Faculty Profile of Dr. P. Ekambaram

Dr. P. Ekambaram
Professor
Department of Biotechnology

Email:ekas2009@buc.edu.in

Phone No:0422-2428293

Mobile No:9865454419

Research Area

- Molecular Toxicology
- Neuropharmacology and Neurtoxicology
- Cancer Biology

Education & Career

Education

Ph. D.
Subject : Pharmacology and Environmental Toxicology
Institution : Dr. ALM PG Institute for Basic Medical Sciences
Affiliated University : University of Madras
Year of Award : 2001

M.Phil.,
Subject : Zoology
Institution : Madras Christian College
Affiliated University :University of Madras
Year of Award : 1997

M. Sc.,
Subject : Zoology
Institution : Madras Christian College
Affiliated University :University of Madras
Year of Award : 1995

Career

At Bharathiar University (Reverse Order)
Associate Professor :01.07.2015 to Till Date
Assistant Professor : 23.06.2005 to 30.06.2015

Past Experience
Scientist B:13.12.2004 to 20.06.2005 at Zoological Survey of India
Lecturer:21.08.2001 to 05.08.2003 at Bharathiar university, coimbatore

Awards

Academic Awards

Awarding agency : University of Madras.
Country : State.
Purpose of award : RDBSK - JRF.
Date of Award : 28-11-1996-31-03-1997.

Awarding agency : Council of Scientific and Industrial research.
Country : National.
Purpose of award : CSIR-JRF.
Date of Award : 01-04-1997-31.03.1999.

Awarding agency : Council of Scientific and Industrial research.
Country : National.
Purpose of award : CSIR-SRF.
Date of Award : 01.04.1999 -31.03.2001.

Awarding agency : Marquis Who's who Publications.
Country : International.
Purpose of award : Who's Who in the World.
Date of Award : 01-07-2012-31-06-2015.

Membership

Professional Bodies

Organization :Social Environmental and Biological Association (SEBA)
Type of Membership :Life Member
Period : 2005

Organization :Who’s who in the World
Type of Membership :Member
Period :2012

Organization :International Society for Fluoride Research
Type of Membership:Life Member
Period :2015

Academic Bodies

Organization :Department of Biotechnology, Bharathiar University, Coimbatore
Type of Membership :Member Board of Studies in Biotechnology
Period :2005-Till Date

Organization :Periyar University Salem
Type of Membership :Chairman/Member Question Paper Setting Board/Evaluation

Period :2005-Till Date

Organization :Bharathiar University, Coimbatore
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2005-Till Date

Organization :Bharathidasan University, Trichirappalli
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2005-Till Date

Organization :University of Madras, Chennai
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2017-2011

Organization :Alagappa University, Karaikudi
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2008-2009

Organization :Annamalai University, Chidambaram
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2008-Till Date

Organization :Karunya University, Coimbatore
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2008-Till Date

Organization :Vinayaka Missions University, Salem
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2008-Till Date

Organization :Department of Environmental Sciences, Bharathiar University, Coimbatore
Type of Membership :Member Board of Studies in Biotechnology
Period :2009 -2010

Organization :Kumaraguru College of Technology, Coimbatore
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2009-Till Date

Organization :Mahatma Gandhi University, Kottayam
Type of Membership :Chairman/Member Question Paper Setting Board/Evaluation

Period :2009-Till Date

Organization :Osmania University, Hyderabad
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2012-2013

Organization :SNR & Sons College, Coimbatore
Type of Membership :Member Board of Studies in Biotechnology
Period :2012-2015

Organization :Adhiparasakthi College of Arts and Science, Vellore
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2012-Till Date

Organization :Bannari Amman Institute of Technology, Sathyamangalam
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2013-Till Date

Organization :Vivekanandha College of Arts and Sciences for Women, Trichengode
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2014-Till Date

Organization :K.S. Rangasamy College of Arts and Science, Trichengode
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2014-Till Date

Organization :Tamilnadu Agricultural University, Coimbatore
Type of Membership :Member Question Paper Setting Board/Evaluation
Period :2014-Till Date

Organization :PSG College of Arts and Sciences, Coimbatore
Type of Membership :Member Board of Studies in Biotechnology
Period :2015-2018

Organization :CMS College of Science and Commerce
Type of Membership :Chairman/Member Board of Studies in Biotechnology
Period :2016-2019

Visits

Country Visited : Taiwan**.**
Duration of Visit : 9 months
Month and Year : August 2003 – April 2004
Purpose of Visit : Postdoctoral Research.

