

**PROFESSIONAL  
CURRICULUM**

**PERSONAL INFORMATIONS**

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First and last name	<b>Giulia Baini</b>
Nationality	Italian

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**WORKING EXPERIENCE**

- 01/02/2022-31/01/2024** Research fellow at the Department of Physical, Earth and Environmental Sciences of the University of Siena.  
Pharmaceutical Biology Laboratory  
Responsible: Prof. Elisabetta Miraldi  
Topic and lines of research:  
“Exploitation of medicinal species with cosmeceutical activity”
- 01/06/2016 – 30/05/2018** Research fellow at the Department of Physical, Earth and Environmental Sciences of the University of Siena.  
Pharmaceutical Biology Laboratory  
Responsible: Prof. Elisabetta Miraldi  
Topic and lines of research:  
Development of natural products with immunomodulatory and anti-flu activity

**EDUCATION AND TRAINING**

- 01/10/2018 – 30/11/2021** PhD in Environmental, Geological and Polar Sciences and Technologies 34th Cycle at the Department of Physical, Earth and Environmental Sciences, University of Siena.  
Laboratory of Pharmaceutical Biology  
Responsible: Prof. Elisabetta Miraldi  
Topic and lines of research:  
Research and development of botanicals obtained from local medicinal plant, potentially active in skin aging by air pollution.
- 2020** Postgraduate course in Phytotherapy at the University of Siena.
- 2017** Postgraduate Course in Galenic Phytotherapeutic Preparations at the University of Siena.
- 2015** Degree in Pharmacy and Industrial Pharmacy, awarded from in Faculty of Pharmacy of the University of Siena”.

**SUPPORT FOR UNIVERSITY**

**TEACHING**

- From 2020 to the present** University of Siena, Department of Physical, Earth and Environmental Sciences:  
Expert in the subject of SSD Bio/15
- A.A 2017/2018 to date** Assisted the teacher of the Teaching Course in Pharmaceutical Botany of the Degree Course in Environmental and Natural Sciences (6 CFU) for the preparation of the laboratory exercises.

## ORGANIZATIONAL SKILLS

2022 to the present

Head of the SIFITLab research laboratory of the Italian Society of Phytotherapy (S.I.Fit).

2017 to present

Segreteria Scientifica e organizzativa SIFIT

## TECHNICAL SKILLS AND COMPETENCES

- Experience in the use of classic (maceration, percolation) and innovative (using Naviglio Estrattore, ultrasound) methods for extracting medicinal plants.
- In-depth knowledge of methods for the characterization of plant products: HPLC with DAD and MS detection, TLC, spectrophotometry and colorimetric and gravimetric qualitative-quantitative analyses.
- Cell biology techniques: maintenance and treatment of primary, tumor and immortalized cell lines: primary human fibroblasts (HFF), keratinocytes (HaCaT), intestinal (Caco-2), liver (Hep), kidney (Hek), microglia (BV2), monocytes (THP-1). Isolation and maintenance in culture of PBMC from blood; in vitro analysis of proliferation, viability and cell death.
- Enzyme tests (activity of antioxidant enzymes, collagenase, tyrosinase, elastase, hyaluronidase, neuraminidase),
- Molecular biology techniques: colorimetric assays of NO, malonyldialdehyde, carbonylproteins, ELISA assays, immunocytochemistry, immunofluorescence, immunohistochemistry, optical and fluorescence microscopy, RT-qPCR, western blot.
- In vitro test for the evaluation of the antioxidant and anti-radical activity of natural substances (DPPH, ORAC, FRAP, BAP).
- Cell biology and molecular biology tests on the protection mechanisms of aging induced by air pollution on human keratinocytes and human fibroblasts.
- Electrochemical analyses.
- Knowledge of basic molecular modeling computational techniques using Pymol, PyRosetta, Maestro and Autodock software.
- Knowledge of bio-informatic prediction techniques using Lotus, Sea, PubChem, Swiss TargetPrediction.