

Ashraf Badr

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MAJOR INTERESTS

- Plant micropropagation (*in vitro* culture).
- Extraction and purification of plant phytochemical compounds.
- Assessment of plant antioxidant under abiotic stress.
- Metabolic profiling of the plant response to environmental variations.
- Biosynthesis pathways of plant compounds.
- Teaching undergraduate and graduate students.

EDUCATION

<i>Laval University, Québec, Canada</i>	2011
Ph.D. in Plant Biotechnology (METABOLOMICS) Dissertation: “ <i>In vitro</i> and <i>ex vitro</i> potato plantlets (<i>Solanum tuberosum</i>) metabolic response to exogenously supplied sucrose: a metabolomic approach” Honors: Dissertation passed “with Distinction”	
<i>Zagazig University, Zagazig, Egypt</i>	1998
M.Sc. in Pomology Thesis: “Studies on propagation of fruit trees by tissue culture” Honors: Dissertation passed “with Distinction”	
<i>Zagazig University, Zagazig, Egypt</i>	1992
B.Sc. in Horticulture Equivalent to four years of university full time studies Honors: “with Distinction”	

AWARDS

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|---|------------------|
| ❖ “Outstanding Undergraduate Student Award” awarded annually to the student with highest GPA in the entire College of Agriculture, Zagazig University, Egypt. | 1989-1992 |
| ❖ “Excellence Grant” from Egyptian Government to pursue a Ph.D. in plant biotechnology. | 2001-2006 |
| ❖ Canadian Mitacs-Accelerate postdoctoral fellow. | 2012-2013 |
| ❖ Canadian Mitacs-Accelerate postdoctoral fellow. | 2014 |

The Agricultural Development Systems Project, California-Egypt collaboration, Cairo, Egypt

1995

Practical training on horticultural plants propagation by tissue culture technique which included:

- Preparing *in vitro* culture media.
- Stage I. Establishment of an aseptic culture.
- Stage II. The multiplication of propagules.
- Stage III. Preparation of propagules for successful transfer to soil (acclimatization).
- Stage IV. Establishment in soil (or other appropriate growing medium).

WORKSHOPS

Centre for continuing education, MacGill university, Montreal
Workshop on METABOLOMICS

2007

Genetic Engineering and Biotechnology Research Institute, Minufiya University, Egypt
Workshop on plant tissue culture and genetic manipulation

1998

TEACHING EXPERIENCE

Assistant Lecturer

1998-2001

Responsible for teaching courses: Principles of horticultural plants, Plant propagation, Plant tissue culture, Grapevine production, Deciduous fruit production and Evergreen fruit production for under-graduate students.

Teaching Assistant

1993-1998

Teaching courses: Principles of horticultural plants, Grapevine production, Deciduous fruit production and Evergreen fruit production for under-graduate students.

WORK EXPERIENCE

<p><i>Institute of Nutraceuticals and Functional Foods (INAF), Laval university, Québec, Qc</i> Canadian Mitacs-Accelerate postdoctoral fellowship – Development and standardisation of nitrates extraction from Canadian celery co-product for the organic market.</p>	<p>2014</p>
<p><i>Institute of Nutraceuticals and Functional Foods (INAF), Laval university, Québec, Qc</i> Canadian Mitacs-Accelerate postdoctoral fellowship – Development of extraction and purification methods of many plants (such as, strawberries, raspberries, sea buckthorn, cranberries, onions, blueberries and spinach) nutraceutical and natural compounds at laboratory and pilot scales.</p>	<p>2012-2013</p>

These skills include familiarity with media preparation, explants disinfection, plantlets maintenance during *in vitro* stages and plantlets acclimatization.

Soiless culture:

A very good background in hydroponics and aeroponics techniques.

Computer:

Operating Systems: (Windows 1998, 2000, XP, Vista, 7_ Linux_ Mac OSX)

Internet: (Internet explorer, Firefox, Opera, Google chrome)

Microsoft Office: (Word, Excel, PowerPoint, Outlook)

Statistics: (SAS, JMP, graphPad Prism)

Reference Manager: (Endnote)

Art & Graphics: (SigmaPlot, graphPad Prism, Adobe Illustrator, Adobe Photoshop, Inkscape)

Design: (Adobe InDesign)

Metabolite data analysis: (Agilent ChemStation, NIST library, AMDIS)

Hardware:

- Computer assembling and maintenance.
- Installing and configuring the peripherals, components and drivers.
- Installing software and application to user standards.
- Sound knowledge of digital and analog embedded computer hardware.
- Electrical hardware test equipment (Multi meter).
- Configuring and troubleshooting desktops and laptops.
- Familiar with hardware tools like printers, VoIP, networking and telecommunications devices.
- Good troubleshooting skills in complex software and hardware problems.
- Installed Hard disks, Floppy drives, CD Drives, Sound Blaster cards, CPU, Memory, Power supply unit, Network card, Video graphics card, Hard disk controller card on PC systems.

LANGUAGES

- * English
- * French
- * Arabic – native language

REFERENCES

Available on request

PUBLICATIONS

- **Badr A.**, Leonard S., Gosselin A. (2014). Quantification and identification of polyphenol compounds in seabuckthorn, strawberry and raspberry leaf extracts by Folin-Ciocalteu, DMAC assays and UHPLC-ESI-MS/MS technique (anticipated publication date 2014).
- **Badr A.**, Paul Angers and Desjardins Y. (2014). Comprehensive analysis of *in vitro* to *ex vitro* transition of tissue cultured potato plantlets grown with or without sucrose using