

## Curriculum Vitae

**Ahmed O. Elzoghby, Ph.D.**

### **1. Personal Data**

**Name:** Ahmed Osman Mahmoud Elzoghby

**Gender:** Male

**Date of Birth:** November 16, 1981

**Citizenship:** Egypt

**Contact:** Tel: 002-01065034721

Email: [ahmed\\_elzoghby@alexu.edu.eg](mailto:ahmed_elzoghby@alexu.edu.eg)

[dr\\_ahmedelzoghby@yahoo.com](mailto:dr_ahmedelzoghby@yahoo.com)

**Address:** Elreyada building, Aced city, Smouha, Alexandria, Egypt

**Web Site:** [www.cnrl.22web.org](http://www.cnrl.22web.org)



### **2. Academic Record**

- 1- Ph.D. in Pharmaceutical Sciences, Industrial Pharmacy, Alexandria University, Egypt, 2012. Thesis Title: “**Development and evaluation of protein nanocarriers as promising drug delivery systems**”. Qualified courses for Ph.D. degree fulfillment (Industrial Pharmacy) 2009.
- 2- M.Sc. in Pharmaceutical Sciences, Industrial Pharmacy, Alexandria University, Egypt, 2009. Thesis Title: “**Preparation and evaluation of some controlled release dosage forms**”. Special courses for master degree fulfillment (Industrial Pharmacy) 2005. General courses for master degree fulfillment (Industrial Pharmacy) 2004.
- 3- B.Sc. of Pharmaceutical Sciences “Distinction, Honor”, Faculty of Pharmacy, Alexandria University, Egypt, 2003.

### **3. Work Experience**

- 1- **October 2014 – present:** Director of Cancer Nanotechnology Research Laboratory (CNRL), Faculty of Pharmacy, Alexandria University, Egypt.
- 2- **November 2012 – present:** Lecturer of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, Egypt.
- 3- **August 2009 – October 2012:** Assistant Lecturer at the Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, Egypt.
- 4- **September 2003 – July 2009:** Demonstrator (Teaching Assistant) at the Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, Egypt.

### **4. Language Qualifications**

English: Good (iBT TOEFL score 91 out of 120)

Arabic: Mother tongue.

## **5. Teaching Experience**

<b>Teaching Topic</b>	<b>Course Content</b>	<b>University</b>	<b>Academic Level</b>
<b>1. Industrial Pharmacy</b>	- Drying - Evaporation - Flow chart	Alexandria University	Classical pharmacy program, Fourth year, 2012/2013, 2014/2015
<b>2. Pharmaceutical Technology</b>	- Heat transfer - Crystallization - Drying - Evaporation - Mixing - Size enlargement - Size reduction - Flow chart	Alexandria University	Clinical pharmacy program, Fourth year, 2013/2014, 2014/2015
<b>3. Physical Pharmacy</b>	- Complexation - Solubilization - Biopharmaceutics	Alexandria University	Special course for postgraduate master students, 2013/2014, 2014/2015
<b>4. Drug Delivery</b>	-Cancer nanotechnology -Novel pulmonary drug delivery systems -Advanced colon-targeting strategies -Targeted brain drug delivery	Alexandria University	Special course for postgraduate master students, 2013/2014, 2014/2015
<b>5. Pharmaceutical Terminology</b>		Pharos University	Pharmacy program, First year, 2015/2016

## **6. Supervising Theses**

1. **Fabrication and characterization of nanostructured systems for biomedical applications** (Sarah A. Lakkany, M.Sc. degree, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, September 2013).

2. **Application of protein nanocarriers for tumor-targeted delivery of anti-cancer drugs** (Mona A. Agwa, Ph.D. degree, Department of Biotechnology, Institute of Graduate studies and Research, Alexandria University, October 2013).

3. **Self-assembled natural polymers as promising nanocarrier vehicles for drug delivery** (Sally A. Sabra, Ph.D. degree, Department of Biotechnology, Institute of Graduate studies and Research, Alexandria University, December 2013).

