

# Curriculum Vitae

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**Place of Birth: Cairo, Egypt**

## Education

Year	Degree	Field of study	Institution
Sept. 2010	PhD	Laser science and Biotechnology	The National Institute of Laser Enhanced Science, Department of laser applications in meteorology, photochemistry and agriculture, Cairo University, Egypt.
June 2006	M.Sc.	Laser science and Biotechnology	The National Institute of Laser Enhanced Science, Department of laser applications in meteorology, photochemistry and agriculture, Cairo University, Egypt.
Oct 2002	Diploma	Laser science and Biotechnology	The National Institute of Laser Enhanced Science, Department of laser applications in meteorology, photochemistry and agriculture, Cairo University, Egypt.
June 1999	B.Sc.	Chemistry- Zoology	Faculty of Science, Cairo University, Egypt.
May 1995	Thanwya Amma (High school)	High school	St. Fatima Language Schools., Egypt.

## Postdoctoral Training

Year	Title	Specialty	Institution
Oct. 2014- March 2015	Post doctoral fellowship as a research visitor	Protein purification and crystallography.	Chemistry research laboratory, University of Oxford, United Kingdom.
June 2013- Dec.2013	Post doctoral fellowship	Nanoparticles and photodynamic therapy.	Laser research centre, University of Johannesburg, South Africa.
Feb. 2012- Aug. 2012	Post doctoral fellowship as a research visitor	Sodium channel and patch clamping.	Centre of molecular biomedicine, Friedrich Schiller University, Germany.
June 2010- Dec.2010	Post doctoral fellowship as a research visitor	Photodynamic Therapy	Laser research centre, University of Johannesburg, South Africa.

## Faculty Academic Appointments

Year	Academic title	Department	Academic Institution
Dec. 2010 - Present	Lecturer (Assistant Professor)	Department of laser applications in meteorology, photochemistry and agriculture.	The National Institute of Laser Enhanced Science, Cairo university, Egypt.
Sept. 2006- June 2010	Lecturer Assistant	Department of laser applications in meteorology, photochemistry and agriculture.	The National Institute of Laser Enhanced Science, Cairo university, Egypt.
June 2001- Sept. 2006	Laboratory Demonstrator	Department of laser applications in meteorology, photochemistry and agriculture.	The National Institute of Laser Enhanced Science, Cairo university, Egypt.

## Other Professional Positions

Years	Position Title	Institution
June 2000- June 2001	Medical Representative	Egyptian International Pharmaceutical company EIPICO, Egypt.
June 1999- June 2000	Quality Assurance chemist	Nestle, Egypt.

## Professional Societies

1995- present	The Egyptian Scientific Syndicate	Member
	1995- present	

## Grant Review Activities

Journal of photoenergy

## Honors and Prizes

2012	Best PhD Thesis	Cairo university	Best PhD Thesis
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## Report of Funded and Unfunded Projects

### Funding Information

Past

2009-2010	Assessment of DNA damage in human cancer cells after Photodynamic therapy using metallophthalocyanine photosensitizer
	African Laser Centre
	Postdoctoral fellowship for the assessment of the DNA damage after photodynamic therapy
	Assessment of DNA damage after photodynamic therapy for 3 cancer cell lines and to assess if there is adaptive response could be displayed by these cells if they were pre radiated.

2012-2013	Synthesis of photosensitizers conjugated with nanoparticles and antibodies for photodynamic therapy
	African laser centre
	Synthesis of silver and gold nanoparticles to be utilized as photosensitizers
	The evaluation of utilizing of silver and gold nanoparticles as photosensitizers in treatment of two cancer cell lines. Comparing these nanoparticles to traditional photosensitizers and conjugated ones.

## Report of Local Teaching and Training

### Teaching of Students in Courses

2002 – 2006	Laboratory course “Photochemistry and Photobiology”	The National institute of laser enhanced science, NILES - Cairo University
	Diploma students	2-hr session per week for six weeks

