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Professional Experience:

- Research Professor, Department of Nuclear Medicine, School of Medicine, Kyungpook National University, South Korea. (January 2015- till date)
- Post Doctoral Fellow, Department of Nuclear Medicine, School of Medicine, Kyungpook National University, South Korea. (Jan, 2014- Dec, 2014)
- Post Doctoral Fellow, Department of Chemistry, Marine Bioprocess Research Center Pukyong National University, Busan, South Korea (Oct, 2012- Dec, 2013).
- Flow Cytometry Analyst (BD FACS Aria III), School of Biological Sciences, Madurai Kamaraj University, Madurai- 625021, India. (July, 2011- Sep, 2012)

Awards and Honours

- **Best Poster Award**, National Conference on “Korean Thyroid association” (2016), held at Dajeon, August 26 and 27th 2016, South Korea.
- **Best Walking Oral Poster Award**, International Conference on “11th Asia Oceania Congress of Nuclear Medicine and Biology” (2015). 54th Annual Autumn Meeting of the Korean Society of Nuclear. October 31st to November 4th, 2015 ICC Jeju, South Korea.

Grants and Fellowships:

- **Senior Research Fellow** (Council of Scientific and Industrial Research, India), Department of Endocrinology, Dr. ALM Post Graduate Institute of Basic Medical Sciences, University of Madras. Chennai, India (Oct, 2008 – Sep, 2010).
- **Project Fellow** (UWPFE-HS10, University of Madras), Department of Endocrinology, Dr. ALM Post Graduate Institute of Basic Medical Sciences, University of Madras. Chennai, India (Sep, 2006 – May, 2007).

Memberships in Societies & Professional Bodies

- Active member, Society for Reproductive Biology and Comparative Endocrinology (SRBCE, India).
- Member, ISEV - International Society for Extracellular Vesicles
- Member, Nuclear Medicine Society, Korea.

Education details

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| 2006 - 2011 | Ph. D., Biochemistry-Endocrinology University of Madras, Tamilnadu, India |
| 2004 – 2005 | M.Phil., Endocrinology University of Madras, Tamilnadu, India. |
| 2001 – 2003 | M.Sc., Biochemistry University of Madras, Tamilnadu, India. |
| 1998 – 2001 | B.Sc., Chemistry University of Madras, Tamilnadu, India. |

Workshop Organized

Organized a workshop on “Flow Cytometry” (May 28 – June 1, 2012) at School of Biological Sciences, Madurai Kamaraj University, Madurai. India. National Workshop - Convener.

PUBLICATIONS

Peer reviewed Journal

1. Lee HW, Gangadaran P, **Kalimuthu S**, Ahn B-C. Advances in Molecular Imaging Strategies for In Vivo Tracking of Immune Cells. *BioMed Research International*. 2016;2016. (IF: 1.579)
2. Li XJ, Gangadaran P, **Kalimuthu S**, Oh JM, Zhu L, Jeong SY, et al. Role of pulmonary macrophages in initiation of lung metastasis in anaplastic thyroid cancer. *Int J Cancer*. 2016;139(11):2583-92. (IF: 5.531)
3. Kelkar MG, **Senthilkumar K**, Jadhav S, Gupta S, Ahn B-C, De A. Enhancement of human sodium iodide symporter gene therapy for breast cancer by HDAC inhibitor mediated transcriptional modulation. *Scientific reports*. 2016;6. (IF: 5.228)
4. **Kalimuthu S**, Gangadaran P, Li XJ, Oh JM, Lee HW, Jeong SY, et al. In Vivo therapeutic potential of mesenchymal stem cell-derived extracellular vesicles with optical imaging reporter in tumor mice model. *Scientific Reports*. 2016;6. (IF: 5.228)
6. Kim JE, **Kalimuthu S**, Ahn B-C. In Vivo Cell Tracking with Bioluminescence Imaging. *Nucl Med Mol Imag*. 2015;49(1):3-10.
7. Hwang M-H, Kim JE, Kim S-Y, **Kalimuthu S**, Jeong SY, Lee S-W, et al. Biological production of an integrin $\alpha v \beta 3$ targeting imaging probe and functional verification. *BioMed research international*. 2015;2015. (IF: 1.579)
8. Sharmila G, Bhat F, Arunkumar R, Elumalai P, Singh PR, **Senthilkumar K**, et al. Chemopreventive effect of quercetin, a natural dietary flavonoid on prostate cancer in in vivo model. *Clin Nutr*. 2014;33(4):718-26. (IF:4.487)
9. Sharmila G, Athirai T, Kiruthiga B, **Senthilkumar K**, Elumalai P, Arunkumar R, et al. Chemopreventive effect of quercetin in MNU and testosterone induced prostate cancer of Sprague-Dawley rats. *Nutr Cancer*. 2014;66(1):38-46. (IF: 2.322)
10. **Senthilkumar K**, Venkatesan J, Kim S-K. Marine derived natural products for osteoporosis. *Biomedicine & Preventive Nutrition*. 2014;4(1):1-7.
11. Raja Singh P, Arunkumar R, Sivakamasundari V, Sharmila G, Elumalai P, Suganthapriya E, et al. Anti-proliferative and apoptosis inducing effect of nimbolide by altering molecules involved in apoptosis and IGF signalling via PI3K/Akt in prostate cancer (PC-3) cell line. *Cell Biochem Funct*. 2014;32(3):217-28. (IF: 1.854)
12. **Kalimuthu S**, Venkatesan J, Kim S-K. Marine Derived Bioactive Compounds for Breast and Prostate Cancer Treatment: A Review. *Curr Bioact Compd*. 2014;10(1):62-74.
13. **Senthilkumar K**, Venkatesan J, Manivasagan P, Kim S-K. Antiangiogenic effects of marine sponge derived compounds on cancer. *Environ Toxicol Pharmacol*. 2013;36(3):1097-108. (IF: 2.084)