Country Visited : Malaysia.
Duration of Visit : 2 days
Month and Year : November 2015
Purpose of Visit : Oral Presentation – Malaysia Zebrafish Disease Model Workshop.

Collaborators

Others

Projects

Funded Projects(National level)

- Ongoing-3
- Completed-5

1.Mitigation of fluorosis and fluoride sensing: An amalgamation of biology and chemistry.

Principle Investigator:Dr. P. Ekambaram
Funding Agency :TANSCHE, Government of Tamilnadu,
Amount :Rs.60,00,000
Duration :May 2021 to April 2024

2.Identification, validation, analysis and characterization of molecular activators and antioxidant response elements of Keap1/Nrf2/ARE signaling pathway in zebrafish.

Principle Investigator:Dr. P. Ekambaram
Funding Agency :Department of Science and Technology, Science and Engineering Research Board, EEQ, New Delhi
Amount :Rs.46,19,000.
Duration : March 2019 to February 2022

3.Novel STAT3 Inhibitors from Plants for Cancer Treatment.

Principle Investigator:Dr. P. Ekambaram
Funding Agency :RUSA 2.0 BCTRC, Bharathiar University,
Amount :Rs. 14,88,000.
Duration :December 2020 to November 2022

1.Effects of tamarind seed coat extract on fluoride induced apoptosis in MRC-9 cells.

Principle Investigator:Dr. P. Ekambaram
Funding Agency :University Grants Commission, New Delhi,
Amount :Rs.13,22,380.
Duration :February 2010 to January 2013,

2.Catecholaminergic activity enhancer compounds for performance enhancement in vitro and in vivo models.

Principle Investigator:Dr. P. Ekambaram
Funding Agency :Defence Research and Development Organization, New Delhi,
Amount :Rs.20,20,000.
Duration :April 2014 to March 2018

3.Role of fisetin on the interrelationship between autophagy and apoptosis in hepatocellular carcinoma.

Principle Investigator:Dr. P. Ekambaram
Funding Agency :Department of Science and Technology, Science and Engineering Research Board, EMEQ, New Delhi,
Amount :Rs.11,00,000.

Duration :April 2016 to March 2018

4.Elucidating the molecular mechanisms of necroptosis in fluoride induced neurotoxicity: Therapeutic potential of Naringenin, through NFκB and NRF2 signaling pathways.

Principle Investigator:Dr. P. Ekambaram
Funding Agency :Department of Science and Technology,Science and Engineering Research Board,New Delhi,
Amount :Rs.33,77,625.
Duration :December 2015 to November 2018

5.Screening and Analysis of Phytochemicals for Defluoridation of Groundwater.

Principle Investigator:Dr. P. Ekambaram
Funding Agency :RUSA 2.0 BEICH, Bharathiar University,
Amount :Rs.7,00,000.
Duration :January 2020 to June 2020

Consultancy Projects

- Ongoing
- Completed

Research Guidance

- Post Doc.
- Ph.D.
- M.Phil.
- M.Sc.

Ongoing

Title

Name

Completed

Title

Name

Ongoing

Sample Data.

Completed

Sample Data.

Ongoing

Sample Data.

Completed

Sample Data.

Ongoing

Sample Data.

Completed

Sample Data.

Research Publication

- International
- National
- Patents
- Conferences
- Books / Chapters
- Database

1. Mitigation of arsenic induced developmental cardiotoxicity by ferulic acid in zebrafish,
   E. Perumal, S. Eswaran, R.Parvin, and S.Balasubramanian,
   Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology, 244, 109021(2021).

2. Fisetininhibits autophagy in HepG2 Cells via PI3K/Akt/mTOR and AMPK Pathway,
   K. Sundarraj, A.Raghunath, L.Panneerselvam, and**E.Perumal,**
   Nutrition and Cancer, 1-13(2020).

3. Chitosan-coated silver nanoparticles promoted antibacterial, antibiofilm, wound-healing of murine macrophages and antiproliferation of human breast cancer MCF 7 cells,
   A. Parthasarathy, S. Vijayakumar, B.Malaikozhundan, MP.Thangaraj, **E. Perumal**, T.Murugan, P.Velusamy, P.Anbu, and B.Vaseeharan,
   Polymer Testing, 90, 106675(2020).

