

## **Dr. Ravikumar Hosamani**

Assistant Professor

Department of Biotechnology

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### **Education**

- B. Sc. (Agri.), 2003, University of Agricultural Sciences, Dharwad, Karnataka
- M. Sc. (Agri.) in Entomology, 2005, CCS Haryana Agricultural University, Hisar, Haryana
- Ph. D. Bioscience. 2010, CSIR- CFTRI, Mysore, Karnataka
  
- Postdoctoral Researcher at NASA Ames Research Center, California, USA
- NASA Postdoctoral Program Fellow at NASA Ames Research Center, California,
- Research Assistant Professor at NASA Ames Research Center, California, USA/University of New-Mexico (UNM), New Mexico, USA
  
- Seven years of post-Ph. D. research experience at NASA Ames Research center, California
- Mentored undergraduates, Master's and Ph. D. students during their summer internships
- Published 14 peer-reviewed original research articles

### **Research and teaching experience**

- Evaluated the Pesticide (Rotenone and paraquat)-induced Parkinson's-like symptoms in *Drosophila* model.
- Screened several phytochemicals to assess their neuromodulatory efficacy against pesticide-induced Parkinson's disease model in *Drosophila melanogaster*
- Integral part of the science team that has planned, designed, and executed NASA's spaceflight experiments on the International Space Station (ISS) involving *Drosophila* as model organism to understand the immune response and physiological stress.
- Omics (transcriptomics and proteomics) study to understand the panoramic view of *Drosophila* response to spaceflight condition.
- Ground based altered gravity platform such as hypergravity and simulated microgravity models were used to elucidate the biochemical and molecular response to immune function, physiological stress, and behavior of *Drosophila melanogaster*.

## Awards, fellowships and recognition

- NASA Ames Honor Award
- NASA's Space Flight Awareness Team Award
- NASA's Group Achievement Award to ARC Family
- NASA Postdoctoral Program Fellow - NASA Headquarters, Washington DC, USA
- Postdoctoral Travel Grant - COSPAR 2012 Scientific Assembly, France
- Postdoctoral Fellowship Award - University Space Research Association, USA
- Best Poster Presentation Award - SFRR International Conference, 2010
- Doctoral Travel Grant - 12<sup>th</sup> European Drosophila Neurobiology Conference, Germany
- Recipient of Research Fellowships - CSIR-UGC New Delhi, Government of India
- Junior Research Fellowship - ICAR, New Delhi, Government of India

## Publications

- Hosamani, R., Leib, R., Bhardwaj, S. R., Adams, C. M., Bhattacharya, S., 2016. Elucidating the “Gravome”: Quantitative proteomic profiling of the response to chronic hypergravity in *Drosophila*. *J. Prot. Res.*, DOI: 10.1021/acs.jproteome.6b00030.
- Hateley, S.,\* Hosamani R.,\* Bhardwaj, S. R., Pachter, L., Bhattacharya, S., 2016, Transcriptomics response of *Drosophila melanogaster* pupae developed in hypergravity. *Genomics* DOI: 10.1016/j.ygeno.2016.09.002 (\*Shared first author).
- Parsons-Wingerter, P., Hosamani, R., Vickerman, M. B., Bhattacharya, S., 2015, Mapping by VESGEN of Wing Vein Phenotype in *Drosophila* for Quantifying Adaptations to Space Environments. *Gravittl. Space Res.*, 3(2):52-62.
- Hosamani, R., Krishna, G., Muralidhara. 2014, Standardized *Bacopa monnieri* extract ameliorates acute paraquat-induced oxidative stress and neurotoxicity in prepubertal mice brain. *Nutritl. Neurosc.* DOI: 10.1179/1476830514Y.0000000149.
- Hosamani, R., Muralidhara, 2013, Acute exposure of *Drosophila melanogaster* to paraquat causes oxidative stress and mitochondrial dysfunctions. *Arch. Insect Biochem. Physiol.*, 83(1): 25-40.
- Ranjini, M. S., Hosamani, R., Muralidhara., Ramachandra, N. B., 2011, Differential susceptibility of *nasuta-albumicans* complex of *Drosophila* to paraquat-induced lethality and oxidative stress. *Genome*, 54(10): 829-835.
- Hosamani, R., Ramesh, S. R., Muralidhara., 2010, Attenuation of rotenone-induced mitochondrial oxidative damage and neurotoxicity in *Drosophila melanogaster* supplemented with Creatine. *Neurochemical Res.*, 35(9): 1402-1412.
- Hosamani, R., Muralidhara., 2010, Prophylactic treatment with *Bacopa monnieri* leaf powder mitigates paraquat-induced oxidative perturbations and lethality in *Drosophila melanogaster*. *Indian J. Biochem. Biophys.*, 47: 75-82.
- Hosamani, R., Muralidhara., 2009, Neuroprotective efficacy of *Bacopa monnieri* against rotenone-induced oxidative stress and neurotoxicity in *Drosophila melanogaster*. *NeuroToxicology*, 30: 977-985 (Cited among TOP 25 Hottest article by Science Direct: Oct-Dec, 2009)
- Shinomol, G. K., Hosamani, R., Muralidhara., 2009, Prophylaxis with *Centella asiatica*

confers protection to prepubertal mice against 3-nitropropionic-acid -induced oxidative stress in the brain. *Phytoth. Res.*, 24(6): 885-892.

Hosamani, R., Gulati, R., Sharma, S. K., Kumar, R., 2006, Efficacy of some botanicals against *Tropilaelaps clareae* in *Apis mellifera* L. Colonies. *Syst. Appl. Acarol.*, 12: 99-1

Hosamani, R., Gulati, R., Sharma, S. K., 2006, Bioecological studies and management of honey bee mite, *Tropilaelaps clareae* Delfinado & Baker. *Agricul. Rev.*, 27(3): 191-199.

Hosamani, R., Sharma, S.K., Gulati, R., 2005, Effect of *Tropilaelaps clareae* Delfinado & Baker (Mesostigmata: Laelapidae) infestation on colony buildup and stores in *Apis mellifera* L. Colonies. *Korean J. Apicul.*, 20(1): 35 - 38.

Hosamani, R., Sharma, S. K., Gulati, R., 2005., Pest potential of *Tropilaelaps clareae* Delfinado & Baker (Mesostigmata: Laelapidae) on *Apis mellifera* L. Colonies. *Honeybee Sci.*, 26(4): 163-166.