4. **Biopolymeric nanovehicular drug delivery systems for targeted cancer therapy** (Shimaa A. Khamis, Ph.D. degree, Department of Biotechnology, Institute of Graduate studies and Research, Alexandria University, January 2014).

5. **Biopolymeric nanocomplexes as emerging platform for tumor-targeted drug delivery** (Shimaa W. Elfar, Ph.D. degree, Department of Biotechnology, Institute of Graduate studies and Research, Alexandria University, January 2014).

6. **Inhalable particulate drug delivery systems as a non-invasive approach for treatment of lung cancer** (HadeerM. Abdelaziz, M.Sc. degree, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, November 2014).

7. **Berberine-loaded nanocarriers and its effect as anti-HCV** (Mayada M. Maarof, M.Sc. degree, Department of biochemistry, Faculty of Science, Alexandria University, September 2014).

8. **Biocompatible nanomedicines as potential liver-targeted therapy for hepatocellular carcinoma** (MonaA. Abdelmonem, M.Sc. degree, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, March 2015).

9. **Albumin-based nanoparticulate delivery systems as efficient drug vehicles for targeted cancer therapy** (Mayada A. Elgohary, M.Sc. degree, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, April 2015).

10. **Hybrid protein-lipid nanocarriers as emerging platform for targeted delivery of anti-cancer drugs** (Nayra M. Abd-elbaset, M.Sc. degree, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, April 2015).

11. **Polymeric drug delivery systems for colon targeting of some drugs with potential anti-cancer activity** (Dalia A. Ramadan, M.Sc. degree, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, September 2015).

12. **Hybrid polymer-quantum dots as promising cancer nano-theranostic platforms** (Dina G. Zayed, M.Sc. degree, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, September 2015).

13. **Self-assembled amphiphilic polymeric micelles for tumor-targeted delivery of selected anti-cancer drugs** (Doaa M. Anwar, M.Sc. degree, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, September 2015).

14. **Hybrid polymer-inorganic nanoparticles as emerging platforms for targeted cancer therapy** (Ahmed S. Abd-Elhamid, M.Sc. degree, Department of Pharmaceutical Technology, Faculty of Pharmacy, Tanta University, October 2015).

15. **Novel protein-drug conjugate nanocarriers for tumor-targeted drug delivery applications** (Mustafa T. Elsayed, M.Sc. degree, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, September 2015).

16. **Inhalable electrostatic complex nanocomposites for targeted co-delivery of drugs to lung cancer** (Dalia Kabbary, M.Sc. degree, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, September 2015).

## **7. Awards and Nominations**

1. Alexandria University Award for publication in the **top 20 %** of pharmacy and pharmacology journal rank (ISI, 2015): **Int. J. Pharm.**, 491 (2015) 113–122.
2. Alexandria University Award for publication in the **top 50 %** of pharmacy and pharmacology journal rank (ISI, 2015): **Adv. Protein Chem. Struct. Biol.**, 98, 2015, pp. 169-221.
3. Alexandria University Award for publication in the **top 5 %** of pharmacy and pharmacology journal rank (ISI, 2013): **J. Control. Release** 172 (2013) 1075–1091.
4. Alexandria University Award for publication in the **top 20 %** of pharmacy and pharmacology journal rank (ISI, 2013): **Eur. J. Pharm. Biopharm.** 85 (2013) 444–451.
5. Alexandria University Award for publication in the **top 20 %** of pharmacy and pharmacology journal rank (ISI, 2013): **Pharm. Res.** 30 (2013) 2654–2663.
6. Alexandria University Award for publication in the **top 20 %** of pharmacy and pharmacology journal rank (ISI, 2013): **Eur. J. Pharm. Biopharm.** 84(2013)487–496.
7. Alexandria University Award for publication in the **top 20 %** of pharmacy and pharmacology journal rank (ISI, 2013): **Pharm. Res.** 30 (2013) 512–522.
8. Alexandria University Award for publication in the **top 20 %** of pharmacy and pharmacology journal rank (ISI, 2013): **Int. J. Nanomedicine.** 8(2013) 1721–1732.
9. Alexandria University Award for publication in the **top 5 %** of pharmacy and pharmacology journal rank (ISI, 2012): **J. Control. Release** 161 (2012) 38–49.
- One of the most downloaded 25 articles of journal of controlled release from [SciVerseScienceDirect](#).
10. Alexandria University Award for publication in the **top 5 %** of pharmacy and pharmacology journal rank (ISI, 2012): **J. Control. Release** 157 (2012) 168–182.
- Selected personally by the Editor-in-chief as one of the selected 5 quality articles to be featured at the two main pharmaceutical sciences annual events 2012; *The Controlled Release Society's Annual Meeting and at the American Association of Pharmaceutical Scientists Annual Meeting*.
- One of the most downloaded 25 articles of journal of controlled release from [SciVerseScienceDirect](#).
11. Alexandria University Award for publication in the **top 5 %** of pharmacy and pharmacology journal rank (ISI, 2012): **J. Control. Release** 153 (2011) 206–216.

