

Dr. K. Pandima Devi

Assistant Professor, Department of Biotechnology, Alagappa University,
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Date of Birth : 11 April 1973

Mailing Address : Dr. K.Pandima Devi
Assistant Professor
Department of Biotechnology
Alagappa University
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Education

Degree	University	Year	Subjects	Percentage
B.Sc	Avinashilingam Deemed University	1993	Biochemistry	80
M.Sc#	Avinashilingam Deemed University	1995	Biochemistry	'O' Grade
PhD*	University of Madras	2001	Biochemistry	

Title of dissertation : Serum Glycoproteins in Pulmonary Tuberculosis

* Title of thesis : Hepatoprotective effects of *Premna tomentosa* Linn
(Verbanaceae) against acetaminophen/paracetamol induced acute hepatitis in rats

Employment (Past & Present)

1. May 2003- Till date
Faculty in Department of Biotechnology, Alagappa University, Karaikudi, Tamil Nadu
2. March 2002- March 2003
Postdoctoral trainee, Department of Peptide Chemistry, CSIC, Barcelona, Spain
3. Feb 2001- Sep 2001
Project associate in National Institute of Immunology, New Delhi, India in the project " Isolation and characterization of genes encoding sperm surface antigens

by screening human testis expression cDNA Lib: Identification of a candidate molecule(s) for development of contraceptive vaccine”

4. Sep 1995 to April 1996
Lecturer in Department of Biochemistry, S.Chattanatha Karayalar College of Arts and Sciences, Tenkasi, INDIA

Professional Training and Research Experience

1. April 2002- March 2003
CID-CSIC, Barcelona, SPAIN.
Synthesis of citrulinated peptides by F-moc chemistry and diagnosing arthritis by ELISA
2. March 2000- April 2000
Defense Institute of Physiology and Allied Sciences, New Delhi
Evaluation of the herbal drugs *P.tomentosa* to antioxidant and immunomodulation properties, studies on apoptosis and DNA fragmentation in splenocytes and macrophages
3. Feb 2000
Department of Anatomy (Electron Microscopy Facility), All India Institute of Medical Sciences (AIIMS), New Delhi
Training course in Electron Microscopy
4. Aug 1994 to Sep 1994
Pasteur Institute of India, Coonoor
Training course in observing the various procedures of production and quality control of Rabies vaccine and DTP group of vaccines

List of Publications

2011

1. **Devi KP**, Sakthivel R, Nisha SA, Suganthy N, Pandian SK. Eugenol alters the integrity of cell membrane and acts against the nosocomial pathogen *Proteus mirabilis*. **Achieves of Pharmacal Research (Accepted)** [Springer] [IF-1.558]
2. Kiruthiga PV, Pandian SK, **Devi KP**. Silymarin prevents the toxicity induced by Benzo(a)pyrene in human erythrocytes by preserving its membrane integrity: An *in vitro* study. **Environmental Toxicology (Accepted)** [John Wiley and Sons] [IF-1.932]

3. Ilavarasi K, Kirthiga PV, Pandian SK, **Devi KP**. Hydroxytyrosol, the phenolic compound of olive oil protects human PBMC against oxidative stress and DNA damage mediated by 2,3,7,8- TCDD. **Chemosphere** 84 (7): 888-893 [Elsevier] [IF -3.155]

