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AREA OF RESEARCH

- ❖ Secondary Metabolites from rhizosphere of Medicinal plants.
- ❖ Plant defence related enzymes.
- ❖ Biocontrol agents for plant disases
- ❖ Plant growth hormones from bacteria and fungi

HONOURS AND RECOGNITIONS

Postdoctoral fellow, Department of Biology, Disease and Biotechnology Agroforestry Universita degli studi della Basilicata Potenza, Italy.

Young Scientist award - Federation of European Microbiologist (FEMS) Geneva, Switzerland.

ONGOING RESEARCH PROJECT

Biological control of sheath blight disease in rice using phenazine antibiotics produced by fluorescent *Pseudomonas* Funded by UGC (2011-2014).

RECENT PUBLICATIONS

Harikrishnan, H., **Shanmugaiah, V.**, Balasubramanian, N., M. P Sharma, S. O Kotchoni. 2014. Antagonistic potential of native strain *Streptomyces aurantiogriseus* VSMGT1014 against sheath blight of rice disease. *World Journal of Microbiology and Biotechnology*. 30: 3149-3161.

Harikrishnan, H., **Shanmugaiah, V** and Balasubramanian, N. 2014. Optimization for production of Indole acetic acid (IAA) by plant growth promoting *Streptomyces* sp VSMGT1014 isolated from rice rhizosphere. *International Journal of Current Microbiology and Applied Sciences*. 3(8): 158-171.

Shanmugaiah V., Harikrishnan H., Venkatesh, T.S and Jayaprakashvel, M. 2014. Larvicidal and antimicrobial activities of silver nanoparticles synthesized using marine fluorescent pseudomonads. *BMC Infectious Diseases*. 14 (Suppl 3): 25.

Nagarajan, S., Shanmugavelan, P., Sathishkumar, M., Selvi, R Ponnuswamy, A., Harikrishnan, H and **Shanmugaiah, V**. 2014. An eco-friendly water mediated synthesis of 1, 2, 3-triazolyl-2-aminopyrimidine hybrids as highly potent anti-bacterial agents. *Chinese Chemical Letters*. 25(3): 419 - 422.

Nagarajan, S., Shanmugavelan, P., Sathishkumar, M., Selvi, R Ponnuswamy, A., Harikrishnan, H and **Shanmugaiah, V.** 2014. An eco-friendly and water mediated product selective synthesis of 2-aminopyrimidines and their in-vitro anti-bacterial evaluation. *Bioorganic and Medicinal Chemistry Letters*. 24: 4999 – 5007.

Balasubramanian, N., Tamil Priya, V., **Shanmugaiah, V** and Lalithakumari, D. 2014. Effect of improved *Trichoderma fusants* and their parent strains in control of sheath blight of rice and wilt of tomato. *Journal of Plant Diseases and Protection*. 121: 71-78.

Arulraj, J., **Shanmugaiah, V** and Lakshmanan N. 2014. Studies on phytochemical analysis and antimicrobial activity of Tulsi (*Ocimum sanctum* Linn) leaf extract against human and fish pathogens. *International journal of Advanced Life Sciences*. 7 (1): 27- 34.

Suresh, R., Muthusubramanian, S., Paul, N., Kalidhasan, N and **Shanmugaiah, V.** 2014. Synthesis of (Z)-1, 3-diaryl-2-(4-aryl-1H-1, 2, 3-triazol-1-yl) prop-2-en-1-ones and their antibacterial studies. *Medicinal Chemistry Research*. 23: 4367- 4375.

Harikrishnan, H and **Shanmugaiah V.** 2013. *Streptomyces* sp. VSMGT1014- mediated antifungal activity against fungal plant pathogens. In: A. Sabu and A. Augustine (eds.), *Prospects in Bioscience: Addressing the Issues*. Springer India. pp-335-341.

Charulatha, R., Harikrishnan, H., Manoharan, P. T., **Shanmugaiah, V.** 2013. Characterization of groundnut rhizosphere *Pseudomonas* sp. VSMKU 2013 for control of phytopathogens. In: Rajesh Kannan.V (eds.), *Microbiological Research in Agro ecosystem Management*. Springer India. pp-121-127.

Sathish Kumar, C., Harikrishnan, H., Charulatha, R and Shanmugaiah V. 2013. Evaluation of *Pseudomonas* sp. VSMKU-4046 for suppression of Sheath Blight (ShB) of Rice in detached leaf assay. In: A. Sabu and A. Augustine (eds.), *Prospects in Bioscience: Addressing the Issues*. Springer India. pp- 277-282.

Nagarajan, S., Sathishkumar, M., Shanmugavelan , P., Ranganathan, R., Ponnuswamy A., Venkatesan., R and Shanmugaiah, V. 2012. Facile water promoted synthesis of 1, 2, 3-triazolyl dihydropyrimidine-2-thione hybrids—Highly potent antibacterial agents. *European Jo*

Shanmugaiah V, Harikrishnan H and Nithya K. 2012. Phenazine Antibiotic producing *Pseudomonas* sp VSMKU 4047 against Sheath Blight of Rice, In: Ponmurugan P, Puniethaa Prabhu, Ayyappadasan G, GaneshBabu R. (Eds), *Current Scenario in Biotechnology*. Bloomsbury Publishing India Pvt Ltd, pp. 134- 143.

Charulatha R, Harikrishnan H, Manoharan PT and **Shanmugaiah V.** 2012. Preliminary Screening of Fluorescent *Pseudomonads* from Groundnut rhizosphere against fungal pathogens and phenazine gene identification by Polymerase Chain reaction (PCR), In: P. Ponmurugan, Puniethaa Prabhu, G.Ayyappadasan, R.GaneshBabu. (Eds), *Current Scenario in Biotechnology*. Bloomsbury Publishing India Pvt Ltd, pp. 285- 293.

BOOK CHAPTER PUBLISHED

Gomathinayagam.,S, Balasubramanian., N, **Shanmugaiah, V,** Rekha., M, Manoharan., P.T. and Lalithakumari., D. 2011. Molecular Characterization of Carbendazim Resistance of Plant Pathogen (*Bipolaris oryzae*), Fungicides - Beneficial and Harmful Aspects, Nooruddin Thajuddin (Ed.), SBN:978-953-307-451-1. InTech. Open publication. (www.intechopen.com).