



Gamal Eldein Fathy Abd-Ellatef Abd-Elrahman

Date of birth: 31/05/1981 | **Nationality:** Egyptian | **Gender:** Male | (+20) 1069076067 |

gamalology@yahoo.com | gamalology@gmail.com | ge.fathy@nrc.sci.eg |

gabdelra@unito.it | gamal.abdelrahman@edu.unito.it |

<https://www.facebook.com/gamalology> |

33, El Buhouth St., National Research Centre, Giza, Dokki, Egypt, Pharmaceutical and Drug Industries Research Division, Therapeutic Chemistry Department, 12622, Cairo, Egypt

About me: I am a Dr. of Molecular Medicine and Integrated Molecular Physiology Researcher at the Pharmaceutical and Drug Industries Research Division, Therapeutic Chemistry Department, National Research Centre in Egypt with fourteen years of experience in Tissue Culture, Cancer Multidrug Resistance, Anticancer Drug Development, Cancer Biology and Cancer Metabolomics.

● WORK EXPERIENCE

29/12/2020 – CURRENT – Cairo, Dokki, Giza, Egypt
RESEARCHER – NATIONAL RESEARCH CENTRE (NRC)

I am a Researcher in the Pharmaceutical and Drug Industries Research Division, Therapeutic Chemistry Department and my research is going on Cancer Multidrug Resistance in Cancer Cells, Molecular Medicine, Integrated Molecular Physiology, Anti-cancer Drug Development, and Cancer Metabolomics.

<http://www.nrc.sci.eg/nrc/> | 33 El Buhouth St. National Research Centre, 12622, Cairo, Dokki, Giza, Egypt

03/2013 – 28/12/2020 – Cairo, Dokki, Giza, Egypt
ASSISTANT RESEARCHER – NATIONAL RESEARCH CENTRE (NRC)

National Research Centre is a center for scientific research.
Pharmaceutical and Drug Industries Research Division, Therapeutic Chemistry Department, studying Cancer Multidrug Resistance in Cancer Cells, Molecular Medicine, Integrated Molecular Physiology, Anticancer Drug Development, and Cancer Metabolomics.

28/09/2016 – 01/04/2020 – Torino, Italy
PH.D. STUDENT, JOINT PHD SUPERVISION MISSION – THE UNIVERSITY OF TORINO, ONCOLOGY DEPARTMENT

Molecular Medicine, Oncology research field, on Multi-Drug Resistance in Breast Cancer Cells.

Professional, scientific and technical activities | <http://en.unito.it/> | Via Verdi, 8, 10124, TO, Torino, Italy

10/2015 – 18/08/2020 – Cairo
PH.D. STUDENT – CAIRO UNIVERSITY, FACULTY OF SCIENCE

Integrated Molecular Physiology research field, focusing on multi drug resistance in cancer cells.

06/2006 – 03/2013 – Cairo, Egypt
RESEARCHER ASSISTANT – NATIONAL RESEARCH CENTRE (NRC)

Pharmaceutical and Drug Industries Research Division, Therapeutic Chemistry Department, studying human physiology and trying to find novel anticancer drugs, specially for breast cancer patients through studying cell signalling pathways.

<http://www.nrc.sci.eg/nrc/> | 33, El Buhouth St., 12311, Cairo, Egypt



25/02/2020 – CURRENT – Cairo, Egypt

ASSOCIATE DIRECTOR OF MEDICAL WRITING – MD PHARMA CONSULTING GROUP [HTTPS://WWW.MDPHARMA-EGYPT.COM/OUR-PEOPLE](https://www.mdpharma-egypt.com/our-people)

Medical Writing:

1- Academic Writing

- Evidence synthesis: systematic review and meta-analysis for academic writing.
- Journal selection.
- Abstract preparation.
- Manuscript preparation.
- Citation management.
- Journal submission.
- Editing and proofreading.
- Poster design.
- Slide deck design.

2- Clinical Research Writing and Communications

- Clinical study protocols.
- Informed consents.
- Medical coding conventions.
- Safety module specifications.
- Medical management and safety plans.
- White papers.
- Investigator brochures.
- Serious adverse event narratives.
- Investigational New Drug (IND) safety reports.
- Data Safety and Monitoring Board (DSMB) summaries/updates, etc.

