Bhuvaneshwari	UGC-SAP fellow	University of Madras
2.	A. Johnpaul	UGC-Project Fellow	University of Madras
3.	Priyadarsini. A	DST-PURSE	University of Madras
4.	K. Sunil kumar	DBT-JRF	University of Madras

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5.	T. Karthigayani	UGC- Meritorious fellow	University of Madras
6.	S. Karthick	UGC-CPEPA	University of Madras
7.	Andrew Remy	DST-JRF	University of Madras
<b>Prof. H. Devaraj</b>			
1.	R.Nagaraj	UGC-Meritorious Fellow	University of Madras
2.	N.Gopalakrishnan	UGC-Project Fellow	University of Madras
3.	K.Shymi	LTMT – SRF	University of Madras
4.	R.Nithya	Research Scholar	University of Madras
5.	G.Ashidha	DBT – JRF	University of Madras
6.	M. Uthrakumar	Research Scholar	University of Madras
7.	Soumya C. Iyer	DBT – JRF	University of Madras
<b>Prof. R. Ramanibai</b>			
1.	S.Kanniga	UGC Project fellow	University of Madras
2.	A. Madhavarani	UGC-BSR	University of Madras
<b>Prof. N. Munuswamy</b>			
1.	K.Dhanasekar	UGC-BSR	University of Madras
2.	R. Subha	Research Scholar	University of Madras
<b>Prof. P. Mullainadhan</b>			
1.	Y. Christina	Research Scholar	University of Madras
2.	V. Vaishnavi	DST- INSPIRE fellow	University of Madras
3.	A. Athaullah	NCNSNT-JRF	University of Madras
<b>Dr. S. Janarthanan</b>			
1.	P. Ramaraj	UGC-CPEPA-JRF	University of Madras
2.	P. Murali	Part Time	University of Madras
<b>Dr. C. Arulvasu</b>			
1.	G. Babu	Research Scholar	University of Madras
2.	D. Dinesh	Research Scholar	University of Madras
3.	D. Prabhu	UGC-Project Fellow	University of Madras
4.	D. Chandrasekar	UGC-CPEPA-JRF	University of Madras
5.	M. Hemavathi	UGC-BSR	University of Madras
6.	G. Dhanasekaran	Research Scholar	University of Madras
<b>Post-doctoral students /Research Associates</b>			
1.	Dr. M. Pavunraj	DST – Young Scientist	University of Madras, Chennai

b) from other institutions/universities

S.No.	Name	Designation	Institutions/Universities
<b>Doctoral students</b>			
<b>Prof. M. Arumugam</b>			
1.	S. R. Ganesh	Research Scholar	Bharathidasan University
<b>Prof. H. Devaraj</b>			
1.	Snigdha Poddar	UGC – SAP Project Fellow	SRM University
<b>Prof. R. Ramanibai</b>			
1.	R.Sonia	Research Scholar	Madurai Kamaraj University
2.	J. Gobinath	UGC-BSR	Bharathidasan University
<b>Prof. N. Munuswamy</b>			
1.	Prasun Goswamy	UGC-Project Fellow	Calcutta University

2.	G.Karuna Sagar	UGC-BSR	Bharthidasan University
<b>Prof. P. Mullainadhan</b>			
1.	T. Sakthivel	UGC-BSR	Bharthidasan University
<b>Dr. S. Janarthanan</b>			
1.	V. Veeramani	UGC-Project Fellow	Bharathidasan University
2.	S. Sakthivelkumar	UGC-RGNF	Madurai Kamaraj University
3.	Jobin C. Tharian,	UGC-JRF (NET)	Mahatma Gandhi University
4.	A. Ganesh	NCNSNT-JRF	Bharathidasan University
<b>Dr. C. Arulvasu</b>			
1.	S. Sellamuthu	Research Scholar	Sathyabama University
2.	N. Kathirvel	Part Time - Research Scholar	Madurai Kamaraj University
<b>Post-doctoral students / Research Associates</b>			
1.	Dr. Maghil Denis	DST- Women Scientist Programme (DST-WOS)	Manonmaniam Sundaranar University, Tirunelveli
2.	Dr. M. Rajkumar	UGC- Dr. D. S. Kothari Post Doctoral Fellow	Annamalai University, Chidambaram
3.	Dr. C. Selvakumar	UGC- Dr. D. S. Kothari Post Doctoral Fellow	Manonmaniam Sundaranar University, Tirunelveli

**40. Number of post graduate students getting financial assistance from the university. -**

**NIL**

**41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.**

No new programmes developed

**42. Does the department obtain feedback from**

**a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?**

Yes. Feedback received from the faculties is placed before the Departmental Committee to revise the curriculum.

