Faculty of Pharmacy **Alexandria University**

Department of Pharmaceutical Chemistry

RÉSUMÉ

PROFESSOR DR. OMAIMA M. ABOULWAFA

Name: Omaima Mohamed AboulWafa Alam El-Din.

Date and Place of Birth: April 23rd, 1953 – Alexandria – Egypt.

ID 2530423200681

Professional Position: Professor, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

Gender: Female

Marital Status: Single.

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Languages Spoken: Arabic, English and French.

EDUCATION:

1- Bachelor of Pharmaceutical Sciences:

June 1975 – Grade: Distinction Honor, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

2- Master Degree in Pharmaceutical Chemistry:

November 1978, Faculty of Pharmacy (Pharmaceutical Chemistry), Alexandria University, Alexandria, Egypt.

Thesis Title:

Synthesis of Some New Heterocyclic Compounds of Potential Anticancer Activity.

3- Ph.D. Degree in Pharmaceutical Sciences:

April 1981, Faculty of Pharmacy (Pharmaceutical Chemistry), Alexandria University, Alexandria, Egypt.

Thesis Title:

Synthesis of Novel Steroidal Derivatives as Potential Anticancer Agents.

CAREER DEVELOPMENT:

DATE	POSITION HELD
December 3, 1975 - January 12, 1979	**Instructor**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.
January 13, 1979 - July 29, 1981	**Assistant Lecturer**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.
July 30, 1981 - January 26, 1987	**Lecturer**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

January 27, 1987 - May 25, 1993	**Associate Professor,** Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.
May 26, 1993 - August 17, 2002	**Professor**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.
August 18, 2002 – June 2008	**Professor**, Department of Pharmaceutical Chemistry, College of Pharmacy, King Saud University, Riyadh, KSA.
July 2008 – 2013	**Professor**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.
August 2008 – October 2011	**Head**, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.
November 2011- September 2012	**Executive Manager,** Pharmaceutical Services Unit, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.
July 2013- till Now	Professor Emiratus, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

AWARDS:

1- Recipient of the **University Award for Sciences** from Alexandria University, Egypt in 1988.

2- Nominee of the 14th edition **Marquis Who's Who in the World** (1997).

3- Award from the Faculty of Pharmacy, Damanhour University (2022) for great effort installation of the Department of Pharmaceutical Chemistry.

POST-DOCTORATE FELLOWSHIPS:

1- September 1983 – July 1985:

Research Associate, Laboratoire de Chimie Bioorganique, Université des Sciences et Techniques du Languedoc, Montpellier, **FRANCE**.

2- November 1987 – May 1989:

Research Associate, Department of Oncology, Papanicolaou Comprehensive Cancer Center, School of Medicine, University of Miami, Miami, Florida, **USA**.

3- August 2002 – June 2008:

Professor, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, King Saud University, Riyadh, KSA.

MEMBERSHIPS:

1- Syndicate of Pharmacists since 1975.
2- Egyptian Pharmaceutical Society since 1975.
3- American Chemical Society since 1988.
4- Association des Médecins Francophones since 1991.
5- Saudi Pharmaceutical Society since 2003.
6- Saudi Chemical Association since 2004.
7- Egyptian Association of Bibliotheca Alexandrina since 2009.
8- American Association for Advancement of Science (AAAS) since 2011.
9- Egyptian Association for Heterocyclic Compounds since 2011.
10- Arab Chemical Association since 2011.

MEETINGS ATTENDANCE:

1- 6th International Round Table on "Nucleosides, Nucleotides and their Biological Aplications", La Grande Motte, France, October 1 - 4, 1984.
2- 79th Annual Meeting of the American Association for Cancer Research, New Orleans, Louisiana, USA, May 25 - 28, 1988.

3- 2nd Annual Meeting on AIDS, Cairo, Egypt, March 2 - 7, 1990.

4- International Conference of Pharmaceutical Industries, Alexandria, Egypt, May 16 -19, 1990.

5- Second Anglo-Egyptian Conference of Pharmaceutical Sciences, Alexandria, Egypt, November 9 -12, 1991.

