

Amira Roshdy Khattab, PhD

Vice-Dean of Student Affairs

Associate Professor of Natural Product Chemistry, College of Pharmacy, Arab Academy for Science, Technology & Maritime Transport, Abu Qir, Alexandria, Egypt

Founding member in Federation of Arab Women Leaders, member in Education & Scientific Research Committee, League of Arab States.

Date of Birth: August, 15th 1983

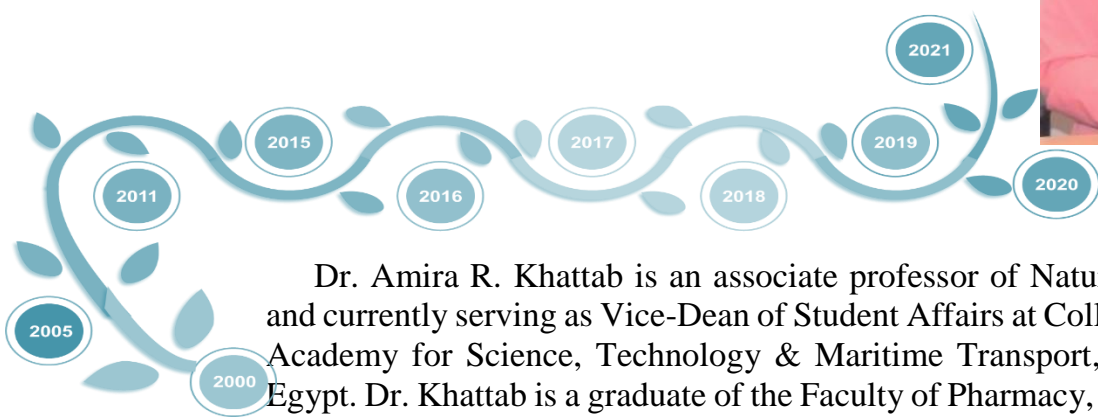
Place of Birth: Dubai, United Arab Emirates

Nationality: Egyptian

Telephone: +02-01068999813

Marital Status: Single

E-mail: Dr_amira_khattab@aast.edu



Dr. Amira R. Khattab is an associate professor of Natural Product Chemistry, and currently serving as Vice-Dean of Student Affairs at College of Pharmacy, Arab Academy for Science, Technology & Maritime Transport, Abu Qir, Alexandria, Egypt. Dr. Khattab is a graduate of the Faculty of Pharmacy, Alexandria University, Egypt (2005), ranked 13th. She received her MSc degree from Alexandria University, Egypt (2011) and her PhD from Tanta University, Egypt (2015), in natural products chemistry.

Dr. Khattab teaches Pharmacy students and conducts research at Pharmacognosy Department where she involves her students in a variety of interactive learning modalities, some of them based on Artificial Intelligence (AI), problem solving and technology-infused activities that provide them with opportunities to apply the skills in real-life after graduation.

She has co-authored 32 articles published in prestigious journals with Impact Factor (IF) up to 16.002, in the field of plant metabolomics with special focus on phytopharmaceuticals and functional foods analysis aided by modern bioinformatics tools. She also serves on the editorial board of several international journals.

Her main research interest includes phytopharmaceuticals and functional foods analysis aided by modern bioinformatics tools. Some of her research work was dedicated towards opening a promising avenue for the discovery of natural products with phytoprophylactic potential against COVID-19, with one of her research articles has been well-received and selected by *RSC Advances* journal reviewers and handling editors as being "HOT

article":https://blogs.rsc.org/ra/2020/12/16/rsc-advances-hot-articles-a-feature-interview-with-usama-ramadan-abdelmohsen-and-amira-r-khattab/?fbclid=IwAR22z2MhZYNQS21-Zsh4ve7N9MvU7GZzKDZ3R1hXbnhJ7G4AaXVDeaaDbEM&doing_wp_cron=1629663380.0944640636444091796875

Dr. Khattab is also interested in logistics and AI tools in healthcare system in addition to the therapeutic potentials of functional foods. She teaches “Medical Nutrition” to the students of Hospital Logistics Management Professional Master at the Institute of logistics and International Transport, Arab Academy for Science, Technology and Maritime Transport, Alexandria, Egypt.

