



Turin University Culture Collections

THE TURIN UNIVERSITY CULTURE COLLECTION (TUCC): A SUCCESSFUL NETWORKING INITIATIVE OF MICROBIAL RESOURCES



Luca Cocolin^a, Paolo Gonthier^a, Angelica Laera^a, Fabiano Sillo^a, Vivian Tullio^b, Narcisa Mandras^b, Janira Roana^b, Patrizia Nebbia^c, Andrea Peano^c, Annarita Molinar^c, Beatrice Costantino^c, Olivier Friard^d, Valeria Prigione^d, Iolanda Perugini^d, Giovanna Cristina Varese^d

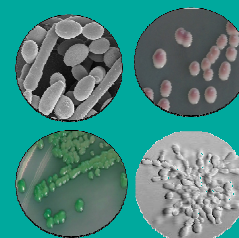
^aAgricultural, Forest and Food Sciences Dept. (DISAFA); ^bPublic Health and Paediatrics Dept. (DSSPP); ^cVeterinary Sciences Dept. (DSV); ^dLife Sciences and Systems Biology Dept. (DBIOS)



What is TUCC?



TUCC is the microbial collection of the University of Turin (Italy). It was established three years ago through the cooperation of four departments, following the need to share and manage in a proper way different research collections scattered in the city of Turin. TUCC manages different collections: the MiAGR collection at the Agricultural, Forest and Food Sciences Dept. (DISAFA); the MiBAT collection at the Public Health and Pediatrics Dept. (DSSPP); the MiVET collection at the Veterinary Sciences Dept. (DSV); and the MUT (Mycoteca Universitatis Taurinensis) collection at the Life Sciences and Systems Biology Dept. (DBIOS).



MUT

MUT is one of the most important biorepository of fungal biodiversity in Italy preserving more than **6000** strains from different habitat such as arctic, temperate and tropical areas.

MUT operates according to the **ISO9001** standards since 1996 and is characterised by a high systematic, ecological and applicative value.

The aims of MUT are the acquisition, identification, characterization, preservation and distribution of macro and micromycetes to promote scientific research and technology transfer to support basic research and bioeconomy.

MiAGR

MiAGR includes two collections, namely the Food Microbiology section and the Plant and Forest Pathology section.

The **Food Microbiology section** is an important biotechnological resource for companies in the food sector producing fermented food. Lactic acid bacteria from dairy and meat products, and yeasts isolated during the wine fermentation process represent the main microorganisms deposited. This collection is a starting point for the selection of starter microorganisms to be used in specific fermentative food processes.

The **Forest Pathology section** includes more than **3000** fungal pathogens affecting forest and ornamental trees (approximately 700 strains of Ascomycota and 2600 lignivorous Basidiomycete). This collection represents a powerful resource for applied research in forest pathology, from molecular diagnostic tools development to large-scale epidemiological studies.

MiVET

MiVET comes from two labs specialized in the diagnosis of bacterial and fungal diseases of animals. The activity is aimed at characterizing bacteria, yeasts and filamentous fungi in tissue samples from domestic, wild, and exotic species.

The goal is to obtain the diagnosis and other useful information (e.g. the susceptibility profile to antimicrobial agents) for the management and treatment of infected animals. The labs are involved in research projects and training support activities. Since 2015, the diagnostic activity is carried out according to UNI EN **ISO9001** Certified Quality System.

MiBAT

MiBAT is an important resource for basic clinical research. Yeasts, filamentous fungi, and bacteria, mainly from human clinical specimens (skin, urine, blood, BAL, etc.), isolated from community and hospital patients, are included.

The research activity is focused on the study of the interaction between nonspecific immunity and antimicrobial agents (antibiotics, antimycotics, essential oils, vegetal extracts) in bacterial and fungal infections.

CONCLUSIONS

TUCC is setting up a database allowing to look over all the available microorganisms (bacteria, yeasts, filamentous fungi, microalgae) deposited in the different sections of the collections. TUCC provides important services for **academia**, **industry** and other **institutions**; it brings together microbial resources, equipment and staff present at the University, optimizing the management and ensuring accessibility to both resources and services that individual structures can provide.

Finally, **TUCC** guarantees a correct administration of complex legal procedures in order to comply with national and international rules regarding access, distribution and exploitation of genetic resources.

For info, visit the TUCC website: www.tucc.unito.it