6- International Conference of Pharmaceutical Sciences and Technology, Alexandria, Egypt, March 22 - 25, 1995.

7- 6th Ibn Sina International Conference on Heterocyclic Chemistry, Cairo, Egypt, December 11 - 14, 1997.

8- 6th Saudi Pharmaceutical International Conference, Riyadh, KSA, October 6-8, 2003.

9- 9th International Conference of Pharmaceutical Sciences, Riyadh, KSA, December 17-21, 2005.

10- 19th International Symposium on Medicinal Chemistry (ismc), Istanbul, Turkey, August 23 – September 2nd, 2006.

11-7th Saudi Pharmaceutical International Conference, Riyadh, KSA, March 19-21, 2007.

12- The 4th International Chemistry Conference, Riyadh- Kingdom of Saudi Arabia, 19-21, November 2011.

13- Biovision, Bibliotheca Alexandrina, April 2012

14- 12th Ibn Sina international Conference on Pure and Applied Heterocyclic Chemistry, Luxor, Egypt, 16-19 February, 2013.

15- 2nd International Conference of Pharmaceutical Sciences (MU-PHARM 2019) in Cooperation with Delta University, Mansoura University, held in ElEin-Elsokhna on 9-12 April 2019.

16- DU-PHARM 2021, 1st international conference of Delta Univ, Semiramis Intercontinental Hotel, Cairo, Egypt, November 2021

TEACHING EXPERIENCE:

1- Supervising the Practical Courses of Organic Chemistry for Undergraduate Students, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

2- Lecturing Theoretical Courses of Organic Chemistry for Undergraduate Students, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

3- Lecturing Theoretical Courses of Advanced Organic Chemistry and Synthetic Organic Chemistry for Graduate Students, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

4- Lecturing Theoretical and Practical Courses of Organic Chemistry for Undergraduate Students, Faculty of Pharmacy, Beirut Arab University, Lebanon.

5- Supervising the Practical Courses of Organic Chemistry and Medicinal Chemistry for Undergraduate Students, Faculty of Pharmacy, King Saud University, Riyadh, KSA.

6- Lecturing Theoretical Courses of Organic Chemistry and Medicinal Chemistry for Undergraduate Students, Faculty of Pharmacy, King Saud University, Riyadh, KSA.

7- Lecturing Theoretical Courses of Advanced Organic Chemistry, Synthetic Organic Chemistry, Molecular Modeling, Drug Design, Computational Chemistry, Drug Synthesis for Graduate Students, Faculty of Pharmacy, King Saud University, Riyadh, KSA.

8- Lecturing Theoretical Courses and supervision of practical courses of Pharmaceutical Organic Chemistry and Spectroscopy for Undergraduate Students, Clinical Pharmacy program, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

9- Lecturing Theoretical Courses and supervision of tutorial courses of drug Synthesis and Spectroscopic Identification of Organic Compounds for Undergraduate Students, Pharm. D. Program, Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

10- Lecturing Theoretical Courses of Organic Chemistry for Undergraduate Students, Faculty of Pharmacy, Damanhour University, Damanhour, Egypt.

11- Lecturing Theoretical Courses of Pharmaceutical Organic Chemistry for Undergraduate Students, Clinical Pharmacy program, Faculty of Pharmacy, Damanhour University, Damanhour, Egypt.

12- Lecturing Theoretical Courses of Advanced Organic Chemistry and Synthetic Organic Chemistry for Graduate Students (Ph.D.), Faculty of Pharmacy, Damanhour University, Damanhour, Egypt.

13- Lecturing Theoretical Courses of Advanced Organic Chemistry, Drug synthesis and Advanced Spectroscopy for Graduate Students (M. Sci.), Faculty of Pharmacy, Damanhour University, Damanhour, Egypt.

14- Lecturing Theoretical Courses (General courses) of Spectroscopy for Graduate Students (M. Sci.), Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

15- Lecturing Theoretical Courses of Advanced Organic Chemistry and Advanced Spectroscopy for Graduate Students (M. Sci., Special course), Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.

