



CURRICULUM VITAE

Personal data

- Name:** Mohamed ABDEL AZIZ Balah
- Date of birth:** August 1, 1974
- Place of birth:** Qutor, El-Gharbia Governorate, Egypt.
- Nationality:** Egyptian
- Native language:** Arabic
- Marital status:** Married with two kids.
- LANGUAGES:** English
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Educational

- B.Sc. of Agriculture Science (Pesticide chemistry), Alexandria Univ., 1996.
- M.Sc. of Agriculture Science in Plant Protection (Pesticides), Ain Shams Univ., 2001.
- Ph.D. of Agriculture Science in Plant Protection (Pesticides), Ain Shams Univ., 2006.

Professional Experiences

- 1997-2001: Agriculture specialist
Department of Plant Protection, Desert Research Center
- 2002-2006: Assistant Researcher
Department of Plant Protection, Desert Research Center
- 2007-2011
Researcher
Department of Plant Protection, Desert Research Center
- 2006-2007
Head of Micro Analytical unit,
Complex laboratory, Desert Research Center
- 2008-2009
Post doctoral in Colorado State Univ. USA
Center for Rhizosphere Biology
- 2010-20/1/2013
Director of Micro Analytical Unit
Central laboratory, Desert Research Center
- 2011-untill now
Head of Pesticides unit
Department of Plant Protection, Desert Research Center
- 2012-untill now
Research Associate Professor,
Department of Plant Protection, Desert Research Center

Research interested

I am interested in pesticides particularly herbicides, weed management and control as well as weed biology in production agricultural; most of my scientific work related to two principles: Firstly: Natural product herbicides by isolation of natural bioactive products from plant parts or root exudates by chromatographic techniques (HPLC, CC, and TLC) and identification by spectroscopic methods (^1H and ^{13}C NMR, UV, IR, LC-MS, GCMS). In addition to developing the phytotoxic bioassays test for the bioactive metabolites introduced from plant-plant, plant-insect and plant-microbe interactions.

Secondly: Initiate integrated weed management program by the suitable additives and adjuvants (Surface active agent, sticking agent, spreading agent, deactivator agent, and deposition aids...) to the herbicide spray tank solutions for improving application characteristics, enhancement the herbicide biological activity against the target weeds and reducing the recommended dose as well as herbicides residue in the field crop, vegetable and horticulture under new reclaimed lands.

Published Papers in journals

- 1-Balah, M.A.; Z.H. Zidan; A.S. Dahroug and A.G. Abdel-Rahman(2006). **RESPONSE OF *Cyperus rotundus* WEEDS TO GLYPHOSATE HERBICIDE WITH SOME ADJUVANTS UNDER GREENHOUSE CONDITIONS.** *J. Agric. Sci. Mansoura Univ.*, 31 (3): 1653 – 1667.
- 2-Abd El-Moaty,H.I and M. A. Balah (2009). **Phytochemical investigations of *Taverniera lappacea* forssk. and its activity as herbicides.** *Journal of Applied Sciences Research*, 5(12): 2563-2573.
- 3-Balah, M. A. (2010). **Enhancement the biological activity of sugar beet post emergence herbicide by some additives.** *J. Biol Chem. Environ SCI.*, 5,3 367-384.
- 4-Ashoub. A. and M.A. Balah (2010). **Nematicidal and Herbicidal activity of some weed extracts against *Meloidgyne incognite* and other weeds (2010).** *Egyptian journal of agronematology*, 9 (2): 68-90.
- 5-Balah, M. A. (2011). **Allelopathic Characteristics of *Jasonia montana* For Weeds Control.** *Australian Journal of Basic and Applied Sciences*, 5(11): 98-106, 2011.
- 6-El-said,M. A and M. A. Balah (2011).**Efficacy of soil biofertilizers on fusilade herbicide activity, growth and productivity of broad bean (*Vicia faba*),** *J. of Agric. Chem. and Biotech. Mansoura univ.* Vol. 2 (10):185-204.
- 7- Balah, M. A and M.I Nassar (2011). **Allelopathic Constituents from *Abutilon theophrasti* Aerial parts to Others Weeds.** *Research Journal of Agriculture and Biological Sciences*, 7(2): 243-250, 2011
- 8-El-naser,A.S and M. A. Balah (2011). **Productivity of Some Wheat Cultivars and their Weed Community Structure in El-Farafra Oasis.,** *Research Journal of Agriculture and Biological Sciences*, 7(2): 234-242.
- 9-Balah, M. A (2011). **IMPACT OF MIXING GLYPHOSATE WITH MULTI ADDITIVES ON WEEDS CONTROL AND SOIL MICROORGANISM,** Mohamed Abdel aziz Balah *J. Plant Prot. And Path, Mansoura univ.* Vol. 2 (10):791-804.
- 10-Balah,M.A; A. Hanfy and S. Biomy (2012). **Tank mixture additives approach to improve efficiency of bentazon against broadleaf weeds in peas.** *Journal of Environmental Science and Health, Part B (2012)* 47, 390–396.
- 11-Omer, A.M and M. A. Balah(2011). **Using of rhizo-microbes as bioherbicides of weeds.** *Global J. Biotech. & Biochem.*, 6 (3): 102-111
- 12- Balah, M. A (2012).**Allelopathic potential of *Jasonia montana* (wild plant) to control weeds of family Convolvulaceae.** *Allelopathy journal*, 29(1): 93-106.
- 13- Ibrahim, H.M; M. A Balah and H.M Tohami (2012).**APPLIED GAP FOR HERBICIDE USERS IN NUBARIA AND BURJ AI ARAB REGION.** *J. Agric. Econom. And Social Sci. Mansoura Univ.*, Vol.3 (1): 161-173.
- 14-Balah, M. A; F. R. Stremtitz and T. L. Weir.(2012). **Herbicidal Activity of Phytochemicals Isolated from Egyptian Medicinal Plants.** *in press* .
- 15- Raef, M. and M. A. Balah (2011).**Productivity of some eggplant cultivars under different systems of weed control.** *J. Plant Prod, Mansoura univ.*3 (8):2311-2324,2012.

