



Dr. Mahesh Kandasamy
UGC-Assistant Professor

Contact

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Academic Qualifications:

Degree	Subject	Name of the Institute/University	Year
Ph.D	Natural Sciences	Department of Neurology Faculty of Natural Sciences University of Regensburg, Germany	2005-2010
M.Sc	Biochemistry	Department of Biochemistry and Molecular Biology, School of Life Sciences, Guindy Campus (AC Tech), University of Madras, India	1997-1999
B.Sc	Chemistry	Govt. Arts College, Dharmapuri University of Madras, India	1994-1997

Teaching Experience: 8 Years

Biomolecules and structural biology, Stem cells and cancer biology, Developmental biology

Research Experience: 20 Years

Position	From	To	Organization
UGC-Assistant Professor	Dec 2014	Present	Department of Animal Science, School of Life Sciences, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India
Research Scientist	Dec 2012	Dec 2014	Molecular Genetics Laboratory, Department of Psychiatry, NIMHANS, Bangalore, India
Research Associate	June 2011	Nov 2012	Department of Neuropsychiatry Laboratory of Molecular Psychiatry, Charité University of Medicine Berlin, Germany.
Postdoc	Jan 2010	April 2011	Institute of Molecular Regenerative Medicine, Paracelsus Medical University, Salzburg, Austria.
Bavarian Research Fellow	April 2005	Dec 2009	Department of Neurology, University of Regensburg, Germany.
Junior Research Fellow	March 2002	Nov 2004	Department of Biochemistry, Indian Institute of Science (IISc), Bangalore, Karnataka, India.

Areas of Research

Stem cell biology, Adult Neurogenesis, Cognition, Gut-Brain axis, HPG-axis, COVID-19

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	01	03
	M.Phil.	02	00
Project	PG	33	05
	UG / Others	02	-

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	UGC	2015	2017	UGC-FRP Start-up grant	6
2	DST SERB	2017	2021	The regulation of the hippocampal neurogenesis and cognitive functions in experimental animals	49
3	DST SERB	2018	2021	Neural stem cells... A non-invasive attempt for the brain regeneration	52

Ongoing Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	RUSA 2.0	2021	2023	Regulation of adult neural stem cells....in gastrointestinal disorder	6

Consultancy Projects: None

Patents

None

Distinctive Achievements / Awards

1	Bavarian Research Fellowship	Bavarian Research Foundation, Munich, Germany	2005-2009
2	Best Poster Presentation Award	German Society of Neurology Conference, Berlin, Germany.	2007
3	Researcher of the year Award	Paracelsus Medical University, Salzburg, Austria	2011
4	Early Career Researcher Award	SERB, India	2018

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 3

Events Participated

Conferences / Seminars / Workshops: 7

Overseas Exposure / Visits

Europe

Membership in

Professional Bodies

Member: European Huntington's Disease Network

Others: Journal ad hoc reviewer:

Oxidative Medicine and Cellular Longevity, BMC Research Notes, Molecular and Cellular Biochemistry, Biomedical Research, Toxicology Report, Neuromolecular Medicine, Naunyn-Schmiedeberg's Archives of Pharmacology and Apoptosis

Editorial Board

1. None

Advisory Board

1. None

Academic Bodies (such as Board of Studies etc.,)

Doctoral committee member:

Bharathidasan University (BDU), Vellore Institute of Technology (VIT)

The National Institute of Mental Health and Neurosciences (NIMHANS)

