

## **Dr. Walid Wafik Mohamed Badawy. Ph.D.**

100 Omer Ben Abdel Aziz Street, Nahal Zone, Zagazig City.  
El-Sharkia – Egypt.

**Nationality :** Egyptian **Date of birth:** 1/ 5 / 1975  
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**Telefax:** +20 233828902 **Mobile :** +201003322943  
**Marital status:** Married with two daughters.

### **Education:**

**Apr.2009** **Ph.D. degree in Genetic Engineering Botany Dept., Faculty of Agric., Suez Canal University, Ismailia, Egypt.**  
**Thesis title: Preparation and characterization of antiviral agents from Medicinal plants with antiviral activity.**

Licorice (roots and stolons of *Glycyrrhiza* plants) is a well - known natural sweetener and its sweet constituent was an oleanane - type triterpene saponin, glycyrrhizin. HPLC profiles of methanol extracts of the thickening roots of the five Egyptian *G.glabra* samples showed that the glycyrrhizin content increased in 4 year old main roots about 5.75%. Moreover to elucidated the regulation of the triterpenoid biosyntheses in *G.glabra* and *G.uralensis*, cDNAs of oxidosqualene cyclase (OSC) and  $\beta$ -amyrin synthase (bAS) which are situated at the branching point of triterpenoid biosynthesis were cloned. The *E.coli* transformed with an expression vector containing open reading frame of (OSC) and (bAS) indicating that both (OSC) and (bAS) encodes Oxidosqualene cyclase and  $\beta$ -amyrin synthase involved in the glycyrrhizin and soyasaponin biosyntheses in licorice.

**May.2003** **M.Sc. in Genetic Engineering, Botany Dept., Faculty of Agric., Suez Canal University, Ismailia , Egypt.**

**Thesis title: Genetic polymorphism in some cucurbits**

**1993-1997** **B.Sc. in Genetics and Genetic Engineering, Zagazig University, Egypt.**

### **Work experience**

**Oct. 1997, Dec. 2004** **Researcher Assistant (Demonstrator) at Biotechnology lab., El-Kassasein Horticulture Research Station, Agriculture Research Center, Giza, Egypt.**  
During this period I'd started learn the basis of biotechnology methods and I have joined with the tem work of the (NARP) project.

**Sep.2000- Jul. 2002** **Lecture Assistant at (Faculty at Science, Omer El-Mokhtar University) El-Beda, Libya.**  
During this period I'd started to teaching some courses related with genetics and genetic engineering. Also I teach in **(The Arab University For Medicine in Ben-Ghazi, Libya)**. I'd started to teaching also some courses related with genetics and genetic engineering.

**Jan. 2005-Apr.2009** **Assistant Researcher and Chief of Biotechnology lab at the National Organization for Drug Control and Research (NODCAR), Cairo, Egypt.**  
During this period I'd started to apply some Biotechnology methods (Cloning, DNA sequencing, SDS-PAGE, Restriction mapping, PCR, RT-PCR, HPLC and Flash Chromatography, etc...) as a routine work. Also, I have finished ICDL courses.

- Sep. 2006- Jul 2007 **Assistant Lecture at (High Institute For Medical Technology), Derna, Libya.**  
During this period I'd started to teaching basic of Biotechnology methods theoretical and practical. At the same time I worked as  
**Assistant Lecture (participated) in (Faculty at Science, Omer El-Mokhtar University) El-Beda, Libya.**  
During this time I'd teaching some courses related with genetics.
- Apr. 2009-present **Researcher at National Organization for Drug Control and Research (NODCAR) and Head of Biotechnology lab.**

### Training Courses:

- "Detection of Genetic Modifications in Food and Feed" workshop in the Biotechnology Research Center at University of Suez Canal, Ismailia , Egypt and the German Federal Institute for Health Protection and Veterinary Medicine (*bgvv*),2001.
- "Plant Genomics: From the Gene to the Product" workshop in the Genetic Engineering and Biotechnology Research Institute Menoufeia University, Egypt, 2002.
- "Genetic Engineering and Genomes" workshop in the Institute of Genetic Engineering and Molecular Biology – Mubarak city for scientific researches, 2003.
- "Application of Cytogenetics and Genetic Engineering in Biotaxonomy" workshop in Faculty of Science, El- Azhar University, 2004.
- "Genetic diagnosis of certain diseases using (real time PCR)" workshop in Faculty of Science, El-Azhar University, 2005.

### Scientific Participations:

- Seventh Scientific Conference "Quality Control of Drugs, Vaccines and Natural Products" Cairo, Egypt, 2004.
- Attended the conference of *Biovision 2004* in Alex Bibliotheca.
- Participated in the conference of *Biovision 2006* in Alex Bibliotheca.
- Participated in "The 1st Scientific Day of General Branch of Biological Control and Research" VACSERA, 2007.
- One – Day Symposium on the Future Prospects of Pharmaceutical Biotechnology in the Arab Region on March 3, 2010. At Al-Nahda University (NUB), New Beni Sueif city – Egypt and Biberach / RiB, Baden – Württemberg Germany.
- International Conference & Exhibition on Total Quality Management of Herbs & Medicinal Plants & their Products "Packaging Technologies System for Enhancing the Exportation" December 6-8, 2011. Egyptian International Center for Agriculture. Conf. Hall, Nady El-Seed St., Dokki , Giza ,Egypt .

## Publications:

- Identification and characterization of some medicinal plants belonging to family "*Labiatae*" using specific molecular techniques. (*Egyptian J. of Biotechnology*, Oct. 2005).
- Genetic diversity analysis of artichoke, curcumin and ginger and determination of genomic DNA, RNA and proteins. (*Egyptian J. of Biotechnology*, Oct.2007).
- Phylogenetic relationship of six *Glycyrrhiza* plants based on *rbcl* gene and total proteins. (*Egyptian J. of Biotechnology*, Feb.2009).
- Glycyrrhizin biosynthesis in *Glycyrrhiza* plants by using molecular biology techniques. (*Egyptian J. of Biotechnology*, Feb.2009).

## Skills and personal qualities:

- Computer literate: Excellent P. C. user (Windows Xp, Word, Excel, PowerPoint, Database, Internet, *Biogene* analysis software).
- Good time management: To survive while studying for my degree, I had to have good time management skills to enable me to work full-time and run a home.
- Good communication skills: Gained from giving presentations at seminars.
- Hobbies, Interests, and Activities: Extensive knowledge and interest in practical science.
- Languages: Arabic, Mother tongue; English, Very good (Written, Read, Spoken).
- Molecular biology techniques like plasmid and genomic DNA, RNA isolation, genetic engineering (GFP mutant isolation, gene transfer via conjugations, transduction, mutant identification assay)
  - Genotyping by PCR, RFLP, SSCP
  - Elisa, RT-PCR, Southern blotting etc
  - Electrophoresis ( vertical, horizontal, paper, tube gel, 2D)

## Subjects Taught:

Molecular Biology, Cell Biology, Nanotechnology, Genetics, Microbiology, Biochemistry, Basic level Statistics, Genetic Engineering, Plant and Animal Biotechnology, Medical Biotechnology, Industrial and Environmental Biotechnology.

## References:

1. **Prof. Dr. Abd El-Rhman S. Mandour**  
Prof. of Genetics, Botany Dept., Faculty of Agric., Zagazig University, Zagazig, Egypt.  
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2. **Dr. Mahmoud M. Rifaat**  
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3. **Prof. Dr. Zakaria Ahmed Teleb**  
Prof. of Biochemistry & Molecular Biology, National Organization for Drug Control and Research (NODCAR), Cairo, Egypt.  
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