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Department: Microbiology

Designation: Lecturer

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Qualifications

1. M.Sc. (Microbiology), Kakatiya University.
2. Ph.D. (Cell and Molecular Biology), Kent State University.
3. Post-doctoral Research (Bacterial Nanotoxicology), University of California Santa Barbara.
4. Post-doctoral Research (Plant-PGPR Interactions), University of Hyderabad.

Teaching Experience: 14.5 years (PG-level, 9 years; UG-level 5.5 years).

Areas of Interest: Bacterial Stress Responses; Bacterial Nanotoxicology; Plant-Microbe Interactions; Microbial Ecology; Probiotics.

Research Grants (Intramural)

1. High-throughput screening sub-lethal effects of engineered nanomaterials to bacteria. (2010). University of California Center for Environmental Implications of Nanotechnology, Los Angeles, California, USA. US\$ 59,150.00 (Participating Investigator).
2. Effect of modeled reduced gravity conditions on bacterial morphology and physiology. (2008). Graduate Student Senate, Kent State University, Kent, Ohio, USA. US\$1,023.00.
3. Bacterial multiple stress resistance under modeled reduced gravity: are responses triggered by alterations in microenvironments around cells? (2007). Graduate Student Senate, Kent State University, Kent, OH, USA. US\$1,300.00.

Publications

a. International (ISSN; All are Scopus Indexed Journals)

1. Yue, Y., Liu, Y.J, Wang, J., Vukanti, R.& Ge, Y. (2021). Enrichment of potential degrading bacteria accelerates removal of tetracyclines and their intermediates from cow manure biochar amended soil. *Chemosphere*. 278, 130358. Citations: 4. Current IF: 7.086.
2. Liu, Y.J., Qiao, N.H., Diao, Q.Y., Jing, Z., Vukanti, R., Dai, PL. & Ge, Y. (2020). Thiacloprid exposure perturbs the gut microbiota and reduces the survival status in honeybees. *Journal of Hazardous Materials*. 389, 121818. Citations: 21. Current IF: 10.558.
3. Chellappan, S., Roy, S., Nagmoti, J.M., Tabassum, W., Vukanti, R., Hoti, S.L.,Bhattacharyya, M.K.& Nina, P.B. (2020). Functional studies of *Plasmodium falciparum* putative SURF1 in *Saccharomyces cerevisiae*. *Journal of Vector Borne Diseases*, 57(4), 325-330. Current IF: 1.688.
4. Vaikuntapu, P.R., Dutta, S., Samudrala, R.B., Vukanti, R., Kalam, S. & Podile A.R. (2014). Preferential promotion of *Lycopersicon esculentum* (tomato) growth by plant growth promoting bacteria associated with tomato. *Indian Journal of Microbiology*, 54(4), 403-412. Citations: 49. Current IF: 2.461.
5. Podile, A.R., Vukanti, R., Sravani, A., Kalam, S., Dutta, S., Durgeshwar, P. & Vaikuntapu, P.R. (2014). Root colonization and quorum sensing are the driving forces of plant growth promoting rhizobacteria (PGPR) for growth promotion. *Proceedings of the National Academy of Sciences, India Section B. Biological Sciences*, 80(2), 407-413. Citations: 27. Current IF 0.95.
6. Horst, A.M., Vukanti, R., Priester, J.H. & Holden, P.A. (2013). An Assessment of fluorescence- and absorbance-based assays to study metal oxide nanoparticle ROS production and effects on bacterial membranes. *Small*, 27(9), 1753-1764. Citations: 60. Current IF 13.281.
7. Vukanti, R., Model, M.A. & Leff, L.G. (2012). Effect of modeled reduced gravity conditions on bacterial morphology and physiology. *BMC Microbiology*, 12:4. Citations: 44. Current IF: 2.989.
8. Vukanti, R. & Leff, L.G. (2012). Expression of multiple stress response genes by *Escherichia coli* under modeled reduced gravity. *Microgravity Science and Technology*, 24(4), 267-279. Citations: 7. Current IF: 1.982.
9. Vukanti, R., Crissman, M., Leff, A.A. & Leff, L.G. (2009). Bacterial communities of tire monofill sites: growth on tires-shreds and leachate. *Journal of Applied Microbiology*, 106(6), 1957-1966. Citations: 12. Current IF: 3.772.
10. Vukanti, R., Mintz, E.M. & Leff, L.G. (2008). Changes in gene expression of *E. coli* under conditions of modeled reduced gravity. *Microgravity Science and Technology*, 20(1), 41-57. Citations: 46. Current IF: 2.141.

b. International (ISBN)

- **Book Chapter**

- Vukanti, RVNR. (2020). Structure and function of rhizobiome. A. Varma et al. (eds.), Plant Microbe Symbiosis. Springer International Publishing. 241-262. Citations: 1.

c. National (ISBN)

- **Book**

- Raja VNR Vukanti. (2018). Basic Research Techniques in Biology. Notion Press Media Pvt. Ltd. Chennai, Tamil Nadu, INDIA. 1-198.

- **Book Chapter**

- Vukanti, R. (2014). A primer for understanding metagenomics and its accomplishments. Business Management, Educational Aspects, Social Science & Science and Technology. Victorious Publications, New Delhi, INDIA. 287-297.

Awards / Recognitions

1. Outstanding graduate student teaching award (2009). Graduate Student Senate, Kent State University, Kent, Ohio, USA.
2. Student travel grant (2005). American Society for Microbiology, Washington DC, USA.
3. University 1st Rank + a Gold medal (2000). Kakatiya University, Warangal, Telangana, INDIA.

Invited Guest Lectures

- Resource person for a five-day lecture series (April 05-09, 2021) on ‘Laboratory Approach for Disease Investigation’ at the Department of Epidemiology and Public Health, Central University of Tamil Nadu, Thiruvavur, Tamil Nadu, INDIA.

Workshops/ Refresher courses /Training programs Attended: (Last Five Years)

1. Five-Day Faculty Development Program. (2020). Bhavan’s Vivekananda College, Secunderabad, Telangana.
2. Seven-day online national Sage Summer School on ‘Recent Advances on Microbial Bioinoculants for Improvement of Agricultural Sustainability’. (2020). Sage School of Agriculture. SAGE University, Bhopal, Madhya Pradesh.
3. Three-day online workshop on ‘Online Course Design, Development and Delivery’. (2020). Human Resource Development Center, University of Hyderabad, Hyderabad, Telangana.

4. Two-Day Faculty Development Program. (2019). Bhavan's Vivekananda College, Secunderabad, Telangana.
5. University-Level Dissemination Program on Ethical Guidelines for Biomedical Research on Human Participants. (2018). Institutional Human Ethics Review Board and Department of Life Sciences, Central University of Tamil Nadu, Thiruvarur, Tamil Nadu, India.
6. Two-Week Teacher Orientation Program. (2016). Palamuru University, Mahabubnagar, Telangana, India.

Membership of Professional Bodies

1. Student Member of American Society for Microbiology (2003-2008).
2. Post-doc Member of American Society for Microbiology (2009-2011).

Manuscript Reviewer

1. **2009**; Applied Biochemistry and Biotechnology.
2. **2012**; BMC Research notes.
3. **2021**; Environmental Pollution.