She gave many talks in international conferences and lectures in the American University in Cairo (AUC). Besides she was invited to attend a number of international events such as “International Staff Week” in May 2017 at the University of Valladolid in Spain within the AAST framework of the project Erasmus+ KA107, and “Academy on Green Jobs Promotion in the MENA Region” organized by the International Labor Organization (ILO) in cooperation with the Arab Institute for Leadership Development of the Arab Academy for Science, Technology and Maritime Transport.

Work Experience

- 6/2022-till now:** Vice-Dean for Student Affairs, College of Pharmacy, Arab Academy for Science, Technology & Maritime Transport (AASTMT), Abu Qir, Alexandria, Egypt.
- 9/2020-6/2022:** Vice-Dean for Student Affairs & Quality, College of Pharmacy, Arab Academy for Science, Technology & Maritime Transport (AASTMT), Abu Qir, Alexandria, Egypt.
- 9/2019-till now:** Associate Professor, Department of Pharmacognosy, College of Pharmacy, Arab Academy for Science, Technology & Maritime Transport (AASTMT), Abu Qir, Alexandria, Egypt.
- 2/2017-9/2019:** Assistant Professor, Department of Pharmacognosy, College of Pharmacy, Arab Academy for Science, Technology & Maritime Transport (AASTMT), Abu Qir, Alexandria, Egypt.
- 8/2015-2/2017:** Assistant Professor, Department of Pharmacognosy, Faculty of Pharmacy, Pharos University in Alexandria (PUA), Egypt.
- 1/2011-8/2015:** Teaching assistant, Department of Pharmacognosy, Faculty of Pharmacy, Pharos University in Alexandria (PUA), Egypt.
- 9/2006-1/2011:** Demonstrator, Department of Pharmacognosy, Faculty of Pharmacy, Pharos University in Alexandria (PUA), Egypt.
- 9/2005-9/2006:** Demonstrator, Department of Pharmacognosy, Faculty of Pharmacy, Alexandria University, Egypt.

Research Experience & Publications

Specializing in metabolomics, natural products chemistry, and applications of machine learning, Dr. Khattab has a good experience in conducting metabolomics study using UPLC-MS/MS, GC/MS & NMR analytical platforms assisted by different bioinformatics tools to establish smart models for chemical profiling, fingerprinting, authentication and analysis of natural products and/or their derived phytopharmaceuticals.

Dealing excellently with many LC-MS and GC-MS data analysis software (such as XCMS, Met-idea, AMDIS and X-Calibur) for achieving relative quantification of metabolite profiles after chromatographic-mass spectrometric analysis and also performing a variety of multivariate statistical data analyses.

Amira Khattab Google Scholar:

https://scholar.google.com.eg/citations?user=4B_c0b0AAAAJ&hl=en

32 Publications, 449 Citations, 11 *h*-index

List of recent publications:

1. **Khattab, A. R.**, & Farag, M. A. Marine and terrestrial endophytic fungi: a mine of bioactive xanthone compounds, recent progress, limitations, and novel applications. *Critical Reviews in Biotechnology*, **2022**, 42(3), 403-430. [IF=9.071]
2. Zahran EM, Sayed AM, Alaaeldin R, **Khattab AR**, Abdelmohsen UR. Bioactives and functional food ingredients with promising potential for management of cerebral and myocardial ischemia: A comprehensive mechanistic review. *Food & Function*, **2022**, 13, 6859-6874. [IF=6.317]
3. **Amira R. Khattab**, Seham S. El Hawary, Amira S. El Senousy, Hanan S. Marzouk, Mariam Alex. Biodiversity Assessment in Tecoma Species using micro-morphometric, phytochemical and molecular descriptors aided by multivariate analysis. *Journal of the Mexican Chemical Society*, **2022**. [IF=0.869]
4. Younis IY, **Khattab AR**, Selim NM, Sobeh M, Elhawary SS, Bishbishy MH. Metabolomics-based profiling of 4 avocado varieties using HPLC–MS/MS and GC/MS and evaluation of their antidiabetic activity. *Scientific Reports*, **2022**, 23;12(1), 1-5. [IF=4.996]
5. Bhatti MA, Tahira A, Shah AA, Aftab U, Vigolo B, **Khattab AR**, Nafady A, Halepoto IA, Tonezzer M, Ibupoto ZH. Facile synthesis of a luminescent carbon material from yogurt for the efficient photocatalytic degradation of methylene blue. *RSC Advances*, **2022**, 12(39):25549-64. [IF=4.036]
6. **Khattab, A. R.** & Teleb M. *In-silico* discovery of non-psychoactive scaffolds in Cannabis halting SARS-CoV-2 host entry and replication machinery, *Future Virology*, **2022**, 17(6):367-86. [IF=3.015]