4. miRNAs and xenobiotic toxicity: An overview,
   S. Balasubramanian, K. Gunasekaran, S.Sasidharan, VJ.Mathan, and**E. Perumal**,
   Toxicology Reports, 7, 583-595 (2020).

5. Selective detection of pyrophosphate anion by zinc ensemble of C3-symmetric triaminoguanidine-pyrrole conjugate and its biosensing applications,
   B.Tharmalingam, M.Mathivanan, KS. Mani, W. Kaminsky,A. Raghunath, M.Jothi,**E. Perumal**, and B.Murugesapandian,
   AnalyticaChimicaActa,1103, 192-201 (2020).

6. Ameliorative effect of hesperidin against motion sickness by modulating histamine and histamine h1 receptor expression,
   UM.Deshetty, A.Tamatam, M. Bhattacharjee, **E. Perumal**, G. Natarajan, and F. Khanum,
   Neurochemical Research, 45, 371-384(2020).

7. ZFARED: a database of the antioxidant response elements in zebrafish,
   A. Raghunath, R.Nagarajan, and**E. Perumal**,
   Current Bioinformatics, 15, 415-419(2020).

8. Ferulic acid attenuates arsenic-induced cardiotoxicity in rats,
   L. Panneerselvam, A. Raghunath, MS. Ravi, A. Vetrivel,V. Subramaniam, K. Sundarraj, and**E. Perumal**,
   Biotechnology and Applied Biochemistry, 67, 186-195(2020).

9. Fisetin, a phytopolyphenol, targets apoptotic and necroptotic cell death in HepG2 cells,
   K. Sundarraj, A. Raghunath, L. Panneerselvam, and**E. Perumal**,
   BioFactors, 46, 118-135(2020).

10. Chronic exposure to copper oxide nanoparticles causes muscle toxicity in adult zebrafish,
    R. Mani, S. Balasubramanian, A. Raghunath, and**E. Perumal**,
    Environmental Science and Pollution Research, 27, 27358-27369(2020).

11. Acute fluoride exposure alters myocardial redox and inflammatory markers in rats,
    L. Panneerselvam, A. Raghunath, K. Sundarraj, and**E. Perumal**,
    Molecular Biology Reports, 46,6155-6164(2019).

12. Role of epigenetics in zebrafish development,
    S. Balasubramanian, A. Raghunath, and**E. Perumal**,
    Gene, 718, 144049(2019).

13. Iron oxide nanoparticles affects behaviour and monoamine levels in mice,
V. Manickam, V. Dhakshinamoorthy, and**E. Perumal,**
Neurochemical Research, 44, 1533-1548, (2019).

14. Identification of compounds that inhibit the binding of Keap1a/Keap1b Kelch DGR domain with Nrf2 ETGE/DLG motifs in zebrafish,
A. Raghunath, R. Nagarajan, K. Sundarraj, K. Palanisamy, and**E. Perumal,**
Basic &Clinical Pharmacology &Toxicology, 125, 259-270(2019).

15. Potential plant-derived catecholaminergic activity enhancers for neuropharmacological approaches:A Review,
M. Bhattacharjee, and**E. Perumal**,
Phytomedicine, 55, 148-164(2019).

16. Dysregulation of Nrf2 in Hepatocellular Carcinoma: Role in Cancer Progression and Chemoresistance,
A. Raghunath, K. Sundarraj, A. Frank, G. Sethi, and**E. Perumal**,
Cancers, 10, 481(2018).

17. Genome-wide identification and analysis of Nrf2 binding sites–Antioxidant response elements in zebrafish,
A. Raghunath, R. Nagarajan, K. Sundarraj, L. Panneerselvam, and**E. Perumal**
,
Toxicology and Applied Pharmacology, 360, 236-248(2018).

18. Tamarind seed coat extract restores fluoride-induced hematological and biochemical alterations in rats,
J. Ameeramja, A. Raghunath, and**E. Perumal**,
Environmental Science and Pollution Research, 25, 26157-26166(2018).

19. Protocatechuic acid methyl ester modulates fluoride induced pulmonary toxicity in rats,
J. Ameeramja, VV. Kanagaraj, and**E. Perumal**,
Food and Chemical Toxicology, 118, 235-244(2018).

