

CURRICULUM VITAE

Family name: Mekky

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Sex: Male

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Education:

May/2009 Tissue Culture Group, Department of Plant and Crop Sciences, School of Biosciences, The University of Nottingham, Sutton Bonington Campus, Leicestershire, LE12 5RD, UK. Awarded the degree of **PhD** in Tissue Culture and Genetic Engineering under the title of “Effects of transgene expression on secondary products in chicory”.

Work supervised by Dr Micheal R. Davey.

June/2006 Tissue Culture Group, Department of Plant and Crop Sciences, School of Biosciences, The University of Nottingham, Sutton Bonington Campus, Leicestershire, LE12 5RD, UK. Awarded the degree of **M.Phil** in Tissue Culture and Genetic Engineering for a report entitled “Investigations of the effects of transgene insertion on secondary product biosynthesis in Chicory”.

Work supervised by Dr Micheal R. Davey and Dr Brian Power.

August/2003 The Department of Pharmacognosy, School of Pharmacy, University of Alexandria, Alexandria, Egypt.

Awarded the degree of **Master** in Pharmaceutical Sciences for a thesis entitled “Phytochemical study of some plants belonging to genus *Cirsium* and genus *Cichorium* grown in Egypt”.

Work supervised by Professor Nabila M. Ghazy

June/1999 The School of Pharmacy, University of Alexandria, Alexandria, Egypt.

Awarded the degree of **Bachelor** in Pharmaceutical Sciences

Work and professional experience:

December 2010- Current: Lecturer, Department of Pharmacognosy, Faculty of Pharmacy, University of Alexandria. One of the organisers of the Biotechnology unit in the School of Pharmacy, University of Alexandria.

Working with Dr Masouda M. Amer.

September 2010- December 2010: Visitor lecturer, Oman Assistant Pharmacists institute.

Working with Dr Mostafa Fahmy Abd El Kerim.

July 2009- September 2010: Lecturer, Department of Pharmacognosy, Faculty of Pharmacy, University of Alexandria. One of the organisers of the Biotechnology unit in the School of Pharmacy, University of Alexandria.

Working with Dr Fathalla Haraz.

April 2009- June 2009: Researcher, Department of Plant and Crop Sciences, Plant Sciences Building, The University of Nottingham, Sutton Bonington Campus, Leicestershire, LE12 5RD.

Working with Dr Micheal R. Davey.

2006 -2009: Demonstrator at Module D2D002 “Plant Genetic Manipulation: Practical Techniques”, School of Biosciences, The University of Nottingham, Sutton Bonington Campus, Leicestershire, LE12 5RD.

Working with Drs. Micheal R. Davey and Timothy Robbins.

2003-2005: Assistant Lecturer at the Department of Pharmacognosy, School of Pharmacy, University of Alexandria, Egypt.

Working with Professor Maged El Ghazoly

2000-2003: Demonstrator at the Department of Pharmacognosy, School of Pharmacy, University of Alexandria, Egypt.

Working with Professor Abdullah Abd El Razek

1999-2000: Pharmacist (full time) at Marsa-Matroh Military Hospital

2000-2005: Pharmacist (part time) at Al-Mostafa Pharmacy, Alexandria, Egypt.

Working with Dr. Mostafa Ahmad

Membership of societies:

1. Science AAAS
2. Egyptian Herb lovers Society

Technical Experiences and Skills:

[A] Plant Tissue Culture, Genetic Engineering and Biomolecular:

- Aseptic cell and tissue handling procedures,
- Preparation of the different culture media for plant tissue culture.
- Plant Cell and Tissue culture (for regeneration, scaling up of plants, as a primary part for: genetic transformation using Biolistics and preparation of cell suspension cultures)
- Culture of Agrobacterium and preparation of glycerol stocks.
- Agrobacterium-mediated transformation of leafy vegetables (to insert different genes in the plant genome).

- Genetic transformation of leafy vegetable plants using Biolistics technique.
- Selection of Genetically transformed plants from escapes.
- Gel preparation for Gel chromatography.
- Identification of successfully transformed plants using different techniques such as;
 - 1- GUS assay.
 - 2- DNA extraction (Edwards method, Sigma Kit and Qiagen Kit) and PCR analyses.
 - 3- RNA extraction (Qiagen Kit) and RT-PCR analyses.
 - 4- HPLC analyses for secondary metabolite changes.
 - 5- Gas chromatography for volatile secondary metabolites.
 - 6- Enzyme immuno assay (Cayman chemical Kit) for Prostaglandins that were produced in transgenic plants.
- Initiation and maintenance of cell suspension cultures.
- Assessing cell viability of cell suspensions using fluorescein diacetate (FDA) staining.
- Agrobacterium-mediated transformation of cell suspension cultures.
- Study the effect of elicitors on biomass and production of secondary metabolites of cell suspension cultures.