**b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?**

Yes. IQAC of University of Madras for their evaluation. Based on the feedback teaching and learning methods are periodically improved.

**c. Alumni and employers on the programmes offered and how does the department utilize the feedback?**

YES – Representation from Industries are members of the Board of Studies

**43. List the distinguished alumni of the department (maximum 10)**

1. Sir. K. Romoni Menon
2. Prof. P. N. Ganapathy
3. Dr. S. Krishnan
4. Prof. N. Balakrishna Nair
5. Prof. S. Krishnaswamy
6. Prof. M. K. Chandrasekar
7. Prof. T. J. Pandian
8. Prof. S. Krishnakumaran
9. Dr. T. Subramonian
10. Prof. P. J. Sanjeevaraj

**44. Give details of student enrichment programmes (special lectures / workshops/ seminar) involving external experts.**

**Special lectures:**

1. UGC-SAP-DSA Seminar Series I: Guest lectures by Dr. R. J. Rabindra, Dr. M. Vijayakumaran, Dr. R. B. Narayanan, Dr. C. S. V. Ramachandra Rao, Dr. S. Ajmalkhan, 18-19 February 2008.
2. UGC-SAP-DSA Seminar Series II on “Perspectives of Scientific Research” by Prof. L. S. Ganesh, Department of Management Studies, IIT, Chennai, 19, February 2008.
3. UGC-SAP-DSA Seminar Series III, “Structural and functional characteristics of human perleen and its role in osteoarthritis” by Dr. Arivalagan Muthusamy, Pennstate Orthopedics, Pennstate University College of Medicine, 25, February 2008.

**Refresher Course conducted:**

1. Orientation and Refresher Course in Life Science for the Lecturers during 13 October 2008 to 08 November 2008 newly recruited by Teachers Recruitment Board (TRB), Government of Tamil Nadu supported by UGC-Academic Staff College, University of Madras, Chennai.
2. Refresher Course in Life Science on the topic “Recent Trends in Molecular Cell Biology” – Batch VII, held from 04 February 2009 to 24<sup>th</sup> February 2009 supported by UGC-Academic Staff College, University of Madras, Chennai.

**(UGC-SAP-DSA Seminar Series 2008-2010)**

1. Dr. L. Rajkumar, Asst. Professor, Department of Biomedical Sciences, Texas Tech University, EL Passo, Texas “Microarray and Tissue proteomic Analysis of Breast Cancer” 4 July 2008
2. Dr. Lawrence Rajendran, Max Planck Institute for Molecular Cell Biology and Genetics, Dresden, Germany “Systems and Cell Biology Approaches to study Alzheimer’s Disease” 9 January 2009

3. Dr. H. Krishnamurthy, National Centre for Biological Science (NCBS), UAS-GKVK Campus, Bangalore “Basics of Microscopy and Flow Cytometry & Hormonal regulation of Spermatogenesis” 7 Feb. 2009
4. Dr. Govindan Dayanithi, Professor in Cellular Neurophysiology, Institute of Experimental Medicine, EU Centre of Excellence, Prague, Czech Republic. Molecular Physiology of Calcium Signaling in the Central Nervous System Neurons. 11 March 2009
5. Prof. S. Ajmalkhan, CAS in Marine Biology, Annamalai University, Porto Nova “Global Warming and Biodiversity” 16 March 2009
6. Dr. Preethi Rajan, Centre for Stem Cell Research, Christian Medical College, Vellore “Stem Cells as Research Platforms and Clinical Tools & Modelling Gliomas in Neural Stem Cells” 18 March 2009
7. Dr. Michael Swift, Olaf College, Minnesota, USA “Some aspects of pesticide herbicide toxicology” 14 December 2009
8. Dr. Anne Walter, Olaf College, Minnesota, USA “From seagulls to membranes” 14 December 2009
9. Dhesikan Venkatesan, Department of Civil, Architectural & Environmental Engineering “Estimation of carbon credits by reducing green house gas emissions” 8 January 2010
10. Prof. G. Padmanaban, NASI – Platinum Jubilee Chair, Department of Biochemistry, Indian Institute of Science, Bangalore – 560 012. “Molecular medicine” 3 November 2009
11. Prof. S. K. Saidapur, Vice Chancellor, Karnatak University, Dharwad “Marveling evolution” 20 January 2010
12. Prof. M. A. Kalam, Professor & Head, Department of Anthropology, University of Madras “Out of Africa and socio-cultural Evolution” 20 January 2010
13. Prof. P. Dayanandhan, Former Professor of Botany, Madras Christian College, Chennai “Darwinian unification of all life” 20 January 2010