20. Antioxidant response elements: Discovery, classes, regulation and potential applications,
A. Raghunath, K. Sundarraj, R. Nagarajan, F. Arfuso, B. Jinsong, AP. Kumar, G.Sethi,and **E. Perumal**,
Redox Biology, 17, 297-314(2018).

21. Possible modulatory effect of tamarind seed coat extract on fluoride-induced pulmonary inflammation and fibrosis in rats,
J.Ameeramja, and**E. Perumal**,
Inflammation, 41, 886-895(2018).

22. Iron oxide nanoparticles induces cell cycle-dependent neuronal apoptosis in mice,
V. Manickam, V.Dhakshinamoorthy, and**E. Perumal**,
Journal of Molecular Neuroscience,64, 352-362(2018).

23. A review on the chemotherapeutic potential of fisetin: In vitro evidences,
K. Sundarraj, A. Raghunath, and**E. Perumal**,
Biomedicine and Pharmacotherapy, 97, 928-940(2018).

24. Recurrent exposure to ferric oxide nanoparticles alters myocardial oxidative stress, apoptosis and necrotic markers in male mice,
V. Manickam, M.Periyasamy, V.Dhakshinamoorthy, L. Panneerselvam, and**E. Perumal**,
Chemico-Biological Interactions, 278, 54-64, (2017).

25. Protocatechuic acid methyl ester ameliorates fluoride toxicity in A549 cells,
J.Ameeramja, and**E. Perumal**,
Food and Chemical Toxicology, 109, 941-950(2017).

26. Pumonary fluorosis: a review,
J. Ameeramja, and **E. Perumal**,
Environmental Science and Pollution Research28, 22119-22132 (2017).

27. Differential expression of myocardial heat shock proteins in rats acutely exposed to fluoride
L.Panneerselvam,A. Raghunathand**E. Perumal**,
Cell Stress and Chaperones22, 743-750(2017).

28. Neurobehavioral toxicity of iron oxide nanoparticles in mice,
D. Vasanth, V.Manickam, and**E. Perumal**,
Neurotoxicity Research, 32, 187-203(2017).

29. Iron oxide nanoparticles modulate heat shock proteins and organ specific markers expression in mice male accessory organs,
K. Sundarraj, A. Raghunath, L. Panneerselvam, and**E. Perumal**,
Toxicology and Applied Pharmacology, 317, 12-24(2017).

30. Metal oxide nanoparticles as antimicrobial agents: a promise for the future,
A. Raghunath, and**E. Perumal**,
International Journal of Antimicrobial Agents, 49, 137-152(2017).

31. Therapeutic effects of gold nanoparticles synthesized using Musa paradisiaca peel extract against multiple antiobiotic resistant *Enterococcus faecalis* biofilms and human lung cancer cells (A549),
S. Vijayakumar, B.Vaseeharan, B.Malaikozhundhan, N. Gopi, **E. Perumal**, R.Pachaiappan, P.Velusamy, K.Murugan, G. Benelli, R. Suresh Kumar, and M.Suriyanaranayanamoorthy,
Microbial Pathogenesis, 102, 173-183(2017).

32. Repeated exposure to iron oxide nanoparticles causes testicular toxicity in mice,
K. Sundarraj, V. Manickam, A. Raghunath, M.Periyasamy, MP.Viswanathan, and**E. Perumal,**
Environmental Toxicology, 32, 594-608(2017).

33. Acute fluoride poisoning alters myocardial cytoskeletal and AMPK signaling proteins in rats,
L. Panneerselvam, A. Raghunath, and**E. Perumal**,
International Journal of Cardiology 229, 96-101(2017).

34. Acute and sub-lethal exposure to copper oxide nanoparticles causes oxidative stress and teratogenicity in zebrafish embryos,
S. Ganesan, N.AnaimalaiThirumurthi, A. Raghunath, S.Vijayakumar, and**E. Perumal**,
Journal of Applied Toxicology, 36, 554-567(2016).

35. *In silico* prediction of microRNAs on fluoride induced sperm toxicity in mice,
A. Raghunath, D. Jeyabaskar, K. Sundarraj, L. Panneerselvam, and**E. Perumal**,
Food and Chemical Toxicology, 98, 34-49(2016).

36. Antibacterial, antibiofilm and cytotoxic effects of *Nigella sativa* essential oil coated gold nanoparticles,
S. Manju, B.Malaikozhundan, S.Vijayakuma, S. Shanthi, A.Jaishabanu, and**E. Perumal**, B.Vaseeharan,
Microbial Pathogenesis,91, 129-135(2016).

