VINSTROM - Progress Report (April 2011 to March 2012)

PAPERS PUBLISHED:

Thirunavukkarasu, N., Suryanarayanan, T.S., Girivasan, K.P., Venkatachalam, A., Geetha, V., Ravishankar, J.P., and Doble, M. (2012). Fungal symbionts of marine sponges from Rameswaram, southern India: species composition and bioactive metabolites. *Fungal Diversity* 55:37-46.

Suryanarayanan, T.S., Thirunavukkarasu, N., Govinda Rajulu, M.B. and Venkat Gopalan (2012). Fungal endophytes: An untapped source of biocatalysts. Fungal Diversity 54:19–30.

Suryanarayanan, T.S., Venkatachalam, A. and Govinda Rajulu, M.B. (2011). A comparison of endophyte assemblages in transgenic and non-transgenic cotton plant tissues. Current Science 101:1472-1474.

Suryanarayanan, T.S., Govinda Rajulu, M.B, Thirumalai, E., Reddy, M.S. and Money, N.P. (2011). Agni's fungi: heat-resistant spores from the Western Ghats, southern India. Fungal Biology 115: 833-838.

Thirunavukkarasu, N., Suryanarayanan, T.S., Murali, T.S., Ravishankar, J.P., Gummadi, S.N. (2011). L-asparaginase from marine derived fungal endophytes of seaweeds. Mycosphere 2:147–155.

CHAPTERS IN BOOKS

Suryanarayanan, T.S. 2012. Fungal Endosymbionts of Seaweeds: C. Raghukumar (ed.), In Biology of Marine Fungi, Progress in Molecular and Subcellular Biology 53, Springer-Verlag, Berlin Heidelberg, pp 53-69.

Suryanarayanan, T.S. 2011. Diversity of fungal endophytes in tropical trees. In Endophytes of Forest Trees: Biology and Applications (A.M. Pirttilä and A.C. Frank (eds.). Forestry science series 80, pp 67-80.

Fellowship programme:

Suryanarayanan was awarded the Fulbright Nehru Senior Fellowship to visit the Dept. of Biochemistry, The Ohio State University to study the feasibility of using endophytic fungi for the conversion of plant wastes into ethanol for use in biofuel generation.

Invited Talks by T. S. Suryanarayanan: (1) Smithsonian Tropical Forest Research Institute, Panama, (2) University of North Carolina, Greensboro, USA (3) Ohio State University, USA.

Research Projects:

Ongoing

2011-2014 – Indo–German Collaborative Project (in collaboration with University of Goettingen, Germany) - Department of Biotechnology (Government of India) research grant for the project "*The potential of fungal endophytes as biocontrol organisms*". (Rs. **36.59** lakhs)

Completed

2008-2011 – Department of Biotechnology (Government of India), research grant for the project "*Pharmaceuticals from marine and marine-derived fungi assocaited with seagrasses and seaweeds of Tamil Nadu coast*". (Rs. **15.09** lakhs)

Proposed

1.Marine algal endophytes & fungal symbionts of sponges of the eastern coast of India - Rs.**56.55** lakhs –Min. Earth Science, Govt. India. 2. Identification and applications of cotton endophytes for growth promotion and amelioration of biotic stresses (in Collaboration with CICR, Nagpur Rs. Rs. **5 crores and 72 lakhs**. 3. Biologically active natural products from fungi associated with mangroves and sponges of Andaman Islands, DBT, Rs. **15.96** lakhs.

Findings/collaborations of significance (1).Agni fungi – widely covered by media and Indian Embassy in USA. (2). A new molecule that is effective against 2 types of human cancers (in collaboration with IIT Madras). (3). Ohio State University (OSU), USA is designing a course for their undergraduate students based on VINSTROM's specialities in which VINSTROM researchers will mentor through video conferencing. (4) A week long workshop for students envisaged in December 2012 with Anna University, Chennai and OSU, USA.