#### **Special Lectures Organized (2010 -2011)**

1. Dr. M. H. Ravindranath, Director, Terasaki Foundation, Los Angeles, USA delivered first Prof. K. Ramlingam Endowment Lecture on Oct. 2010.
2. Dr. M. K. Durga Prasad, Vice Chancellor, Krishna University, Andhra Pradesh, delivered a talk on “Science Education in Universities” on 21 February 2011.
3. Prof. S. Ajmal Khan, Professor, CAS in Marine Biology, Annamalai University delivered a talk on “Assessment of marine ecosystem health based on biodiversity indices” on 21 February 2011.
4. Dr. K. K. Vijayan, Principal Scientist & Head, MBTD, CMFRI, Kochi, delivered a talk on Advances in Crustacean Biology: Relevance in Aquaculture” on 21 February 2011.

5. Dr. R. B. Narayanan, Professor, Centre for Biotechnology, Anna University, Chennai delivered a talk on “Medical Biotechnology: Current Status” on 22 February 2011.
6. Dr. D. Karunakaran, Professor, Department of Biotechnology, IIT, Chennai delivered a talk on “Molecular Biology of Cancer” on 22 February 2011.
7. Dr. S. Uthamasamy, Professor, Department of Agricultural Entomology, TNAU, Coimbatore, delivered a talk on “Molecular Approaches in integrated pest management” on 22 February 2011.
8. Sri. S. Santhana Krishnan, Chief Executive, Marine Technologies & Founder President, Society of Aquaculture Professionals delivered a talk on “Aquaculture – Public Private Partnershi – Universities on 17 March 2011.
9. Dr. K. Sankaran, Director, Centre for Biotechnology, Anna University, Chennai delivered a talk on “Diagnostic approaches for infectious diseases – *Shigella* as a model on 17 March 2011.
10. Dr. S. Krishnan, Member, Commission on Ecosystem Management – IUCN, Chennai, delivered a talk on “Current trends in Taxonomy and Systematics” on 18 March 2011.
11. Prof. V. K. Venkataramani, Dean, (Research) Fisheries College and Research Institute, Thoothukkudi, delivered a talk on “Fishery Resources of Tamil Nadu” on 18 March 2011.

**45. List the teaching methods adopted by the faculty for different programmes.**

Object based learning: Aims at developing the overall skills of the students (research or learning and communication skills).

Research-led learning: Aims at research-informed learning and also research skills and methods based learning among students (especially for M.Phil. students).

In addition, lectures, seminars, group discussions, practical classes, field experiences, educational visits, departmental club meetings, extension outreach and computer aided instruction materials are adopted by the faculty for various programmes.

**46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?**

This is done through continuous assessment system as a measure of internal evaluation and class committees.

Learning outcomes are monitored by frequent feed back from students and reports to head of the department for suitable remedial measures.

**47. Highlight the participation of students and faculty in extension activities.**

Students of M.Sc. and M.Phil. participate different social welfare activities through Zoology Club with the advise and help of faculty.

Additionally, PG students involve in various social development programmes including blood donation through University NSS programme.

**48. Give details of “beyond syllabus scholarly activities” of the department.**

Soft skills courses, internships, organization of special lectures for UGC-CSIR NET examinations etc. are considered as beyond syllabus scholarly activities.

**49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.**

NO.

**50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.**

Participation of students in a variety of intercollegiate and inter-university programmes such as seminars, workshops, scholarly science writing competition, preparation of scientific models etc.

**51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.**

**Strength:** Faculty commitment and excellent coordination among faculty

Interfaculty discussion for effective teaching

Teaching supported with practical and field activities

Extensive use of IT and internet facilitates for teaching

**Weakness:** Job opportunities are comparatively poorer for PG and M.Phil. students.

**Opportunities:**

Receipt of various extramural funding by national agencies and several collaborative programmes by the faculty is an excellent opportunity offered to students for their research endeavors.

**Challenges:**

The subject is losing its charm due to recent attraction in engineering education in Tamil Nadu, which poses a challenge in getting studious group of students even in university departments.

**52. Future plans of the department.**

Strengthening adequate number of young and motivated faculty to compensate teaching workload is a primary future plan of the department.