14. **Senthilkumar K**, Manivasagan P, Venkatesan J, Kim S-K. Brown seaweed fucoidan: biological activity and apoptosis, growth signaling mechanism in cancer. *Int J Biol Macromol.* 2013;60:366-74. (IF: 3.096)
15. **Senthilkumar K**, Kim S-K. Marine invertebrate natural products for anti-inflammatory and chronic diseases. *Evid Based Complement Alternat Med.* 2013;2013. (IF: 1.931)
16. Manivasagan P, Venkatesan J, **Senthilkumar K**, Sivakumar K, Kim S-K. Isolation and characterization of biologically active melanin from *Actinoalloteichus* sp. MA-32. *Int J Biol Macromol.* 2013;58:263-74. (IF: 3.096)
17. Manivasagan P, Venkatesan J, **Senthilkumar K**, Sivakumar K, Kim S-K. Biosynthesis, antimicrobial and cytotoxic effect of silver nanoparticles using a novel *Nocardioopsis* sp. MBRC-1. *BioMed research international.* 2013;2013. (IF: 1.579)
18. Manivasagan P, Sivasankar P, Venkatesan J, **Senthilkumar K**, Sivakumar K, Kim S-K. Production and characterization of an extracellular polysaccharide from *Streptomyces violaceus* MM72. *Int J Biol Macromol.* 2013;59:29-38. (IF: 3.096)
19. **Kalimuthu S**, Se-Kwon K. Cell survival and apoptosis signaling as therapeutic target for cancer: marine bioactive compounds. *Int J Mol Sci.* 2013;14(2):2334-54. (IF: 3.257)
20. Arunakaran J, Arunkumar R, Elumalai P, **Senthilkumar K**. Impact of quercetin, diallyl disulfide and nimbolide on the regulation of nuclear factor kappa B expression in prostate and breast cancer cell lines. *Natural Products Chemistry & Research.* 2013;2013. (IF: 1.7)
21. Elumalai P, Gunadharini DN, **Senthilkumar K**, Banudevi S, Arunkumar R, Benson CS, et al. Ethanolic neem (*Azadirachta indica* A. Juss) leaf extract induces apoptosis and inhibits the IGF signaling pathway in breast cancer cell lines. *Biomedicine & Preventive Nutrition.* 2012;2(1):59-68.
22. Elumalai P, Gunadharini D, **Senthilkumar K**, Banudevi S, Arunkumar R, Benson C, et al. Induction of apoptosis in human breast cancer cells by nimbolide through extrinsic and intrinsic pathway. *Toxicol Lett.* 2012;215(2):131-42. (IF: 3.262)
23. Arunkumar R, Sharmila G, Elumalai P, **Senthilkumar K**, Banudevi S, Gunadharini D, et al. Effect of diallyl disulfide on insulin-like growth factor signaling molecules involved in cell survival and proliferation of human prostate cancer cells in vitro and in silico approach through docking analysis. *Phytomedicine.* 2012;19(10):912-23. (IF: 3.126)
24. Venkatesh K, Govindaraj S, Ramachandran A, **Kalimuthu S**, Perumal E, Velayutham S, et al. Effect of Ukrain on cell survival and apoptosis in the androgen-independent prostate cancer cell line PC-3. *J Environ Pathol Toxicol Oncol.* 2011;30(1). (IF: 1.246)