Published Papers in Conferences:

- 1-Abdel-Rahman A.G; Z.H.Zidan;M.T.B. Fayed and M. A. Balah (2006) **Bioactivity of allelochemicals liberated from aqueous leachate of some plant parts on germination and seedling development of alfalfa and onion**

- crops.** 10th Conf. Agric. Dev. Res. Fac.Agric. Ain Shams Univ. Cairo Egypt. November 6-8, 2006Annals Agric.Sci.,Sp.Issue,1,357-368.
- 2-Fayed, M.T.B, Zidan Z. H., A. G. Abdel-Rahman and **M. A. Balah (2006)** **Influence of allelochemicals liberated from soil decayed plants on the germination and seedling development of some crops.** Proceeding of 10th Conf. Agric. Dev. Res. Fac.Agric. Ain Shams Univ. Cairo Egypt. November 6-8, Annals Agric.Sci.,Sp.Issue,1,379-389.
- 3- Zidan Z. H, A. G. Fayed, Abdel-Rahman M.T.B and **M. A. Balah (2006).** **Allelopathic influence of previous plantation on the germination and seedling development of successive crops.** Proceeding of 10th Conf. Agric. Dev. Res. Fac.Agric. Ain Shams Univ. Cairo Egypt. November 6-8, 2006Annals Agric.Sci.,Sp.Issue,1,391-400.
- 4- Fayed, M.T.B, Zidan, Z.H., Abdel-Rahman, A.G, and **M.A. Balah (2006).** **Allelopathic potential of root exudates of different plants on seed germination and seedling growth of some field and vegetable crops.** Proceeding of 10th Conf. Agric. Dev. Res. Fac. Agric. Ain Shams Univ. Cairo Egypt. November 6-8, Annals Agric.Sci. Sp.Issue,1,369-378.
- 5-Zidan Z. H, M.T.B. Fayed, A. G. Abdel-Rahman and **M. A. Balah(2006).** **Chromatographic isolation of certain active allelopathic fractions from purslane, alfalfa and sunflower plants.** Proceeding of 10th Conf. Agric. Dev. Res. Fac. Agric. Ain Shams Univ. Cairo Egypt. November 6-8, Annals, agric. Sci., Sp.Issue, 1, 347-356.
- 6- **Balah, M. A.,** A. G. Abdel-Rahman, Z. H. Zidan, and S. A. Dalroug (2012). **Photo and thermal degradation of Glyphosate and Fusilade herbicides with and without additives.** in press.
- 7- **Balah, M. A.,** A. G. Abdel-Rahman, Z. H. Zidan, and S. A. Dahroug (2012). **ENHANCEMENT THE BIOLOGICAL PERFORMNCE OF FUSILADE HERBICIDE.** in press .

Current projects

- 2 Metabolic architecture and its impact on tomato plants resistance to whitefly insects (2010).
- 2 Role of Plant Root Exudates in Certain Plant Disease and Weed Management (2011).
- 3 Using of some weeds types in the disposal of heavy metals in contaminated soil (2011)
- 4 Survey of Associated Insect with some Perennial Weeds and their potential role in biological control of weeds (2012).
- 5- Biochemical Alterations in Wheat Seedlings and Some Weeds Related to Allelopathic Potential of Some Medicinal Plants (2012).