Resource persons in various capacities

Number of Invited / Special Lectures delivered: 12

1. Cellular and molecular aspects of Neurogenesis, Mahesh Kandasamy, Refresher course in Life sciences for Assist/ Assoc. Professors, UGC- Human Resource Development Centre of the University of Calicut, Malapuram, Kerala, Nov 2018.
2. Hippocampal Neurogenesis in Huntington Disease, Mahesh Kandasamy, Lecture Workshop on Hands on training in Cell and Molecular Biology techniques, Department of Biochemistry, Bharathidasan University, Tiruchirappalli, March 2018
3. Is brain can regenerate, where is the proof? Mahesh Kandasamy, CME on Stem cells and Tissue Engineering meeting, Indian Medical Association Hall, Tiruchirappalli 13.09.2015.
4. Regulation and functional significance of neurogenesis in the adult brain, Mahesh Kandasamy, IISER TVM, 17.07.2015.
5. Modulation of Neural Stem cell Niches: Therapeutic Strategies for Regeneration and Repair in the Neurodegenerative Brains: Mahesh Kandasamy, Two weeks Faculty Development Programme on New perspectives in drug discovery and progressive technological developments” 2015, Department of Pharmaceutical Technology Anna University (BIT-Campus) Tiruchirappalli 11.05.2015.
6. Regenerative capacity of the adult brain: Mahesh Kandasamy, TEQIP II sponsored two weeks FDP programme on ‘Comprehensive Approach of Biotechnological Applications (CABA’15), Department of Biotechnology, Bharathidasan Institute of Technology, Anna University, Tiruchirappalli, TN, India, 17.04.2015.
7. Applications of stem cell research in CNS disorders: Mahesh Kandasamy, National Level Symposium on Innovation in Biotechnology, Arignar Anna College of Arts and Science, Krishnagiri, Tamilnadu, India, 24.10 2013.
8. Stem cells and Biomedical Engineering: Mahesh Kandasamy, CADENZA, at National Level Technical Symposium, Dhanalakshmi Srinivasan, Group of Institutions, Perambalur, Tamilnadu, India Sep 2013.
9. Neurodegenerative Diseases – Parkinson (PD), Huntington’s (HD) and Alzheimer Diseases (AD): PD: Prof. Jürgen Winkler, University Hospital Erlangen, Germany. HD: Mahesh Kandasamy, PMU, Salzburg, Austria and AD: Prof. Eliezer Masliah, University of California, San Diego, USA: at Neuroscience Club Meeting, PMU, Austria, March 2010.
10. Stem cell quiescence in the hippocampal neurogenic niche is associated with elevated TGF-beta signaling in an animal model of Huntington’s disease: Mahesh Kandasamy, 11th. Meeting of the Austrian Neuroscience Association, Salzburg, Austria, Sep 2009.
11. TGF-beta signalling in the stem cell niche of the healthy and diseased brain: Mahesh Kandasamy, Institute of Developmental Genetics, Helmholtz Institute, German Research Center for Environmental Health Munich, Germany. Dec 2008
12. Regulation of hippocampal neurogenesis and TGF-beta1 signalling in Huntington's Disease: Mahesh Kandasamy, Biostatistics and Grant Writing for Scientists, For NeuroCell meeting, Frauenchiemsee, Germany, Sep 2008

Others

1. Articles published in Newspapers / Magazines: 02
2. Products developed: None
3. No. of PhD Thesis evaluated: 02
4. No. of PhD Public Viva Voce Examination conducted: 02
5. Sequences submitted in GenBank: 2

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
44	10	-	6	2

Cumulative Impact Factor (as per JCR)	:	179
h-index	:	22
i10 index	:	33
Total Citations	:	1542

List of Publication

1. Rethinavel HS, Selvaraj DB, Balakrishnan SJ, Andrews JF, Joseph JH, **Kandasamy M**. “Omeprazole treatment manifests anxiolytic effects in a cysteamine hydrochloride induced mouse model of gastrointestinal disorder”.
Heliyon. 2022 Jun 24:e09787. (IF:3.776).
2. Ravichandran S, Manickam N, **Kandasamy M**. “Liposome encapsulated clodronate mediated elimination of pathogenic macrophages and microglia: A promising pharmacological regime to defuse cytokine storm in COVID-19”.
Medicine in Drug Discovery. 2022 Jun 13:100136.
3. Radhakrishnan RK, **Kandasamy M**. “SARS-CoV-2-Mediated Neuropathogenesis, Deterioration of Hippocampal Neurogenesis and Dementia”.
American Journal of Alzheimer's Disease & Other Dementias®. 2022 Jan 24;37 (IF:2.632).
4. Radhakrishnan RK, Ravichandran S, Sukesh A, Kadalmani B, **Kandasamy M**. “Single injection of very mild dose botulinum toxin in the vastus lateralis improves testicular spermatogenesis and sperm motility in ageing experimental mice”.
Laboratory Animal Research. 2022 Dec;38(1):1-1.
5. Ravichandran S, Joseph JH, Sellathamby S, **Kandasamy M**. “Antihemorrhagic Properties of Therapeutic Botulinum Toxin in Experimental Mice”.
Available at SSRN 4115779 (Pre-print).
6. Yesudhas A, Radhakrishnan RK, Sukesh A, Ravichandran S, Manickam N, **Kandasamy M**. “BOTOX® counteracts the innate anxiety-related behaviours in correlation with increased activities of key antioxidant enzymes in the hippocampus of ageing experimental mice”.
Biochemical and Biophysical Research Communications. 2021 Sep 10; 569:54-60. (IF: 3.322).

7. Rethinavel HS, Ravichandran S, Radhakrishnan RK, **Kandasamy M.** “COVID-19 and Parkinson's disease: Defects in neurogenesis as the potential cause of olfactory system impairments and anosmia”. *Journal of Chemical Neuroanatomy*. 2021 Sep; 115:101965. (IF:3.097).
8. Selvaraj K, Ravichandran S, Krishnan S, Radhakrishnan RK, Manickam N, **Kandasamy M.** “Testicular Atrophy and Hypothalamic Pathology in COVID-19: Possibility of the Incidence of Male Infertility and HPG Axis Abnormalities”. *Reproductive Sciences*. 2021 Jan 7:1-8. (IF: 2.924).
9. **Kandasamy M.** “NF-κB signalling as a pharmacological target in COVID-19: Potential roles for IKKβ inhibitors” *Naunyn-Schmiedeberg's Archives of Pharmacology*. 2021 Mar;394(3):561-567. (IF: 3.0).
10. Krishna MP, Sivashanmugam K, **Kandasamy M.**, Subbiah R, Ravikumar V “Repurposing of histone deacetylase inhibitors: a promising strategy to combat pulmonary fibrosis promoted by TGF- β signalling in COVID-19 survivors” *Life Sciences*. 2021 Feb 1; 266:118883. (IF:6.78).
11. Manickam N, Radhakrishnan RK, Andrews JFV, Selvaraj DB, **Kandasamy M.** “Cell cycle re-entry of neurons and reactive neuroblastosis in Huntington's disease: Possibilities for neural-gial transition in the brain”. *Life Sciences*. 2020 Dec 15; 263:118569. (IF:6.78).
12. Yesudhas A, Roshan SA, Radhakrishnan RK, Abirami GPP, Manickam N, Selvaraj K, Elumalai G, Shanmugaapriya S, Anusuyadevi M, **Kandasamy M.** “Intramuscular Injection of BOTOX® Boosts Learning and Memory in Adult Mice in Association with Enriched Circulation of Platelets and Enhanced Density of Pyramidal Neurons in the Hippocampus”. *Neurochemical Research*. 2020 Dec;45(12):2856-2867. (IF:4.414)
13. **Kandasamy M.**, Anusuyadevi M, Aigner KM, Unger MS, Kniewallner KM, de Sousa DMB, Altendorfer B, Mrowetz H, Bogdahn U, Aigner L. “TGF-β Signaling: A Therapeutic Target to Reinstiate Regenerative Plasticity in Vascular Dementia?” *Ageing & Disease*. 2020 Jul 23;11(4):828-850 (IF: 9.968).
14. **Kandasamy M.** “Perspectives for the use of therapeutic Botulinum toxin as a multifaceted candidate drug to attenuate COVID-19”. *Medicine in Drug Discovery*. 2020 Jun; 6:100042.
15. Poornimai Abirami GP, Radhakrishnan RK, Johnson E, Roshan SA, Yesudhas A, Parveen S, Biswas A, Ravichandran VR, Muthuswamy A, **Kandasamy M.** “The Regulation of Reactive Neuroblastosis, Neuroplasticity, and Nutraceuticals for Effective Management of Autism Spectrum Disorder”. *Advances in Neurobiology*. 2020; 24:207-222.
16. Selvaraj K, Manickam N, Kumaran E, Thangadurai K, Elumalai G, Sekar A, Radhakrishna RK, **Kandasamy M.** “Detoriation of neuroregenerative plasticity in association with testicular atrophy and dysregulation of the hypothalamic- pituitary-gonadal (HPG) axis in Huntington’s disease: A putative role of the huntingtin gene in steroidogenesis” *The Journal of Steroid Biochemistry and Molecular Biology*. 2019 Nov 9; 197:105526. (IF:5.011).

17. **Kandasamy M**, Radhakrishnan RK, Poornimai Abirami GP, Roshan SA, Yesudhas A, Balamuthu K, Prahalathan C, Shanmugaapriya S, Moorthy A, Essa MM, Anusuyadevi M. "Possible Existence of the Hypothalamic-Pituitary-Hippocampal (HPH) Axis: A Reciprocal Relationship Between Hippocampal Specific Neuroestradiol Synthesis and Neuroblastosis in Ageing Brains with Special Reference to Menopause and Neurocognitive Disorders"
Neurochemical Research. 2019 Aug;44(8):1781-1795. (IF: 4.414).
18. **Kandasamy M**, Yesudhas A, Poornimai Abirami GP, Radhakrishnan RK, Roshan SA, Johnson E, Ravichandran VR, Biswas A, Shanmugaapriya S, Anusuyadevi M, Aigner L. "Genetic reprogramming of somatic cells into neuroblasts through a co-induction of the doublecortin gene along the Yamanaka factors: A promising approach to model neuroregenerative disorders"
Medical Hypotheses. 2019 Jun; 127:105-111. (IF:4.411).
19. Subathra R, Omana A T, Reddy MS, Rela M, **Kandasamy M**, Shanmugapriya S. "In vitro transdifferentiation of human adipose tissue-derived stem cells to neural lineage cells - a stage-specific incidence"
Adipocyte. 2019 Dec; 8(1): 164-177. (IF:3.553).
20. **Kandasamy M** and Aigner L. "Neuroplasticity, limbic neuroblastosis and neuro-regenerative disorders"
Neural Regeneration Research. 2018 Aug;13(8):1322-1326. (IF:6.058).
21. **Kandasamy M** and Aigner L. "Reactive neuroblastosis in Huntington's disease: A putative therapeutic target for striatal regeneration in the adult brain"
Frontiers in Cellular Neuroscience. 2018 Mar 9; 12:37. (IF: 6.147).
22. Sowmya DV, **Kandasamy M**, Vaidyanathan R, Moilya NS, Kota, LN, Adhikarla S, Yadav R, Pal PK, Jaina, S, Purushottam M. "Genetic testing for clinically suspected spinocerebellar ataxias: Report from a tertiary referral center in India"
Journal of Genetics. 2018 Mar;97(1):219-224. (IF:1.508).
23. Sathya M, Gobinath T, Salomy S, Nisha M, **Kandasamy M**, Essa MM, Jayachandran SK, Anusuyadevi M. "Significance of biophysical interaction of resveratrol with Sirtuin pathway in Alzheimer's disease"
Frontiers in Bioscience-Landmark. 2018 Mar 1; 23:1380-1390. (IF:3.115).
24. Periyasamy S, Sathya M, Karthick C, **Kandasamy M**, Shanmugaapriya S, Tamilselvan J, Jayachandran KS, Anusuyadevi M. "Association studies of specific Cholesterol related genes (APOE, LPL, and CETP) with Lipid profile and memory function: A correlative study among Rural and Tribal Population of Dharmapuri District, India"
Journal of Alzheimer's Disease. 2017;60(s1): S195-S207. (IF:4.160).
25. Velusamy T, Panneerselvam SA, Purushottam M, Anusuyadevi M, Pal PK, Jain S, Essa MM, Guillemin JG, **Kandasamy M**. "Protective effects of antioxidants on neuronal dysfunction and plasticity in Huntington's disease".
Oxidative Medicine and Cellular Longevity. 2017; 2017:3279061. (IF: 7.316).
26. Sathya M, Moorthi P, Premkumar P, **Kandasamy M**, Jayachandran K.S, Anusuyadevi M. "Resveratrol intervenes cholesterol and isoprenoids mediated amyloidogenic processing of A β PP in Familial Alzheimer's disease".
Journal of Alzheimer's Disease. 2017;60(s1): S3-S23. (IF: 4.160).

