

# Curriculum Vitae

**Name:** Walid Ismail Mohammed Mohammed Bakeer

**Nationality:** Egyptian

**Date of Birth:** 21-May-1977

**Married** with three children

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**Work address:** Microbiology and Immunology department, Faculty of Pharmacy, Beni-Suef University - Ahmed Hegazi Tawil Street, Beni-Suef, Egypt.

**General Specialization:- Pharmaceutical Microbiology and Biotechnology**

**Specific specialization:- Fungal Biotechnology**

## Educational Qualifications

- 1- **Bachelor in Pharmaceutical Sciences** from the **Faculty of Pharmacy, Cairo University** (Beni-Suef branch) with the general grade “**Excellent with honor**”. Graduation date on May-1999.
- 2- **Master degree in Microbiology** from **Faculty of Pharmacy, Cairo University** and was awarded in **6<sup>th</sup> August-2006**.  
The title of the thesis was:- "**Study on Post-Antimicrobial effect (PAE) of certain Antimicrobial Agents on certain Bacterial Isolates**". Specialty (Clinical and Pharmaceutical Microbiology)
- 3- **Doctor of Philosophy (Ph.D.) in Fungal Biotechnology, University of Bristol, United Kingdom** and awarded on **15<sup>th</sup> November 2011**.  
The title of the thesis was: - "**Overexpression of Secondary Metabolism Genes from *Magnaporthe grisea* and *Beauveria bassiana***". Specialty (Fungal Biotechnology)



The certificate from the Egyptian Supreme Council of Universities was issued on 11 –January– 2012 for the equilibration of my British Ph.D. to the Egyptian equivalents gained from Egyptian universities.

## **Professional Qualifications**

- 2000-2006**                    **Demonstrator** at the department of Microbiology, Faculty of Pharmacy, Cairo University, Beni-Suef campus, Egypt.
- 2006-2012**                    **Assistant lecturer** at the department of Microbiology, Faculty of Pharmacy, Beni Suef University, Egypt. Additionally, a member of the governmental full-time Ph.D. mission (Specialty Biotechnology) in University of Bristol, United Kingdom, from March-2008 till December-2011.
- 2012-Current**                **Lecturer** at the department of Microbiology, Faculty of Pharmacy, Beni-Suef University, Egypt (since 31-01-2012).

## **Publications**

- 1- **Heterologous expression of the ACE1 "PKS-NRPS" from the fungal rice pathogen *Magnaporthe grisea*. Walid Bakeer, Zhongshu Song, James Marshall, Jerome Collemare, Colin M. Lazarus, Andrew M. Bailey, Thomas J. Simpson Marc-Henri Lebrun, and Russell J. Cox. The international conference “Directing Biosynthesis” occurred on 15-17<sup>th</sup> September 2010, Durham University, United Kingdom, poster presentation.**
- 2- **The Programming Role of *Trans*-acting Enoyl Reductases during the Biosynthesis of Highly Reduced Fungal Polyketides.** Mary N. Heneghan, Ahmed A. Yakasai, Katherine Williams, Khomaizon A. Kadir, Zahida Wasil, Walid Bakeer, Katja M. Fisch, Andrew M. Bailey, Thomas J. Simpson, Russell J. Cox, and Colin M. Lazarus. *Chem. Sci.*, 2011, 2, 972-979. [Impact Factor 9.14]

- 3- **Rational Domain Swaps Decipher Programming in Fungal Highly Reducing Polyketide Synthases and Resurrect an Extinct Metabolite.** Katja M. Fisch, Walid Bakeer, Ahmed A. Yakasai, Zhongshu Song, Jennifer Pedrick, Zahida Wasil, Andrew M. Bailey, Colin M. Lazarus, Thomas J. Simpson, and Russell J. Cox. *JACS*, **2011**, **133**, **16635–16641**. [Impact Factor 10.8]
- 4- **Isolation, Cloning and Sequence Analysis of  $\beta$ -tubulin Gene from *Bolinea lutea* F23523, a Potential Strobilurin Producing Fungus.** Zafar Iqbal, Walid Bakeer. *Int. J. Agric. Biol.*, **2013**, **15**, **1008–1012**. [Impact Factor 0.94]
- 5- **Heterologous Expression of the Avirulence gene ACE1 from the fungal rice pathogen *Magnaporthe oryzae*.** Zhongshu Song, Walid Bakeer, James W. Marshall, Ahmed A. Yakasai, Rozida Mohd Khalid, Jerome Collemare, Elizabeth Skellam, Didier Tharreau, Marc-Henri Lebrun, Colin M. Lazarus, Andrew M. Bailey, Thomas J. Simpson and Russell J. Cox. *Chem. Sci.*, **2015**, **6**, **4837-4845**. [Impact Factor 9.14]
- 6- **Solamargine production by a fungal endophyte of *Solanum nigrum*.** S.S. El-Hawary, R. Mohammed, S.F. AbouZid, W. Bakeer, R. Ebel, A.M. Sayed and M.E. Rateb. *Journal of Applied Microbiology*, **2016**, **120**, **900—911**. [Impact Factor 2.8]
- 7- **A study on an aniline degrading *Pseudomonas aeruginosa* isolate recovered from agricultural wastewater in Egypt.** Fatma Molham, Walid Bakeer, Eman El-Gebaly, Magdy Amin. *New Egyptian Journal of Microbiology*. **2016**