7. **Khatab, A. R.**, Teleb M. & Kamel M.S. *In-silico* study of potential anti-SARS cell entry phytoligands from *Phlomis aurea*: A promising avenue for prophylaxis. *Future Virology*, **2021**, 16(11), 761-775. [IF=3.015]
8. Mohamed Z. G., Samar S. A., Farag, M. A., **Khatab, A. R.** Over a century since ephedrine discovery: an updated revisit to its pharmacological aspects, functionality and toxicity in comparison to its herbal extracts. *Food & Function*, **2021**, 12, 9563-9582. [IF=6.317]
9. Farag, M. A., Afifi, S. M., Rasheed, D. M., & **Khatab, A. R.** Revealing compositional attributes of *Glossostemon bruguieri* Desf. root geographic origin and roasting impact via chemometric modeling of SPME-GC-MS and NMR metabolite profiles. *Journal of Food Composition and Analysis*, **2021**, 1(102), 104073. [IF=4.520]
10. Hegazi, N. M., **Khatab, A. R.**, Frolov, A., Wessjohann, L. A., & Farag, M. A. Authentication of saffron spice accessions from its common substitutes via a multiplex approach of UV/VIS fingerprints and UPLC/MS using molecular networking and chemometrics. *Food Chemistry*, **2021**, 15(367)130739. [IF=9.321]
11. Farag, M. A., Abib, B., Tawfik, S., Shafik, N., & **Khatab, A. R.** Caviar and fish roe substitutes: Current status of their nutritive value, bio-chemical diversity, authenticity and quality control methods with future perspectives. *Trends in Food Science & Technology*, **2021** 1(110), 405-17. [IF=16.002]
12. Farag, M. A., **Khatab, A. R.**, Shamma, S., & Afifi, S. M. Profiling of Primary Metabolites and Volatile Determinants in Mahlab Cherry (*Prunus mahaleb* L.) Seeds in the Context of its Different Varieties and Roasting as Analyzed Using Chemometric Tools. *Foods*, **2021**, 10(4), 728. [IF=5.561]
13. Hamed, A. N., Ismail, M. M., Abdelmohsen, U. R., Kamel, A. A., El-Daly, M., Fouad, M. A., **Khatab, A.R.** & Kamel, M. S. Headspace GC-MS and LC-MS based metabolomic study of Waterpipe smoke of unflavored and peach-flavored Moâssel with an insight into their health hazards, *Journal of Advanced Biomedical and Pharmaceutical Sciences*, **2021**; 4(2):69-80.
14. Saleh, S.R., Abdelhady, S.A., **Khatab, A.R.**, & El-Hadidy, W.F. Dual prophylactic/therapeutic potential of date seed, and nigella and olive oils-based nutraceutical formulation in rats with experimentally-induced Alzheimer's disease: A mechanistic insight. *Journal of Chemical Neuroanatomy*, **2020**, 110, 101878. [IF=3.097]
15. Farag, M. A., Hegazi, N., Dokhalahy, E., & **Khatab, A. R.** Chemometrics based GC-MS aroma profiling for revealing freshness, origin and roasting indices in saffron spice and its adulteration. *Food Chemistry*, **2020**, 331, 127358. [IF=9.231]