2010

4. Suganthi N, Nisha SA, Pandian SK, **Devi KP**. Antioxidant and metal chelating potential of the solvent fractions of *Gelidiella acerosa* , the red algae inhabiting South Indian coastal area. **Biomedicine and Pharmacotherapy** [In Press] [Elsevier] [IF- 2.208]
5. Varatharajan S, Kumar KS, Berchmans S, Amutha R, Kiruthiga PV, **Devi KP**. Synergistic effect of hydroxy propyl- β -Cyclodextrin encapsulated soluble ferrocene and the gold nanocomposite modified glassy carbon electrode for the estimation of NO in biological systems. **Analyst** Sep 2010, 135(9):2348-54. [RSC Publishing] [IF-3.913]
6. Kiruthiga PV, Pandian SK, **Devi KP**. Silymarin protects PBMC against B(a)P induced toxicity by replenishing redox status and modulating glutathione metabolizing enzymes- an in vitro study **Toxicology and Applied Pharmacology** Sep 2010, 247(2):116-28. [Elsevier Publishers] [IF-3.993]
7. **Devi KP**, Nisha SA, Sakthivel R, Pandian SK. Eugenol (an essential oil of clove) acts as an antibacterial agent against *Salmonella typhi* by disrupting the cellular membrane. **Journal of Ethnopharmacology** July 2010. 130(1): 107-115. [Elsevier Publishers] [IF-2.466]
8. **Devi KP**, Sivamaruthi B, Kiruthiga PV, Pandian SK. Study of p53 codon 72 polymorphism and codon 249 mutations in Southern India in relation to age, alcohol drinking and smoking habits. **Hum Exp Toxicol**, June 2010. 29(6):451-8. [IF-1.211]
9. Suganthi N, Pandian SK, **Devi KP**. Neuroprotective effect of Seaweeds inhabiting South Indian coastal area (Hare Island, Gulf of Mannar Marine Biosphere Reserve): Cholinesterase Inhibitory effect of *Hypnea valentine* and *Ulva reticulata*. **Neuroscience Letters**, 468, Jan 2010, 216–219 (Elsevier) [IF-2.055]

2009

10. Suganthi N, Kesika P, Pandian SK, **Devi KP**. Mangrove Plants Extract: Radical Scavenging Activities and Its Battle against Food Borne Pathogens. **FORSCH KOMPLEMENTMED/Research in Complementary Medicine**, March 2009, 16, 41-48 [Karger Press][IF-1.059]

11. Suganthy N, Pandian SK, **Devi KP**. Cholinesterase inhibitors from *Sargassum* and *Gracilaria gracilis*: Seaweeds inhabiting South Indian coastal area (Hare Island, Gulf of Mannar). **Natural Product Research**, March 2009, 23, 355-369. [Taylor and Francis, UK] [IF-0.906]

2008

12. Suganthy N, Pandian SK, **Devi KP**. Cholinesterase inhibitory effects of *Rhizophora lamarckii*, *Avicennia officinalis*, *Sesuvium portulacastrum* and *Suevada monica*: Mangroves inhabiting Indian coastal area (Vellar Estuary). **Journal of Enzyme Inhibition and Medicinal Chemistry**, 2008, 1-6 [Taylor and Francis] [IF-1.574]
13. **Devi KP**, Suganthy N, Kesika P, Pandian SK. Bioprotective properties of seaweeds: In vitro evaluation of antioxidant activity and antimicrobial activity against food borne bacteria in relation to polyphenolic content. **BMC Complementary and Alternative Medicine**, 2008, 8:38 [Biomed Central Ltd, UK] [IF-2.195]
14. **Devi KP**, Kiruthiga PV, Pandian SK, Archunan G and Arun S. Olive oil protects rat liver microsomes against benzo(a)pyrene induced oxidative damages- an *in vitro* study. **Molecular Nutrition and Food Research**, 2008, 52, S95-102 [Wiley-VCH Verlag] [IF-4.713] [Most accessed in 07/2010]

2007

15. Kiruthiga PV, Shafreen RB, Pandian SK, **Devi KP**. 2007 Silymarin protection against major reactive oxygen species released by environmental toxins: - Exogenous H₂O₂ exposure in erythrocytes. **Basic and Clinical Pharmacology and Toxicology**, 100, 414-419 [Blackwell Publishers] [IF-2.371]
16. Kiruthiga PV, Shafreen RB, Pandian SK, Arun S, Govindu S, **Devi KP**. 2007. Protective effect of silymarin on erythrocyte haemolysate against benzo(a)pyrene and exogenous reactive oxygen species (H₂O₂) induced oxidative stress. **Chemosphere**, 68,1511-1518 [Elsevier] [IF-3.155]

2006

17. Maria L. Perez, Maria J. Gomara, **Devi Kasi**, Ana Alonso, Odette Vinas, Guadalupe Ercilla, Raimon Sanmarti, Isabel Haro. 2006. Synthesis of overlapping fibrin citrullinated peptides and their use for diagnosing rheumatoid arthritis. **Chemical Biology and Drug Design**, 68, 194-200. [Blackwell Publishers] [IF-2.527]

