

CURRICULUM VITAE

Name **Dr. Nagaraja** M.Sc., Ph.D.

Designation Professor

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Kuvempu University
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Academic Positions:

2013 - present : Professor
2010 - 2013 : Associate Professor
2007-2010 : Reader
2004- 2007 : Senior Scale Lecturer
1998-2004 : Lecturer (Joined on 27th-08-1998)

Education/Research:

Post-doctoral Research:

2004 – 2007 : With **Dr. Michael Hortsch**, Dept. of Cell and Developmental Biology, University of Michigan, Ann Arbor, Michigan, USA. (Research grant funded by NSF-USA).

2003 –2004 : University of Texas Health Center at Tyler, Texas, USA. (Research grant funded by NIH-USA).

Ph.D. 2002 : University of Mysore, Karnataka, India.
Title of the thesis: Molecular phylogeny of the *nasuta* subgroup of *Drosophila*
Ph.D. Mentor: **Prof. H. A. Ranganath**, Farmer Director, NAAC, Bangalore, INDIA.

M.Sc. 1994 : Zoology with specialization in **GENETICS**
University of Mysore, Karnataka, India.
B.Sc. : 1992 : University of Mysore, Karnataka, India.

Area of Research

Developmental Neuroscience, Molecular Genetics.

Research Interest : Role of neural Cell adhesion molecules in development,
Axon guidance and pathfinding,
Developmental and molecular genetics of human diseases.

Research Training Courses

2006 Course on “**Neurobiology of *Drosophila***”,
Cold Spring Harbor Laboratory, New York. June 30 – July 20.

2005 Course on **Vectors for RNAi in Neuroscience**.
Society for Neuroscience, 35th Annual meeting on Neuroscience,
Washington D.C., USA. November 11.

Research Publications

2017 : Dayananda G.Y., Narasimha Reddy A., Chandrakala, E and **Nagaraja**. 2017.
Inversion Polymorphism of the natural (Mandagadde Bird Sanctuary) and
laboratory population of *Drosophila nasuta nasuta*. **International Journal
of Recent Scientific Research**. Vol. 8, Issue, 7, pp. 18059-18061

2016 : G.Y. Dayananda, E. Chandrakala and **Nagaraja**
Comparative studies on inversion polymorphism in *Drosophila ananassae*.
Current Biotica 10(1): 77-80.
ISSN: 0973 – 4031.

2013 : Mualla R, **Nagaraj K**, Hortsch M.
A phylogenetic analysis of the L1 family of neural cell adhesion molecules.
Neurochem Res. Jun;38(6):1196-207

2009 : **Nagaraj K**, Lars Kristiansen, Adam Skrzynski, Carlos Castiella, Luis Garcia-
Alonso, Michael Hortsch.
Pathogenic Human L1-CAM Mutations Reduce the Adhesion-dependent
Activation of EGFR.
Human Molecular Genetics. 18(20):3822-31

- 2009** : Michael Hortsch, **Kakanahalli Nagaraj** and Tanja A. Godenschwege.
The Interaction Between L1-type Proteins and Ankyrins - A Master Switch
for L1-type CAM Function.
"Cellular and Molecular Biology Letters". 14 : 57-69
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- 2006** : **Nagaraj K** and Hortsch M.
Phosphorylation of L1-type cell-adhesion molecules -ankyrins away.
Trends Biochem Sci. 2006 Oct: 31(10):544-6.
- 2004** : **Nagaraja**, Nagaraju J, Ranganath H A.
Molecular phylogeny of the *nasuta* subgroup of *Drosophila* based on 12S
rRNA, 16S rRNA and Col mitochondrial genes, RAPD and ISSR
polymorphisms. **Genes Genet Syst. 2004** Oct;79(5):293-9.
- 2013** : **Kakanahalli Nagaraj**, Rula Mualla and Michael Hortsch
The L1 Family of Cell Adhesion Molecules – A Sickening Number of
Mutations and Protein Functions.
Book Chapter
**Title of the book: Cell Adhesion Molecules: Implications in Neurological
Diseases.**
Springer; 2013 edition (September 30, 2013)
ISBN-10: 1461480892
ISBN-13: 978-1461480891
Editors: Vladimir Berezin and Peter Walmod