16. Farag, M. A., Abib, B., Ayad, L., & **Khatab, A. R.** Sweet and bitter oranges: An updated comparative review of their bioactives, nutrition, food quality, therapeutic merits and biowaste valorization practices. *Food Chemistry*, **2020**, 331, 127306. [\[IF=9.231\]](#)
17. El Hawary, S. S., **Khatab, A. R.**, Marzouk, H. S., El Senousy, A. S., Alex, M. G., Aly, O. M., & Abdelmohsen, U. R. In silico identification of SARS-CoV-2 spike (S) protein–ACE2 complex inhibitors from eight *Tecoma* species and cultivars analyzed by LC-MS. *RSC Advances*, **2020**, 10(70), 43103-43108. [\[IF=4.036\]](#)
18. **Khatab, A. R.**, & Farag, M. A. Current status and perspectives of xanthenes production using cultured plant biocatalyst models aided by in-silico tools for its optimization. *Critical reviews in biotechnology*, **2020**, 40(3), 415-431. [\[IF=9.062\]](#)
19. Shady, N. H., **Khatab, A. R.**, Ahmed, S., Liu, M., Quinn, R. J., Fouad, M. A. & Abdelmohsen, U. R. Hepatitis C Virus NS3 Protease and Helicase Inhibitors from Red Sea Sponge (Amphimedon) Species in Green Synthesized Silver Nanoparticles Assisted by in Silico Modeling and Metabolic Profiling. *International Journal of Nanomedicine*, **2020**, 15, 3377. [\[IF=7.003\]](#)
20. Sayed, A. M., **Khatab, A. R.**, AboulMagd, A. M., Hassan, H. M., Rateb, M. E., Zaid, H., & Abdelmohsen, U. R. Nature as a treasure trove of potential anti-SARS-CoV drug leads: a structural/mechanistic rationale. *RSC Advances*, **2020**, 10(34), 19790-19802. [\[IF=4.036\]](#)
21. Farrag, A. R. H., Abdallah, H. M., **Khatab, A. R.**, Elshamy, A. I., El Gendy, A. E. N. G., Mohamed, T. A., & Hegazy, M. E. F. Antiulcer activity of *Cyperus alternifolius* in relation to its UPLC-MS metabolite fingerprint: A mechanistic study. *Phytomedicine*, **2019**, 62, 152970. [\[IF=6.652\]](#)
22. **Khatab, A. R.**, Guirguis, H. A., Tawfik, S. M., & Farag, M. A. Cheese ripening: A review on modern technologies towards flavor enhancement, process acceleration and improved quality assessment. *Trends in Food Science & Technology*, **2019**, 88, 343-360. [\[IF=16.002\]](#)
23. Farag, M. A., **Khatab, A. R.**, Maamoun, A. A., Kropf, M., & Heiss, A. G. UPLC-MS metabolome based classification of *Lupinus* and *Lens* seeds: A prospect for phyto-equivalency of its different accessions. *Food Research International*, **2019**, 115, 379-392. [\[IF=7.425\]](#)
24. Elhawary, S. S., Younis, I. Y., El Bishbishy, M. H., & **Khatab, A. R.** LC–MS/MS-Based chemometric analysis of phytochemical diversity in 13 *Ficus* spp.(Moraceae): Correlation to their in vitro antimicrobial and in silico quorum sensing inhibitory activities. *Industrial crops and products*, **2018**, 126, 261-271. [\[IF=6.449\]](#)
25. Farag, M. A., Elsebai, M. F., & **Khatab, A. R.** Metabolome based classification of artichoke leaf: A prospect for phyto-equivalency of its different leaf origins and

commercial preparations. *Journal of pharmaceutical and biomedical analysis*, **2018**, 158, 151-159. [IF=3.571]

26. Dekinash MF, Beltagy AM, El Moataz Bellah A, **Khatab AR**, El Fiky FK. Chemical Composition and Biological Activities of the Essential Oil of *Pulicaria Crispa* in The Middle East. *Delta University Scientific Journal*, **2018**, 1(1):16-34.
27. Farag, M. A., **Khatab, A. R.**, Ehrlich, A., Kropf, M., Heiss, A. G., & Wessjohann, L. A. Gas chromatography/mass spectrometry-based metabolite profiling of nutrients and antinutrients in eight lentil and lupinus seeds (Fabaceae). *Journal of agricultural and food chemistry*, **2018**, 66(16), 4267-4280. [IF=5.895]
28. **Khatab, A.**, & Farag, M. Application of pattern recognition algorithms in assessing phytoequivalency of phytomedicines using NMR metabolomics data: A case study of artichoke. In *2018 28th International Conference on Computer Theory and Applications (ICCTA)*, **2018**, 134-137. IEEE.
29. Fathy, K., Dekinash, M., Beltagy, A., Moataz Bellah, E., & **Khatab, A.** Chemical composition and biological activity of essential oil from *Cotula cinerea* (Del.) growing wild in the Middle East: A short review. *Int J Pharmacogn Chinese Med*, **2017**, 1(1), 000103.
30. **Khatab, A. R.**, Ibrahim, A. R. S., Ibrahim, S. M., Abou El-Seoud, K. A., Soliman, W. E., & El-Fiky, F. K. LC-MS/MS based-comparative study of (S)-nicotine metabolism by microorganisms, mushroom and plant cultures: Parallels to its mammalian metabolic fate. *Bulletin of Faculty of Pharmacy, Cairo University*, **2015**, 53(2), 93-99.
31. **Khatab, A. R.**, Abou-shoer, M., Harraz, F. M., & El-Ghazouly, M. G. Hierarchical Clustering of Commercial Chamomile Oil, A Quality Assessment Approach. *Egypt. J. Biomed. Sci.*, **2010**, 34, 1-12.