2002 - 2006	Laboratory course "Biotechnology"	The National institute of laser enhanced science, NILES - Cairo University
	Diploma students	2-hr session per week for six weeks
2002 - 2006	Laboratory course "Optics"	The National institute of laser enhanced science, NILES - Cairo University
	Diploma students	2-hr session per week for four weeks
2011- 2013	Cell biology	The National institute of laser enhanced science, NILES - Cairo University
	Master Students	2-hr session per week for six weeks
2011 - 2013	Laser applications in biotechnology	The National institute of laser enhanced science, NILES - Cairo University
	Diploma Students	2-hr session per week for six weeks
2011 - 2013	Cell signaling and biomembranes	The National institute of laser enhanced science, NILES - Cairo University
	Diploma Students	2-hr session per week for six weeks
2001- 2002	Laboratory course "Genetics"	Suez Canal University
	1 <sup>st</sup> year Science students	4-hr session per week for eight weeks
2001- 2002	Laboratory course "Physiology"	Suez Canal University
	1 <sup>st</sup> year Science students	4-hr session per week for eight weeks
2001- 2002	Laboratory course "Anatomy"	Suez Canal University
	1 <sup>st</sup> year Science students	4-hr session per week for eight weeks

### Local Invited Presentations

2013	Study the expression of Channelrhodopsin-2 as a directly light-gated cation-selective membrane channel in HEK 293 cells/ oral presentation
	Egyptian society of Experimental Biology

## Report of Regional, National and International Invited Teaching and Presentations

### Invited Presentations and Courses

#### International

2014	Nanoparticles and photodynamic therapy
	LAM network, Dakar, Senegal
2013	Applications of Nanoparticles in Photodynamic Therapy
	African Laser Centre and University of Stellenbosch, Cape town, South Africa
2012	Assessment of DNA damage after photodynamic therapy
	South Africa, Johannesburg, South Africa

## Report of Scholarship

### Publications

1. Ivan Mfouo-Tynga, Ahmed Hussein, Mohamed Abd ElHarith and Heidi Abrahamse (2014). Photodynamic Ability of Silver Nanoparticles in Inducing Cytotoxic Effects in Breast and Lung Cancer Cell Lines. to International journal of nanomedicine. International Journal of Nanomedicine 9 (1) (2014) 3771-3780.

2. Navin K Ojha; Ehsan Nematian-Ardestani; Sophie Neugebauer; Benjamin Borowski; Ahmed El-Hussein, Dr.; Toshinori Hoshi, Prof.; Enrico Leipold, Dr.; Stefan H Heinemann, Dr. (2014). Sodium channels as gateable non-photon sensors for membrane-delimited reactive species. *Biochimica et Biophysica Acta* 1838 (2014) 1412–1419.
3. S. Elfeky and A.El-Hussein, (2013). Characterization and photostability study for CdTe quantum dots (QDs) with different sizes using laser induced fluorescence. Submitted to *Journal of Nanomaterials*
4. A. Marzouk, A.EL-Hussein and M. Harith. (2013) Characterization of petroleum crude oils using laser induced fluorescence. Submitted to *Journal of Applied Spectroscopy*.
5. A. El-Hussein, (2013). Study the expression of Channelrhodopsin-2 as a directly light-gated cation-selective membrane channel in HEK 293 cells, Egypt. *J. Exp. Biol. (Bot.)*, 9(1): 81 – 86.
6. A. El-Hussein, M. Harith and H. Abrahamse (2011). Assessment of DNA damage after photodynamic therapy using a metalphthalocyanine photosensitizer”, *International Journal of Photoenergy*. doi:10.1155/2012/281068.
7. A. El-Hussein, A.K. kassem. H. Ismail and M.A. Harith (2010). Exploiting LIBS as a spectrochemical analytical technique in diagnosis of some types of human malignancy. *Talanta*. 82(2), 495-501.
8. A. El-Hussein, H. Ismail, A. K. Kasem, and M. A. Haritha (2009). Application of LIF technique in the diagnosis of some human cancer types. *AIP Conf. Proc.*, 1172 (1), 101-105.

## Thesis

**Title of the dissertation:** Applications of LIBS and LIF techniques in the diagnosis of breast and colorectal human cancer (in vitro study).

**Doctor of Philosophy in Laser science and Biotechnology**

The national institute of laser enhanced science, department of laser applications in meteorology, photochemistry and agriculture, Cairo University.

**Narrative Report (limit to 500 words)**

**My activities are split between scientific research, teaching and supervising master and PhD students. Currently I am busier in doing postdoctoral fellowships and academic visits to acquire the knowledge and the experience in many techniques. Some of which are patch clamping, protein crystallography and protein purification and synthesis. After which I will transfer this experience to my colleagues and my future students as well. I have been involved as main organizer in various national and international conferences and schools that were greatly succeeded. I have attended different schools and different workshops as wells as national and international conferences.**

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