37. Tamarind seed coat ameliorates fluoride induced cytotoxicity,oxidative stress, mitochondrial dysfunction and apoptosis in A549 cells,

J. Ameeramja, L. Panneerselvam, V. Govindarajan, S. Jeyachandran, V.Baskaralingam, and**E. Perumal**,
Journal of Hazardous Materials, 301, 554-565(2016).

38. Single oral acute fluoride exposure causes changes in cardiac expression of oxidant and antioxidant enzymes, apoptotic and necrotic markers in male rats,
L. Panneerselvam, V. Govindarajan, J.Ameeramja, HR. Nair, and**E. Perumal**, Biochimie, 119, 27-35(2015).

39. Caffeic acid, a phyto polyphenol mitigates fluoride induced hepatotoxicity in rats: A possible mechanism,
VV. Kanagaraj, L. Panneerselvam, V. Govindarajan, J.Ameeramja, and**E. Perumal**,
Biofactors, 41, 90-100, (2015).

40. Micro-RNAs and their roles in eye disorders,
A. Raghunath, and**E. Perumal**,
Ophthalmic Research, 53,169-186(2015).

41. Acute exposure to titanium dioxide (TiO2) induces oxidative stress in zebrafish gill tissues,
S.Purushothaman, A. Raghunath, V.Dhakshinamoorthy, L. Panneerselvam, and**E. Perumal,**
Toxicological & Environmental Chemistry, 96, 890-905, (2014).

42. An anthraquinone derivative, emodin sensitized hepatocellular carcinoma cells to TRAIL induced apoptosis through the induction of death receptors and downregulation of cell survival proteins.
S.Aruljothi, YL. Ser, R.Peramaiyan, AM.Kanjoormana, **E. Perumal**, L.Feng, KS. Muthu, SS.Kodappully, P. Joo-In, SA. Kwang, MH.Kam, PK. Alan, and S. Gautam,
Apoptosis, 18, 1175-1187(2013).

43. Emodin inhibits growth and induces apoptosis in an orthotopic hepatocellular carcinoma model by blocking activation of STAT3,
S.Aruljothi, KS. Muthu, HO. Tina, L. Feng, **E. Perumal**, C.Luxi, V. Shireen, A. Taher, K. Shweta, SA. Kwang, PK. Alan, MH. Kam, and S. Gautam,
British Journal of Pharmacology, 170, 807-821(2013).

44. Potential role of signal transducer and activator of transcription (STAT3) signaling pathway in inflammation, survival, proliferation and invasion of

hepatocellular carcinoma,
S.Aruljothi, MK. Shanmugam, **E. Perumal**, F. Li, A.Nachiyappan, X. Dai, SN. Swamy, KS.Ahn, AP. Kumar, BK. Tan, KM. Hui, and G. Sethi,
BiochimicaBiphysicaActa, 1835, 46-60(2013).

45. Emodin suppresses migration and invasion through the modulation of CXCR4 expression in an orthoptic model of human hepatocellular carcinoma,
KA. Manu, MK.Shanmugam, TH.Ong, S.Aruljothi, K.S.Siveen,**E. Perumal**, R.PSamy, P.Bist,L.H Lim, A.P Kumar, K.M Hui, and G.Sethi,
PLoS One, 8, e57015(2013).

46. A brief review on experimental fluorosis,
E. Perumal, V. Paul, V. Govindarajan, and L. Panneerselvam,
ToxicolLett. 223:236-251, 2013.

47. Involvement of nitric oxide in learning and memory processes,
V. Paul and **P. Ekambaram**,
Indian Journal of Medical Research, 133, 471-478(2011).

48. Therapeutic efficacy of Tamarindus indica (L) to protect against fluoride-induced oxidative stress in the liver of female rats,
P. Ekambaram, T.Namitha, S.Bhuvaneswari, S.Aruljothi, D. Vasanth, and M.Saravanakumar,
Fluoride, 43,134-140(2010).

49. Effects of sodium nitroprusside, a nitric oxide donor, on gamma-aminobutyric acid concentration in the brain and on picrotoxin-induced convulsions in combination with phenobarbitone in rats,
V. Paul, and **P. Ekambaram**,
Pharmacology, Biochemistry andBehaviour, 80, 363-370(2005).