Papers published in the Proceedings of the seminar/ Conferences/ Symposium

- 2012** : Madhan S, Milan R, Kumar T M and **Nagaraj K**
Analysis of ABO blood group association with epilepsy disease
Diversity and Physiological Processes : 46-56.
Editors: P.V. Desai and R Roy
@ Goa University

ISBN: 978-81-908791-3-2
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- 2006** : **N. Kakanahalli**, L.V. Kristiansen, A.K. Skrzynski, E. Bock, V. Berezin, L.
Garcia-Alonso and M. Hortsch.
Pathological Missense Mutations in Human L1-CAM Are Unable to Rescue
Loss-of-function Axonal Pathfinding Defects in *Drosophila*. **Developmental
Biology** (295): 366.

Research Papers Presented at Conferences

- 2017** Chandrakala E and **Nagaraja**
Assessment of Autism Spectrum Disorder in central Karnataka.
International Conference on Environment, Genes, Health and Diseases,
22nd to 24th August, at Bharathiar University, Coimbatore.
- 2017** Nijagal B.S., Chethan Kumar G.P and **Nagaraja**
Effect of food additives on the protein content and midgut enzyme
(amylase and protease) activities in the 5th Instar larvae of Bombyx mori(L).
International Conference on Environment, Genes, Health and Diseases,
22nd to 24th August, at Bharathiar University, Coimbatore.
- 2017** Madhan S and **Nagaraja**
Screening and identification of L1 syndrome patients in Karnataka.
International Conference on Environment, Genes, Health and Diseases,
22nd to 24th August, at Bharathiar University, Coimbatore.
- 2016** Chandrakala E and **Nagaraja**
Preliminary survey of Autism Spectrum Disorder (ASD) patients in Malnad
region of Karnataka.
National Conference on Genetics of Human Diseases, 3rd and 4th
November, at Central University of Kerala, Kasargod.
- 2016** Chethan Kumar G.P., B.S Nijagal and **Nagaraja**
A Survey on prevalence of throat cancer and its association with various
risk factors.
National Conference on Genetics of Human Diseases, 3rd and 4th
November, at Central University of Kerala, Kasargod.
- 2016** Madhan S and **Nagaraja**
Survey and identification of L1 syndrome patients with X-linked mental
retardation.
National Conference on Genetics of Human Diseases, 3rd and 4th
November, at Central University of Kerala, Kasargod.
- 2016** Sarika B.M., Hanagavadi S and **Nagaraja**
Prevalence of Hemophilia in Shivamogga, Davangere, and Chitradurga
districts, Karnataka.
National Conference on Genetics of Human Diseases, 3rd and 4th
November, at Central University of Kerala, Kasargod.

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- 2016** Madhan S and **Nagaraja**
Survey and identification of L1 syndrome patients with Mental retardation. International Symposium on Understanding the Molecules of Life in the era of New Biology and 28th All India congress of Zoology (AICZ), 20th to 22nd October, at Davangere University, Davangere.
- 2016** Chethan Kumara G.P., B.S. Nijagal and **Nagaraja**
Study on prevalence of throat cancer and its association with various risk factors.
International Symposium on Understanding the Molecules of Life in the era of New Biology and 28th All India congress of Zoology (AICZ), 20th to 22nd October, at Davangere University, Davangere.
- 2015** Sarika B.M, Rakesh S and **Nagaraja**
Prevalence of hemophilia and other bleeding disorders in Davangere, Shivamogga and Chitradurga districts.
National Conference on Recent Advances in Animal Sciences, 13th to 15th February, at Mangalore University, Mangalore.
- 2015** Nijagal B.S, **Nagaraja**, Chandrakala. E, Pruthvi K.J and Pooja H.K
Biochemical changes due to mercuric chloride toxicity in brain and testis of Swiss albino mice.
National Conference on Recent Advances in Animal Sciences, 13th to 15th February, at Mangalore University, Mangalore.
- 2015** **Nagaraja**, Nijagal B.S, Madhan S, Savitha A.V, Halamma M.S and Lakshmi R
Mercuric chloride toxicity analysis in brain and ovarian tissues of Swiss albino mice.
National Conference on Recent Advances in Animal Sciences, 13th to 15th February, at Mangalore University, Mangalore.
- 2015** Madhan S and **Nagaraja**
Analysis of ABO blood group association with Epilepsy.
7th Annual KSTA National Conference on Science, Technology and Productization – A means for growth, 5th and 6th February, at The Oxford College of Science, Bangalore.
- 2013** Initha N C., Shwetha P and **Nagaraja**
Distribution and Analysis of ABO blood group association in Chikungunya Disease.
National Conference on Biotechnology in Healthcare: Bench to Bedside, 27th and 28th September, at Department of Biotechnology, Sahyadri Science College, Shimoga.