[B] Phytochemical:

- Extraction and fractionation of plants using hydro-alcoholic method.
- Isolation and purification of materials from plant extracts using the different methods of chromatography such as;
 - 1- Thin layer chromatography (TLC).
 - 2- Column chromatography.

- 3- Preparative thin layer chromatography (PTLC).
- 4- High performance liquid chromatography (HPLC).

- Identification of the purified materials through interpretation of the compound's spectral data such as;

- 1- Ultra violet spectra.
- 2- Infra red spectra.
- 3- Mass spectroscopy.
- 4- Nuclear magnetic resonance (H, ^{13}C and 2 dimensional).

- Detection of the pharmacological effects of plant extracts and purified compounds on dissected animal organs.

[C] Instruments:

- Incubators (different makes).
- Orbital shakers (different makes).
- Perkin Elmer UV/VIS spectrometer.
- Nanodrop[®] 1000 Spectrophotometer
- Centrifuges (different makes).
- PCR machines (different makes).
- Horizontal gel tanks for gel chromatography (different makes).
- Syngene UV-transilluminator for detection of bands on gel chromatography.
- alpha 2-4 LD freeze-drier.
- Vortex mixers (different makes).
- DSQ II mass spectrometer.
- Fluorescence microscopy.
- Dissecting microscopy.
- Confocal microscopy.
- Spectra Series P100 isocratic pump for HPLC.
- PU-980 intelligent HPLC pump.
- Gel permeation chromatography (GPC).
- UV Spectrophotometer (spectroscopy),
- 300MHz NMR instrument.

[D] Computer Programs:

- Windows 2007, XP, Me and 1998
- MS Office 2007, XP, 2003 and 2000 packages

Courses History:

- Risk Assessment and SOP for Processes Involving use of Hazardous Substances.
- Introducing Excel Spreadsheets.
- Introduction to Library Skills.
- Getting More from Microsoft Office.
- Getting Started with PowerPoint.
- PowerPoint for Presentations.
- Enhancing PowerPoint Presentations.
- How to Prepare an Effective Poster Presentation.
- Getting Going on your Thesis and Getting your Work Published.
- Further Presentation Skills.
- Finishing your Thesis and Preparing for the Viva.
- Exploiting the power of MS Word a and b: long documents and papers.
- Demonstrating and Assessment.
- Nature of the PhD and the Supervision Process.
- Planning Research and Time Management.
- Getting Started with Research Design and Statistics.
- Questionnaires.
- Research Management in Science and Engineering.
- Philosophy of Science and Scientific Ethics.
- Science Policy and Intellectual Property Rights (IPR).
- Preparing for the viva.
- Getting into the habit of writing.
- Creating and publishing web pages.
- Designing surveys.
- Presentation skills - building confidence.
- Problem exploration in research.
- Post-genomics and bioinformatics.

- Introduction to quantitative research.
- MSc Plant Genetic manipulation (Tissue culture, sexual and somatic genetics for plant improvement).
- Fundamental and applied aspects of plant genetic manipulation (Plant transformation).
- Active interaction skills.
- Active presentation skills.
- Teaching skills.
- Credit hours.

Presentation at International Congresses:

December 2010 32nd Seminar for The Continuous Pharmaceutical Education Programme (Basic and Advanced Trends in Drug Therapy and Pharmaceutical Care), Muscat, Oman.

(Oral presentation)

July 2010 The international work shop of industrial biotechnology, Cairo, Egypt

(Attendant)

December 2008 4th Annual CBCB Symposium West Concourse Room West Co, Portland Building, The University of Nottingham, UK.

(Poster presentation)

September 2008 Agrigenomics World Congress, Amsterdam, The Netherlands

(Poster presentation)

May 2008 Post graduate symposium, Sutton Bonington Campus, The University of Nottingham.

(Oral presentation)

August 2007 Plants for Human Health in The Post Genomic Era, Helsinki, Finland.

(Poster presentation)

May 2007 Post graduate symposium, Sutton Bonington Campus, The University of Nottingham.

(Poster presentation)

May 2006 Post graduate symposium, Sutton Bonington Campus, The University of Nottingham.

(Oral presentation)

Publications:

1. Two papers are in the final writing process from my work in genetic modification of chicory to produce omega 3 fatty acids and prostaglandins.
2. Abdalla M. El-Lakany, Maha Aboul-Ela, Mohamed M. Abdul-Ghani and **Hattem M. Mekky** (2004) Chemical constituents and biological activities of *Cichorium intybus* L. *Natural Product Sciences* 10: 69-73.
3. Maha Aboul-Ela, Mohamed M. Abdul-Ghani, Fathy K. El-Fiky, Abdalla M. El-Lakany, **Hattem M. Mekky** and Nabila M. Ghazy (200) Chemical constituents of *Cirsium syriacum* and *Cichorium intybus* (*Asteraceae*) growing in Egypt. *Alexandrian Journal of Pharmaceutical Science* 16: 152-156.

List of References:

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