2005

18. **Devi KP**, Pandian SK and Kumar NSS. 2005. Cholinestrace activity in clam *Meretrix casta* : Possible biomarker for organophosphate pesticide pollution. ***Bulletin of Environmental Contamination and Toxicology***. Feb;74(2):250-5 [Springer-Verlag publishers, USA] [IF-1.139]
19. **Devi KP**, Sreepriya M, Balakrishna K, Devaki T. 2005. Protective effect of *Premna tomentosa* extract (L. Verbanaceae) on acetaminophen induced mitochondrial dysfunction in rats. ***Molecular and Cellular Biochemistry, Vol 272, No 1-2*** [Springer Science Business Media B.V, The Netherlands] [IF-2.168]

2004

20. **Devi KP**, Sreepriya M, Balakrishna K, Devaki T. Protective effect of *Premna tomentosa* (L.Verbanaceae) extract on membrane bound phosphatases and inorganic cations transport in acetaminophen induced hepatotoxicity rats. ***J Ethnopharmacol***. 2004 Aug;93(2-3):371-5. [Elsevier Publishers] [IF-2.466]
21. **Devi KP**, Ram SM, Sreepriya M, Ilavazhagan G, Devaki T, Selvamurthy W. Immunomodulatory effects of *Premna tomentosa* (L.Verbanaceae) extract in J 779 macrophage cell cultures under Cr (VI) induced immunosuppression. ***J Altern Complement Med***. 2004 Jun;10(3):535-9. [Mary Ann Liebert, Inc., USA] [IF-1.498]
22. **Devi KP**, Sreepriya M, Balakrishna K, Veluchamy G, Devaki T. Assessment of the protective potential of *Premna tomentosa* (L.Verbanacea) extract on lipid profile and lipid metabolizing enzymes in acetaminophen intoxicated rats. ***J Altern Complement Med***. 2004 Jun;10(3):540-6. [Mary Ann Liebert, Inc., USA] [IF-1.498]

1998-2003

23. **Devi KP**, Sreepriya M, Devaki T, Balakrishna K. Anti-nociceptive and hypnotic effects of *Premna tomentosa* L.(Verbanaceae) in experimental animals. ***Pharmacology Biochemistry and Behaviour***, 75 (2003) 261–264 [Elsevier Publishers] [IF-2.624]
24. **Devi KP**, Ram MS, Sreepriya M, Ilavazhagan G, Devaki T. 2003. Immunomodulatory effects of *Premna tomentosa* extract against Cr (VI) induced toxicity in splenic lymphocytes - an *in vitro* study. ***Biomedicine and Pharmacotherapy***, 57(2), 105-108. [Elsevier Publishers] [IF-2.208]

25. Anandan R, **Devi KP**, Devaki T, Govindaraju P. 1999. Protective effects of *Picrorhiza kurroa* against D-Galactosamine induced hepatitis in rats. *Medical Science Research*, 27(2), 127-130. [Chapman & Hall Publishers, UK] [IF-0.384]
26. **Devi KP**, Devaki T. 1998. Protective effect of *Premna tomentosa* on acetaminophen- induced acute hepatitis in rats. *Medical Science Research*, 26, 785-787. [Chapman & Hall Publishers, UK] [IF-0.384]
27. **KP Devi**, Anandan R, Balakrishna K, Devaki T. 1998. Effect of *Premna tomentosa* on rat liver antioxidant defence system in acetaminophen intoxicated rats. *Biomedical Research*, 19(5), 339-342. [Biomedical Research Foundation, Japan] [IF-1.263]
28. Anandan R, Sreepriya M, **Devi KP**, Devaki T. 1998. Preventive effects of *Picrorhiza kurroa* on D-Galactosamine - induced hepatitis in rats. *Journal of Clinical Biochemistry and Nutrition*, 25, 87-95. [Institute of Applied Biochemistry, Japan] [IF-1.609]