PUBLIC SERVICES IN SCIENTIFIC FIELDS:

1- Supervision of the Central Laboratory of the Faculty of Pharmacy, Alexandria University, Egypt from 1989 - 1992.

3- Reviewer and Member of the Revision Board of "Alexandria Journal of Pharmaceutical Sciences" from 1986 - 2014.

4- Reviewer in the Promotion Committee of Pharmaceutical Chemistry, Ministry of Higher Education, Egypt since 1996.

5- Reviewer at King Abdul-Aziz City for Science and Technology – Riyadh – KSA since 2008.

9- Reviewer at Alexandria University Research Fund (AURF) – Research Enhancement Program (Alex Rep) since 2008.

10- Reviewer at Borg Al-Arab City for Research and Technology since 2008.

11- Reviewer and Member of Al-Azhar Promotion Committee of Pharmaceutical Chemistry, Egypt from 2012-2021.

12- Reviewer at Elsevier Corporation for Eur. J. Med. Chem., Life Sci. and Ar. J. Chem.

13- Contribution in the preparation of the Theoretical and Practical Courses of Organic Chemistry Syllabi and installation of the Chemistry Laboratories Equipment for the Faculty of Pharmacy, Effat University, Jeddah, KSA (1997).

14- Member of the Laboratories Committee in the Department of Pharmaceutical Chemistry, College of Pharmacy, King Saud University, Riyadh, KSA (2002-2008).

15- Member of the College of Pharmacy Committee on Educational and Cultural Development, College of Pharmacy, King Saud University, Riyadh, KSA (2002-2008).

16- Contribution in the preparation of the Theoretical and Practical Courses of Organic Chemistry Syllabi and installation of the Chemistry Laboratories Equipment for the Faculty of Pharmacy, Damanhour University, Damanhour, Egypt (2010).

17- Contribution in the establishment of the Pharmaceutical Chemistry department and preparation of the Theoretical and Practical Courses of Organic Chemistry Syllabi and installation of the Chemistry Laboratories Equipment for the Faculty of Pharmacy, Al Basra University, Iraq (2010).

18- Member of the Theses Examination Committee for Master and Ph.D. Students in Alexandria University, Cairo University, Mansoura University, Al-Azhar University (Girls Branch), Al-Azhar University (Boys Branch), Zagazig University and Assiut University since 1998.

QUALITY ASSURANCE and ACCREDITATION

1- Description of the Course Specifications for undergraduate and graduate courses, College of Pharmacy, King Saud University, Riyadh, KSA (2006-2008).

2-Member of the College of Pharmacy Committee on Development Strategies (Scientific Research Sector), College of Pharmacy, King Saud University, Riyadh, KSA (2006-2008).

3-Description of the Course Specifications for undergraduate and graduate courses for General program, Clinical Program, Pharm. D. Program and Graduate Studies Program (General and Special Courses), Faculty of Pharmacy, Alexandria University, Egypt (2008-2010, 2020 - till now).

4- Description of the Program Specifications for undergraduate and graduate courses, Faculty of Pharmacy, Alexandria University, Egypt (2008-2010).

5- Head of the Leadership committee in quality assurance and accreditation project, Faculty of Pharmacy, Alexandria University, Egypt (2008 – 2018).

6- Member of the Coordination Educational Committee for organization of new undergraduate syllabi for transfer to credit hours program, Faculty of Pharmacy, Alexandria University, Egypt (2008 – 2017).

7- Head of Committee for Organization of theses Supervision for Academic Degrees, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Egypt (2008 – 2018).

8- Establishing and Member of the Academic Theses Research Fund (ATRT), Faculty of Pharmacy,Alexandria University, Egypt (2015 – 2018).

9- Member of the Graduate Studies Educational Committee, Faculty of Pharmacy,Alexandria University, Egypt (2008-2014).

10- Member of the Safety and Security Committee, department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Egypt (2009-2014).

11- Member of the Cultural Committee, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Egypt (2008-2014).

12- Head of the Leadership committee of the faculty Biography, Quality Assurance, Faculty of Pharmacy, Alexandria University, Egypt (2008 – 2014).

