

VINSTROM

Progress Report - for the period April 2010 to March 2011

Suryanarayanan was invited to Brazil as a Visiting Professor to collaborate with State University of Amazonas, Federal University of Amazonas and Agricultural University of Sao Paulo for 2 months from 13-10-2010 to 10-12-2010. He interacted with the scientists and research scholars in these Universities and explored the possibilities of research collaborations between these Institutions and VINSTROM. He conducted workshops in Mycology for the students and faculty in these Institutions and delivered special lectures on Biodiversity and Bio prospecting of microfungi. His travel and stay in Brazil was funded by the Brazilian Universities. He gave suggestions to their research on fungal endophytes of Amazon forests and economic crops.

Suryanarayanan participated in a the workshop on “Water Quality and Environment” conducted by the State University of Amazonas, Brazil (23&24th October 2010).

Papers published:

1. Suryanarayanan, T.S., Murali, T.S., Thirunavukkarasu, N., Govinda Rajulu, M.B., Venkatesan, G. and Sukumar, R. 2011. Endophytic fungal communities in woody perennials of three tropical forest types of the Western Ghats, southern India. *Biodiversity and Conservation* **20**:913-928.
2. Govinda Rajulu, M.B., Thirunavukkarasu, N, Suryanarayanan, T.S., Ravishankar, J.P., El Gueddari, N.E., and Moerschbacher, B.M. 2011. Chitinolytic enzymes from endophytic fungi. *Fungal Diversity* **47**:43-53.
3. Suryanarayanan, T.S., Ravishankar, J.P., Muruganandam V. 2010. Drug discovery: going with the tide. *Current Science* **99**:1308.
4. Suryanarayanan, T.S., Venkatachalam, A., Thirunavukkarasu, N., Ravishankar, J.P., Doble, M. and Geetha, V. 2010. Internal mycobiota of marine macroalgae from the Tamilnadu coast: distribution, diversity and biotechnological potential. *Botanica Marina* **53**:456-468.

Invited Lectures by T. S. Suryanarayanan:

1. Suryanarayanan was invited to deliver a lecture on Endophytic microorganisms: diversity and biotechnological potential at the University of Sao Paulo, Brazil, October 2010.

2. The Technological Potential of Tropical Endophytes: The Enzyme Angle at the 6th Brazilian mycological Congress, Brasilia on 01.12.2010.

3. Suryanarayanan was invited to a DBT-sponsored symposium on Bioprospecting in the tropics-promises and challenges organized by the University of Agricultural Sciences, Bangalore to contribute to a brain-storming session (10 th and 11th March 2011) aimed at providing a road map to the Govt. of India on bioprospecting. He delivered a lecture in this meeting on Fungal endophytes – a potential source of plant secondary metabolites – 11th March 2011.

4. “Tropical fungal endophytes: How reliable are they in predicting global fungal diversity” at the National Seminar of the Mycological Society of India (8 &9th February, 2011), Chennai.

5. Suryanarayanan T.S, Venkatachalam A, Thirunavukkarasu, N. and Ravishankar,J.P. “Fungal endosymbionts of seagrasses from Tamilnadu coast” on 8th and 9thFebruary, 2011, National Conference on Recent advances in Mycological Research, CAS in Botany, Chennai.

National and International Conference / Posters Presented:

1. Geetha V., Venkatachalam, A., Suryanarayanan, T.S. and Doble, M. 2011.Isolation and Characterization of new antioxidant and antibacterial compounds from algicolous marine fungus *Curvularia tuberculata* at International conference on Biosciences, Biochemistry and Bioinformatics on 26-28th February, Singapore.

2. Thirunavukkarasu N, Govinda rajulu, M.B., Mohandoss, J. and Suryanarayanan, T.S. 2011. Endophyte assemblage of an evergreen forest in the Nilgiri Biosphere Reserve” at National conference on recent advances in mycological research on 8 & 9th February, CAS in Botany, Guindy Campus, Chennai.

On going projects:

The potential of fungal endophytes as biocontrol organisms - Indo – German collaborative Research project with Prof. Stefan Vidal, Georg-August-University, Goettingen, Germany and funded by Dept. of Biotechnology, Government of India, New Delhi (Rs.36.59 lakhs).

New Research Collaborations:

1. Dr. N. Thirunavukkarasu, Asst. Professor, Dept. of Plant Biology & Plant Biotechnology, RKM Vivekananda College, - a minor research project “Extracellular proteases from endophytic fungi” funded by the UGC (Rs.1.2 lakhs) – In collaboration with VINSTROM.
2. Dr. J. Mohandoss, Asst. Professor, Dept. of Plant Biology & Plant Biotechnology, RKM Vivekananda College - a minor research project “Extracellular tannase of fungal endophytes” funded by the UGC (Rs.1.5 lakhs) – In collaboration with VINSTROM.
3. Dr. Dinkar Sahal, International Center for Genetic Engineering & Biotechnology, New Delhi - anti malarial chemicals from fungi.
4. Prof. N. Money, Department of Botany and Western Program, Miami University, Oxford, Ohio, USA – heat tolerant fungi
5. Dr. S.N. Gummadi, Dept. of Biotechnology, Indian Institute of Technology, Chennai - anticancer enzyme from fungi

Academic Recognition for T.S. Suryanarayanan :

Selected for Fulbright-Nehru Senior Fellowship for the year 2011 to work for 6 months in the Department of Biochemistry, The Ohio State University, USA on production of greener biofuels using fungi.

Extension Service:

- ❖ Trained Mr. M. Jayaseelan, Guest lecturer in Botany, Govt. Arts College, Dharmapuri for 2 weeks in laboratory techniques.
- ❖ Gave a 2 day training in Mycology for Mr. S. Raja, a research scholar, CAS in Marine Biology, Annamalai University.
- ❖ Gave training to N. Jayalakshmi, PG Assistant (Chemistry) and her students of MGR Higher Secondary School in basic techniques in Microbiology which helped them to participate at the **National Children's Science Congress 2010**.