TOTAL IMPACT FACTOR OF THE PUBLICATIONS- 58.232

Review Articles in Books

1. **Devi KP**, Suganthi N, Kiruthiga PV, Pandian SK (2010). Liposome Technology and its Applications. In: Tripathi (Ed) Cellular and Biochemical Science Book, IK International Publishers, New Delhi. ISBN: 9788188237852
2. **Devi KP**, Kiruthiga PV and Pandian SK (2010). Flavonoids from complementary and alternative medicine: Mechanism of immunomodulation of macrophages. Book series on Bioactive Natural Products. Studium Press LLC, USA. ISBN : 1-933699-50-7
3. Suganthi N, Pandian SK and **Devi KP** (2011). Anti-Amyloidogenic Effect of Natural Products: Implications for the Prevention and Therapeutics of Alzheimer's Disease. In: V.K.Gupta (Ed) Natural Products: Research Reviews Vol. 1. M/S. Daya Publishing House, New Delhi (In Press)
4. Nisha SA, Sakthivel R, Pandian SK, **Devi KP** (2011). Natural Bioactive Compound from Marine Plants with Anticancer Potential: A Review. In: V.K.Gupta (Ed) Bioactive Phytochemicals: Perspectives for Modern Medicine Vol. 1 Daya Publishing House, New Delhi (In Press)

Review Articles in Journals

5. **Devi KP**, Kiruthiga PV, Pandian SK (2009). Emerging Role of Flavonoids in Inhibition of NF-kB-Mediated Signaling Pathway: A Mini Review. In: Chattopadhyay D (Ed) Ethnomedicinal Phytophores in Disease Management. *International Journal of Biomedical and Pharmaceutical Sciences* 3 (Special Issue 1), 31-45
6. Suganthy N, Pandian SK and **Devi KP** (2009). Cholinesterase inhibitors from plants: Possible treatment strategy for neurological disorders- A Mini Review. In: Chattopadhyay D (Ed) Ethnomedicinal Phytophores in Disease Management. *International Journal of Biomedical and Pharmaceutical Sciences* 3 (Special Issue 1), 87-103

Projects

1. **SERC Fast Track Proposals for Young Scientist scheme** sponsored by Department of Science and Technology, Govt. of India (Award no. SR/FT/L-32/2004). Title of the project: '**Antioxidant properties of Olive oil: Possible role in preventing environmental immunotoxicity and associated oxidative stress**'. Total amount- Rs 10.02 lacs (Completed) (Dec 2004 to Dec 2007)
2. **UGC sponsored Major Project**. Title of the project: Seaweeds inhabiting South Indian coastal area: Possible drugs for the treatment of neurodegenerative disorders. Total amount: Rs. 11.34 lacs (On going) (May 2009 to April 2012)
3. Ad-hoc project sponsored by ICMR, New Delhi. Title of the project: **Gelidiella acerosa: Seaweed inhabiting gulf of mannar: Assessment of the possible suppression of dioxin mediated Immunotoxicity**. Total amount: Rs 8.619 lacs (On going) (June 2010-May 2013)

TNSCT Project

1. Completed one students project sanctioned by TNSCT, Tamil Nadu on "Scavenging capacities of mangrove plants/seaweed extracts against free radicals- In vitro evaluation" (Dec 2006 – April 2007)

Fellowships Received and Professional Recognition

Fellowship

1. Junior research Fellowship by Tamil Nadu Government (TN-JRF)
2. Junior Research Fellowship by Rameshwardasji Birla Smarak Kosh, Mumbai, India.
3. Senior Research Fellowship by Council of Scientific and Industrial Research. (CSIR), New Delhi, India.

Achievements

1. State Level Educational Testing (SLET) for Lectureship conducted by Government of Tamil Nadu, India.
2. National Eligibility Test (NET) for Professor/Assistant Professor conducted by Agricultural Scientist Recruitment Board (ASRB), New Delhi, India

Membership

1. Life Member of The Indian Science Congress Association, Kolkatta
2. Life Member of Society of Biological Chemists, Bangalore

Conferences/Seminar/Symposium

1998

1. Studies on the protective effect of *Premna tomentosa* on acetaminophen induced toxicity “Women in Science conference” held at Tuberculosis Research Centre, Chetpet, Chennai, April 7 1998.