12. Alexandria University Award for publication in the **top 20 %** of pharmacy and pharmacology journal rank (ISI, 2012):**Int. J. Pharm.** 411 (2011) 113–120.

13. Alexandria University Award for publication in the **lower 50 %** of pharmacy and pharmacology journal rank (ISI, 2011):**Drug Dev. Ind. Pharm.** 37 (2011) 754–764.

14. Alexandria University Award for publication in the **lower 50 %** of pharmacy and pharmacology journal rank (ISI, 2011):**Drug Dev. Ind. Pharm.** 37 (2011) 446–455.

15. Alexandria University Award for publication in the **top 50 %** of pharmacy and pharmacology journal rank (red jasper, 2009):**Eur. J. Pharm. Biopharm.** 74 (2010) 397–405.

### **8. Training Courses** (Faculty and Leadership Development Center FLDP)

<b>Course Name</b>	<b># of training days</b>	<b>Certified by</b>
Workshop on Effective Teaching program (April 2007)	Three days five hours per day each	International Board of Certified Trainers- European Division (IBCT)
Workshop on Research Methodology program (April 2007)		
Workshop on Communication Skills (April 2007)		
Workshop on Thinking Skills (May 2007)		
Code of Ethics (December 2007)		
Workshop on Teaching with Technology (January 2008)		
Quality Standards in Teaching (January 2008)		
International Publishing of Scientific Research (June 2010)		
Legal and Financial Aspects in University Environment (June 2010).		
Preparing Research Project (July 2010)		

### **10. Research Interests**

- **Fabrication of Novel Nanoparticle Drug Delivery Systems Based on Naturally Occurring Polymers**

Using biocompatible and biodegradable polymers for targeted drug delivery not only improve drug safety, but also significantly shorten the timeline of drug development. Based on their biodegradability and excellent biocompatibility, in our research, we are particularly interested in utilizing natural polymers including proteins and polysaccharides such as albumin, chitosan, and heparin for fabrication of nanoparticulate drug delivery systems. These polymers are considered as ideal carriers for the delivery of anti-cancer drugs, as demonstrated by nanometer-sized albumin-bound paclitaxel (Abraxane<sup>®</sup>) which is already in clinical use.

- **Design of Ligand-Directed Active Tumor-Targeting Polymeric Nanoparticles for Cancer Chemotherapy**

Ligand-mediated active tumor-targeting treatment modality has become an emerging and indispensable platform for safe and efficient cancer therapy. Surface decoration of nanoparticles by a specific tumor-homing ligand, might further lead to increased retention

and accumulation of nanoparticles in the tumor vasculature as well as selective and efficient internalization by target tumor cells. In our laboratory, active targeting nanoparticulate drug formulations are developed with the aim of improving the therapeutic performances in different tumor models as compared to their passive targeting counterparts.

- **Developing Intelligent Nanotechnology-Based Combinatorial Drug Delivery Systems for Effective Cancer Treatment**

To achieve better treatment efficacy, multimodality or combination treatment is commonly used to treat cancer. Compared with single-modality treatment, multimodality treatment can do an excellent job with additive or even synergistic efficacy. The combination of chemotherapy, endocrine therapy, and/or herbal therapy has been investigated for their synergistic effects recently. Therefore, we are concerned with the development of nanoparticles for combined delivery of two or more anti-cancer drugs to promote synergism among the different drugs against cancer cells and suppress drug resistance through distinct mechanisms of action.