13- Head of the Training and Human Resources committee, Quality Assurance, Faculty of Pharmacy, Alexandria University, Egypt (2010-2015).

14- Member of the Faculty of Pharmacy Committee on Development Strategies (Educational Program Sector), Alexandria University, Egypt (2009-2015).

15- Supervising the Pharmaceutical Service Unit, Faculty of Pharmacy, Alexandria University (2011 – 2012).

16- External reviewer for Organic Chemistry Courses for Undergraduate and graduate studies programs for Cairo University, Mansoura University, Assiut University, Damanhour University, Pharos University, Horus University and Delta University (since 2010).

17- Internal reviewer for Undergraduate program, Faculty of Pharmacy, Alexandria University, Alexandria Egypt (2020).

18- Internal reviewer for graduate program, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria Egypt (2021, 2022).

RESEARCH EXPERTISE:

A- Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Alexandria, EGYPT:

1- Basic Organic Chemistry: The research in this area has been successful in the establishment of a new method for the synthesis of Heterocyclic Compounds through Cyclodesulfurization of Thio-Compounds with DCC. This reagent opened new, simple and easy way for the preparation of various Heterocyclic Compounds by a one-pot reaction. This new method is now gaining publicity and wide application in different laboratories abroad, and has been applied for the preparation of a variety of Heterocyclic Compounds of potential biological activities.

2- Organic and Medicinal Chemistry: The studies in this area are concerned with the synthesis of various groups of compounds of anticipated biological activities. Their evaluation for the respective potential activity and correlation of the obtained activity to the structure are handled. The studied groups included the following:

a- ***Heterocyclic Alkylating Agents*****:** Utilizing benzimidazole and benzothiazole nuclei as carriers for the alkylating function. These compounds were evaluated against P-388 Lymphocytic Leukemia.

b- ***Steroidal Anticancer Agents*****:** Utilizing the estrogenic steroidal nuclei as a carrier for various moieties. These Modified Estrogens were *in vitro* evaluated against estrogen-dependent MCF-7 cancerous cells, non estrogen dependent MDA-MB 231 cancerous cells and Hep G2 liver cancerous cells. They were also tested for *in vitro* anabolic-catabolic activities by measuring their effect on the activity of the bovine pancreatic ribonuclease.

c-*Endocrinological Studies:* in which natural Estrogens are subjected to various structural modifications with the aim of reducing estrogenicity and production of Antiestrogens. These compounds were evaluated for *in vitro* Binding Affinity to the Estrogen Receptor, *in vivo* Uterotrophic, Antiuterotrophic and Post coital Anti-implantation activities.

d- ***Non-Steroidal Anti-breast Cancer Agents:*** As evident from the recent advances provided in this area, various heterocyclic skeletons are providing appealing opportunities for cancer therapy. Importantly, logical design and production of new bioactive candidates was achieved by structural variation. Experimental evidence gathered so far suggests that the pronounced antiproliferative effects caused by the synthesized compounds most likely arise from innovative mechanisms of action in comparison to established anticancer drugs. Extensive research work has unveiled numerous heterocyclic hybrids as promising antineoplastic agents against MCF-7 and MDA-MB-231 BC cells. Target compounds also showed significant increases in the levels of caspase 9. The role of these compounds was also explored for their increasing apoptosis ability against MCF-7 and MDA-MB-231. Compounds displayed apoptosis and arrested cell cycle at various phases, in particular at the S and G1 phases. According to the obtained results, it can be safely concluded that target compounds may cause apoptosis *via* a caspase-9 dependent mechanism. Further clarification of their effects was made by modulating their related activities as inhibitors of ARO and EGFR enzymes.

In conclusion, we believe that, in the future, the biological properties of these compounds can aid the design, and discovery of new anticancer agents and that a better understanding of the mode of action of the synthesized compounds will be necessary to provide a rational basis for their further development into novel anticancer drugs.