The article is also available on-line as an application note on the website of CAMO Software's corporation for analytical modeling, prediction and optimization, at http://www.camo.com/downloads/resources/application_notes/Amira-Article.pdf

32. **Khatab A. R.**, Ibrahim A-R, Mohamoud S., Bio-Simulation of (S)-Nicotine mammalian Metabolism: *Cunninghamella elegans* and *Streptomyces platensis*-Based Microbial Metabolic Models. *Egypt J. Biomed. Sci.* **2015**, 46.

Conferences

7-9/6/2022: “CardioAlex 2022” Conference, Egypt in which I won the 1st Place Award in the “Clinical pharmacy training set” competition.

31/5-1/6/2022: “Egypt Can with Industry” Conference, Egypt, held **under the auspices of President Abdel Fattah El-Sisi** and organized by the Ministry of Immigration and Egyptian Expatriates' Affairs, in cooperation with the

Ministries of Trade and Industry, the Public Enterprise Sector, and the Ministry of State For Military Production, the Arab Organization for Industrialization, the General Authority for Investment. **I was the scientific coordinator of the “Medical and pharmaceutical industries” session.**

21/6/2022: Invited presentation entitled **“Artificial intelligence (AI) technologies in medicine for improving healthcare service: global approaches”** in Egypt the gateway to sustainable investment in Africa Conference, **which was covered by the media and published in Egyptian Time newspaper.**

<https://timemasrya.com/2022/06/22/%D8%AA%D8%AD%D8%B3%D9%8A%D9%86-%D9%85%D8%B3%D8%AA%D9%88%D9%89-%D8%AE%D8%AF%D9%85%D8%A7%D8%AA-%D8%A7%D9%84%D8%B1%D8%B9%D8%A7%D9%8A%D8%A9-%D8%A7%D9%84%D8%B5%D8%AD%D9%8A%D8%A9-%D8%A8%D8%A7%D8%B3%D8%AA/>

22-24/2/2022: Supervision of student poster entitled **"Biosynthesis of silver nanoparticles using Quinoa seeds as antidiabetic remedy"**, Dubai International Pharmaceutical & Technology Conference & Exhibition, Dubai, UAE, which **won the 1st best thematic pharmacy student poster award.**

22-24/2/2022: Supervision of student poster entitled **"Enhancing antidiabetic activity of buckwheat seeds using silver nanoparticles"**, Dubai International Pharmaceutical & Technology Conference & Exhibition, Dubai, UAE which **won the 2nd best organized pharmacy student poster award.**

22-24/2/2022: Supervision of student poster entitled **"Anti-Alzheimer potential of some selected herbs and their derived phytochemicals"**, Dubai International Pharmaceutical & Technology Conference & Exhibition, Dubai, UAE.

28/8/2021: The **“3rd forum for training & coaching”**, organized by International Expert Academy (IEA), Egypt.

29/1/2020: Research paper entitled **"The Role of Innovation and Scientific Research Development in the Executive Framework of the 2030 Sustainable Development Plan: An Applied Model"**, Conference on the role of women in leadership in achieving the sustainable development goals, under the auspices of the League of Arab States.

9-10/2019: The **3rd forum of the Arab Specialized Associations**, under the auspices of the League of Arab States.

27/2-1/3/2018: Professional presentation entitled **“A Nutraceutical Formula Based on Date Seed Extract and Black Seed Oil As a Promising Anti-**

Alzheimer Therapy with Prophylactic Potential”, Dubai International Pharmaceutical & Technology Conference & Exhibition, Dubai, UAE.

12/4/2018: “**AI-based teaching & learning methods implemented in Pharmacognosy Dept.**” accompanied by some of my distinguished 1st year students in the “2nd Pharmacy Day” held on in the main conference hall at the Arab Academy for Science, Technology & Maritime Transport.

11/4/2018: BioVision Alexandria 2018 “**New Life Sciences: Towards SDGs**”.

27/2-1/3/2018: Professional presentation entitled “**Herbal cosmeceuticals: An evidence-based review and recommendations**”, Dubai International Pharmaceutical & Technology Conference & Exhibition, Dubai, UAE.