- **Design of Novel Nano-theranostic Drug Delivery Systems for Enhanced Targeting of Brain Tumor**

Despite the application of aggressive surgery, radiotherapy and chemotherapy in clinics, brain tumors are still a difficult health challenge due to their fast development and poor prognosis. A critical challenge in treating brain tumors is the delivery of drugs to the central nervous system (CNS) where the blood brain barrier (BBB) prevents the access of therapeutic concentrations of systemic drugs to the tumor in brain parenchyma. Recent advances in molecular and cellular identifications of neuro-oncological biomarkers promise the advent of nanotechnology-based brain tumor-targeted detection and therapy. Many efforts have been witnessed in integrating imaging and therapeutic functionalities into a nanoscale component. In our laboratory, we are trying to improve the nano-delivery of therapeutic agents and imaging contrast across BBB to brain tumors mainly via utilizing hybrid natural polymeric-quantum dot nanocarriers as promising nano-theranostic agents for brain tumor. Our aim is to develop drug delivery systems (DDSs) associated with imaging and targeting functions, or image-guided DDSs, in order to detect, deliver therapeutic agents, and track the distribution of drug vehicles within brain tumor.

- **Development of Inhalable Nanocomposites for Enhanced Lung Cancer Targeting**

Lung cancer is the most prevalent type of cancer in the World. The conventional systemic chemotherapy uses high doses of toxic anticancer drugs, which often produce severe adverse side effects on healthy organs. Pulmonary delivery of chemotherapy via inhalable nanoparticles is gaining more attention in recent years due to their unique properties of controlled drug release, and delivering drugs directly to the target tissue. The aim of our research is to illustrate a strategy to develop inhalable dry powder nanocomposites for targeted delivery of anti-cancer drugs to lung tumor sites via encapsulating anti-cancer drugs into natural polymer-based nanoparticles.

- **Development of actively-targeted biocompatible nanocarriers for treatment of hepatocellular carcinoma**

About one million people die from hepatocellular carcinoma (HCC) each year. HCC threatens to people's lives and is the third most common cause of cancer death. The present

drawbacks of most anticancer drugs are low bioavailability, poor selectivity as they could inhibit both tumor cells and normal cells, and immunosuppression that can cause many side effects and even led to the deaths of patients<sup>5</sup>. However, targeted therapy for liver cancer is in urgent need because it could produce higher biological effects and fewer side effects compared with current therapies. It is well known that polymeric nanocarriers are effective and fast growing vehicles for improved use of chemotherapy drugs. Polymeric nanocarriers generally exhibit the enhanced *in vivo* stability, the prolonged half-life in blood, the improved water solubility, and the specific tumor-targeting property through enhanced permeability and retention (EPR). However, only partial amounts of loaded-drugs reach the target site due to some physiological limitations. For example, generally, the high tumor interstitial fluid pressure contributes to a decreased uptake of drugs in the tumor. In addition, the extravasation of polymeric nanoparticles will be influenced by tumor types and anatomical sites. One approach to overcome these limitations is active targeting strategies such as binding to appropriate receptors highly expressed at the target site e.g. Hyaluronic acid (HA), Glycyrrhetic acid (GA), sugars, lactoferrin receptors.

- **Study of the Influence of Drying Techniques on the storage stability and scale up feasibility of Nanoparticulate Drug Delivery Systems**

Although polymeric nanoparticles have been recognized as one of the most promising colloidal drug delivery systems, translation in this area of research is very poor owing to difficulties concerning the scale-up of technologies used for their preparation. Moreover, the poor stability in an aqueous medium of these systems forms a real barrier against the clinical use of nanoparticles. Spray- and Freeze-drying techniques have been successfully employed to the scale-up of the manufacturing process of polymeric nanoparticulate systems with the conservation of original properties after rehydration thus improving the long-term stability of colloidal nanoparticles. In our laboratory, different drying techniques including mainly spray- and freeze-drying are investigated to elucidate the most important parameters that influence the success of drying process of various types of nanoparticle-based drug delivery systems (e.g. polymeric nanospheres, nanocapsules, micelles and nano-conjugates) with respect to their scale up possibility and physicochemical behaviour such as particle size, surface charge, and drug release with a focus on the impact of formulation and process on particle storage stability.