Work was concerned with the synthesis of various heterocyclic compounds as quinazolinones, β-Carbolines, pyrimidines, benzoxazoles and piperidines as anticancer agents. Some of thesynthesized β-Carboline derivatives were selected by NCI, Maryland, for 5-dose assays.

e- ***Anticonvulsants and Antidepressant Agents:*** encompassing compounds containing sulfur moieties or bearing hydrazone, hydrazine and oxadiazole moieties attached to benzo[b]thiophene nucleus. The compounds were evaluated for Anticonvulsant Properties or for their *in vitro* inhibitory effect on Monoamine oxidase enzyme (MAO) type A.

f- ***Antimicrobial and Anthelmintic Agents:*** which utilize the thiourea, thiosemicarbazide and thiosemicarbazone moieties as the vital center carried on various heterocyclic nuclei. They were evaluated for *in vitro* Antibacterial, Antifungal and Anthelmintic activities.

g- ***Calcium Channel Blockers and Antihypertensive Agents:*** Aiming at developing novel effective antihypertensive agents to manage hypertension; the leading cardiovascular risk factor. This resulted in the synthesis and pharmacological evaluation of novel pyrimidine derivatives as antihypertensive agents belonging to calcium channel blockers.

B- Laboratoire de Chimie Bioorganique, Université des Sciences et Techniques du Languedoc, Montpellier, FRANCE:

The work involved the preparation of Thiazolidinyl aminoacids and various Glutathione analogs and peptides as Potential Radioprotective Agents.

C- Department of Oncology, Papanicolaou Comprehensive Cancer Center, School of Medicine, University of Miami, Miami, Florida, USA:

The research dealt with the following:

1- Synthesis of Nucleoside and Nucleotide Derivatives as Potential Anticancer and Anti-AIDS Agents. Some of the synthesized products possessed good selectivity index. They exhibited anti-HIV activity similar to that of dideoxyadenosine and protected the cells against the cytopathic effect of HIV with lesser toxicity.

2- Application of Bioorganic Chemistry for the preparation of various Nucleosides and Nucleotides. The use of enzymes or certain strains of bacteria can be helpful for the preparation of some compounds that cannot be obtained by classical chemical reactions due to their sensitivity to these reaction conditions.

3- Training in cell culture including L 1210 and MCF-7 cells.

D- Department of medicinal Chemistry, College of Pharmacy, King Saud University, KSA:

The research dealt with the establishment of the first school for steroid chemistry in the Department of Pharmaceutical Chemistry, College of Pharmacy, King Saud University, KSA in which natural Estrogens are subjected to various structural modifications with the aim of reducing estrogenicity and production of Antiestrogens. These compounds are evaluated for *in vitro* Binding Affinity to the Estrogen Receptor, *in vivo* Uterotrophic, Antiuterotrophic and Post coital Anti-implantation activities.

In this field, the following has been realized:

1- Principal investigator in the grant sponsored by the Deanship of Scientific research, King Saud University, KSA. The project title is: Novel Modified Estrogens: Synthesis, Binding Affinity to Estrogen Receptor, Uterotrophic, Antiuterotrophic and Antitumor Activities. The project has been accepted (2004), sponsored starting February 2005 and ending on May 2008.

2- Principal investigator in the grant sponsored by KACST, Riyadh, KSA. The project title is: Synthesis, Binding Affinity to ER, Biological and Antitumor Activities of Various Novel Modified Estrogens. The project has been accepted (2004), sponsored starting March 2005 and finished on February 2008.

SUPERVISION OF RESEARCHES FOR ATTAINMENT OF POST GRADUATE DEGREES:

1- **Ph.D. Degree** (1990) of the candidate: Khadiga A. Ismail, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Synthesis and Structure Activity Relationship Study of a Novel Series of Modified Female Hormones.

2- **Ph.D. Degree** (1993) of the candidate: Alaa A. El-Tombary, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Novel Steroidal Derivatives as Potential Antiestrogens.

3- **Ph.D. Degree** (2003) of the candidate: Sherine A.E. El-Samahy, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Synthesis of Novel Series of Condensed Heterocyclic Compounds by Cyclodesulfurization of Thiourea and Thiosemicarbazide Derivatives.

4- **Master Degree** (2004) of the candidate: May M.S. El-Shokrofy, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Design and synthesis of Some Thiophene Derivatives of Potential Therapeutic Activity.