27. Lenka A, Kamble NL, Sowmya V, Jhunjhunwala K, Yadav R, Netravathi M, **Kandasamy M**, Moily NS, Purushottam M, Jain S, Kumar Pal P. "Determinants of Onset of Huntington's Disease with Behavioral Symptoms: Insight from 92 Patients"
Journal of Huntington's Disease. 2015;4(4):319-24.
28. **Kandasamy M**, Roskopf M, Wagner K, Klein B, Couillard-Despres S, Reitsamer HA, Stephan M, Nguyen HP, Riess O, Bogdahn U, Winkler J, von Hörsten S, Aigner L. "Reduction in subventricular zone-derived olfactory bulb neurogenesis in a rat model of Huntington's disease is accompanied by striatal invasion of neuroblasts".
PLoS One. 2015 Feb 26;10(2):e0116069. (IF: 3.24)
29. Moily NS, Kota LN, Anjanappa RM, Venugopal S, Vaidyanathan R, Pal P, Purushottam M, Jain S, **Kandasamy M**. "Trinucleotide Repeats and Haplotypes at the Huntingtin Locus in an Indian Sample Overlaps with European Haplogroup A"
PLOS Currents. 2014 Sep 24;6.
30. **Kandasamy M**, Lehner B, Kraus S, Sander PR, Marschallinger J, Rivera FJ, Trümbach D, Ueberham U, Reitsamer HA, Strauss O, Bogdahn U, Couillard-Despres S, Aigner L. "TGF-beta signalling in the adult neurogenic niche promotes stem cell quiescence as well as generation of new neurons"
Journal of Cellular and Molecular Medicine. 2014 Jul;18(7):1444-59. 2014 (IF:5.295).
31. Dreier JP, Victorov IV, Petzold GC, Major S, Windmüller O, Fernández-Klett F, **Kandasamy M**, Dirnagl U, Priller J. "Electrochemical failure of the brain cortex is more deleterious when it is accompanied by low perfusion"
Stroke. 2013 Feb;44(2):490-6. (IF: 10.17).
32. Jadasz JJ, Rivera FJ, Taubert A, **Kandasamy M**, Sandner B, Weidner N, Aktas O, Hartung HP, Aigner L, Küry P. "p57kip2 regulates glial fate decision in adult neural stem cells"
Development. 2012 Sep;139(18):3306-15. (IF:6.862).
33. Sah A, Schmuckermair C, Sartori SB, Gaburro S, **Kandasamy M**, Irschick R, Klimaschewski L, Landgraf R, Aigner L, Singewald N. "Anxiety- rather than depression-related behavior is associated with adult neurogenesis in a mouse model of enhanced trait anxiety- and comorbid depression-like behaviour"
Translational Psychiatry. 2012 Oct 16;2: e171. (IF: 7.989).
34. **Kandasamy M**, Reilmann R, Winkler J, Bogdahn U, Aigner L. "Transforming Growth Factor- Beta Signaling in the Neural Stem Cell Niche: A Therapeutic Target for Huntington's Disease"
Neurology Research International. 2011; 2011:124256.
35. Steffenhagen C, Kraus S, Dechant FX, **Kandasamy M**, Lehner B, Poehler AM, Furtner T, Siebzehnrubl FA, Couillard-Despres S, Strauss O, Aigner L, Rivera FJ. "Identity, fate and potential of cells grown as neurospheres: species matters"
Stem Cell Reviews and Reports. 2011 Nov;7(4):815-35 (IF: 6.692).
36. Kohl Z, Regensburger M, Aigner R, **Kandasamy M**, Winner B, Aigner L, Winkler J. "Impaired adult olfactory bulb neurogenesis in the R6/2 mouse model of Huntington's disease"
BMC Neuroscience. 2010 Sep 13; 11:114. (IF: 3.264).