- **Study of the Influence of Physicochemical Properties of Nanoparticle Drug Delivery Systems on the *In Vivo* Pharmacokinetics, Biodistribution and tumor accumulation**

The physicochemical parameters of the nanoparticle drug vehicles including particle size, charge and shape affect the overall blood circulation kinetics, the extravasation processes and the intratumoral diffusion and accumulation. Therefore, the goal of our research is to conduct pharmacokinetic and biodistribution animal studies for the nanoparticle drug delivery systems to provide better insight into how nanoparticles work *in vivo*. Using this knowledge, we can then control the physicochemical properties, composition, and formulation process of the nanoparticles so as to improve their pharmacokinetic behavior and tissue distribution pattern.

## 1. Scientific Activities

•Dr. Ahmed Elzoghby has established a new research laboratory entitled "**Cancer Nanotechnology Research Laboratory (CNRL), Faculty of Pharmacy, Alexandria University**" in October 2014. CNRL is the first research laboratory in Egypt specialized in utilizing nanotechnology for tumor-targeted drug delivery with the aim of improved cancer therapy. The laboratory gathers a team of research members in the fields of drug delivery, cellular cytotoxicity and uptake studies, and in vivo studies. The laboratory is concerned with the formulation and in vitro evaluation of anti-cancer drug-loaded nanoparticles mainly fabricated from natural polymers (proteins and polysaccharides). The developed nanocarriers then undergo cytotoxicity and cellular uptake evaluation on cancer cell lines. Finally, the successful formulations are evaluated for pharmacokinetics, tissue biodistribution and anti-tumor efficacy in cancer-bearing animals.

•**Training research groups for undergraduate students** were recently established in July 2015. The students were allowed to contribute in the development of nano-delivery systems as vehicles for the anti-cancer drugs utilizing the facilities and equipment of the **CNRL**. In addition, the students were also involved in the in vitro physicochemical characterization of the developed nanocarriers (measurement of the particle size, zeta potential, drug loading and release, morphological analysis and biodegradability). The optimized formulations will be selected to undergo cell line and in vivo studies.

### Student training groups involved in research topics in Summer 2015:

Student Group	Student Names	Class	Nano-delivery System
1	Jaydaa Maher	Fourth Clinical	Development and evaluation of inhalable cubosomal nanocomposites for targeted delivery of anti-cancer drugs to lung carcinoma
	EsraaAlaa	Fourth Clinical	
	ShazaKamel	Fifth Clinical	
	Mariam Esam	Fifrth Clinical	
2	Mohamed Gaber	Fourth Clinical	Development and evaluation of human serum albumin-based nanocapsules for targeted delivery of anti-cancer drugs to breast carcinoma
	Mark Hany	Fourth Clinical	
	Sara Mokhtar	Fourth Clinical	
	Dalia Hany	Fifth Clinical	
3	ManarElnaggar	Fourth Clinical	Development and evaluation of lactoferrin-coated nanocarriers for targeted brain tumor delivery of anti-cancer drugs
	ManarSerag	Fourth Clinical	
	May Mostafa	Fourth Clinical	
4	MalakAboayyana	Fourth Regular	Development and evaluation of casein-based nanocapsules for combined targeted delivery of anti-cancer drugs
	Sara Soffar	Fourth Regular	
	ManarAbdelghany	Fourth Regular	
5	WaseemMedhat	Fourth Clinical	Development and evaluation of hybrid core-shell phospholipid-protein nanoparticles for targeted co-delivery of hydrophilic and hydrophobic anti-cancer drugs
	NorhanSaher	Fourth Clinical	
	Nada Ahmed	Fourth Clinical	
	Nadine Nabeh	Fourth Clinical	
	Youlianna Hanna	Fourth Clinical	
	Mary George	Fifth Clinical	



**12. Peer Reviewer** in the following highly ranked international journals in pharmaceuticals and industrial pharmacy:

1. Molecular Pharmaceutics
2. Nanomedicine: Nanotechnology, Biology, and Medicine
3. European Journal of Pharmaceutics and Biopharmaceutics
4. European Journal of Pharmaceutical Sciences
5. International Journal of Pharmaceutics
6. Drug Development and Industrial Pharmacy
7. Journal of Microencapsulation
8. Journal of Colloid and Interface Science
9. Colloids and Surfaces B: Biointerfaces

### **9. Oral Presentations**

1. **Enhancing the Oral Bioavailability of Poorly Water Soluble Drugs;** (10/8/2008); Faculty of Pharmacy, Alexandria University, Egypt.
2. **Proteins as Promising Drug Delivery Systems;** (22/6/2010); Faculty of Pharmacy, Alexandria University, Egypt.
3. **Casein-based Formulations for Drug Delivery Applications;** (12/9/2012); Faculty of Pharmacy, Alexandria University, Egypt.
4. **Inhalable Spray-Dried Anticancer Drug-loaded Nanocomposites for Enhanced Lung Cancer Targeting;** (2/11/2014); Science & Technology Development Fund (STDF), Ministry of Scientific Research, Egypt.
5. **Zein-Based Nanospheres and Nanocapsules as Biopolymeric Colloidal Carriers for Exemestane in Treatment of Breast Cancer;** (14/2/2014); Pharmacy Research Day, Faculty of Pharmacy, Alexandria University, Egypt.
6. **Lactoferrin-Coated Milk Protein-Based Micelles for Tumor-Targeted Delivery of Herbal and Bacterial-Derived Anti-Cancer Drugs;** (14/2/2014); Pharmacy Research Day, Faculty of Pharmacy, Alexandria University, Egypt.
7. **Novel Self-Assembled Nanocarriers Based on Natural Amphiphilic Copolymers for Tumor-Targeted Delivery of Poorly Soluble Anti-Cancer Drugs;** (14/2/2014); Pharmacy Research Day, Faculty of Pharmacy, Alexandria University, Egypt.
8. **Drug-Polymer Conjugate Nanomicelles as Emerging Platform for Targeted Brain Tumor Therapy;** (11/12/2014); Science & Technology Development Fund (STDF), Ministry of Scientific Research, Egypt.
9. **Cancer Nanotechnology: The Impact of Natural Polymeric Nanocarriers as Emerging Platforms for Tumor-Targeted Drug Delivery;** (24/12/2014); Pharmaceutical Biotechnology "The Revolution of Sciences", Institute of Graduate Studies and Research (IGSR), Alexandria University, Egypt.

**10. Freeze-drying Technology: Basic Concepts and Advanced Pharmaceutical Applications;** (2/8/2015); Pharco B International; Pharco Corporation, Alexandria, Egypt.

**11. Lactoferrin-based nanocapsules for targeted drug delivery to brain tumors;** (18/10/2015); Scientific Conference, Faculty of Pharmacy, Alexandria University, Egypt.

