Curriculum vitae

Mohammed Bahey-El-Din, *M.Sc., Ph.D.*

- **Name:** Mohammed Bahey-El-Din Hassan Bahey-El-Din
- **Current post:** Associate Professor and Principal Investigator (PI)
- **Address:** Department of Pharmaceutical Microbiology, Faculty of Pharmacy, Alexandria University, 1-El-Khartoum Square, El-Azarita, Alexandria, Egypt.
- **Telephone:** 002 03 4868482 (ext. 471 or 472)
- **Fax**: 002 03 4871668
- **Mobile**: 002 01112462729
- **E-mails:** m.bahey-el-din@alexu.edu.eg ; mohammedbahey@gmail.com
- **ORCID:** http://orcid.org/0000-0003-3457-9084
- **Scopus Author ID:** http://www.scopus.com/authid/detail.url?authorId=24586763400
- **Google Scholar ID:** https://scholar.google.com.eg/citations?user=8PPcj_0AAAAJ&hl=en
- ***h*-Index** (according to Scopus): **8**

- **Qualifications and degrees:**

➢ **June 2000**: Bachelor degree in Pharmaceutical Sciences. Mohammed Bahey-El-Din was the Top of pharmacy graduates year 2000 (Faculty of Pharmacy, Alexandria University, Egypt), with a general grade of Distinction Honor.
➢ **September 2001-April 2004**: Master degree in Pharmaceutical Microbiology (Department of Pharmaceutical Microbiology, Alexandria University, Egypt).
➢ **November 2005-September 2009**: Ph.D. degree in Microbiology (The School of Pharmacy, University College Cork (UCC), Ireland).

- **Positions:**

➢ September 2000-March 2004: Demonstrator for the undergraduate pharmacy students at the department of Pharmaceutical Microbiology, Faculty of Pharmacy, Alexandria University.
➢ April 2004-October 2005: Assistant lecturer at the department of Pharmaceutical Microbiology, Faculty of Pharmacy, Alexandria University.
➢ November 2005-September 2009: PhD candidate and demonstrator at the School of Pharmacy, University College Cork (UCC), Ireland.
➢ September 2009-July 2010: Post-Doctoral Researcher at the Department of Microbiology, University College Cork (UCC), Ireland.

- August 2010-July 2015: Lecturer and Principal Investigator (PI) at the Department of Pharmaceutical Microbiology, Faculty of Pharmacy, Alexandria University, Egypt.
- August 2015- Present: Associate Professor and Principal Investigator (PI) at the Department of Pharmaceutical Microbiology, Faculty of Pharmacy, Alexandria University, Egypt.

- **Research interests:**

Mohammed Bahey-El-Din is interested in the areas of immunotherapy, vaccinology and genetic engineering. Of particular interest is the development of *Lactococcus lactis*-based safe vaccines against potential pathogens. He has been involved in research projects for the development of live vaccines against *Listeria monocytogenes* and *Clostridium difficile*. More recently, Dr. Bahey-El-Din has been involved in the development of recombinant subunit vaccines with various immunoadjuvants. In addition, he is the Principal Investigator (PI) of three research projects for the development of vaccine candidates against *Schistosoma mansoni* and diagnostics for Hepatitis C virus and *Mycobacterium tuberculosis*. These projects were funded by Alexandria University and the Egyptian Science and Technology Development Fund (STDF), respectively. He published more than 15 journal publications mostly in the areas of vaccinology and genetic engineering. Furthermore, he co-authored two book chapters published by international publishers (Landes Bioscience and Humana Press (Springer)) on bacterial immunomodulation and immunological protocols, respectively. Dr. Bahey-El-Din is a regular reviewer in a number of international journals such as *Vaccine*, *Journal of Medical Microbiology*, *Journal of Biomedical sciences*, *Microbial Cell Factories, Frontiers in immunology* and *BMC Microbiology*.

- **Journal Publications:**

1. Shehat MG, **Bahey-El-Din M**, Kassem MA, Farghaly FA, Abdul-Rahman MH, Fanaki NH. Recombinant expression of the alternate reading frame protein (ARFP) of Hepatitis C virus genotype 4a (HCV-4a) and detection of ARFP and anti-ARFP antibodies in HCV-infected patients. *Archives of virology* 2015*;* 160: 1939-1952.
2. Mossallam SF, Amer EI, Ewaisha RE, Khalil AM, Aboushleib HM, **Bahey-El-Din M.** Fusion protein comprised of the two schistosomal antigens, Sm14 and Sm29, provides significant protection against Schistosoma mansoni in murine infection model. *BMC infectious Diseases* 2015; 15:147
3. Ewaisha RE, **Bahey-El-Din M,** Mossallam SF, Amer EI, Aboushleib HM, Khalil AM. Combination of the two schistosomal antigens Sm14 and Sm29 elicits significant protection against experimental *Schistosoma mansoni* infection. *Experimental Parasitology* 2014; 145:51-60
4. Ewaisha RE, **Bahey-El-Din M,** Mossallam SF, Khalil AM, Aboushleib HM. Successful detection, expression and purification of the alternatively spliced truncated Sm14 antigen of an Egyptian strain of Schistosoma mansoni. *J Helminthol* 2015; 89:764-768.