25. **Senthilkumar K**, Arunkumar R, Elumalai P, Sharmila G, Gunadharini DN, Banudevi S, et al. Quercetin inhibits invasion, migration and signalling molecules involved in cell survival and proliferation of prostate cancer cell line (PC-3). *Cell Biochem Funct.* 2011;29(2):87-95. (IF: 1.854)
26. Gunadharini DN, Elumalai P, Arunkumar R, **Senthilkumar K**, Arunakaran J. Induction of apoptosis and inhibition of PI3K/Akt pathway in PC-3 and LNCaP prostate cancer cells by ethanolic neem leaf extract. *J Ethnopharmacol.* 2011;134(3):644-50. (IF: 2.998)
27. Banudevi S, Elumalai P, Sharmila G, Arunkumar R, **Senthilkumar K**, Arunakaran J. Protective effect of zinc on N-methyl-N-nitrosourea and testosterone-induced prostatic intraepithelial neoplasia in the dorsolateral prostate of Sprague Dawley rats. *Exp Biol Med.* 2011;236(9):1012-21. (IF: 2.226)
28. Banudevi S, Elumalai P, Arunkumar R, **Senthilkumar K**, Gunadharini D, Sharmila G, et al. Chemopreventive effects of zinc on prostate carcinogenesis induced by N-methyl-N-nitrosourea and testosterone in adult male Sprague-Dawley rats. *J Cancer Res Clin Oncol.* 2011;137(4):677-86. (IF: 3.081)
29. **Senthilkumar K**, Elumalai P, Arunkumar R, Banudevi S, Gunadharini ND, Sharmila G, et al. Quercetin regulates insulin like growth factor signaling and induces intrinsic and extrinsic pathway mediated apoptosis in androgen independent prostate cancer cells (PC-3). *Mol Cell Biochem.* 2010;344(1-2):173-84. (IF: 2.057)
30. Banudevi S, **Senthilkumar K**, Sharmila G, Arunkumar R, Vijayababu MR, Arunakaran J. Effect of zinc on regulation of insulin-like growth factor signaling in human androgen-independent prostate cancer cells. *Clin Chim Acta.* 2010;411(3):172-8. (IF: 2.535)
31. Gayathri R, Gunadharini DN, Arunkumar A, **Senthilkumar K**, Krishnamoorthy G, Banudevi S, et al. Effects of diallyl disulfide (DADS) on expression of apoptosis associated proteins in androgen independent human prostate cancer cells (PC-3). *Mol Cell Biochem.* 2009;320(1-2):197-203. (IF: 2.057)
32. Sridevi N, Venkataraman P, **Senthilkumar K**, Krishnamoorthy G, Arunakaran J. Oxidative stress modulates membrane bound ATPases in brain regions of PCB (Aroclor 1254) exposed rats: protective role of α -tocopherol. *Biomed Pharmacother.* 2007;61(7):435-40. (IF: 2.326)
33. Kanagaraj P, Vijayababu M, Ilangovan R, **Senthilkumar K**, Venkataraman P, Aruldas M, et al. Effect of 17β -estradiol on apoptosis, IGF system components and gelatinases A and B in prostate cancer cells (PC-3). *Clin Chim Acta.* 2007;377(1):70-8. (IF: 2.535)
34. **Senthilkumar K**, Arunkumar A, Sridevi N, Vijayababu M, Kanagaraj P, Venkataraman P, et al. Chemoprevention of MNU and testosterone induced prostate carcinogenesis by calcitriol (vitamin D3) in adult male albino Wistar rats. *Annals of Cancer Research and Therapy.* 2006;14(1):12-8.

35. Arunkumar A, Vijayababu MR, Venkataraman P, **Senthilkumar K**, Arunakaran J. Chemoprevention of rat prostate carcinogenesis by diallyl disulfide, an organosulfur compound of garlic. *Biol Pharm Bull.* 2006;29(2):375-9. (IF: 1.828)

Book Chapters:

1. Kim S-K, Manivasagan P, **Senthilkumar K**, Venkatesan J. Biological Applications of Chitin, Chitosan, Oligosaccharides and Their Derivatives. *Chitin and Chitosan Derivatives: Advances in Drug Discovery and Developments: CRC Press*; 2013. p. 223-42.
2. **Senthilkumar K**, Kim S-K. Anticancer effects of fucoidan. *Adv Food Nutr Res.* 2014;72:195-213.
3. **Senthilkumar K**, Kim SK. Marine Algae and Chronic Diseases. *Marine Algae Extracts: Processes, Products, and Applications.* 2015:557-74.
4. Kim S-K, **Kalimuthu S**. Introduction to Anticancer Drugs from Marine Origin. *Handbook of Anticancer Drugs from Marine Origin: Springer*; 2015. p. 1-13.
5. **Kalimuthu S**, Kim S-K. Fucoidan, a sulfated polysaccharides from brown algae as therapeutic target for cancer. *Handbook of Anticancer Drugs from Marine Origin: Springer*; 2015. p. 145-64.
6. **Senthilkumar K**, Ramajayam G, Venkatesan J, Kim S-K, Ahn B-C. Marine Sponge-Derived Antiangiogenic Compounds for Cancer Therapeutics. *Marine Sponges: Chemicobiological and Biomedical Applications: Springer*; 2016. p. 305-14.

