

## Resume

### I General Information

Name : Dr. (Mrs)B. Karunai Selvi  
 Father's Name : Dr. Thiru. A.Balan  
 Age : 39 yrs  
 Designation : Assistant Professor  
 Department : Botany  
 Email ID : [karunaiselvi@gmail.com](mailto:karunaiselvi@gmail.com)  
 Service in other colleges : 6 – Months (05.06.2006 – 30.11.2006)  
 Department of Biotechnology, Sri  
 Kaliswari College, Sivakasi  
 Date of appointment : 18.01.2007  
 Date of retirement : 31.05.2033



### II Educational Qualification

| Examination Passed       | Board/University   | Subject                         | Year of Passing |
|--------------------------|--|---------------------------------|-----------------|
| SSLC                     | State Board  |                                 | 1990            |
| PUC/ Higher Secondary    | State Board  | Pure Science                    | 1992            |
| Bachelor's Degree        | Lady Doak College, Madurai<br>Kamaraj University, Madurai                  | Botany (Sp)                     | 1995            |
| Master's Degree          | The Madura College, Madurai<br>Kamaraj University, Madurai                 | Botany                          | 1997            |
| M.Phil                   | Thigarajar College, Madurai<br>Kamaraj University, Madurai                 | Botany                          | 1998            |
| PhD                      | Gandhigram Rural Institute –<br>Deemed University,<br>Gandhigram, Dindigul | Biology                         | 2006            |
| B.Ed.,                   | Avinashilingam Deemed<br>University, Coimbatore                            | Biological Science /<br>English | 2001            |
| PGDiploma                | Bharathiar University,<br>Coimbatore                                       | Microbial<br>Biotechnology      | 2005            |
| Diploma /<br>Certificate |  | Diploma in RDBMS<br>Oracle      | 1999            |
|                          | CSC Computer Education,<br>Tirunagar, Madurai                              | Diploma in Office<br>Automation | 2000            |

III Teaching Experience : UG : 9 Years  
 PG : 6 Months  
 M.Phil : 6 Months  
 Field of Specialization : Agricultural Microbiology

### IV Research Experience Minor Research Project

| Topic | Period | Funding Agency | Amount sanctioned in Rs |
|-------|--------|----------------|-------------------------|
|       |        |                |                         |

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|--|-------------|----------------|---------------------|
| Genetic Improvement of Phosphate solubilizing microorganism and preparation of microbial inoculant using vermicompost as a carrier material (PI)               | 2009 - 2011 | UGC, Hyderabad | 90,000              |
| Isolation, Identification and Screening of endophytic fungi from medicinal plants from Virudhunagar district for antimicrobial and antifungal activity (CO-PI) | 2009 – 2011 | UGC, Hyderabad | 98,000              |
| Preparation of novel rhizoazophos biofertilizer consortium and evaluation of their shelf life in rice bran, coir pith and sugarcane trash (PI)                 | 2014 - 2015 | UGC, Hyderabad | 2,95,000 (On going) |

### Articles published in Journals

| Title of the Article   | Name of the Journal   | Database |
|--|---|----------|
| Biogas production from municipal solid waste with cowdung and vermicomposting  | Environment and Ecology 25(3): 603 – 605, 2007 - ISSN 0970 – 0420   |          |
| Effect of phosphate solubilizers and <i>Rhizobium</i> sp. on <i>Vigna unguiculata</i>  | Journal of Ecobiology 22(4) 377- 388 2008 - ISSN 0970 – 9037 – 08 – 22 - 377                                  |          |
| Impact of phosphate solubilizing microorganism and <i>Rhizobium</i> sp on growth, nutrition and microbial load of cowpea fertilized with rock phosphate. | Asian Journal of Microbiology, Biotechnology and Environmental Sciences 10(3): 621-624, 2008                  | Scopus   |
| Vermicomposting of Municipal solid waste by indigenous earthworm, <i>Perionyx excavates</i>  | Journal of Ecotoxicology and Environmental Monitoring 18 (5):421 – 426, 2008. ISSN 0971 – 0965 – 08 -18 - 421 |          |
| Effect of organic substrates on amino acid composition of vermimeal  | Journal of Ecotoxicology and Environmental Monitoring 18 (5):531–532, 2008. ISSN 0971 – 0965 – 08 -18 -531    |          |
| Changes in the micronutrient content during vermiprocess   | Journal of Ecotoxicology and Environmental Monitoring 18 (5):533–534, 2008.ISSN 0971 – 0965 – 08 -18 - 533    |          |
| Mercury induced alternation in the phycobiliproteins of cyanobacterium, <i>Cylindrospermum stagnale</i> (kutz.)  | ARPN Journal of Agricultural and Biological Science 4 (3): 11 – 14, 2009. ISSN 1990 - 6145                    |          |

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|--|--|---------|
| adapted under different light.   |  |         |
| Vermicomposting of Municipal Solid waste by <i>Perionyx excavatus</i> .  | Trends in Kalis Research 4(1): 3-7 2010. <b>ISSN : 0974-701X</b>   |         |
| Growth and reproduction of newly reported native earthworm, <i>Perionyx ceylanensis</i> in different agro residues.            | Journal of Ecotoxicology and Environmental Monitoring 20(1): 77-82 2010. <b>ISSN : 0971 - 0965</b>                     |         |
| Quantitative estimation of insoluble inorganic phosphates.   | International Journal of Science and Nature, 2(2): 292-295, 2011. <b>ISSN : 2229 - 6441</b>                            |         |
| Green synthesis of Silver nanoparticles from the leaf extracts of <i>Euphorbia hirta</i> and <i>Nerium indicum</i> .           | Digest Journal of Nanomaterials and Biostructures, 6(2): 869 –877.2011   | Scopus  |
| Dissolution of rock phosphate by phosphate solubilizing bacteria in rhizosphere and non-rhizosphere soil samples of legumes.   | Trends in Kalis Research 5(1): 1-3, 2011. <b>ISSN: 0974 – 701X</b>   |         |
| Influence of different carbon and nitrogen sources on insoluble inorganic phosphate solubilization by <i>Bacillus subtilis</i> | International Journal of Advanced Biological Research-IJABR<br>IJABR_Vol2(3)2012 pp441-445<br><b>ISSN: 2250 – 3579</b> |         |
| Preparation-of-Phosphate-Solubilizing-Microbial-inoculant-using-vermicompost-as-a-carrier-material                             | Research Journal of Agricultural Sciences. 4(2): 146-149 2013 .<br><b>ISSN: 2066 – 1843</b>                            |         |
| Synthesis of silver nanoparticles from the leaf extract of selected plants   | Nano Science and Nano Technology 8 2 (2013).<br><b>ISSN 0974 – 7494</b>  |         |
| Synthesis of silver nanoparticles from the leaf extract of <i>Ziziphus mauritiana</i> lam. and its antimicrobial activity      | Multidisciplinary Research Journal of VVV College 1(1):33 – 39.  |         |
| Isolation and screening of endophytic fungi from medicinal plants of Virudhunagar Districts for antimicrobial activity         | International Journal of Science and Nature, 5(1): 147-155, 2014.  | EBOS CO |
| Influence of organic solid wastes in vermicultural properties of the epigeic earthworm, <i>Eisenia fetida</i>                  | International Journal of Advanced Research in Biological Sciences 1(8): 242- 247, 2014<br>ISSN: 2348-8069              |         |
| Iluppai Poo in Proverbs – An Scientific Approach   | Journal of Classical Thamizh (Bi-Annual International  |         |

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|---|---|--|
|   | multilateral Thamizh Journal )<br>2(2): 222-, 2014.   |  |
| Biosynthesis of silver nanoparticles from <i>Premna serratifolia</i> L. leaf and its anticancer activity in CCl4-induced hepato-cancerous Swiss albino mice | Applied Nanoscience, 2015.5(8) 937-944. <b>Online ISSN</b> 2190-5517  |  |
| Enhancing the phycobilin pigment synthesis in <i>Calothrix elenkinii</i> through optimization of light conditions   | I.J.S.N., VOL.6 (1) 2015: 88-91<br><b>ISSN 2229 – 6441</b>  |  |
| Cellulolytic Efficiency of Forest Litter Microflora Isolated from Sirumalai Hills of Dindigul District  | Asian Journal of Science and Applied Technology 4 (1), 5-9, 2015 <b>ISSN: 2249-0698</b> .                       |  |
| Comparative Study of Biochemical Responses in Three Species of Earthworms Exposed to Pesticide and Metal Contaminated Soil                                  | Environmental Processes 3 (1), 167-178.2016. <b>DOI 10.1007/s40710-016-0131-9.</b>                              |  |
| Coelomic fluid protein profiling and heavy metal accumulation of three earthworms after exposure to pesticide and metal stress                              | International Journal of Advanced Multidisciplinary Research. (IJAMR) 3 (2) 84-91, 2016. <b>ISSN: 2393-8870</b> |  |

#### Papers presented

| Date                          | Seminar / Conference | Title of the paper  | Venue  |
|-------------------------------|----------------------|---|--|
| 10.01.2003<br>–<br>11.01.2003 | National Conference  | Bio-Fuels – Ethanol Production from banana peel and cassava waste                                       | Department of Industrial Biotechnology, Karpagam Arts and Science College, Coimbatore.                                     |
| 21.02.2003<br>–<br>22.02.2003 | Regional Seminar     | “People, Plants and Future” – Palmyrah potential resource for bioethanol production                     | Centre for Futures Studies and Department of Biology, Gandhigram Rural Institute (Deemed University), Gandhigram, Dindigul |
| 09.01.2004<br>–<br>10.01.2004 | National Conference  | “Microbes for Mankind” – Preservation of palm juice   | Department of Microbiology, Karpagam Arts and Science College, Coimbatore.   |
| 19.02.2004<br>–<br>20.02.2004 | National Seminar     | “Rural Biotechnology for sustainable Development” – Phosphate solubilizing efficiency of microorganisms | Department of Biology, Gandhigram Rural Institute (Deemed University), Gandhigram, Dindigul                                |

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|------------------------------------|------------------------|---|--|
| 27.02.2004<br>–<br>28.02.2004<br>. | National<br>Symposium  | “Recent Trends in<br>Biosciences”   | Department of Biology and<br>Biotechnology, Sri<br>Paramakalyani College,<br>Alwarkurichi.                 |
| 12.03.2004<br>–<br>13.03.2004      | Regional<br>Seminar    | “Post Harvest<br>Technology for Rural<br>Development” –<br>Candied Ginger and<br>Mango - Acceptance   | Department of Home Science,<br>Gandhigram Rural Institute<br>(Deemed University),<br>Gandhigram, Dindigul. |
| 22.02.2005<br>–<br>23.02.2005      | National<br>Conference | “Advances in Solid<br>Waste Management” -<br>Effect of FYM<br>enriched with RP and<br>PSMs on growth and<br>yield of cowpea ( <i>Vigna<br/>unquiculata</i> L. Walp.)<br>Var. Co. 2. | Department of Biology,<br>Gandhigram Rural Institute<br>(Deemed University),<br>Gandhigram                 |
| 22.02.2005<br>–<br>23.02.2005      | National<br>Conference | “Advances in Solid<br>Waste Management” -<br>Enumeration of PSMs<br>and available<br>phosphate from FYM<br>and soil enriched with<br>rock phosphate.                                | Department of Biology,<br>Gandhigram Rural Institute<br>(Deemed University),<br>Gandhigram                 |
| 14.09.2006<br>–<br>15.09.2006<br>. | National<br>Symposium  | “Grow more<br>Biotechnology for<br>Human and Biosphere<br>Development” -<br>Studies on pigment<br>production by<br><i>Lasiodiplodia<br/>theobromae</i> isolate<br>LD1 and LD2.      | Department of Zoology and<br>Biotechnology, Sri<br>Paramakalyani College,<br>Alwarkurichi                  |
| 29.09.2006                         | National<br>Symposium  | “Role of organic<br>chemistry in<br>Medicine”- Isolation<br>and Screening of<br><i>Lasiodiplodia<br/>theobromae</i> – A<br>Pigment producing<br>fungi.                              | PG Department of<br>Pharmaceutical Chemistry,<br>Sri Kalishwari College,<br>Sivakasi                       |
| 29.02.2008                         | National<br>Seminar    | Tamilaivu –<br>Panmuganokku –<br>Sanga illakiyathil<br>Kanthal .  | Department of Tamil,<br>V.V.Vanniaperumal College<br>for Women, Virudhunagar                               |
| 06.03.2008                         | National               | “The Present scenario   | Department of Biotechnology,   |

|                               |                       |   |   |
|-------------------------------|-----------------------|---|---|
| -<br>07.03.2008               | Seminar               | in biodiversity, biotechnology and environmental management” – Potential of newly reported native earthworm , <i>Perionyx ceylanesis</i> for vermitechology.                          | Botany and Environmental Science, J.J. College of Arts and Science, Pudukkottai                                       |
| 13.03.2009<br>-<br>14.03.2009 | National Seminar      | “New Dimensions in Biotechnology” –   | Department of Biotechnology, J.J. College of Arts and Science, Pudukkottai .  |
| 06.08.2010                    | National Seminar      | “Recent trends in Herbal Medicine” – <i>Vinca Rosea</i> - Properties and Chemical Compounds.  | Department of Biochemistry, V.V.Vannia perumal College for Women, Virudhunagar  |
| 24.09.2010                    |                       | “Isolation, Screening and Identification of phosphate solubilizing microorganisms”  | Student Faculty Research Forum, V.V.Vanniaperumal College for Women, Virudhunagar                                     |
| 08.12.2011                    | International Seminar | “Emerging trends and innovative technologies in biological sciences for a better tomorrow” - Phosphate solubilizing Microorganisms as microbial inoculant for sustainable agriculture | Department of Biochemistry, V.V.Vannia perumal College for Women, Virudhunagar<br>Abs pp.15<br>ISBN 978-93-80657-44-8 |
| 01.02.2012                    | State Seminar         | “Recent scenario on Biological innovations” - Nitrogen fixing and phosphate solubilizing <i>Rhizobium</i> sp. as microbial inoculant for sustainable agriculture                      | Departments of Zoology and Micorobiology, V.V.Vannia perumal College for Women, Virudhunagar                          |
| 26.02.2014                    | State Seminar         | “Integrated pest Management” (IPM) - Botanicals : An Introduction   | Departments of Zoology and Microbiology, Thiagarajar College, Madurai   |
| 05.09.2014<br>–<br>06.09.2014 | National Seminar      | Biovision -   | Department of Zoology and Botany<br>APSA College, Thirupathur Sivagangai  |

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|-------------------------------|------------------|--|---|
| 29.09.2014<br>–<br>30.09.2014 | National Seminar | “Algae for Sustainable Agricultural Production” - Enhancing the Phycobilin pigment synthesis in <i>Calothrix</i>   | Department of Seed Science and Technology, Agricultural Microbiology, TNAU, Madurai and Seaweed Research and Utilization Association, Tuticorin |
| 28.01.2015<br>-<br>29.01.2015 | National Seminar | Interdisciplinary Application of Biology – Diversity of Plant Species in selected sacred groves of Melur Taluk in Madurai District, Tamil Nadu   | Research Centre and PG Department of Zoology, Jayaraj Annapackiam College, Periyakulam  |
| 18.12.2014<br>–<br>19.12.2014 | National Seminar | Biological Sciences ; The Amalgaation and Advancements of Multidisciplinary Life Sciences - Cellulolytic efficiency of forest litter microflora isolated from Sirumalai hills of Dindigul Dt., | Departments of Biochemistry, V.V.Vanniaperumal College for Women, Virudhunagar  |
| 21.02.2015                    | National Seminar | Water sanitation and Hygiene – WaSH -  | Department of Zoology, E.M.G. Yadava Women’s College, Madurai.  |
| 31.03.2015                    | National Seminar | Recent advances in Industrial Biotechnological Skills Development - Preparation of phosphate solubilizing microbial inoculant using vermicompost as a carrier material                         | PG and Research Department of Botany, Thiagarajar College, Madurai  |
| 05.02.2016                    | National Seminar | Emerging Trends in management of Infectious diseases and public health -   | PG and Research Department of Biotechnology, Mohamed Sathak College of Arts and Science, Sholinganallur, Chennai                                |
| 26.02.2016                    | National Seminar | Advances in Biological and Environmental Sciences “Coelomic fluid protein profiling and heavy metal accumulation of three  | Department of Biology, Gandhigram Rural Institute (Deemed Uniersity), Gandhigram, Dindigul  |

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|  |  | species of earthworms after exposure to pesticide and metal stress" |  |
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### Articles published in Books / Conference Proceedings

| Year | Book title / Conference   | Article title   |
|------|---|---|
| 2004 | Rural biotechnology for sustainable development. (Ed.) Thilagavathy, D., Department of Biology, Gandhigram Rural Institute, Gandhigram. pp. 78 – 82. 2004     | Phosphate solublizing efficiency of microorganism isolated from rhizosphere soil sample of <i>Tephrosia purpurea</i> (L) Pres.                  |
| 2005 | Advances in Environmental Biotechnology. (Ed.) Ravindran, A.D., M.S. Dhana Rajan, Srishta Books, Chennai pp: 53-60. 2005                                      | Effect of <i>Rhizobium</i> sp. and cocomposted tannery sludge on the growth of <i>Acacia auriculiformis</i> .                                   |
| 2005 | Advances in Environmental Biotechnology. (Ed.) Ravindran, A.D., M.S. Dhana Rajan, Srishta Books, Chennai pp: 31-35. 2005                                      | Isolation of phosphate solubilizing and salt tolerant bacteria from rhizosphere soil of plants in Gandhigram Rural Institute.                   |
| 2008 | Proceedings of Tamil National Conference on Tamilayvu – Panmukanokku. Department of Tamil, V.V.Vanniaperumal College for Women, Virudhunagar.                 | SangaIellakkiyathil Kanthal ( <i>Gloriosa superba</i> )   |
| 2014 | Proceedings of the National Seminar on Biovision – 2014 Recent trends and future perspectives of Biosciences. Pp 51 -56.                                      | Assessment of vermicultural characteristics of an exotic earthworm, <i>Eisenia fetida</i> in different organic wastes                           |
| 2015 | SOLID STATE PHYSICS: AIP Conference Proceedings of the 59th DAE Solid State Physics ... AIP Conf. Proc. 1665, 080047 (2015);                                  | Studies on the performance of TiO <sub>2</sub> thin films as protective layer to chlorophyll in <i>Ocimum tenuiflorum</i> L from UV radiation . |
| 2016 | Strengthening the participation of youth in environment protection.<br><br>PG and Research Department of Zoology, Rajah Serfoji Government College, Thanjavur | Vermiculture - a tool for eradicate pollution and unemployment. pp 38-50, 2016  |

### Books published / edited

| Year | Book title            | Published / edited | ISBN | Publisher   |
|------|-----------------------|--------------------|------|---|
| 2010 | Environmental studies | Published          | -    | V.V.Vanniaperumal College for Women, Virudhunagar |



|      |                  |           |                   |  |
|------|------------------|-----------|-------------------|--|
| 2011 | Objective Botany | Published | 978-81-234-1981-7 | New Century Book House (P) Ltd., Chennai |
|------|------------------|-----------|-------------------|--|

V **No. of Seminars/Conferences/Workshops attended-34**

VI **Course attended (Refresher / Orientation / any other )**

| Name of the Course                                      | Venue   | Duration                |
|---|---|-------------------------|
| Orientation Programme                                   | Academic Staff College, Madras University, Chennai          | 01.11.2008 - 28.11.2008 |
| Refresher Course - Modern Trends in Biological Sciences | Academic Staff College, Madurai Kamaraj University, Madurai | 03.11.2009 – 23.11.2009 |
| Refresher Course – Nano Science                         | Academic Staff College, Madras University, Chennai          | 15.11.2013 – 05.12.2013 |

**As a member of Board of Studies :**

| University / College        | Period      | Board                  |
|-----------------------------|-------------|------------------------|
| VHNSN College, Virudhunagar | 2012 – 2014 | UG and PG Botany Board |

**As a member in Inspection Commission / Interview Panel / others**

| Particulars     | Date       | Venue  | Course / Post                |
|-----------------|------------|--|------------------------------|
| Interview panel | 05.08.2013 | V.V.Vanniaperumal College For Women, Virudhunagar. | Botany - Assistant Professor |
| Interview panel | 16.03.2016 | V.V.Vanniaperumal College For Women, Virudhunagar. | Botany - Assistant Professor |

IX **Seminars / Conferences / Workshops organized**

| Date       | Level    | Theme                             |
|------------|----------|-----------------------------------|
| 20.01.2012 | Regional | Workshop – Green Health Therapy - |