5- **Master Degree** (2005) of the candidate: Reem E. Al-Wably, College of Pharmacy, King Saud University, Riyadh, KSA.

Thesis Title: Synthesis of Curcumin Analogs Bioconjugates as Potential Antitumor Agents.

6- **Ph.D. Degree** (2008) of the candidate: Maha S. Al-Mutairi, College of Pharmacy, King Saud University, Riyadh, KSA.

Thesis Title: Novel Modified Estrogens of Potential Therapeutic Activity.

7- **Master Degree** (2009) of the candidate: Fayza Bin Jobair, College of Pharmacy, King Saud University, Riyadh, KSA.

Thesis Title: Synthesis of Some Schiff's Bases of Indoline-2,3-dione and Quinolone Carboxylic Acid Derivatives with Potential Antitubercular Activity.

8- **Master Degree** (2012) of the candidate: Mai Eid Abdulfatah, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Potential Anthelmintics Derived from Benzazoles.

9- **Master Degree** (2012) of the candidate: Mohamed Teleb Al-Bassiouny Ismail, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Design and Synthesis of Some Six-membered Nitrogen- Containing Heterocycles of Potential Therapeutic Activities.

10- **Master Degree** (2016) of the candidate: Eman Salah Ezzeldin Khalil,Faculty of Pharmacy, Damanhour University, Egypt.

Thesis Title: Design and Synthesis of Some Heterocyclic Compounds as Potential Antimicrobial and Cytotoxic Agents.

11- **Master Degree** (2016) of the candidate: Waleed Ahmed Mohammed Badawi Faculty of Pharmacy, Al-Azhar University, Assiut Branch, Egypt.

Thesis Title: Design and Synthesis of Some New Pyrimidine Derivatives of Potential Therapeutic Activities.

12- **Master Degree** (2016) of the candidate: Mohamed Adel Abd El-Salam, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Design and Synthesis of Some Heterocycles of Potential Therapeutic Activities.

13- **Ph.D. Degree** (2017) of the candidate: Mohamed Teleb Al-Bassiouny Ismail, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Design, Synthesis and Antihypertensive Evaluation of New Pyrimidine Derivatives.

14- **Master Degree** (2018) of the candidate: Kamel M. Abo ElsayedFaculty of Dentistry, Alexandria University, Alexandria, Egypt.

Thesis Title: Effect of Laser and Chemical Surface treatment of Cobalt-Chromium Alloy on its Bond Srength with Heat Cured Acrylic Resin (Comparative Laboratory Study).

15- **Ph.D. Degree** (2019) of the candidate: Mai Eid Abdulfatah, Faculty of Pharmacy, Alexandria University, Egypt.

Thesis Title: Design and Synthesis of Certain Benzazole Deribatives as Potential Anticancer and Antimicrobial agents.

16- **Master Degree** (2020) of the candidate: Samir Magdi Youssef
Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.
Synthesis of New Derivatives of Some Fused Heterocyclic Ring Systems of Potential Therapeutic Activity.

17- **Ph.D. Degree** (2020) of the candidate: Waleed Ahmed Mohammed Badawi
Faculty of Pharmacy, Damanhour University, Egypt.
Thesis Title: Design and Synthesis of Some New Pyrimidine Derivatives of Potential Therapeutic Activities.

18- **Ph.D. Degree** (2022) of the candidate: Eman Salah Ezzeldin Khalil,
Faculty of Pharmacy, Damanhour University, Egypt.
Thesis Title: Design and Synthesis of Some Quinazoline Derivatives as Potential Anticancer Agents.

19- **Master Degree** of the candidate: Esraa Mostafa Mohammed Farag
Faculty of Pharmacy, Alexandria University, Alexandria, Egypt.
Thesis Title: Design and Synthesis of Novel thieno[3,2-*d*]pyrimidine Derivatives as Potential Antitumor Agents.

20- **Ph.D. Degree (2023)** of the candidate: Ahmed Hamdy El-Said,
Faculty of Pharmacy, Damanhour University, Egypt.
Thesis Title: Design and Synthesis of Some New Benzoxazole Derivatives as Potential Anticancer Agents.