2006

2. Evaluation of anti-inflammatory potential of *Premna tomentosa* (*L.Verbanacae*) extract in rats “**National Symposium** on Phytomedicine and Phytopharmacology” held at Department of Microbiology, Bangalore University, 29-30, November 2006
3. Biotechnological applications of Indian drug heritage: protective role of silymarin against oxidative stress “XXX Indian Social Science Congress” held at Alagappa University, 27-31, December 2006
4. Herbal drug development: protective effect of silymarin against environmental contaminants “XXX Indian Social Science Congress” held at Alagappa University, 27-31, December 2006

5. (Exploration of ocean for development of biotechnological /pharmaceutical products: drug for neurological disorders from seaweeds “XXX Indian Social Science Congress” held at Alagappa University, 27-31, December 2006
- 2007**
6. Cholinesterase inhibitors from seaweeds inhabiting South Indian coastal area (Hare Island, Gulf of Mannar Marine Biosphere Reserve) **International Conference** on “Biotechnological Approaches in Bioresource Management (ICBAM – 07)” held at Bharathidasan University, 23-26, January 2007
- 2008**
7. Protective effect of silymarin on Benzo(a)pyrene induced damages in human polymorphonuclear cells “77th Annual Meeting of Society of Biological Chemists” held at Indian Institute of Technology Madras, 18-20, December 2008
- 2009**
8. Protective effect of Olive oil and its constituents (Hydroxy tyrosol and Tyrosol) on 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) induced damages in human peripheral blood mononuclear cells “1st World Congress on Cancer” (WCC-2009) held at Institute for Holistic Medical Sciences, 12-14, January 2009
9. (i) Olive oil and its phenolics protects the human peripheral blood mononuclear cells against dioxin induced oxidative stress **International Colloquium** on “Emerging Biotechnologies in Agriculture, Animal Health and Productivity” (ICEB’09) held at Alagappa University, 22-26, February 2009
10. (ii) *In vitro* evaluation of antioxidative property of *Rhizophora mucronata* inhabiting South Indian coastal area (Vellar Estuary) **International Colloquium** on “Emerging Biotechnologies in Agriculture, Animal Health and Productivity” (ICEB’09) held at Alagappa University, 22-26, February 2009
11. (iii) Antibacterial activity of Eugenol against *Escherichia coli* & *Salmonella enterica Serovar typhi* **International Colloquium** on “Emerging Biotechnologies in Agriculture, Animal Health and Productivity” (ICEB’09) held at Alagappa University, 22-26, February 2009
12. (iv) Silymarin inhibits B(a)P induced toxicity by modulating glutathione related enzymes and inhibiting CYP1A1 in human PBMC **International Colloquium** on “Emerging Biotechnologies in Agriculture, Animal Health and Productivity” (ICEB’09) held at Alagappa University, 22-26, February 2009

13. Modulation of glutathione related enzymes as a protective mechanism of silymarin against BaP induced apoptosis and cytotoxicity in PBMC- An In vitro study **National Seminar** on Frontiers in Biotechnology” [NFSB-2009] held at Bharathiar University, 22-24, July 2009
14. Bactericidal activity and mode of action of Eugenol on *Salmonella typhi* **National Symposium** on “Antimicrobial resistance and drug discovery” (II Louis Pasteur Memorial Symposium 2009) held at Dr.N.G. P. Arts and Science College, 9-10, September 2009
- 2010**
15. Protective effect of silymarin on Benzo (a) Pyrene [B(a)P] induced oxidative stress and cytotoxicity in human peripheral blood mononuclear cells (PBMC) **International Symposium** On Trace Organic Pollutants in the Environment (ISOTOPE’10) held at Bharathidasan University, 23, January 2010
16. Study on the protective effect of olive oil and its phenolic compound against dioxin induced oxidative stress in PBMC **International Symposium** On Trace Organic Pollutants in the Environment (ISOTOPE’10) held at Bharathidasan University, 23, January 2010
17. Antibacterial activity of natural therapeutic agent (Eugenol) against *Proteus mirabilis*. **Biotechnology-** Fusion of Advanced Research and Teaching Conference held at School of Biotechnology, Madurai Kamaraj University, 2nd- 4th January, 2010
18. Silymarin protects B(a)P induced toxicity and apoptosis by inhibiting CYP1A1 and GST in human peripheral blood mononuclear cells (PBMC) -An In vitro study **Biotechnology-** Fusion of Advanced Research and Teaching Conference held at School of Biotechnology, Madurai Kamaraj University, 2nd- 4th January, 2010
19. Disruption of *Proteus mirabilis* cellular membrane by eugenol, a natural therapeutic agent (Invited talk) **International Conference** on Climate Change and Bioresource (ICCCB-2010), 9 to 12th February 2010 at Bharathidasan University, Tiruchirappalli
20. Antioxidant potential of various solvent extracts of the edible *Gelidiella acerosa* **National Symposium** on Marine Plants held at CAS In Marine Biology, Faculty Of Marine Science, Cas In Marine Biology, Faculty Of Marine Science, Annamalai University, 23-25th September, 2010