31/10/2018: A research paper entitled “**Application of pattern recognition algorithms in assessing phytoequivalency of phytomedicines using NMR metabolomics data: A case study of artichoke**” in 28th International Conference on Computer Theory & applications, held in Arab academy for Science, Technology & Maritime Transport.

27/10/2017: A research paper entitled “**HPLC aided by chemometric analysis of flavonoids and phenolics of eight Tecoma cultivars**” in International Pharma Conference (IPC2017).

2/9/10-2/11/2017: “**Academy on Green Jobs Promotion in the Middle East– North Africa (MENA) Region**” at Abukir campus of the Arab Academy for Science, Technology and Maritime Transport from under the auspices of the Ministry of Investment and International Cooperation.

27-29/10/2015: A Poster entitled: “**Bio-Simulation of (S)-Nicotine Mammalian Metabolism: *Cunninghamella elegans* and *Streptomyces platensis*-Based Microbial Metabolic Models**”, in the International Conference on "Advances in Pharmaceutical Sciences", Pharos University in Alexandria.

Workshops

7/4/2021: “Examination and student assesments systems applied on E-learning” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.

8-9/7/2020: “Moodle” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.

14-15/6/2020: “Applications of human development in education neurolinguistic programming” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.

- 11/3, 16/4/2020:** “Course design and development” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.
- 4- 5/4/2020:** “International publication”, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.
- 16-17/9/2019:** “Effective presentation skills” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.
- 16/1/2019:** “PRIMA Information day” Arab Academy for Science, Technology & Maritime Transport, Abu Qir, Egypt.
- 15/11/2018:** “Status report” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.
- 4-5/4/2018:** “Modern learning & teaching strategies” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.
- 27/2-1/3/2018:** “Starting a Research Project at One’s Practice Site” workshop, Dubai International Pharmaceutical & Technology Conference & Exhibition, Dubai, UAE.
- 27/2-1/3/2018:** “MoPhE-A Mobile Pharmacy Education Service Run by Student Pharmacists” workshop, Dubai International Pharmaceutical & Technology Conference & Exhibition, Dubai, UAE.
- 27/2-1/3/2018:** “Super Speaker: Discover a Proven 5-Steps Process to Become an Influential Speaker” workshop, Dubai International Pharmaceutical & Technology Conference & Exhibition, Dubai, UAE.
- 16-17/1/2018:** “Advanced MS-based metabolomics: applications in medicine & pharmacy” workshop, College of Science and Engineering, American University in Cairo (AUC).
- 22-23/11/2017:** “Scientific conferences organization” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.
- 18-19/10/2017:** “Research ethics” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.
- 18-19/10/2017:** “Ethics of Scientific Research” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.
- 11-13/9/2017:** 1st Computer aided drug design workshop held on at the Faculty of Pharmacy, Kafr Elsheikh University.
- 25-26/9/2017:** “Effective Presentation Skills” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.
- 28-29/8/2017:** “E-learning” workshop, Faculty and Leaders Development Center, Arab Academy for Science, Technology & Maritime Transport.

9/2014-7/2015: “Continuous Professional Development Course in Pedagogy”, a nine module program including: learning styles, interactive modalities, motivation strategies and feedback, learning domains, principles of adult learning plagiarism, syllabus design and construction, managing lectures and students’ assessment.

Honors & Awards

18/1/2018: Received an “**Acknowledgment letter**” for giving a lecture entitled “Merits of Machine learning in quality control of herbals”, in “Advanced MS-based Metabolomics Applications in Medicine & Pharmacy” workshop held in American University in Cairo (AUC).

13/3/2018: Invited to give a session entitled “**Cheese processing: modern technologies towards flavor enhancement, process acceleration and improved nutrition**” to Food Chemistry postgraduate program students in the American University in Cairo (AUC).

22-26/5/2016: Obtained a “**Diploma of participation in the International Staff Week**” at the University of Valladolid in Spain within the framework of the project Erasmus+ KA107.

6/2005: Ranked 13th on 2005 graduation year at Faculty of Pharmacy, Alexandria University.

6/2000: Achieved the 3rd place in Thanaweya Amma.

References

- *Prof. Dr. Mohamed A. Farag, Graduate Program Director, Chemistry Department, American University in Cairo (AUC), Cairo.*
- *Prof. Dr. Fathy El-Fiky, Professor of Pharmacognosy, Faculty of Pharmacy, Alexandria University.*
- *Prof. Dr. Nabila Ghazy, Professor of Pharmacognosy, Faculty of Pharmacy, Alexandria University.*