- 2013** Madhan S and **Nagaraja**
Analysis of ABO blood group association with Epilepsy.
National Conference on Biotechnology in Healthcare: Bench to Bedside, 27th and 28th September, at Department of Biotechnology, Sahyadri Science College, Shimoga.
- 2008** **Nagaraja K.** L.V. Kristiansen, A.K. Skrzynski, E. Bock, V. Berezin, L. Garcia-Alonso and M. Hortsch.
Pathological Missense Mutations in Human L1-CAM Are Unable to Rescue Loss-of-function Axonal Pathfinding Defects in *Drosophila*.
5th Drosophila meeting, University of Mysore, March 27-28.
- 2008** **Nagaraja**, L. V. Kristiansen, A. K. Skrzynski, E. Bok, V. Berezin, L.Garcia-Alonso and M. Hortsch
Pathological missense mutations in Human L1CAM are unable to rescue loss-of-function axonal pathfinding defects in *Drosophila*
HGM 2008, HUGO's 13th Human Genome meeting "Satellite meeting to the international Human Genome Symposium", October 1-2, 2008
Organized by NCBS, Bangalore.
- 2008** Michael Hortsch, **Kakanahalli Nagaraj** and Tanja A. Godenschwege
L1-type proteins and their interaction with Ankyrins - A master switch for L1 function. 12th Mejsbaum-Katzenellenbogen Seminar "Membrane Skeleton. Recent Advances and Future Research Directions", **June 15-18**, Zakopane, Poland.
- 2006** **N. Kakanahalli**, L.V. Kristiansen, A.K. Skrzynski, E. Bock, V. Berezin, L. Garcia-Alonso and M. Hortsch.
Pathological Missense Mutations in Human L1-CAM Are Unable to Rescue Loss-of-function Axonal Pathfinding Defects in *Drosophila*.
Society for Developmental Biology, 65th Annual meeting, Ann Arbor, Michigan. June 17 – 21.
- 2006** **Nagaraja Kakanahalli**, Lars V Kristiansen, Luis Garcia-Alonso and Michael Hortsch.
Analysis of molecular requirements for L1- and NCAM-type cell adhesion molecules during axon guidance in the *Drosophila* Ocellar Sensory system.
47th Annual *Drosophila* Research Conference, Houston, Texas. March 29 - April 2.
- 2006** **N. Kakanahalli**, L.V. Kristiansen, A.K. Skrzynski, E. Bock, V.Berezin, L. Garcia-Alonso and M. Hortsch.
Pathological Missense Mutations in Human L1-CAM Are Unable to Rescue Loss-of-function Axonal Pathfinding Defects in *Drosophila*.

Axon Guidance, Synaptogenesis and Neuronal Plasticity. September 13-17, 2006. **Cold Spring Harbor Laboratory**. September 13 – 17.

- 2005** **N. Kakanahalli**, L.V. Kristiansen, A.K. Skrzynski, E. Bock, V. Berezin, L. Garcia-Alonso and M. Hortsch.
Pathological missense mutations in the human neural cell adhesion molecule L1-CAM affect axon pathfinding during *Drosophila* peripheral nervous system development.
American Society for Neuroscience, 35th Annual meeting 2005, Washington DC. Nov 12, 2005 – Nov 16,.
- 2005** **Nagaraja**, Lars V Kristiansen, Luis Garcia-Alonso and Michael Hortsch.
Analysis of the functional and molecular specificities that determine the axonal guidance function of L1- and NCAM-type proteins in the *Drosophila* sensory nervous system. *Neurobiology of Drosophila*, **Cold Spring Harbor Laboratory**. Oct 5, 2005 – Oct 9.
- 2005** **Nagaraja K**, Lars V Kristiansen, Adam K Skrzynski, Luis Garcia-Alonso and Michael Hortsch.
Missense pathological mutations in the human neural cell adhesion molecule L1-CAM affect a conserved pathfinding in *Drosophila*. 6th International symposium of Organogenesis: ***Stem Cells and Organogenesis***, University of Michigan. May 12–13.