50. A reversal by L-arginine and sodium nitroprusside of ageing-induced memory impairment in rats by increasing nitric oxide concentration in the hippocampus,
V. Paul, L. Reddy, and **P. Ekambaram**,
Indian Journal of Physiology and Pharmacology, 49, 179-186(2005).

51. The effect of L-arginine on the memory impairing action of phenobarbitone in rats that convulsed after the injection of picrotoxin,
V. Paul, L. Reddy, and **P. Ekambaram**,
Indian Journal of Physiology and Pharmacology, 48, 191-198(2004).

52. Demonstrating the dose- and time-related effects of 7-nitroindazole on picrotoxin-induced convulsion, memory formation, brain nitric oxide synthase activity, and nitric oxide concentration in rats,
P.Vanaja, and **P. Ekambaram**,
Pharmacology, Biochemistry andBehaviour, 77, 1-8(2004).

53. Effect of 7-nitroindazole alone and in combination with phenobarbitone and diazepam on picrotoxin-induced convulsions in rats,
V. Paul, and **P. Ekambaram**,
Indian Journal of Physiology and Pharmacology, 47, 400-406(2003).

54. Effect of vitamin D on chronic behavioural and dental toxicities of sodium fluoride in rats,
P. Ekambaram, and V. Paul,
Fluoride, 36, 189-197(2003).

55. Prevention of picrotoxin convulsions-induced learning and memory impairment by nitric oxide increasing dose of L-arginine in rats,
V. Paul, L. Reddy, and **P. Ekambaram**,
Pharmacology Biochemistry and Behavior,75,329-334(2003).

56. Modulation of fluoride in rats by calcium carbonate and by withdrawal of fluoride exposure,
P. Ekambaram, and V. Paul,
Pharmacology and Toxicology, 90, 53-58(2002).

57. Calcium preventing locomotor behavioral and dental toxicities by decreasing serum fluoride level in rats,
P. Ekambaram, and V. Paul,
Environmental Toxicology and Pharmacology, 9, 141-146(2001).

58. Effects of sodium fluoride on locomotor behavior and a few biochemical parameters in rats,
V. Paul, **P. Ekambaram**, and AR.Jayakumar,
Environmental Toxicology and Pharmacology 6, 187-191(1998).

1. Nanoengineered biomaterials for neurodegenerative disorders,
S. Balasubramanian, A. Raghunath, and **E. Perumal**,

Nanoengineered biomaterials for advanced drug delivery,
Elsevier, 713-734(2020),
ISBN: 9780081029855

2. HO-1/HSP32 and cardiac stress signaling,
   L. Panneerselvam, A. Raghunath, K. Sundarraj and **E. Perumal**,Heat shock proteins in signaling pathways,
   Springer, Cham, 139-159(2019),
   ISBN: 9780081029862

3. Curcumin as a potential therapeutic for Alzheimer's disease: A multi-targeted approach,
   P. Velankanni, S. Balasubramanian, A. Raghunath, F. Arfuso, G. Sethi, and **E. Perumal**,
   Medicinal plants: Chemistry, Pharmacology, and Therapeutic applications,
   CRC Press, Taylor & Francis, 10-79(2019),
   ISBN: 9780429259968

4. Heat shock proteins and endoplasmic reticulum stress,
   A. Raghunath, L. Panneerselvam, K. Sundarraj and **E. Perumal**,
   Heat shock proteins and stress,
   Springer, Cham, 39-78(2018),
   ISBN: 9783319907253.

5. Plant sources as potential therapeutics for Alzheimer's disease,
   A. Raghunath, K. Sundarraj, VV. Kanagaraj and **E. Perumal**,
   Plants: Promising future for health and new drugs,
   CRC Press, 161-192(2018),
   ISBN: 9780815370529

6. Analysis of lethality and malformations during Zebrafish (*Danio rerio*) development,
   A. Raghunath and **E. Perumal**,
   Teratogenicity testing,
   Humana Press, 337-363(2018),
   ISBN: 9781493978830.

7. Possible involvement of signal transducer and activator of transcription-3 (STAT3) signaling pathway in the initiation and progression of hepatocellular carcinoma,
   A. Subramaniam, MK. Shanmugam, **E. Perumal**, F. Li, A. Nachiyappan, AP. Kumar, BK. Tan and G. Sethi,

Perspectives in cancer prevention-Translational cancer research, Springer, 73-87(2014),
ISBN: 9788132215332.

Alumini Reflections: