

# Simonetta Sampò

## *Curriculum vitae*

### BIO AND EDUCATION

Simonetta Sampò graduated with full marks in 1987 in Natural Science at Università degli Studi di Torino, In 1993 she achieved her PhD in "Biologia e Biotecnologia dei funghi". During the period 1985-1987 she investigated mycological biodeterioration of works of art working at the Dipartimento di Biologia Vegetale di Torino. She studied biodeterioration of other materials at the Laboratorio Chimico e Merceologico della Camera di Commercio di Torino and collaborated to carry out a quality control plan of Sugherificio Careddu in Canelli. She took part in research programmes at the Centro di Micologia del Terreno del C.N.R. on fungal interactions in natural ecosystems and in "Progetto finalizzato Energetica"( P.F.E) with the Politecnico di Torino (Dipartimento di Energetica) concerned mycological investigations on "building disease" related to building techniques. Dr Sampò cooperated with Dipartimento di Scienze della Terra dell'Università di Torino in studies on oxalate patina to understand its origin and its significance, and with Università della Sapienza di Roma in studies on lichen colonization and restore of Cerere's temple at Paestum. She also cooperated with Dipartimento di Agronomia, Selvicoltura e Gestione del Territorio dell'Università di Torino, Facoltà di Agraria on researches about the degree of mychorrization in herbaceous plants of pastures. She took part to preservation of the strains of Micoteca (Dipartimento di Biologia Vegetale and Centro di Micologia del Terreno del CNR, Turin). In 1991 took part to a training on Biodeterioration organized by CAB in London. Researcher in Applied Vegetal Biology (BIO 03) at Facoltà di Scienze M.F.N. dell'Università del Piemonte Orientale – Alessandria since 1994. Her researches are in the field of fungal interactions, cooperating with Italian and foreign expertises and has been focused on host-fungus interactions, root morphogenesis and looking for quantitative and qualitative chromatin variations. She is also investigating the mechanisms involved in the possible induced tolerance to soil-borne pathogens by AM fungi and on reduction of pesticide use. Besides she is studying polluted sites by using plants and fungi. Other researches are on indoor air-borne fungi. Dr Sampò cooperates with Soprintendenza per i Beni Architettonici e il Paesaggio Sezione di Torino in restore projects on Porta Reale del Forte di Finestrelle (To), on Kremer frescoes of casa Cavassa (Mondovì, Cn), on frescoes of villa del Maresco (To) and on chinese wall papers in Palazzina di caccia di Stupinigi (To). She took part of a research group of the COST Action 838. She has been involved in international and national research projects. She is also involved in Centro di Eccellenza per il monitoraggio e bonifica di siti inquinati in Alessandria and in Centro di Eccellenza per la Biosensoristica Vegetale e Microbica (CEBIOVEM, Torino). She is a teacher of the PhD course "Environmental Sciences "(internal waters and agroecosystems), of the Biology and the Environmental and of the Restore course at Accademia delle Belle Arti di Torino. She studies microbiological aspects of spatial confined environment in Columbus Laboratory and the water recycle to produce oxygen and CO<sub>2</sub> in microgravity conditions. Author of more than 50 publications, including papers, book chapters and abstracts of National and International meetings.

### UNIVERSITY CAREER

2016-1994	Researcher, Università del Piemonte Orientale
1993-1990	Ph D, Università di Torino
1987-1989	Freelance mycologist and agricultural salaried worker

## MAIN FIELDS OF INTEREST

1. Indoor microbiological analyses: Columbus space module
2. Biodeterioration of work of art
3. Microbial biodiversity in natural environment

## CURRENT ISSUES OF RESEARCH

### 1. HEPA filter microbiological analyses: Columbus space module

Abstract – Analyses of the HEPA filter provide insight into different kinds of microorganisms that the crew is exposed to. It will be useful to identify fungi and bacteria to species level with particular attention to groups which may have implications on human health. The scope is also to evaluate the possibility to extend the HEPA filter operative life of 6 months and the maintenance frequency.

### 2. Innovative techniques to reduce microbial load in recycled water from human activities

Abstract – Development of innovative techniques to produce oxygen and CO<sub>2</sub> from recycled water in microgravity conditions, with particular attention to microbial contamination control agrees with the space program performance requirements.

### 1. Fungal biodeterioration of pictorial pigments

Abstract – Qualitative and quantitative microbial analysis on frescoes (Ala di Stura, Turin). Studies on chromatic change of pigments due to presence of microorganisms.

### 2. Fungal biodiversity of soil communities

Abstract – Qualitative and quantitative analyses of soil fungi from extreme environments and from polluted soils. Researches on fungal ecology to use fungi in bioremediation..

## TOP FIVE PAPERS

1. **Sampò S.**, Massa N., Cantamessa S., D'Agostino U., Bosco D., Marzachi C., Berta G., 2012. Effects of *two AM fungi on phytoplasma infection in the model plant Chrysanthemum carinatum*. *Agricultural and food Science* 21: 39-51.
2. Grizzaffi L., Lobascio C., Parodi P., Saverino A., Locantore I., Perrachon D., Giacosa D. and S. 2011- Post-flight analyses of Columbus HEPA Filter. American Institute of Aeronautics and Astronautics (AIAA) Technical Conferences, Portland Oregon
3. Berta G., **Sampò S.**, Gamalero E., Massa N., Lemanceau P. 2005. Suppression of *Rhizoctonia* root-rot of tomato by *Glomus mosseae* BEG12 and *Pseudomonas fluorescens* A6RI is associated with their effect on the pathogen growth and on root morphogenesis. *European Journal of Plant Pathology* 111: 279-288.
4. **Sampò S.**, Bergero R., Buffa G., Luppi-Mosca A.M. 1997. Soil fungal communities in a young and an old *Alnus viridis* coenosis. *Mycologia*, 89 (6): 837 .
5. **Sampò S.** & Luppi-Mosca A.M., 1989. A study of the fungi occurring on 15<sup>th</sup> century frescoes in Florence, Italy. *International Biodeterioration*, 25: 343-53.