Conference/Symposium/Seminars/workshop participated

- 2016 Two days National Seminar on “**Frontier research in diversity and taxonomy of medicinal plants**”, 4th and 5th November, organized by DBT-New Delhi sponsored Builder project at Kuvempu University, Shankaraghatta.
- 2016 “**103rd Indian Science Congress**” on 3rd to 7th January, at University of Mysore, Mysuru.
- 2015 One day State level Seminar on “**Advances in Animal Science**”, 14th March, at Department of Zoology, Sahyadri Science College, Shivamogga.
- 2014 Two days National Symposium on “**Innovations in Science and Technology for Inclusive Development**”, 3rd and 4th January, organized by ISCA, Bangalore Chapter and Department of Studies in Zoology, University of Mysore, Mysore.

- 2011 Two days National seminar on “**Present Scenario of Microbial Life**”, 28th and 29th March, at Department of Microbiology, Kuvempu University.
- 2011 One day State Level Symposium on “**Treatise on Contemporary Molecular Biology**”, 9th May, at Department of Biotechnology, Sahyadri Science College Shivamogga.
- 2010 **6th Drosophila meeting** on 19th & 20th November, at Department of Zoology, University of Mysore, Mysore.

Conference Organized : Organizing Secretary

Organized a two days’ **National Conference** on “**New Frontiers in Animal Science**” from 9-10th April 2012 at Department of Applied Zoology, Kuvempu University.

***Sponsored by DST, DBT, CSIR, ICMR, BRNS and Kuvempu University.**

Members in various academic bodies:

1. Director(September 2017 – till date), Pre-Examination Training Center, Kuvempu University.
2. Chairman of BOS (November 2016 – till date), Department of Applied Zoology, Kuvempu University.
3. Nodal officer (May 2015 – till date), Online Students Grievance Redressal Portal of UGC, Kuvempu University.
4. Chairman (January 2014 to December 2016), Department of Applied Zoology, Kuvempu University.
5. Chairman (November 26, 2010 to December 09, 2012), Department of Applied Zoology, Kuvempu University.
6. Chairman of BOE (June 2010 – December 2011), Department of Applied Zoology, Kuvempu University.
7. Member of BOS (from 2007- till date), Department of Applied Zoology, Kuvempu University.

8. Chairman of BOE (June 2012 – December 2013), Department of Applied Zoology, Kuvempu University.
9. Member: Popularization of Science Education, Kuvempu University
10. Co-ordinator, P. G. Diploma in Genetics(DDE), Kuvempu University
11. Member: Monitoring Committee of University Incubation Centre for Innovation (UICI), Kuvempu University.
12. Member, Faculty of Science, Kuvempu University.

Served as Resource person:

1. Special Lectures on “**Molecular Cell Biology**”. November 21st and 22nd 2016, Gulbarga University, Gulbarga, Karnataka.
2. Invited talk on “**DNA and advancements**”. KRVP., January 19th 2010, Koppal, Karnataka.

Research Projects Implemented:

- **Principal Investigator:** DST-SERB Project funded by DST. Grants of **Rs. 11,00,000/-**
 - Project title: Molecular Screening and association analysis of Neuronal Cell Adhesion Molecule (NrCAM) gene mutations in Autism.
- **Co-Invetigator: DBT-BUILDERS Project:.** Grants of **Rs.4.5 Crores.**
 - Project title: Bio Prospecting of Medicinal Plants.
- **Principal Investigator:** Major Research Project funded by UGC. Grants of **Rs. 12,88,800/-**
 - Project title: Molecular Screening and Identification of Novel Human L1CAM Mutations in Patients with L1 Syndrome.
- **Co-Ordinator:** VGST-K-FIST, Govt. of Karnataka, Bengaluru. **Rs. 20,00000/-**
Project title: Molecular genetics of Human diseases