3- Biomedical Research Writing

Providing the biomedical research scientific writing needs during the preclinical drug and medical device development phase. Providing the help with the experimental design and choose the right biomedical lab technologies suitable for lab study.

4- Regulatory Affairs Writing

Supporting the regulatory affairs writing needs. Having open communication channels with the regulators, know the required regulatory documents, and know when and how to submit them.

06/2006 – CURRENT

CHIEF CHEMIST – TIBA LAB

I worked in medical analysis departments (Semen processing for IVF, Blood Sampling, Blood Chemistry, Haematology, Immunology, Parasitology and Culture/sensitivity for samples from different body parts). Using automatic instruments and manual techniques.

Cairo, Egypt

● **EDUCATION AND TRAINING**

09/2016 – 01/04/2020 – Via Verdi, 8, The University of Turin, Torino, Italy

PH.D. IN MOLECULAR MEDICINE – The University of Torino

<https://www.unito.it/>

17/10/2015 – 18/08/2020 – 1 Gamaa Street, Giza Faculty of Science, Cairo, Egypt

PH.D. IN INTEGRATED MOLECULAR PHYSIOLOGY – Cairo University, Faculty of Science

<https://cu.edu.eg/Home>



06/2006 – 09/2012 – Cairo, Egypt

MSC IN PHYSIOLOGY – Zoology department, Faculty of Science, Beni-suef University National Research Center, Pharmaceutic

Studying:

- Sensory Physiology and Animal Behavior, Haematology, Neurophysiology, Endocrinology and Coordination, Muscle Physiology, Reproduction, Water and Minerals' Metabolism, Histology and Histochemistry, Cell Biology and Immunology, Radiobiology, Systematic Zoology, Biochemistry, Toxicology, Fresh Water Ecology and Physiology, Respiration and Excretion, Biostatistics.
- Experimental studying of *In Vitro* and *In Vivo* Activities of *Ulva lactuca* Polysaccharides as Cancer Chemopreventive Agents.

09/1999 – 05/2003 – Beni-suef, Egypt

BSC IN ZOOLOGY AND CHEMISTRY – (Biology) Zoology and Chemistry department, Faculty of Science, Cairo University, Beni-suef branch

Physiology, Immunology, Endocrinology, Haematology, Anatomy, Parasitology, Ecology, Histology, Histochemistry, Zoology, Botany, Analytical Chemistry, Organic Chemistry, Physics, Mathematics, Biochemistry, Comparative Anatomy, Animal Behavior, Vertebrates and Invertebrates.

02/2013 – 08/2013 – Salamanca, Spain

PROJECTS DEALING WITH THE USE OF NOVEL ANTICANCER COMPOUNDS AND APPLYING SEVERAL CELL BIOLOGICAL TECHNIQUES, AS WELL AS OTHER BASIC CELL CULTURE AND BIOCHEMICAL TECHNIQUES – Centro de Investigación del Cáncer (CIC), scientific research center

- Studying of proteins that participate in processes of intercellular communication. In particular, growth factors and their receptors.
- Cellular mechanisms involved in the proliferative response induced upon activation of growth factor receptors.
- Evaluation of the role of receptors from the HER family and their ligands in processes of proliferation and tumour genesis.
- Using novel anticancer compounds for triple negative breast cancer.

Occupational skills covered:

1. Cell culture techniques.
2. Antiproliferative effect of the drugs on different breast carcinoma cell lines like: MCF-7, MDA-MB-231, HCC1806, HCC2157, HCC1599 and HCC70.
3. Cytotoxicity assays on breast cancer cell lines using the drug under test.
4. MTT assay.
5. Protein extraction from cancer cells.
6. Protein immunoprecipitation.
7. Western blot technique.
8. Cell cycle analysis.
9. Biochemical studies of the mechanism of action of the drug under test.
10. Genomic studies of the mechanism of action of the drug under test. Xenograft mouse breast cancer model preparation.

