

Alessandro Quadri

PhD Candidate

My professional goal is to deepen the issues related to the **use of LED lights in smart farming systems**, with particular reference to their use on **medicinal crops** to influence the content and composition of **secondary metabolites** of industrial interest. In fact, for this reason, I have undertaken in this sector an **Innovative Industrial PhD** (at DISTAL - Alma Mater Studiorum) in which, in addition to covering the role of **PhD Candidate**, I am also the representative of the PhD Students.



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SKILLS



HARD SKILLS



EDUCATION

INNOVATIVE INDUSTRIAL Ph.D. (PON) IN "HEALTH, SAFETY AND GREEN SYSTEMS"

Alma Mater Studiorum - University of Bologna

01/2022

Research Topic

- **LED lighting in smart farming systems for influencing content and composition of medicinal crops secondary metabolites.**

SECOND CYLCE DEGREE/TWO YEAR MASTER IN AGRICULTURAL SCIENCES AND TECHNOLOGIES CURRICULUM IN "PLANT PATHOLOGY"

Alma Mater Studiorum - University of Bologna

09/2017 - 09/2020

110/110 CUM LAUDE

Thesis

- Effects of different crop densities on the quality and yield of open field zucchini (*Cucurbita pepo* L.).

FIRST CYCLE DEGREE/BACHELOR IN LAND AND AGRO-FORESTRY SCIENCES

Alma Mater Studiorum - University of Bologna

09/2013 - 12/2016

110/110 CUM LAUDE

Thesis

- Foliar fertilization test on grapevine.

EDUCATION

FIRST CYCLE DEGREE/BACHELOR IN INDUSTRIAL CHEMISTRY

Alma Mater Studiorum - University of Bologna

09/2012 - 09/2013

Courses supported

- Physical Chemistry 1.
- Physics with exercises.
- Mathematics with exercises.
- Organic chemistry 1 with laboratory.
- General and inorganic chemistry with laboratory.

HIGH SCHOOL LEAVING QUALIFICATION IN SCIENTIFIC STUDIES

State Scientific High School Enrico Fermi

2007 - 2012

WORK EXPERIENCE

Ph.D. CANDIDATE

Alma Mater Studiorum University of Bologna - C-LED S.r.l. (Cefla Group)

01/2022 - Present

Imola/Bologna, Italy

Innovative Industrial Ph.D. (PON) in "Health, safety and green systems" focused on the use of LED lights in smart farming systems. In particular, the research interests are aimed on medicinal crops in order to influence their content and composition of secondary metabolites. The entire doctoral path involves collaboration with C-LED S.r.l. (host company). Moreover, I also cover the role of representative of the PhD students.

Collaborations

- Industrial collaboration: C-LED (Host company)
- Interdepartmental collaborations: Department of Pharmacy and Biotechnology (FaBiT).

R&D AGRONOMIST PROJECT COORDINATOR

Unitec S.p.A

12/2020 - 12/2021

Lugo, Italy

Reporting directly to the company management, I held the role of R&D Agronomist Project Coordinator

Main responsibilities

- I am responsible for coordinating several industrial research projects.
- Company Teacher and Tutor for 2 CFU of the "Trend in Food Industry LAB" course of the M. Sc. in "Food Engineering" (Politecnico di Milano).

RESEARCHER, HORTICULTURAL CROPS AND INDOOR CULTIVATION SYSTEMS

Greenhouse DISTAL complex (Alma Mater Studiorum - University of Bologna)

10/2019 - 03/2020

Bologna, Italy

Master's degree traineeship which consisted of a research test conducted on different horticultural species cultivated by means of indoor cultivation systems (hydroponic systems -deep water culture-, growth chambers and artificial lighting using LED lamps). This traineeship was organized in three distinct phases: 1)Phase of preparation of the samples for the experiments; 2) Experimentation phase; 3) Bibliographic research work. The objectives of the traineeship were the following:

Goals/Tasks

- Studying the plant-light interaction.
- Studying the effects of LED lights on plant growth and its production of secondary metabolites.

R&D SPECIALIST IN HORTICULTURAL CROPS

Rijk Zwaan

04/2018 - 04/2019

Bologna, Italy

Internship for master's degree thesis consisting of an experimental field test in order to verify the effect of different plant densities on the quality and yield of the open field zucchini (Cucurbita pepo). The specific objectives (internship outcomes) and the planned activities were the following:

Goals/Tasks

- Cultivation follow-up from field transplant to harvest.
- Evaluation of the best plant density on zucchini crops.
- Check of different agronomic techniques applied to zucchini cultivation.
- Collection of qualitative and quantitative data on the different agronomic techniques and on the different varieties.
- Statistical analysis of the data collected (statistical analysis of information to support the definition of the best sixth of plant).

WORK EXPERIENCE

R&D SPECIALIST IN PLANT NUTRITION

Haifa Italia S.r.l. (Haifa Group)

04/2016 - 10/2016

Bologna, Italy

Internship object of the Bachelor's degree thesis which consisted in carrying out an experimental test of foliar fertilization on grapevine, at one of the plots of land of the Caretti farm, San Giovanni in Persiceto (BO). The foliar fertilization test was carried out on two varieties, Grechetto Gentile and Moscato Bianco for the comparison between two nutrition lines: 1) Haifa, with Haifa foliar fertilizers, in addition to the hypogean fertilization normally made by the farm owner; 2) Company (Caretti) based on BMS products in addition to normal soil fertilization. Two foliar fertilization plans were implemented combining nutritional products with the expected pesticide treatments. The goal was to verify the possibility of having:

Goals/Tasks

- Better qualitative results (i.e. increasing the acidity, freshness and aromatic characteristics of the grapes).
- Better quantitative results (in terms of greater production).

CERTIFICATES

Haifa U Seminar (11/2015 - 11/2015)

"NUTRIGATION: OPTIMIZING WATER-MINERAL NUTRITION OF THE CROPS"

Cold Plasma Workshop for the decontamination of food and food packaging (03/2021 - 03/2021)
(03/2021 - 03/2021)

Certificate of participation in the workshop carried out as part of the "Cold plasma for the decontamination of food and food packaging" project financed by the European Funds of the Emilia-Romagna region - POR FESR 2014-2020 program and coordinated by CIRI Agro-food - Alma Mater Studiorum University of Bologna.

LANGUAGES

English

Full Professional Proficiency

Italian

Native or Bilingual Proficiency

INTERESTS

Reading

Photography

Music

Basketball

Gym

Scientific literature

Ancient history

Modelism

Astronomy