Societies Membership

- 1- Arab Society for Plant Protection, Beirut, Lebanon.
- 2-Agricultural chemistry & Environment protection society
- 3- Egyptian society for biological control of pest (ESBCP)
- 4-Member of the Committee for pest control in new cultivated land (Desert Research Center)

LABORATORY EXPERIENCE

- Purification of bioactive natural product by HPLC and identification by LC/MS, FTIR and NMR.
- Determination of environmental samples (Pesticides residue) in water, plant and soil sample.
- Using Colorimetric methods in Qualitative and Quantitative Analysis, DRC, Cairo, Egypt, 2006.
- Determination of total and free Amino acid by AMINOACID ANALYZER (AAA).

- Isolation of plant, bacteria and fungi DNA and RNA and amplification by PCR.
- Quantitative and Qualitative determination of proteins SDS-PAGE electrophoresis.
- Member of Committees for scientific equipment in desert Research Center

Internal Training

- 1- Training period in applied statistics by computer (DRC, 2009).
- 2- Olive growing (Protection and Manufacture, (DRC, 2009).
- 3- Advanced training programs on biological statistics (DRC, 2010)
- 4- HPLC Columns applications; TLC and HPLC instruments) Course, by PSI (Peak scientific instruments, S,A,E, Cairo, Egypt 10/5/2011.
- 5- International publishing module for Post Docs, By DAAD Kairo Akademie (DAAD Cairo), **Egypt**, On 4 June 2012.
- 6- Developing a Personality of Leadership, By DAAD Kairo Akademie (DAAD Cairo), **Egypt**, On 11 July 2012
- 7- General chromatography & New Technique of HPTLC (HPTLC, MS) Course, by PSI (Peak scientific instruments, S,A,E, Cairo, Egypt 24/9/2012.

International training

- 1- Training on NMR practices and interpretation, CSU, Colorado, **USA**, 2009.
- 2- Training on principles of DNA and RNA analysis of plant, bacteria and fungi samples, CSU, Colorado, **USA**, 2009.
- 3- Training and study visits on desertification in Egypt (Afro-Asian Rural Development organization (AARDO) and Desert Research Center (DRC), Egypt, 21st – 30th November 2010).
- 4- Advanced Course (WEED MANAGEMENT IN MODERN AGRICULTURE) CIHEAM (IMAZ institute in Zaragoza) (**Spain**), 16-21 April 2012.

Teaching Experience

- 1- Lecturer and trainer in Training course: (Management techniques and the use of natural resources to maximize the productivity of land affected by salinity in the Northern Sinai) with lecture entitle (Prevention and control techniques of weeds affecting forage or fodder crops in environment affected by salinity) organized by International center for bio-saline agriculture, United Arab Emirates and Desert research center at 11/9-13-9/2012 for (**Diversifying crop and livestock production to adapt to climate change in Middle East and North Africa**) project.
- 2- Training the complex laboratory staff in Desert Research Center and other arrivals from the Arab countries and visitors on chromatography devices (HPLC), analysis techniques and FTIR machine.
- 3- Trainer to 10 researchers for HPLC-DAD/FLD application (Desert Research Center. 22/11 to 18/12/2012).

Research & development Projects

- 1- National campaign for wheat productivity: New Valley governorate and El- Baharia Oasis during seasons 2003/04 to 2004/2005 in weeds control trend.
- 2- Development capacities of Matrouh and north coast region resources from 2007/2008 in olive weeds control trend.

Published Pamphlets

- 1- Publication entitled 'olive pests and diseases'.

Thesis under supervision:-

Ph.D. thesis titled " Biotreatment of olive mill wastewater for agricultural uses"
Ain Shams Univ.. Cairo, Egypt.

Conferences and workshop

- 1-The First Conference of the Central Agriculture Pesticide Laboratory 3-5 September, Cairo, Egypt, 2002.
- 2-10th Conf. Agric. Dev. Res. Fac. Agric., Ain Shams Univ. Cairo, Egypt. November 6-8, 2006.
- 3-Advantages and Disadvantages of Pesticides Conference, September 6-7, 2006, Alexandria, Egypt.
- 4-The fourth annual Conference (Environmental Development) Risks and Solutions 20-21 October 2010.
- 5-Anti oxidants in wheat: Recent Achievement and New Trends 27th April 2011 Cairo Egypt.
- 6-The Third Arab conference for applied biological control in the Arab countries, Cairo, Egypt, 10-13 October, 2011.

Field professional Activities.

- Demographic Analysis of weeds under reclaimed condition on some Crops (Wheat, Faba bean, and Field peas, Eggplants, Tomato, Olive and Citrus...).
- Management of weed in production agricultural systems.
- Implementing integrated weed management in many crops under new reclaimed lands condition.
- Enhancement the performance of some post emergence herbicides with additives and adjuvants against annual and perennial weed control.
- Supervisor for weeds control in some landscape area and non cropland.
- Member of Pest Management Committee in Desert Research Center 2012 until now.

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Ecology and Dry Land Agriculture Division
Department of Plant Protection.

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