37. **Kandasamy M.** Couillard-Despres S, Raber KA, Stephan M, Lehner B, Winner B, Kohl Z, Rivera FJ, Nguyen HP, Riess O, Bogdahn U, Winkler J, von Hörsten S, Aigner L. “Stem cell quiescence in the hippocampal neurogenic niche is associated with elevated transforming growth factor-beta signaling in an animal model of Huntington disease”
Journal of Neuropathology & Experimental Neurology, 2010 Jul;69(7):717-28. (IF: 3.685).
38. Rivera FJ, Steffenhagen C, Kremer D, **Kandasamy M.** Sandner B, Couillard-Despres S, Weidner N, Küry P, Aigner L. “Deciphering the Oligodendrogenic Program of Neural Progenitors: Cell Intrinsic And Extrinsic Regulators”
Stem Cells and Development. 2010 May;19(5):595-606. (IF: 4.39).
39. Rivera FJ, Siebzehnrbubl FA, **Kandasamy M.** Couillard-Despres S, Caioni M, Poehler AM, Berninger B, Sandner B, Bogdahn U, Goetz M, Bluemcke I, Weidner N, Aigner L. “Mesenchymal stem cells promote oligodendroglial differentiation in hippocampal slice cultures”
Cellular Physiology and Biochemistry. 2009;24(3-4):317-24. (IF: 5.5).
40. Marxreiter F, Nuber S, **Kandasamy M.** Klucken J, Aigner R, Burgmayer R, Couillard-Despres S, Riess O, Winkler J, Winner B. “Changes in adult olfactory bulb neurogenesis in mice expressing the A30P mutant form of alpha-synuclein”
European Journal of Neuroscience. 2009 Mar;29(5):879-90. (IF: 3.698).
41. Torner L, Karg S, Blume A, **Kandasamy M.** Kuhn HG, Winkler J, Aigner L, Neumann ID. “Prolactin prevents chronic stress-induced decrease of adult hippocampal neurogenesis and promotes neuronal fate”
Journal of Neuroscience. 2009 Feb 11;29(6):1826-33. (IF: 6.709).
42. Couillard-Despres S, Wuertinger C, **Kandasamy M.** Caioni M, Stadler K, Aigner R, Bogdahn U, Aigner L. “Ageing abolishes the effects of fluoxetine on neurogenesis”
Molecular Psychiatry. 2009 Sep;14(9):856-64 (IF: 13.437).
43. Rivera FJ, **Kandasamy M.** Couillard-Despres S, Caioni M, Sanchez R, Huber C, Weidner N, Bogdahn U, Aigner L. “Oligodendrogenesis of Adult Neural Progenitors: Differential Effects of Ciliary Neurotrophic Factor and Mesenchymal Stem Cell Derived Factors”
Journal of Neurochemistry. 2008 Nov;107(3):832-43. (IF: 5.546).
44. Kohl Z, **Kandasamy M.** Winner B, Aigner R, Gross C, Couillard-Despres S, Bogdahn U, Aigner L, Winkler J. “Physical activity fails to rescue hippocampal neurogenesis deficits in the R6/2 mouse model of Huntington's disease”
Brain Research. 2007 Jun 25; 1155:24-33. (IF: 3.61).

As on 27.07.2022