2011

21. Acetylcholinesterase and butyrylcholinesterase inhibitory activity of the benzene extract of *Gelidiella acerosa* **National Seminar** on Cellular and Molecular Neurobiology in Health and Diseases held at Department of Biochemistry, University of Madras, 11-12th February, 2011
22. Neuroprotective effect of Mangrove (*Rhizophora mucronata*) inhabiting South Indian coastal area (Vellar estuary): In vitro evaluation of Antioxidant, Anti-cholinesterase and metal chelating activity (Suganthi was given award for best oral presentation) **National Seminar** on Cellular and Molecular Neurobiology in Health and Diseases held at Department of Biochemistry, University of Madras, 11-12th February, 2011

Conferences/Seminars/Workshops/Symposia organized/attended

1. Organizing committee member for the National Seminar on Biotechnology of Transgenesis: Scientific Progress and Social Issues, Alagappa University, Karaikudi July 28 and 29, 2003.
2. Executive Member, Organizing Secretary for the International Workshop cum Seminar on “Advances in Modern Biotechnology & Molecular Techniques in Veterinary parasitology: Diagnosis, Chemotherapy and Control”, March 17- 21, 2008 organized by School of Biotechnology, Alagappa University, Karaikudi
3. Participated in “National Workshop on Bioinformatics”, March 10-12, 2010, organized by the Bioinformatics Infrastructure Facility, Alagappa University, Karaikudi

Invited Talk

1. International Conference on Climate Change and Bioresource (ICCCB-2010), 9 to 12th February 2010 at Bharathidasan University, Tiruchirappalli. Title: “Disruption of *Proteus mirabilis* cellular membrane by eugenol, a natural therapeutic agent”
2. National Symposium on Emerging Trends in Life Sciences”, March 17-19, 2010, organized by Rajah Serfoji Govt College (Autonomous), Thanjavore. Title: Environmental pollution: Sources, toxic health effects and its prevention by natural products

Editorial Board Member in International Journal

Editorial Board Member for the journal *African Journal of Food Science*, published by Academic Press, Nairobi.

Reviewer to International Journals

1. Basic and Clinical Pharmacology and Toxicology (Blackwell Publishing)
2. Fitoterapia (Elsevier)
3. Biological Trace Element Research (Springer)
4. Pharmacology Biochemistry and Behaviour (Elsevier publishers)
5. Food and Chemical Toxicology (Elsevier publishers)
6. Phytotherapy Research (Elsevier publishers)
7. BMC Complementary and Alternative Medicine (Biomed Central, UK)
8. International Journal of Food Science and Technology (Wiley-Blackwell)
9. Invest.Clinica (Publication of the Universidad del Zulia, Venezuela)
10. Medical Principles and Practice (Karger, Switzerland)
11. Research in Complementary Medicine (Karger Press, Germany)
12. African Journal of Pharmacy and Pharmacology (Academic Journals, Nairobi)
13. African Journal of Plant Science (Academic Journals, Nairobi)
14. African Journal of Biochemistry Research (Academic Journals, Nairobi)
15. Journal of Medicinal Plants Research (Academic Journals, Nairobi)
16. Journal of Ecology and Natural Environment (Academic Journals, Nairobi)

Membership in Board of Studies

Member of Board of Studies for BSc Biotechnology and MSc Biochemistry in Alagappa University, Karaikudi