### **13. Conferences**

1. Nazik Elgindy, Kadria Elkhodairy, Abdallah Molokhia, **Ahmed Elzoghby**, Chitosan nanoparticles as a potential protein drug delivery system. *FIP International Congress of Pharmaceutical Sciences*, Hyderabad, India, September 2011.
2. Nazik Elgindy, Kadria Elkhodairy, Abdallah Molokhia, **Ahmed Elzoghby**, Impact of different formulation variables on the biodegradability, surface area and porosity of chitosan microparticles. *3<sup>rd</sup> TERMS World Congress 2012 "Tissue Engineering and Regenerative Medicine Symposium"* Vienna, Austria, September 5-8, 2012.
3. Nazik Elgindy, **Ahmed Elzoghby**, Wael Samy, Maged Helmy, Ionically crosslinked casein nanoparticles as a novel controlled delivery vehicle for flutamide. *3<sup>rd</sup> TERMS World Congress 2012 "Tissue Engineering and Regenerative Medicine Symposium"* Vienna, Austria, September 5-8, 2012.
4. Sara A. El-Lakany, Nazik A. Elgindy, **Ahmed O. Elzoghby**, Dalia A. Hamdy, Development of HPLC method for simultaneous quantitation of two novel exemestane-herbal mixtures in nano-formulations. *"DUPHAT – Dubai International Pharmaceuticals & Technologies Conference & Exhibition"* Dubai, United Arab Emirates, March 8-11, 2015.
5. Mousa E. Elsayed, Samar E. Abdel Naeem, **Ahmed O. Elzoghby**, Adnan A. Bekhit, Aly A. Elbardan, Ayman Elfaham, Sherine, N. Khattab, "Triazine polyamide derivatives application as drug delivery systems" *250<sup>th</sup> American Chemical Society ACS National Meeting & Exposition "Innovation from Discovery to Application"*. Boston, Massachusetts, USA, August 16-20, 2015.
6. Sarah A. Ellakany, Maged W. Wisa, Nazik A. Elgindy, **Ahmed O. Elzoghby**, Shell-Crosslinked Zein Nanocapsules for Oral Co-Delivery of Exemestane and Resveratrol in Breast Cancer Therapy: In-vitro Characterization, Bioavailability and Anti-Tumor Efficacy, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
7. Shaimaa Khamis, Maged W. Helmy, Salah Shewita, **Ahmed O. Elzoghby**, Novel Tumor-Targeted Protamine Nanocapsules for Combined Delivery of Letrozole and Celecoxib to Breast Cancer Bearing Mice, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
8. Doaa M. Anwar, Sherine A. Khattab, Adnan A. Bekhit, Wael M. Samy, **Ahmed O. Elzoghby**, Self assembled amphiphilic nano-micelles for tumor-targeted delivery of the anti-cancer drug Apigenin, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
9. Dina G. Zayed, Shaker M. Ebrahim, Sherine A. Khattab, Wael M. Samy, **Ahmed O. Elzoghby**, Nano-theranostics: Protein-quantum dot nanohybrids as platforms for targeted drug delivery and cancer imaging, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.

10. Mayada M. Elgohary, Sana M. Mortada, **Ahmed O. Elzoghby**, Inhalable Spray-Dried Albumin Nanocomposites for Enhanced Drug Targeting to Lung Cancer. *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
11. Dalia A. Ali, Wael M. Samy, **Ahmed O. Elzoghby**, microencapsulated lactoferrin nanocarriers for targeted delivery of anti-cancer drugs to colorectal cancer. *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
12. Shaymaa W. Elfar, Ahmed Hussein, Adnan A. Bekhit, **Ahmed O. Elzoghby**, Multi-reservoir nanocarriers of PEGylated phytosomal bilayer enveloped casein micelles for co-delivery of Monascus and Resveratrol to Cancer Cell, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
13. S.A. Sabra, S.A. Sheweita, M.A. Haroun, M.A. El Demellawy, **Ahmed O. Elzoghby**, Self-assembled zein-lactoferrin micelles for tumor targeted co- delivery of wogonin and rapamycin, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
14. Nayra M. Kamel, Maged W. Wisa, Magda W. Samaha, **Ahmed O. Elzoghby**, Hybrid lipid-protein core-shell nanoparticles for targeted co-delivery of genistein and tretinoin in lung cancer therapy, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
15. Mona A. Abdelmoneem, Wael M. Samy, Ahmed O. Elzoghby, Tumor-targeted gliadin nanospheres for co-delivery of celecoxib and diosmin to hepatocellular carcinoma, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
16. **Ahmed O. Elzoghby**, Sarah A. Ellakany, Maged W. Wisa, Nazik A. Elgindy, Novel tumor-targeted zein nanospheres for combined delivery of exemestane and luteolin in breast cancer bearing mice: Passive vs. active tumor-targeting, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
17. Mona M. Agwa, Ahmed A. Hussein, Maged W. Helmy, Maha A. El-Demellawy, Mohamed El. Abd-Elsalam, Ahmed I. El-Diwany, **Ahmed O. Elzoghby**, Lactoferrin-coated milk protein-based micelles for tumor-targeted co-delivery of etoposide and prodigiosin, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.
18. Dalia M. Kabary, **Ahmed O. Elzoghby**, Targeted pulmonary co-delivery of rapamycin and berberine to lung cancer via hyaluronate-lactoferrin electrostatic nanocomposites, *PUA International Conference "Advances in Pharmaceutical Sciences"*, Alexandria, Egypt, October 27-29, 2015.