Field(s) of study

- Scientific Research

24/08/2013 – 05/09/2013 – Cairo, Egypt

ADVANCED COURSE IN EMERGENCY 1ST AID – Department of Medical Education Foundation International Cultural Center

Surgical Emergencies, Medical Emergencies, Coma & Neurological Emergencies, 1st Aid In Poisoning, Gynecological & Obstetrical Emergencies, Psychiatric Emergencies, Genitourinary Emergencies, Emergency Investigations, E.N.T. Emergencies, Pediatric & Neonatal Emergencies, Ophthalmologic Emergencies, Oncological Emergencies, I.V. Fluids & Electrolyte Imbalance, Post Operative Complications, Sengstake Tube fixation, Catheters, Subcuticular & Materss Sticking, Ryle and Stomach Wash, Centralvenous Catheters.



● **LANGUAGE SKILLS**

Mother tongue(s): ARABIC

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2
ITALIAN	B1	B1	A2		
SPANISH	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **H-INDEX**

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<https://www.scopus.com/authid/detail.uri?authorId=56974241100>

● **ORCID**

<https://orcid.org/0000-0003-0858-4840>



● PUBLICATIONS

Publications

- 1- Fathy Abd-Ellatef, G. E., Gazzano, E., Chirio, D., Hamed, A. R., Belisario, D. C., Zuddas, C., ... & Sapino, S. (2020). Curcumin-loaded solid lipid nanoparticles bypass p-glycoprotein mediated doxorubicin resistance in triple negative breast cancer cells. *Pharmaceutics*, 12(2), 96.
- 2- Abd-Elrahman, GE. F., Ahmed, O. M., Abdel-Reheim E. S. and Abdel-Hamid Z. A. (2017). Ulva lactuca polysaccharides prevent Wistar rat breast carcinogenesis through the augmentation of apoptosis, enhancement of antioxidant defense system and suppression of inflammation. *Breast Cancer: Targets and Therapy*, Volume 9, pp. 67–83. doi:10.2147/bctt.s125165.
- 3- Chegaev K, Fraix A, Gazzano E, Abd-Ellatef GE, Blangetti M, Rolando B, Conoci S, Riganti C, Fruttero R, Gasco A. (2017). Light-Regulated NO Release as a Novel Strategy To Overcome Doxorubicin Multidrug Resistance. *Sortino S. ACS Med Chem Lett.* 8 (3): 361-365. doi:10.1021/acsmchemlett.7b00016.e.
- 4- Salaroglio, I. C., Gazzano, E., Abdullrahman, A., Mungo, E., Castella, B., Abd, G. E. F. A. E., ... & Kopecka, J. (2018). Increasing intratumor C/EBP- β LIP and nitric oxide levels overcome resistance to doxorubicin in triple negative breast cancer. *Journal of Experimental & Clinical Cancer Research*, 37(1), 286.
- 5- Yahya, Shaymaa M. M., Hamed, Ahmed R., Emara, M., Soltan, M. M., Abd-Ellatef, GE. F. and Abdelnasser, M. S. (2015). Differential effects of c-Myc and ABCB1 silencing on reversing drug resistance in HepG2/Dox cells. *Tumor Biology*, vol. 37, no. 5, pp. 5925–5932. doi:10.1007/s13277015-4426-7.
- 6- El-Kashak, Walaa A., Hamed, Ahmed R., El-Raey M. and Abd-ellatef, GE. F. (2016). Antiproliferative, antioxidant and antimicrobial activities of phenolic compounds from *Acrocarpus fraxinifolius*. *AIEGEF AE. Journal of Chemical and Pharmaceutical Research.* 8 (3), 520-528.
- 7- (Technical contribution): AR Hamed, M Emara, MM Soltan, SMM Yahya, HK Nabih, GH Elsayed, (2018). Investigating the role of miRNA-98 and miRNA-214 in chemoresistance of HepG2/Dox cells: studying their effects on predicted ABC transporters targets. *Medicinal Chemistry Research* 27 (2), 531-537.

● PROJECTS

2016 – 2019

Nanobiotechnology: Metabolomics and Nanotechnology to Evaluate the Therapeutic Efficacy of New Herbal Medication and New Chemical Entities in Hepatocellular Carcinoma and Diabetes in Rats

STDF project

2019 – CURRENT

Metabolomics approach for the characterization of cancer drug-resistance: construction of a novel metabolic profile

National Research Centre internal project.

2019 – CURRENT

Exosomal Melatonin: A Promising Therapy for Hepatocellular Carcinoma and its Drug Resistance

National Research Centre internal project.

