NOURA MASSEH ELLYA KKA, Ph.D.

Lecturer in Plant Sciences
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EDUCATION

2012-2017 **Doctor of Philosophy in Plant Biotechnology**
Deakin University, Geelong, Australia

2004-2007 **Master of Science in Plant Science**
Salahaddin University, Erbil, Iraq

1998-2001 **Bachelor of Science in Plant Science**
Salahaddin University, Erbil, Iraq

WORK EXPERIENCE

October 2017– Present **Lecturer, Plant Science**
College of Agricultural Engineering Sciences, Salahaddin University, Erbil, Iraq

June 2020- October 2021 **Agriculture expert**
Hungarian Interchurch Aid, Erbil, Iraq

March 2016-June 2017 **Demonstrator and Research Assistant**
Deakin University, Geelong, VIC, Australia

May 2007– February 2012 **Assistant Lecturer, Horticultural Science**
College of Agriculture, Salahaddin University, Erbil, Iraq

RESEARCH EXPERIENCE

Principal Investigator, Collage of Agricultural Engineering Sciences, Salahaddin University, Erbil, Iraq [2019-Present]
Project: The Role of Ascorbic Acid in Enhancing Fruit Quality and Antioxidant Activity in Local and Imported Cultivars of Tomato (*Solanum lycopersicum* L.)

The project aims to describe the relation between ascorbic acid levels and the gene controls fruit self-life at different maturation stages of eight local and imported cultivars of tomato (*Solanum lycopersicum* L.)
Collaborators

- Dr. Çeknas ErdinÇ (VAN YÜZÜNCÜ YIL University, Turkey)
- Mr. Amin Raof Pirdawd (Ministry of Agriculture and Water Resources, Kurdistan Region, Iraq)

Ph.D. Student, Deakin University [2012-2017]
Project: Plant ascorbate influence on cell division, growth and seed production of *Arabidopsis thaliana*

My Ph.D. research comprised determination the role of Ascorbic acid in cell division, plant growth and seed production. Exogenous application of Ascorbic acid was enhanced root growth rate and root length in Col-0. The ascorbic acid pathway gene *VTC1* is a central gene that regulates cell proliferation, plant growth and seed production in compression to *DHAR1, APX1* and *VTC5-1* genes. Cell activity was determined by confocal microscope images. In addition, RT-PCR was used to examine gene expression at different growth stages and plant organs.

PUBLICATIONS

In Preparation:

- Role of ascorbic acid in improving seed to seed production of *Allium cepa* L.
- Alterations in endogenous Ascorbic Acid content influences reproductive growth of *Arabidopsis thaliana*.
- Ascorbic acid expression in *twn1-1* and *fis 2-6* mutants of *Arabidopsis thaliana*

Under Review:

- Interactions between halopriming and hormopriming in regulating the vegetative growth and seed quality of *Vicia faba* L.
- Evaluation of onion (*Allium cepa* L.) sets priming with ascorbic acid and salicylic acid for their efficiency to promote growth and seed production

Peer Reviewed Publications

Kka N, (2021), Effect of salicylic acid application on growth and development of green onions grown under salt stress. Mesopotamia Journal of Agriculture. 49, 1-11. 10.33899/magrj.2021.130333.1133

Tariq F. S., **Kka** N, Khudhur A. M, Ahmad A. N. and Dawdy G. (2021), Passage of wheat fire impact on soil properties and environment in Kurdistan region. The Iraqi journal of Agricultural sciences 52 (1). https://doi.org/10.36103/ijas.v52i2.1308

Kka N, Rookes J, Cahill D (2018), The influence of ascorbic acid on root growth and the root apical meristem in *Arabidopsis thaliana*. Plant Physiology and Biochemistry. https://doi.org/10.1016/j.plaphy.2018.05.031

Kka N, Rookes J, Cahill D (2017), Quantitation of ascorbic acid in *Arabidopsis thaliana* reveals distinct differences between organs and growth phases. Plant Growth Regulation: 1-10. https://doi.org/10.1007/s10725-016-0205-8

El-Habar M, **Kika** N (2010), Effect of planting dates and gibberellic acid on seed production by seed to seed of two onion varieties (*Allium cepa* L.), Mesopotamia Journal of Agriculture 38, 2: 63-72. https://www.iasj.net/iasj/article/27788

CONFERENCES AND MEETINGS

- **(Oral Presentation)** "Ascorbic acid expression in *twn1-1* and *fis 2-6* mutants of *Arabidopsis thaliana*" First International Conference of Agriculture sciences 2019, Erbil, Iraq (November 2019)
- Australian Plant Pathology Society Victoria region general meeting, Melbourne, Australia (2016)
- **(Oral Presentation)** "Role of ascorbic acid in modifying root architecture of *Arabidopsis thaliana*" of Centre for Chemistry and Biotechnology conference, Deakin University, Geelong, Australia (December 2015)
- **(Poster Session)** Australian Society of Plant Scientists (ComBio) (2015), Melbourne, Australia (September 2015)
- **(Poster Session)** American Society of Plant Biologists conference, Minneapolis, MN, USA (July 2015)

AWARDS

PhD Scholarship 2012 - 2017
The Higher Committee for Education Development in Iraq
Total support: USD 100,000.00

Masters Scholarship 2004 – 2007
Salahaddin University, Erbil, Iraq
Total support: IQD1000,000.00 (approximately USD 1000.00)

TECHNICAL SKILLS AND EXPERTISE

Agricultural Techniques

- Greenhouse Design and Construction
- Hydroponic
- Permaculture
- Multi-Layer Farming
- Nursery Management
- Monitoring Plant Growth and Development
- Plant Phenotyping Analysis
- Post-harvest handling of seed crop
- Seed Germination and Viability tests.

Laboratory Techniques

- Molecular biology techniques: DNA extraction from plant tissues, mRNA extraction, cDNA synthesis, colony PCR, RT-PCR and agarose gel electrophoresis.
- Other lab techniques: High performance liquid chromatography (HPLC), light microscopy, confocal microscopy, mass spectrophotometry.

Teaching Skills

- Online Teaching Skills and Competencies
- Mentoring and guiding (undergraduate and postgraduate students)
- Competent in teaching undergraduate level Seed technology, Plant nutrition, Experimental Design and Analysis, Plant Biotechnology and Research Methodology.

Software

Highly competent in plant image analysis, SPSS, MS Office, EndNote and Photoshop.

LANGUAGES

- *Native:* Chaldean Neo-Aramaic
- *Full Professional Proficiency:* English and Arabic
- *Limited Working Proficiency*: Kurdish

REFERENCES

Professor David Cahill
(PhD Executive Supervisor)
School of Life and Environmental Sciences
Faculty of Science Engineering & Built Environment
Deakin University
Locked Bag 20000, Geelong, VIC 3220, Australia
Telephone: (+61) 3 5227 1299
Email: david.cahill@deakin.edu.au
Profile: https://www.deakin.edu.au/about-deakin/people/david-cahill#tab__1--3

Dr Jim Rookes
(PhD Co-supervisor)
Lecturer in Biological Sciences
Higher Degree by Research Coordinator
School of Life and Environmental Sciences
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Professor Kawa Ali
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