

Balan Ramesh

Curriculum Vitae

Education

- 2016–Present **B.S to Ph.D. in Quantitative Biology**, *The University of Texas*, Arlington,
GPA – 4.0/4.0.
Specialized in Computational Biology/Bioinformatics
Thesis: Evolution of Dosage Compensation in Tribolium Beetles
Advisor: Dr. Jeff Demuth
- 2012–2016 **Bachelor of Technology**, *Anna University*, Kumaraguru College of Technology,
GPA – 8.66/10, First Class with Distinction.
Specialized in Biotechnology
Advisor: Dr. Sathishkumar Thiyagarajan

Awards, Honors and Grants

- 2018-Present Phi-Sigma Large Research Grant - \$3,000
- 2016-Present STEM Fellowship - \$24,000/year
- 2017 Financial Aid for Python for Genomic Data Science by Johns Hopkins University on Coursera.
- 2016 I was allowed to fast track my curriculum for a complete year ahead of my peers in undergraduate due to my academic excellence
- 2013-2015 Mahatma Gandhi Merit Scholarship for academic excellence
- 2012-2016 Prime Minister's Merit Fellowship for Undergraduate Degree

Peer Reviewed Publications

- 2019 Matthew N. B., Emily C., Joseph H. J., Vamsi K. K., Kimberly R., Kimiko S., Lukas W., Hao X., Vadim Z., Peiwen C., Ariella G., Alan P. H., Ivan J., Olha K., Nicole L., Khun L., Joseph M., Ravinder P., **Balan R.**, Tommer S., John R. S., Daniel S., Allissa D., Ben B. RNAMunger: A toolset for public RNA-seq data analysis.
F1000Research.(Submitted)
- Balan R.**, Indumathi P., Gokhul V., Muthukumaran P., Yuvapriya S., Sathishkumar T. Extraction process optimization of flavonoid and in vitro amylase inhibitory effect of purified quercetin derivative from *Amorphophallus paeoniifolius* tubers.
Journal of Applied Research on Medicinal and Aromatic Plants.(Submitted)

800 Bering Drive – Arlington, Texas 76013

📞 (682) 251 4748 • 📠 (682) 251 4748 • ✉️ balan.ramesh@uta.edu

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- 2019 Drew R. Schield, Daren C. Card, Nicole R. Hales, Blair W. Perry, Giulia M. Pasquesi, Heath Blackmon, Richard H. Adams, Andrew B. Corbin, Cara F. Smith, **Balan R.**, Jeffery P. Demuth, Esther Betran, Marc Tollis, Jesse M. Meik, Stephen P. Mackessy, and Todd A. Castoe. The origins and evolution of chromosomes, dosage compensation, and mechanisms underlying venom regulation in snakes.
Genome Research. 29 (4): pp 590-601
- 2017 Muthukumar P., Aravind J., Thirumurugan A., Sridhar S., **Balan R.**, and Indumathi P. Screening, Isolation and Development of Fungal Consortia with Textile Reactive Dyes Decolorizing Capability.
Bioremediation and Sustainable Technologies for Cleaner Environment (pp. 295-303). Springer International Publishing
Muthukumar P., Yuvapriya S., **Balan R.**, Gokhul V., Indumathi P., and Saraswathy N. *In vitro* phytochemical screening, evaluation, antioxidant potential and antibacterial activity of *Amorphophallus paeonifolius* (Dennst. Nicolson).
Journal of Chemical and Pharmaceutical Sciences 10(3): pp. 1090 - 1097
- 2016 Kumaresan, K., **Balan R.**, Sridhar, A., Aravind, J., and Kanmani, P. An integrated approach of composting methodologies for solid waste management.
Global Journal of Environmental Science and Management 2(2): pp. 157-162.
- Aravind, J., Kanmani, P., Sudha, G., and **Balan R.** Optimization of chromium (VI) biosorption using gooseberry seeds by response surface methodology.
Global Journal of Environmental Science and Management 2(1), 61-68.
- Muthukumar P., Saraswathy, N., Aswitha, V., **Balan R.**, Gokhul, V. B., Indumathi, P., and Yuvapriya, S. Assessment of total phenolic, flavonoid, tannin content and phytochemical screening of leaf and flower extracts from *Peltophorum pterocarpum* (DC.) Backer ex K. Heyne: a comparative study.
Pharmacognosy Journal 8(2).
- Muthukumar P., Saraswathy, N., Yuvapriya, S., **Balan R.**, Gokhul, V. B., and Indumathi, P. In vitro phytochemical screening and antibacterial activity of *Amorphophallus paeonifolius* (Dennst. Nicolson) against some human pathogens.
Journal of Chemical and Pharmaceutical Research 8(2): pp. 388-392.
- Kanmani, P., Kumaresan, K., Aravind, J., Karthikeyan, S., and **Balan R.** Enzymatic degradation of polyhydroxyalkanoate using lipase from *Bacillus subtilis*.
International Journal of Environmental Science and Technology 13(6), pp. 1541-1552.

Conference Presentations

- 2017 Co-Presented a poster on "Inferences of ongoing and unresolved sexually antagonistic selection from population genomic data in the flour beetle *Tribolium castaneum*" in Society of Molecular Biology and Evolution, Austin.
- 2015 Co-Presented a poster on "Green synthesis of Silver Nanoparticles from *Amorphophallus paeoniifolius* and its antimicrobial activity" in a conference on Nanotoxicology at SASTRA University, Kumbakonam. The poster was published in the proceedings of the conference.

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2015 Co-Presented a poster on "A review on albumin as a carrier for the anti-cancer drug paclitaxel" in a conference on Drug Carriers in Medicine and Biology at Bannari Amman Institute of Technology, Sathyamangalam. Best Undergraduate Poster Award

Computer skills

Languages PYTHON, R, GIT, SHELL, \LaTeX , HTML
Workflow Snakemake, Conda, Docker
Management

Additional Training

2019 Certified Software Carpentry Instructor. Certificate
2016 Structure based drug design workshop organized by Schrodinger at Kumaraguru College of Technology, Coimbatore.

Teaching Experience

Graduates

Fall 2017, 2018 & 2019 Bioinformatics Teaching Assistant (volunteer)

Undergraduates

Summer 2018 Evolution and Ecology Lab
- Present
Summer 2017 Human Anatomy and Physiology I Lab

2016-2018 Cell and Molecular Biology Lab

University and Community Service

2017-Present Software Carpentry Workshop - Python and R Instructor

Undergraduates Mentored

- Beena Margabandu
- Kimberly Su
Mentoring Course - Basics of Shell and Python
Aid Course - Bioinformatics Group Projects

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