5. Hanin A, Culligan EP, Casey PG, **Bahey-El-Din M**, Hill C and Gahan CG. Two tiered biological containment strategy for *Lactococcus lactis*-based vaccine or immunotherapy vectors. *Human Vaccines and Immunotherapeutics* 2014; 10(2), 1-5.
6. McLaughlin HP, **Bahey-El-Din M**, Casey PG, Hill C, Gahan CG. A mutant in the Listeria monocytogenes Fur-regulated virulence locus (frvA) induces cellular immunity and confers protection against listeriosis in mice. *J Med Microbiol* 2013; 62**:** 185-190.
7. **Bahey-El-Din M**. Lactococcus lactis-based vaccines from laboratory bench to human use: An overview. *Vaccine* 2012; 30(4):685-90.
8. **Bahey-El-Din M** & Gahan CG. *Lactococcus lactis*-based vaccines: Current status and future perspectives. *Human vaccines,* 2011; 7(1): 106-109.
9. **Bahey-El-Din M**, Gahan CG & Griffin BT. *Lactococcus lactis* as a cell factory for delivery of therapeutic proteins. *Current Gene Therapy* 2010; 10: 34-45.
10. **Bahey-El-Din M**, Casey PG, Griffin BT & Gahan CG. Efficacy of a *Lactococcus lactis ΔpyrG* vaccine delivery platform expressing chromosomally integrated *hly* from *Listeria monocytogenes*. *Bioengineered Bugs* 2010; 1: 66-74.
11. **Bahey-El-Din M**, Casey PG, Griffin BT & Gahan CG. Expression of two *Listeria monocytogenes* antigens (P60 and LLO) in *Lactococcus lactis* and examination for use as live vaccine vectors. *J Medical Microbiology* 2010; 59: 904-12.
12. **Bahey-El-Din M** & Gahan CG. *Lactococcus lactis*: from the dairy industry to antigen and therapeutic protein delivery. *Discovery Medicine* 2010; 9: 455-61.
13. **Bahey-El-Din M**, Griffin BT & Gahan CG. Nisin inducible production of listeriolysin O in *Lactococcus lactis* NZ9000. *Microbial Cell Factories* 2008; 7:24.
14. **Bahey-El-Din M**, Casey PG, Griffin BT & Gahan CG. Lactococcus lactis-expressing listeriolysin O (LLO) provides protection and specific CD8(+) T cells against *Listeria monocytogenes* in the murine infection model. *Vaccine* 2008; 26: 5304-14.
15. El-nakeeb MA, Abou-Shleib HA, Khalil A & **Bahey-El-Din M**. Effect of Beta-lactamases and Nor-A inhibitors on the activities of Ampicillin, Ciprofloxacin and Levofloxacin against *Staphylococcus aureus* clinical isolates. *Alex. J. Pharm. Sci.* 2005; 19(1): 33-40.
16. El-nakeeb MA, Abou-Shleib HA, Khalil A & **Bahey-El-Din M**. Susceptibility of *Staphylococcus aureus* clinical isolates against various antibiotics, selected antibiotic combinations and post-antibiotic effect. *Alex. J. Pharm. Sci.* 2004; 18(2): 157-164.

- **<u>Book Chapters:</u>**

1. **Bahey-El-Din M,** Gahan CG. Vaccination Studies: Detection of a *Listeria monocytogenes*-Specific T Cell Immune Response Using the ELISPOT Technique. In: Jordan K, Fox EM and Wagner M, eds. "*Listeria monocytogenes* Methods and Protocols"; *Methods Mol Biol*. New York: Humana Press (Springer), **2014**; 1157:263-74.

2. **Bahey-El-Din M**, Griffin BT & Gahan CG. Attack and counter-attack: Targeted immunomodulation using bacterial virulence factors. In: Sleator R, Hill C, eds. "Patho-Biotechnology". Austin: Landes Bioscience, **2008**: 163-172.

- **Research projects:**

Principal Investigator (PI) of the following three projects:

1- Project title: "Development of potential vaccine candidates against *Schistosoma mansoni* using novel delivery systems".
-The project was funded by Alexandria University Research Enhancement Program (ALEX-REP).
-Project code: HLTH 10
-Fund amount: **170,000 L.E.**
-Project duration: April 2011- September 2013

2- Project title: "Investigation of anti-hepatitis C (HCV) antibodies in the serum of HCV-infected Egyptian patients at different stages of disease prognosis and treatment".
-The project was funded by the Science and Technology Development Fund (STDF).
-Project ID: 4828
-Fund amount: **100,000 L.E.**
-Project duration: April 2013- October 2014

3- Project title: "Investigation of novel *Mycobacterium tuberculosis* antigens as potential serodiagnostic tools and possible vaccine candidates".
-The project has been recently funded by the Science and Technology Development Fund (STDF).
-Project ID: 15145
-Fund amount: **100,000 L.E.**
-Project duration: July 2015-July 2016

- **Postgraduate students in the research group:**

1. **Radwa Emad Ewaisha:** Master degree granted in 2013 [Supported by ALEX-REP grant, Project code: HLTH10].
2. **Michael George Shehat:** Master degree granted in 2014 [Supported by STDF grant ID: 4828].
3. **Mona Ahmed Kamel Elhosary:** Master degree granted in 2015 [Partly supported by STDF grant ID: 4828].
4. **Fatma Elzahraa Ali:** Master work in progress.
5. **Hend Zeitoun:** PhD work in progress [Supported by STDF grant ID: 15145].