2013 – 2016

Therapeutic model for RNA Interference and miRNA mimicking to Target the Multidrug Resistance in Cancer Cell

Member of Science and Technology Development Fund (STDF) project. Egyptian Ministry for Scientific Research, Cairo, Egypt



2014 – 2016

Metabolomics approaches to evaluate the effectiveness and safety of new herbal medications and chemical entities

Member of Science and Technology Development Fund (STDF) project. Egyptian Ministry for Scientific Research, Cairo, Egypt

2013 – 2016

Metabolomics: the road for therapeutic drug discovery from natural sources and synthetic compounds as well as early diagnosis of liver cancer

Member of internal project, Therapeutic Chemistry Department, Pharmaceutical and Drug Industries Research Division, National Research Center, Cairo, Egypt

● **HONOURS AND AWARDS**

Honours and awards

Awarded the best poster in the 5th International Conference of Pharmaceutical and Drug Industries Research Division, which held in 29-30 March, 2015 under the title (Advances in Pharmaceutical Research).

● **ORGANISATIONAL SKILLS**

Organisational skills

- **Organisational Skills acquired from National Research Center (NRC), Cairo, Egypt:**

1- Participated in the Organization of the 3rd International Conference of Pharmaceutical and Drug Industries Research Division, which took place from March 6 to 8, 2007 under the title: Research and Development in Drugs (Future Trends) and I have designed the cover of conference brochure and the abstracts book.

2- Participated in the Organization of the 4th International Conference of the Division of Pharmaceutical and Drug Industries Research Division, which held in the period from March 3 to 5, 2009 under the title (Research and Development in Drugs (Current Challenges).

3- Participated in the Organization of the 5th International Conference of Pharmaceutical and Drug Industries Research Division, which held in 29 - 30 March, 2015 under the title (Advances in Pharmaceutical Research).

4- Participated in the Organization of the 6th International Euro-Mediterranean Conference and Expo Life Sciences, Pharma and Bio-medicine, which held in 1-2 April, 2019.

● **COMMUNICATION AND INTERPERSONAL SKILLS**

Communication and interpersonal skills

1- Creativity and innovation techniques, from DAAD office in Cairo, Egypt - 26 October 2011.

2- Communication and Rhetorical techniques, from DAAD office in Cairo, Egypt - 14 November 2011.



● **JOB-RELATED SKILLS**

Job-related skills

Technical skills and competence:

A. Technical skills acquired from Centrode Investigación del Cancer (CIC), Salamanca University, Salamanca, Spain:

11. Cell culture techniques.
12. Antiproliferative effect of the drugs on different breast carcinoma cell lines like: MCF-7, MDA-MB-231, HCC1806, HCC2157, HCC1599 and HCC70.
13. Cytotoxicity assays on breast cancer cell lines using the drug under test.
14. MTT assay.
15. Protein extraction from cancer cells.
16. Protein immunoprecipitation.
17. Western blot technique.
18. Cell cycle analysis.
19. Biochemical studies of the mechanism of action of the drug under test.
20. Genomic studies of the mechanism of action of the drug under test.
21. Xenograft mouse breast cancer model preparation.

B. Technical Skills acquired from National Research Center (NRC), Cairo, Egypt: 22. Preparing rat breast cancer model.

23. Polysaccharides extraction from marine algae.
24. RNA extraction using spin col. and Biozol techniques.
25. Rat and mice blood sampling and tissue mastectomy.
26. HPLC.
27. Field of civil defense.
28. Advanced Course lab in writing of Theses.
29. Training courses in Co-Stat statistical analysis program.

C. Technical Skills acquired from Department of Medical Education Foundation International Cultural Center, Cairo, Egypt:

30. Advanced Course in Emergency 1st Aid.

D. Technical Skills acquired from blood analysis labs:

31. Blood sampling from human in different ages.
32. Eight years experience in medical labs in all medical analysis departments (Microbiology: Culture and sensitivity for samples from different body parts on different media types, Blood Sampling, Blood Chemistry, Immunology, Parasitology and Prostatic massage). Using automatic instruments and manual techniques.
33. Semen processing for IVF.

● **REVIEWER**

2017 – CURRENT

Tumor Biology Journal

2019 – CURRENT

Beni-Suef University Journal of Basic and Applied Sciences