### **Selected Conferences attended**

- 1- The Chemistry and Biology of Natural Products IV, 18<sup>th</sup> June 2008, University of Bristol, United Kingdom.
- 2- New Horizons in Natural Product Chemistry, 12<sup>th</sup> November 2008, University of Nottingham, United Kingdom.

- 3- Chemical Biology: A symposium in memory of David R. Kelly, 4<sup>th</sup> February 2009, University of Cardiff, United Kingdom.
- 4- 43<sup>rd</sup> European Symposium on Bio-Organic Chemistry (ESPOC) “Vitamins and Cofactors”, 24-26<sup>th</sup> April 2009, Gregynog, Powys, Wales, United Kingdom.
- 5- The Chemistry and Biology of Natural Products V, 17<sup>th</sup> June 2009, University of Bristol, United Kingdom.
- 6- Directing Biosynthesis 2010: Discovery, Evaluation, Function. 15-17<sup>th</sup> September 2010, Durham University, United Kingdom.
- 7- From Natural products to chemical Biology VI, 22<sup>th</sup> June 2011, University of Bristol, United Kingdom.

### **Research Skills**

- 1- Skillful in cloning and over-expression of secondary metabolism genes in bacterial and fungal hosts.
- 2- Capable of transforming fungi for gene over-expression and genetic engineering to produce new drugs and explore their biosynthesis.
- 3- Skillful in molecular biology techniques.
- 4- Skillful in recombination of genes in Yeast.
- 5- Skillful in gene synthesis and codon optimization for successful expression in prokaryotic and eukaryotic hosts.
- 6- Skillful in over-expression of genes in *E. coli* and Yeast for protein isolation and purification as well as optimization for production of soluble proteins.
- 7- Skillful in fermentation and analysis using LC-MS.
- 8- Basic knowledge about NMR and High Resolution Mass Spectrometry.

### **Teaching undergraduate courses and duties**

**I am teaching the following subjects in faculties of Pharmacy in Beni-Suef University and Nahda University during the previous four years and nine months with competency.**

- 1- Basic microbiology and immunology.
- 2- Pharmaceutical microbiology.
- 3- Clinical microbiology.

- 4- Pharmaceutical biotechnology.
- 5- Public health and preventive medicine.
- 6- Cell biology.
- 7- Pathophysiology.

### **Teaching postgraduate courses and duties**

- 1- Advanced immunology.
- 2- Advanced microbiology.

### **Postgraduate students and research supervision**

- 1- Mohamed Ahmed Sebak. PhD – in progress. Title:- Investigation for the production of biologically active secondary metabolites recovered from some microbial samples.
- 2- Sayed Ali Galal. Master – in final stages. Title:- Studies on bacterial resistance to merpenem
- 3- Fatma Molham. Master – in progress. Title:- Study of the genetic basis of biodegradation of some aromatic compounds in the environment.
- 4- Reham Osama. Master – in progress. Title:- Carbapenem resistance genes in Gram negative pathogenic bacteria and co-incidence with resistance to cephalosporins.
- 5- Hagar Hemdan. Master – in progress. Title:- Mechanisms of Resistance to Macrolides Antibiotic among Pathogenic Bacteria
- 6- Ahmed Mohammed Soliman. Master – in progress. Title:- A study on some marine *Actinomycetes* for production of biologically active compounds
- 7- Aya Ahmed. Master – in progress. Title:- A study on some marine fungi for production of biologically active compounds.
- 8- Ola Rady. Master – in progress. Title:- Multi-drug resistance plasmids in pathogenic *Enterobacteriaceae* and *Pseudomonas* conferring resistance to aminoglycosides.
- 9- Aya Abd El-Gawad. Master – "Under registration". Proposed title:- Study on biodegradation of plastics using fungal isolates.