21- **Master Degree** of the candidate: Nada Mohamed Seif
Faculty of Pharmacy, Alexandria University, Egypt.
Thesis Title: Design and Synthesis of Some New Heterocyclic Compounds as Potential Anti-breast Cancer Agents.

22- **Ph.D. Degree** of the candidate: Samir Magdi Youssef

Faculty of Pharmacy, Cairo University, Cairo, Egypt.

Thesis Title: Design and Synthesis of Some New Thienopyrimidines as Potential Anti-breast Cancer Agents.

23- **Master Degree** of the candidate: Walaa Adel Abas Beala

Faculty of Pharmacy, Damanhour University, Egypt.

Thesis Title: Design, Synthesis and biological evaluation of some Pyridazine derivatives of Potential therapeutic Activitity.

24- **Master Degree** of the candidate: Nsreen Momtaz Zaki Maklad

Faculty of Pharmacy, Damanhour University, Egypt.

Thesis Title: Design, Synthesis and biological evaluation of some quinoline derivatives of Potential therapeutic Activitity.

25- **Master Degree** of the candidate: Marina Guirguis Labib Beshay

Faculty of Pharmacy, Alexandria University, Egypt

Thesis Title: Design and Synthesis of Some Benzopyranone Derivatives as Potential Antitumor Agents.

SCIENTIFIC AND CULTURAL LECTURES:

1- Safety and Security in Chemistry Laboratory: College of Pharmacy, KSU, Riyadh, KSA (April 2004).

2- Coloring Matters: Historical King Abdul Aziz Center, Riyadh, KSA (February 2006).

3- Tamoxifen: College of Pharmacy, KSU, Riyadh, KSA (December 2007).

4- Coloring, Sweetening and Flavor-imparting Agents: Faculty of Pharmacy, Alexandria University (November 2008).

5- Breast Cancer (Part I): Faculty of Pharmacy, Alexandria University (February 2009).

6- Breast Cancer (Part II): Faculty of Pharmacy, Alexandria University (March 2009).

7- Breast Cancer: Faculty of Pharmacy, Alexandria University (October 2009).

8- Chirality in Pharmaceutical Industry: Faculty of Pharmacy, Alexandria University (October 2009).

9- Breast Cancer: Faculty of Pharmacy, Alexandria University (December 2009).

10- IR: Basis and Applications: Pharco Group Pharmaceuticals, Amryia, Alexandria, Egypt (November 2010).

11- Applications of IR in Pharmaceutical Industry: Faculty of Pharmacy, Alexandria University (December 2010).

12- IR: Basis and Applications: Faculty of Pharmacy, Alexandria University (January 2011).

13- Applications of IR in Pharmaceutical Industry: Faculty of Pharmacy, Alexandria University (December 2011).

14- Applications of NIR in Pharmaceutical Industry and in the Detection of Counterfeit Drugs Faculty of Pharmacy, Alexandria University (April 2013).

WORKSHOPS:

1- Designing Scientific Posters: College of Pharmacy, KSU, Riyadh, KSA (November 2002).

2- Computer Training: College of Pharmacy, KSU, Riyadh, KSA (January 2003).

3- Safety and Security in Our Lives: College of Pharmacy, KSU, Riyadh, KSA (April 2004). (Speaker).

4- Chemicals as Food and Cosmetics Additives: Historical King Abdul Aziz Center, Riyadh, KSA (February 2006). (Speaker).

5- 1rst Workshop of Nano Research at Universities: The Road Towards Fulfilling the Vision of Custodian of the Two Holy Mosqus: College of Pharmacy, KSU, Riyadh, KSA (October 2007).

6- Strategies for Student Learning Assessment: Measuring Student Achievement: Essays *vs* Objective tests: College of Pharmacy, KSU, Riyadh, KSA (November 2007).

7- Innovative Assessment: Writing High Quality MCQ Items: College of Pharmacy, KSU, Riyadh, KSA (March 2008).

8- e-learning: College of Pharmacy, KSU, Riyadh, KSA (March 2008).

9- Employee and Academic Staff Work Assessment: College of Pharmacy, KSU, Riyadh, KSA (April 2008).

10- Strategic Planning: Faculty of Pharmacy, University of Alexandria (2009).

11- Leadership: New Horizons, Alexandria, Egypt May 2009.

12- Breast Cancer: Faculty of Pharmacy, Alexandria University (October 2009). (Speaker)

13- IR: Basis and Applications: Pharco Group Pharmaceuticals, Amryia, Alexandria, Egypt (November 2010). (Speaker).

14- International Year of Chemistry: Faculty of Pharmacy, Alexandria University (April 2011). (Speaker).

15- General Chromatography and New technique of TLC (February 2012).

16- Imtroduction to LC/MS/MS in the Analytical Laboratory (March 2012).

17- 6th Environmental Meeting (Management of Solid Waste), (April 2012).

18- Strategies of Scientific Research in Egypt, City for scientific research and Technology Applications (MUCSAT), Borg Al-Arab, Alexandria, Egypt (March 2013).

19- International Day of World Life: Faculty of Pharmacy, Alexandria University (April 2019).

DESIGNING WORKSHOPS:

1- International year of Chemistry: Faculty of Pharmacy, Alexandria University (April 2011).

2- Agilent Company: HPLC (December 2012).

3- Agilent Company: FT-NIR (April 2012)

4- Pharmacists Training in AbuKir Health Security Hospital (March 2012).

5- General Chromatography and New technique of TLC (February 2012).

6- Imtroduction to LC/MS/MS in the Analytical Laboratory (March 2012).

INDUSTRIAL EXPERTISE IN PHARMACEUTICAL COMPANIES:

1- Scientific consultant for **Pharco Pharmaceuticals**, Amriya, Alexandria, Egypt from 1991 - 1996.

2- Scientific consultant for **Amriya Pharmaceutical Industries**, Amriya, Alexandria, Egypt, from 1998 - 2006.

LIST OF PUBLICATIONS

1- Synthesis of 6-Aminophenanthridines from Some Thiourea Derivatives: part 15:
A.-Mohsen M.E. Omar, N.S. Habib and Omaima M. AboulWafa, ***Pharmazie***, **32** (12), 758-761 (1977).

2- Dicyclohexylcarbodiimide as an Efficient Cyclodesulfurizing Agent in the Synthesis of Heterocyclic Compounds from Various Thio-Compounds:
A.-Mohsen M.E. Omar, N.S. Habib and Omaima M. AboulWafa**, *Synthesis***, 912) 864-865 (1977).

3- Synthesis of Some 1-Substituted Amino-3*H*-imidazo[1,5-*a*]Benzimidazole Derivatives by Cyclodesulfurization of Various Benzimidazole Thioureas with Dicyclohexylcarbodiimide (DCCD):
A.-Mohsen M.E. Omar, N.S. Habib and Omaima M. AboulWafa, ***Pharmazie***, **35 (12),** 798-799 (1980).

4- Novel Potential Alkylating Agents Derived from Benzimidazole and Benzothiazole
A.-Mohsen M.E. Omar, N.S. Habib and Omaima M. AboulWafa, ***J. Pharm. Sci.***, **71 (9),** 991-993 (1982).

5- Novel 2'-Substituted Amino-17-oxoestra-1(10),4-dieno[2,3-*d*]oxazole and Estra-1,5(10)-dieno[4,3-*d*]oxazole Derivatives: Synthesis and *in vitro* Anabolic-Catabolic Activities:
El-Sebai A. Ibrahim, A.-Mohsen M.E. Omar, N.S. Habib, Omaima M. AboulWafa and J. Bourdais, ***J. Heterocyclic Chem.*, 19 (7)**, 761-768 (1982).
*Presented in Part at the 8th International Congress of Heterocyclic Chemistry, held in Graz, Austria, August 1981.

6-Steroidal Oxazoline Derivatives: Synthesis and *in vitro* Effect on Bovine Pancreatic Ribonuclease Activity:
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