Selected Conference presentations:

1. **International Conference** on “The 12th Asia and Oceania Thyroid Association Congress (2017)”. In conjunction with the Korean Thyroid Association annual meeting. Held at Busan Lotte Hotel, 16th to 19th March 2017. Busan, South Korea. **Senthilkumar Kalimuthu**, Ji Min Oh, Prakash Gangadaran, Liya Zhu, Ho Won Lee, Shin Young Jeong, Sang-Woo Lee, Jaetae Lee and Byeong-Cheol Ahn. Inducible regulation of suicide gene thymidine kinase with reporter gene engineered mesenchymal stem cell for anaplastic thyroid cancer therapy. **ORAL PRESENTATION.**
2. **National Conference** on “Korean Thyroid association” (2016), held at Dajeon, August 26 and 27th 2016, South Korea. **Senthilkumar Kalimuthu**, Ji Min Oh, Prakash Gangadaran, Liya Zhu, Ho Won Lee, Shin Young Jeong, Sang-Woo Lee, Jaetae Lee and Byeong-Cheol Ahn. Molecular imaging based TetOn regulated suicide gene thymidine kinase engineered mesenchymal stem cell therapy for anaplastic thyroid cancer. **POSTER PRESENTED and AWARDED.**
3. **International Conference** on “2nd Asian Nuclear Medicine Academic forum”(2016), held at the University of Medicine & Health Sciences, Shanghai,

- China, from May 5th-8th, 2016. **Senthilkumar Kalimuthu**, Prakash Gangadaran, Ji Min Oh, Lia Zhu, Ho Won Lee, Shin Young Jeong, Sang-Woo Lee, Jaetae Lee and Byeong-Cheol Ahn. Tet-On regulating HSV-sr39tk suicide gene engineered with reporter system in mesenchymal stem cells exert bystander effect on anaplastic thyroid cancer. **POSTER PRESENTED.**
4. **International Conference** on “11th Asia Oceania Congress of Nuclear Medicine and Biology”(2015). 54th Annual Autumn Meeting of the Korean Society of Nuclear. October 31st to November 4th, 2015 ICC Jeju, South Korea.**Senthilkumar Kalimuthu**, Prakash Gangadaran, Xiu Juan Li, Ji Min Oh, Shin Young Jeong, Sang-Woo Lee, Jaetae Lee and Byeong-Cheol Ahn. Anticancer effect and biodistribution of extracellular vesicles isolated from Rennilla Luciferase labelled mMSC on lung cancer. **WALKING ORAL POSTER PRESENTED and AWARDED.**
 5. **National workshop** on “*In Vitro* Toxicology adopting Integrated Discrete Multiple Organ Co-culture” (IdMOC)-2011. Department of Endocrinology, Dr ALM PGIBMS, University of Madras, Taramani, Chennai- Held during 16 -18th February 2011. **PARTICIPATION.**
 6. **National workshop** on “Techniques in Molecular and Cellular Endocrinology(2010). Department of Endocrinology, Dr ALM PGIBMS, University of Madras, Taramani, Chennai- Held during 4th -13th Jan 2010. **PARTICIPATION.**
 7. **International symposium** on Endocrinology and Reproduction: Molecular medicine and SRBCE-2010, held at Jawaharlal Nehru University, New Delhi. Feb 4-6, 2010. **ORAL PRESENTATION.**
 8. **Workshop on** “Patent Awareness(2009)” held at Patent Information Cell, University of Madras, Guindy Campus, Chennai. 17th April 2009, **PARTICIPATION.**
 9. **International Conference** on “Novel updates and in Reproductive Biology and Comparative Endocrinology(2009). Department of Animal Sciences University of Hyderabad, Hyderabad- held during 19th - 21st Jan 2009. **Senthilkumar K**, Arunkumar R, Elumalai P, Banudevi S and Arunakaran J. Effect of quercetin on Akt, p-Akt and cyclin D1 expression in PC-3 cells. **POSTER PRESENTATION.**