

Resume

Name : Dr. SANNIYASI ELUMALAI

Designation : Associate Professor,
Plant Biology & Biotechnology Department
Presidency College, University of Madras,
Chennai - 600 005, India.

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Education:

Post Doctoral Research Associate with Prof. Henry Daniell, Pegassus Professor and Trustee Chair, Biomedical Division, University of Central Florida, Orlando, U.S.A. on “**Chloroplast Genetic Engineering and Plant based Transgenic Vaccines**”, June 2005 to July 2007.

Post Doctoral Research Associate with Prof. Mike O.K. Jones, Director, State Agri Biotech Center, Murdoch University, Perth, Western Australia on “**Markers based Molecular Plant Breeding**”, Jan. 2002 to July 2003.

Post Doctoral Research Associate with Dr. N. Raman and Prof.A.Mahadevan, Aug. 1996 to June 1998, Department of Plant Sciences, Center for Advanced Studies in Botany, University of Madras, India on “**Mycorrhizhizal and Actinorhizal Association in Casuarina equisetifolia in East Coast of India**”.

Ph.D., with Dr. N. Raman and Prof. A. Mahadevan, Jan. 1992 to July 1996, Department of Plant Sciences, Center for Advanced Studies in Botany, University of Madras, India.

M.Phil, Molecular Mycology, Aug. 1990 – Dec. 1991, Department of Plant Sciences, Center for Advanced Studies in Botany, University of Madras, India.

M.Sc., Department, of Plant Biology and Biotechnology, Presidency College, University of Madras, India. June 1987 to May 1989.

B.Sc, Department of Plant Biology and Biotechnology, Govt. Arts College, Tiruvannamalai, University of Madras, India. June 1984 to May 1987.

Visiting scientist:

Visiting scientist:

Visiting scientist to Technical University of Denmark, Denmark participated and presented research communications in Conference held from 27th to 29th August, 2014.

Visiting scientist:

Visiting scientist to Stockholm University, Sweden Meeting with the Professor Ula from 18th to 26th August, 2014.

Visiting scientist: Russia May to June 2014

Visiting scientist to M. V. Lomonosov State University, Russia attended and presented research communications and research work in conference held from May to June 2014.

Visiting scientist: Hungary April 2013

Visiting scientist to Etovas University, Budapest, Hungary and presented research communications and research work on 11th April, 2013.

Visiting scientist: South Africa on April- 2013

Water and Waste Water Research Center, Durban University of Technology, Durban, South Africa – April 2013-June 2013. Analused the results from Collaborative Research project on Algal Biodiesel both India and South Africa Bilateral 4.5 Million South African Rands.

Visiting scientist- Water and Waste Water Research Center, Durban University of Technology, Durban, South Africa – April 2011-June 2011. Initiated Collaborative Research project on Algal Biodiesel both India and South Africa Bilateral 4.5 Million South African Rands.

Visiting Scientist – Water and Waste Water Treatment Research Centre, Durban University of Technology, Durban, South Africa – April 2010 to June – 2010. Delivered Lectures and Demonstrations about Microalgal based Biodiesel Production.

Books Published:

- ❖ S. Elumalai and R. Bargavi, “*Agrobacterium tumefaciens* mediated gene transfer and Nanobiotechnology of *Capsicum annuum* L. var. Arka Lohit”, Digital age Publishers, 2014, ISBN no. 978-81-926675-3-9.
- ❖ S. Elumalai and R. Sakthivel, “Studies on Biodiversity, Molecular Taxonomy and Nano technology of Microalgae”, Digital age Publishers, 2014, ISBN no. 978-81-926675-2-2.
- ❖ S. Elumalai and S. Revathy, “Studies on Modulation of MDR-1 Gene expression and Nano biotechnology”, Digital age Publishers, 2014, ISBN no. 978-81-926675-4-6.
- ❖ S. Elumalai and V. Prakasam, “Molecular Characterization of Microalgae isolated from Tamil Nadu Coastal region-India for Biofuel production”, Digital age Publishers, 2014, ISBN no. 978-81-926675-5-3.
- ❖ S. Elumalai and S. Ramganes, “Molecular Characterization of Microalgae from different fresh water habitats for Biofuel production”, Digital age Publishers, 2014, ISBN no. 978-81-926675-6-0.

- ❖ M. Prabhakaran and S. Elumalai, “Application of Genetic Engineering in Pigeon Pea Crop Improvement” Scholar’s Press, 2014, ISBN no. 978-3-639-71109-7.
- ❖ S. Elumalai and Remmia Raghavan, “Molecular (RAPD and SSR markers), Ultrastructural, analytical and morphological characterization of Black pepper (*Piper nigrum* L.) for crop improvement”, Digital age Publishers, 2014, In press.
- ❖ S. Elumalai and T. S. Mahendran, “Genetic transformation of *Coleus forskohlii* Briq. mediated by *Agrobacterium tumefaciens* for enhancement of forskolin”, Digital age Publishers, 2014, In press.
- ❖ S. Elumalai and Infant Santhose, B., “Screening and isolation of the microalga *Haematococcus pluvialis* and extraction of the pigment Astaxanthin for its Anticancer potential”, Digital age Publishers, 2014, In press.

Honours and Awards

- **FMSF – Fellow Conferred Madras Science Foundation 2010.**
- **Biotechnology Overseas Associateship Award**, from Department of Biotechnology, Ministry of Science and Technology, Government of India, New Delhi 2004-2005.
- **Young Scientist Award in Biotechnology** from Ministry of Science and technology Government of India, New Delhi, India, 2001 - 2002.
- **Young Scientist Award in Biotechnology** from Ministry of Higher Education and Science, Tamil Nadu State Government, Chennai, India, 1999 - 2000.
- **Awarded Research Associate Fellowship** by Council of Scientific and Industrial Research (CSIR), Government of India, New Delhi, Aug. 1996-June 1998.

- **Awarded Senior Research Fellowship** by Council of Scientific and Industrial Research (CSIR), Government of India, New Delhi, March 1993- Feb. 1996.
- **Awarded Junior Project Fellow** by University Grants Commission (UGC), Government of India, New Delhi, Jan. 1992 - Feb. 1993.
- **"Fyson Award"** for the best Herbarium of rare specimens of South India submitted in 1989 Presidency College, University of Madras, Chennai, India.
- **Member** : Chloroplast Genetic Engineering and Transgenic Association USA.
Indian Association of Biomedical Scientists.
Indian Botanical Society, India.
Association of Microbiologists of India.
Medicago Truncatula Research Group, Australia.
Nitrogen fixing Tree Association, Hawaii, USA.

Teaching Experience

- Associate professor (2011-till date), Presidency College, Chennai (Autonomous), Madras University.
- Assistant Professor (2002-2011), Presidency College, (Autonomous), Madras University.
- Senior Lecturer (2002), Presidency College, Chennai, Madras University.
- Lecturer (1998-2002), Govt. Arts College, Krishnagiri, Periyar University.

Research Projects Awarded by Funding Agencies

1. ***"Large Scale Production of Gasoline and Biodiesel from Microalgae isolated from Rock ponds and Temple Tanks"*** Sponsored by Defence Research and Development Organisation (DRDO), Govt. of India **Rs.42 Lakhs**, duration from 29.11.2010 to 07.06.2012, Completed.
2. ***"Chloroplast Genetic Transformation of Chick pea (Cicer arietinum) for crop improvement"*** Sponsored by University Grant Commission (UGC),

Govt of India, **Rs. 11.5 Lakhs**, duration from 23.09.2009 to 12.05.2012, Completed.

3. ***“Chloroplast Genetic Engineering and Nano Biotechnology for cotton and Pigeon pea crops improvement”*** Sponsored by Department of Biotechnology Ministry of Science and Technology (DST), Govt. of India, **Rs.100 Lakhs**, duration from 05.04.2010 to 05.04.2012, Completed.
4. ***“Chloroplast Genetic Engineering and Gene Transformation for the improvement of Chickpea (Cicer arietinum) Crop”*** Sponsored by Council of Scientific and Industrial Research (CSIR), Govt. of India **Rs.49 Lakhs**, duration from 30.06.2010 to 30.06.2013 Completed.
5. ***“Indo-South African Project entitled “Chloroplast Genome Sequencing of Biodiesel Producing Microalgae Strains from Extreme Climate in India and South Africa”***. Sponsored by Department of Science and Technology (DST), Govt. of India, **Rs. 15.5 lakhs and 4.5 million South African Rands**. Duration from 09.01.2012 to 09.01.2015, On-going.
6. ***“Screening of potent Microalgae from salt-pans of Coromandel Coast, India”*** sponsored by University Grants Commission (UGC) Govt. of India, **Rs. 0.78 lakhs**, duration from August 2012 to Aug. 2015, On-going.
7. ***“Bioremediation of Textile dyeing Industry effluents through microalgae and anaerobic Bacterial consortia.”***Sponsored by Department of Biotechnology (DBT), Govt. of India, **Rs. 13.44 lakhs**, duration Nov. 2012 to Nov. 2015, On-going.

Administrative Experience

1. Member Syllabus Committee, Presidency College, Chennai
2. Member U.G.C committee, Presidency College, Chennai
3. Secretary Parent – Teacher Association, Presidency College, Chennai.
4. Executive Member, Alumni Association Presidency College, Chennai.
5. Academic Council Member, VEL’S University, Pallavaram, Chennai.

6. Executive Member, Hostel Committee, Presidency College, Chennai.
7. Executive Member, Madras Science Foundation, Chennai.
8. Executive Member, NAAC Committee Preparation, Presidency College, Chennai.
9. Organizing Secretary, Many National & International Conferences and Workshops.
10. Organizing Secretary, Annual Science Day Celebration, Presidency College, Chennai.

Research Experience

Genomics and Proteomics

DNA : Minipreps, Maxipreps, PCR, Southern Blot, Sequencing.

RNA : Isolation, Northern Blot.

Protein : Isolation and purification, SDS-PAGE, Western blots, ELISA, MALDITOP, Two Dimension gel, micro arrays.

Microbe : Isolation, identification and maintenance of plant pathogenic bacteria and fungi.

Plant : Marker Assisted selection in Crop plants **Chickpea, Rice** by using PCR, RFLP, AFLP, RAPD, SNP'S, Microsatelites, CAPS - Markers.

“Chloroplast Genetic Engineering and Plant based Transgenic Vaccines”.

- a. Chloroplast Vector Construction.
- b. Plant tissue culture
- c. Particle bombardment (Bio-rad)
- d. Animal Trials with reference to Transgenic plant based vaccines.

Agro forestry tree *Casuarinas* nursery disease management by Mycorrhizas and Actinorhiza (*Frankia*). Investigations on Actinorhizal and Mycorrhizal Tripartite symbiosis in *Casuarina equisetifolia*.

Seminar / Conference / Workshop Organized

1. 1st National Workshop on “*Recent Trends in Biotechnology and Analytical Instrumentation*”, March 5th to 7th, 2008 with I.I.T Madras, Chennai.
2. 2nd National Workshop on “*Recent Trends in Biotechnology and Analytical Instrumentation*”, Jan 7 to 9, 2009, with I.I.T Madras, Chennai.
3. 3rd National Workshop on “*Recent Trends in Nano-Biotechnology and Nanotechnology Instrumentation*”, Sep 17 to 19, 2009 with I.I.T Madras, Chennai.
4. “Exploring the Secrets of Biofuel on international summit”, July 14 – 16, 2011 with I.I.T, Chennai, CLRI Campus.
5. One day “*National seminar cum workshop on Applied Plant Genomics*”, 13th July, 2012.

Research / Training

Participated International conference on “Driving the next Agri Revolution “ – Food pro 2007, 7th Indian Food Processing & Food Technology Fair, Nov 25-27, 2007 by confederation of Indian Industry, Ministry of Food Processing Industry, Govt. of India, Chennai Trade Center, Chennai, India

Participated “National Workshop on Data Analysis using SPSS (Statistical Package for Social Sciences), Golden Jubilee, Dept. of Statistics, Presidency College, Chennai – 5. Nov 22-24 2007

Attend Workshop entitled, “New Cells for New Vaccines” held in Miami, Florida, USA, Jan. 6th to 2007.

Participated in Interdisciplinary dialogue on "Nanobiotechnology" : Implications on Food, Health, and Nutrition Security, March 11-13.2005 organised by M.S. Swaminathan Research Foundation and International Food Policy Research Institute, Chennai, India.

Participated in International Seminar on "Intellectual Property Rights in Biotechnology" organised by David Kelite Associates, U.K. and Mohan Associates, 7th Feb. 2005, Chennai.

Participated in Refresher course in "Educational Technology" for Biotechnology teachers in Universities from 10.01.2004 to 30.01.2004 sponsored by : University Grants Commission -Academic Staff College, Bharathidasan University, Trichirapalli - T.N. India.

Participated in "Bio-Trendz - 2004" Vel's Research Consortium, Vel's College of Science, Pallavaram, Chennai.

Participated in "DNA and Drug Design" 7-8 October, 2004. Vel's Research Consortium, Vel's College of Science, Pallavaram, Chennai.

Participated in National Symposium on "Biotechnological Tools in preserving the biodiversity of rare medicinal plants" 3-4 February, 2005, Vel's Research Consortium, Vel's College of Science, Pallavaram, Chennai.

Participated in National Symposium on "emerging Infections in India - Current Perspectives" 10-11 February, 2005. Vel's Research Consortium.

Participated in XXV - Annual Conference of the Indian Association of Biomedical Scientists, October 7-10, 2004, CLRI, Adyar, Chennai,

Intensive training in Molecular Biology at the Molecular Oncology Dept., June 2000 - March 2002. **Cancer Research Institute**, Chennai, India,

Three months training on detection of Food Borne Pathogens, (*Staphylococcus aureus* in foods) and Polymerase Chain Reaction for the detection of *Bacillus cereus* April - June 2000.

Central Food Tech Research Institute, Mysore, India, Three months training programme on Marker assisted selection programme in crop plants by using PCR, RAPD, Micro Satellites in **University of Agricultural Sciences**, Sep. -Nov. 1999, Bangalore, India,

Two months training on Industrially important enzymes, isolation, purification commercialization at **Central Leather Research Institute**, April - June 1999, Chennai, India.

Two months training programme in Plant Biology and Biotechnology - In Dept., Plant Sciences, **Madurai Kamaraj University**, November - December 1993, Madurai, India,

Received certificate course in Computer Science including Word Processing, Graphics, Basic, Visual Basic, Java, Internet and **Knowledge about Bio-informatics** - Related to Molecular Biology.

Ph.D. completed under my guidance

Six (6) completed and four (4) submitted.

M. Phil. Completed under my guidance

Eighteen (18)

Ph.D. currently Doing under my guidance

Ten (10)

M. Phil. Currently Doing under my guidance

One (1)

Publications

1. Elumalai, S. and R. Devika. 2014. Biosynthesis of Silver Nanoparticles using Curcuma longa and their Antibacterial activity. Int. J. Pharm. Res. Sci., Vol. 02 (1): 98-103.

2. Devika, R., S. Elumalai, E. Manikandan and D. Eswaramoorthy. 2012. Biosynthesis of Silver Nanoparticles using the Fungus *Pleurotus ostreatus* and their antibacterial activity. Open access Scientific Reports. Vol. 1(12). Impact factor: 5.46.
3. Elumalai. S., R. Devika, P. Arumugam and K. Kasinathan. 2012. Extracellular Biosynthesis of Silver Nanoparticles using the Fungus *Pleurotus ostreatus* and their antibacterial activity. Journal of Nano Science Nano-Engineering & Applications. Vol. 2(2): 28-38.
4. Elumalai, S., B. Infant Santhose, R. Devika and S. Revathy. 2012. Collection, Isolation, Identification and Biosynthesis of Silver nanoparticles using microalga *Chlorella pyrenoidosa*. Nanomechanics Science and Technology. An International Journal. Vol. 3(4): 1-9.
5. Elumalai, S., B. Infant santhose and S. Divya. 2013. Growth kinetics of the algae *Scenedesmus* sp. and its Nano particle synthesis, collected from Southern coasts of Chennai, India. Journal of Microbiology and Biotechnology Research. Vol. 3(5):12-17.
6. Elumalai. S., S. Ramganesha and V. Prakasam. 2014. Molecular Characterization and Fatty acid profiling of Indigenous Microalgae species with potential for Biofuel production in Tamil Nadu. Golden Research Thoughts. March 2014.
7. Elumalai*, S., G. Rajesh kanna, G. Jegan, T. Sangeetha and D. Roop singh. June 2014. Extraction of Phycocyanin an important pharmaceutical Phycobiliproteins from Cyanobacteria. International Journal of Pharmaceutical Research and Development, Vol. 6(4): 067-074. Impact factor: 2.01.
8. Prabhakaran, M., S. Elumalai, B. Infant Santhose and G. Rajesh Kanna. March 2014. Collection, Isolation and Identification of *Haematococcus pluvialis* Flotow from high altitude region of Pithoragarh district,

Uttarkhand, India. Golden Research Thoughts, Vol. 3(9): 1-6. Impact factor: 1.9508.

9. Elumalai, S. and Mohamed Halith, A. 2014. Studies on Micro algal Diversity, Arsenic (As) concentration and Physiochemical parameters in different water habitats from West Bengal, India. Golden Research Thoughts, 4(1): 1-14. Impact factor: 2.2052.
10. Prabhakaran, M., S. Elumalai , B. Infant Santhose and G. Rajesh Kanna. January 2015. Optimization of media for Vegetative stage of *Haematococcus pluvialis* Flotow, collected from Pithoragarh district, Uttarkhand, India. Review of Research, Vol. 3 (4): 1-7. Impact factor: 1.6772.
11. Prabhakaran, M. and S. Elumalai. 2014. An efficient *In vitro* regeneration of shoot from cotyledon derived callus of Pigeon Pea (*Cajanus cajan* (L.) Millsp.). Indian Streams Research Journal. Vol. 3(12):1-7. Impact factor: 1.7604.
12. Prabhakaran, M. and S. Elumalai. 2014. Histochemical and Anatomical study of *Helicoverpa armigera* attacked and healthy Pigeon Pea (*Cajanus cajan* (L.) Millsp.) Pods. Golden research thoughts. Vol. 3(7):1-5. Impact factor: 1.9508.
13. Elumalai, S., G. K. Saravanan, G. Rajesh Kanna, T. Sangeetha and D. Roop Singh. 2014. Biochemical and Pigment analysis on phycoremediated microalgal biomass. Golden research thoughts. Vol. 3(7): 1-7. Impact factor: 1.9508.
14. Elumalai, S. G. K. Saravanan, G. Jegan, T. Sangeetha and D. Roop Singh. 2014. Studies on growth and biochemical analysis of three microalgal strains on different molar concentrations of Sodium bicarbonate. Indian journal applied research. Vol. 4(1):60-62. Impact factor: 0.8215.

15. Elumalai, S., R. Sakthivel and A. Mohamed Halith. 2014. Biodiversity of fresh water algae from Presidency College campus, Chennai, India. Golden research thoughts. Vol. 3(7): 1-10. Impact factor: 1.9508.
16. Raman, N. and S. Elumalai. 1997. Development of Proteoid roots in *Casuarina equisetifolia*. Ind. J. Exp. Biology. Vol. 7(II), 138-150. Impact factor: 1.295.
17. Raman, N. and S. Elumalai. 1996. Presence of Cytokinin in the root nodules of *Casuarina equisetifolia*. Ind. J. Exp. Biology. Vol. 34, 577-579. Impact factor: 1.295.
18. Raman, N. and S. Elumalai. 1998. Gibberellic acid in Mycorrhizal and Actinorhizal inoculated *Casuarina equisetifolia*. Ind. J. Exp. Biology. Vol. 36, 703-708. Impact factor: 1.295.
19. Raman, N. and S. Elumalai. 2009. *In vitro* synthesis of *Frankia* and mycorrhiza with *Casuarina equisetifolia* and Ultrastructure of root system. Ind. J. Exp. Biol. Vol. 47. Impact factor: 1.295.
20. Daniel, H., Robert K. Jansen, Martin F. Wojciechowski, Elumalai Sanniyasi and Seung-Bum Lee. 2008. Complete plastid genome sequence of the chickpea (*Cicer arietinum*) and the Phylogenetic distribution of *rps12* and *clpP* intron losses among legumes (Leguminosae). Molecular Phylogenetics and Evolution. Vol. 48(3), 1204-1217. Impact factor: 3.609.
21. Virthie Bholu, Ramesh Desikan, Sheena Kumari Santosh, Karthikeyan Subburamu, Elumalai Sanniyasi and Faizal bux. 2010. Effects of parameters affecting biomass yield and thermal behaviour of *Chlorella vulgaris*. Journal of Bioscience and Bioengineering. Vol. 111 (3), 377-382. Impact factor: 2.149.
22. Gadhe, A. A., S. N. Mudliar, R. A. Pandey, S. Elumalai and D. B. Satpute. 2011. Statistical optimization of process parameters for the production of Vanillic acid by solid-state fermentation of groundnut shell waste using response surface methodology. J. Chem. Technol. Biotechnol. Vol. 86, 1535-154. Impact factor: 2.168.

23. Elumalai, S. and S. Revathy. 2013. Study of Collateral Sensitivity of Multidrug resistant Cell lines to Curcuminoids. Int. J. Curr. Microbiol. App. Sci. Vol. 2(5): 28-39.
24. Elumalai, S., K. Somasundaram, R. Sakthivel, S. Ramganesha and V. Prakasam. 2013. Phytoremediation of metals by aquatic plants at natural wetlands in major lakes of (Industrial city) Hosur, Krishnagiri district, India. International Journal of Science Innovations and Discoveries. Vol. 3(1):135-145.
25. Elumalai, S., G. K. Saravanan, S. Ramganesha, R. Sakthivel and V. Prakasam. 2013. Phycoremediation of textile dye industrial effluent from Tirupur district, Tamil Nadu, India. International Journal of Science Innovations and Discoveries. Vol. 3(1):31-37.
26. Elumalai, S. and R. Sakthivel. 2013. GC-MS and FT-IR spectroscopic determination of Fatty acid Methyl Esters of 16 freshwater Microalgae, Isolated from Cement Industries of Tamil Nadu, India. Journal of Algal Biomass Utilization. Vol. 4(1): 50-69.
27. Elumalai, S., S. Ramganesha, V. Prakasam and M. Prabhakaran. 2012. Construction of plant expression vector of synthetic bt-cry lac gene for genetic transformation. Elixir Biotech. Vol. 53: 11736-11740.
28. Elumalai, S., R. Sakthivel and S. Divya. 2012. Fatty acids methyl ester analysis of potent micro algae *Scenedesmus dimorphus* (Turpin) Kutzing and *Chlorococccum infusionum* (Schrank) Meneghini isolated from effluents of Neyveli thermal power station expansion-1. Journal of Algal Biomass Utilization Vol. 3(3): 12-20.
29. Elumalai, S., N. Senthil Kumar and S. Ramganesha. 2012. Ultra Structural Studies of Macroalgae Collected from Coromandel Coast, India for Biofuel Production. International Journal of Bio-resource and Stress Management. Vol. 3(2): 138-143.

30. Elumalai, S., R. Sakthivel, B. Infant Santhose and N. Senthil Kumar. 2011. Analysis of Algal Cell Elements Collected from Temple Tanks, Rock Ponds and Seashore in Kovalam and Mahabalipuram, Tamil Nadu, India. Journal of Experimental Science. Vol. 1(5): 20-22.
31. Elumalai, S., M. Prabhakaran and N. Raman. 2011. Elemental analysis of mycorrhizal and actinorhizal inoculated *Casuarina equisetifolia* under glasshouse condition. Biotechnology: An Indian Journal. Vol. 5(3).
32. Elumalai, S., B. Infant Santhose, J. Gnanadoss and S. Ramganes. 2011. Enhanced Carotenoid synthesis of *Phormidium* Spp. In Stressed Conditions. Journal of Experimental Sciences. Vol. 2(3): 38-44.
33. Elumalai, S., S. Revathy, M. Benny and B. Antony. 2011. Evaluation of Curcuminoids in Turmeric Rhizome (*Curcuma longa* L.) Collected from Different Places in India. Biosciences, Biotechnology Research Asia. Vol. 8(1): 259-264.
34. Elumalai, S., M. Prabhakaran, S. Ramganes and V. Prakasam. 2011. High Frequency Induction of Callus from Seedling Explants of Pigeon pea (*Cajanus cajan* [L] Millsp.) for Genetic Transformation. Current Botany. Vol. 2(6): 15-17.
35. Elumalai, S., M. Prabhakaran and N. Raman. 2011. Indole Acetic Acid (IAA) Levels of Cladodes and Roots in Effect of Mycorrhizal and Actinorhizal Inoculation on *C. Equisetifolia* under Glasshouse Condition. Recent Research in Science and Technology. Vol. 3(6): 70-75.
36. Elumalai, S., R. Sakthivel, B. Infant Santhose and P. Arul Murugan. 2011. Isolation, Identification, Morphological Studies and Lipid Granules Staining (Nile red) of Different Micro-Algae for Biodiesel Production from Fresh Water and Saline Water. Journal of Experimental Science. Vol. 2(7): 26-29.

37. Elumalai, S., S. Baskaran, V. Prakasam and N. Senthil Kumar. 2011. Ultra structural analysis and Lipid staining of Biodiesel producing Microalgae - *Chlorella vulgaris* collected from various ponds in Tamil Nadu, India. Indian Journal of Eco biotechnology. Vol. 3(1): 05-07.
38. Elumalai, S. and V. Prakasam. 2011. Lipid Granules Staining (Nile Red and Bodypy) of Different Biofuel Producing Fresh Water Microalgae Growing under Various Stress Conditions. Journal of Experimental Science. Vol. 2(2): 65-67.
39. Elumalai, S. and R. Sakthivel. 2011. Micro algae lipid research, past, present, a critical review for Biodiesel production in the future. Journal of Experimental Science. Vol. 2(10): 29-49.
40. Elumalai, S., V. Prakasam and S. Ramganes. 2011. Optimization of abiotic conditions suitable for the production of biodiesel from *Chlorella Vulgaris*. Indian Journal of Science and Technology. Vol. 4(2): 91-97.
41. Elumalai, S., S. Ramganes, N. Senthil Kumar and R. Murugesan. 2011. Pilot Scale production of Biodiesel from Macro algae collected from Coromandel Coast, East Coast India. International Journal of Current Research and Review. Vol. 3(6): 58-76.
42. Elumalai, S., R. Sakthivel and Ganesh kumar. 2011. Ultra structural and analytical studies of Biodiesel producing Microalgae (*Chlorella vulgaris* and *Scenedesmus* sp.) collected from Tamil Nadu, India. Current Botany. Vol. 2(6): 19-25.
43. Elumalai, S., R. Kesavan, S. Ramganes and R. Murugesan. 2011. Isolation, Purification and Identification of the Anti-Diabetic Components from *Cinnamomum zeylanicum* and *Cinnamomum cassia* Bark Oil Extracts. Current Botany. Vol. 2(2): 12-17.

44. Elumalai, S., S. Ramganes, V. Prakasam and M. Prabhakaran. 2011. Optimization of Growth Regulators for Induction of Callus from Cotton (*Gossypium hirsutum*). Journal of Advanced Laboratory Research. Vol. 2(3): 122-126.
45. Elumalai, S., R. Kesavan, S. Ramganes, V. Prakasam and R. Murugesan. 2010. Comparative study on anti microbial activities of bark oil extract from *Cinnamum cassia* and *Cinnamum zeylanicum*. Biosciences and Biotechnology Research Asia. Vol. 7(1): 251-258.
46. Elumalai, S. and R. Bargavi. 2010. *In Vitro* Clonal propagation of *Capsicum annum* L. Var. (*Arka Iohit* and *Arka suphal*) for fruit borer disease resistance. Biosciences and Biotechnology Research Asia. Vol. 7(1): 281-288.
47. Elumalai, S. and R. Bargavi. 2010. Chilli (*Capsicum annum*) cultivation, diseases, breeding, advanced techniques in biotechnology – General review. Biosciences and Biotechnology Research Asia. Vol. 7(1): 171-178.
48. Elumalai, S., M. Prabhakaran and S. M. Sundarapandian. 2010. Phytochemical Studies and Antibacterial Activity of the Leaf, Bark and Root powders of *Odina wodier*, Roxb.. Biosciences and Biotechnology Research Asia. Vol. 7(2): 857-877.
49. Elumalai, S., M. Prabhakaran, N. Senthil Kumar and R. Murugesan. 2010. FT – IR and GC – MS Studies of Dihydroflavonols from bark extract of *Lannea coromendelica* (Houtt.) Merr. Biosciences Biotech Research Asia. Vol. 7(2) 895-900.
50. Elumalai, S., R. Murugesan, Chinnasamy, Baskaran and M. Prabhakaran. 2010. Ultra structural studies of osmophores in the Petals and Pollen Grains of *Jasminum grandiflorum*, *Jasminum sambac* and *Polianthes tuberosa*. Biosciences Biotech Research Asia. Vol. 7(2): 759-768.

51. Elumalai, S., Remmia Raghavan, K. Nirmal Bau and P. Jayaraman. 2010. Anatomy of three *Piper nigrum* genotypes with respect to Phytophthora foot rot disease. Biosciences Biotech. Research Asiz. Vol. 7(2): 981-985.
52. Elumalai, S., S. Kumaresan and M. Prabhakaran. 2010. Effect of VAM fungi on growth and physiological parameters of mulberry (*Morus alba* L.) cultivars in South India. Biosciences Biotech Research Asia. Vol. 7(2): 793-806.
53. Elumalai, S., R. Murugesan, Chinnasamy, M. Prabhakaran and S. Baskaran. 2010. Essential oil analysis of FT-IR and GC-MS studies of *Jasminum grandiflorum*, *Jasminum sambac* and *Polianthus tuberosa* flowers. Biomedical and Pharmacological Journal. Vol. 3(1): 63-72.
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