## **14. Grants**

1. **"Inhalable Anticancer Drug-loaded Nanocomposites for Enhanced Lung Cancer Targeting"**; Science & Technology Development Fund (STDF), Ministry of Scientific Research, Egypt. **Project Budget:** 2,500,000 LE, **Project ID:** 5731, **Code:** TC/3/April/2013/DNPI5731 (**Targeted Call;** Towards Development of National Pharmaceuticals Industries), **Role in the project:** PI.
2. **"Synthesis and evaluation of drug-polymer conjugate nanomicelles as emerging platform for targeted brain tumor therapy"**; Science & Technology Development Fund (STDF), Ministry of Scientific Research, Egypt. **Project Budget:** 769,000 LE, **Project ID:** 15053, **Innovation Grant, Role in the project:** CO-PI.

3. “Natural polymer-based amphiphilic nanocarriers for targeted prostate cancer drug delivery” Science & Technology Development Fund (STDF), Ministry of Scientific Research, Egypt. **Project Budget:** 850,000 LE, **Project ID:** 15130, **Basic & Applied Grant, Role in the project:** CO-PI.

## 15. Editorial:

Executive guest editor in the journal of “Current Pharmaceutical Design”

## 16. Publications

### I. Research Papers:

[1] **Ahmed O. Elzoghby**, Branko Z. Vranic, Wael M. Samy, Nazik A. Elgindy, Swellable floating tablet based on spray-dried casein nanoparticles: Near-infrared spectral characterization and floating matrix evaluation, **Int. J. Pharm.** 491 (2015) 113–122.

[2] Nazik A. Elgindy, Maged W. Helmy, Wael M. Samy, **Ahmed O. Elzoghby**, Casein-based micelles: a novel vector for delivery of the poorly soluble anticancer drug flutamide, **Ther. Deliv.** 5 (2014) 7–9.

[3] **Ahmed O. Elzoghby**, Maged W. Helmy, Wael M. Samy, Nazik A. Elgindy, Ionically-crosslinked milk protein nanoparticles as flutamide carriers for effective anti-cancer activity in prostate cancer-bearing rats, **Eur. J. Pharm. Biopharm.** 85 (2013) 444–451.

[4] **Ahmed O. Elzoghby**, Maged W. Helmy, Wael M. Samy, Nazik A. Elgindy, Micellar delivery of flutamide by spray-dried milk protein nanovehicles enhances its anti-tumor efficacy in androgen-dependent prostate cancer rat model, **Pharm. Res.** 30 (2013) 2654–2663.

[5] **Ahmed O. Elzoghby**, Maged W. Helmy, Wael M. Samy, Nazik A. Elgindy, Spray-dried casein-based micelles as a vehicle for solubilization and controlled delivery of flutamide: Formulation, characterization, and in vivo pharmacokinetics, **Eur. J. Pharm. Biopharm.** 84 (2013) 487–496.

[6] **Ahmed O. Elzoghby**, Wael M. Samy, Nazik A. Elgindy, Novel spray-dried genipin-crosslinked casein nanoparticles for prolonged release of alfuzosin hydrochloride, **Pharm. Res.** 30 (2013) 512–522.

[7] **Ahmed O. Elzoghby**, Maged W. Helmy, Wael M. Samy, Nazik A. Elgindy, Novel ionically-crosslinked casein nanoparticles for flutamide delivery: Formulation, characterization and in vivo pharmacokinetics, **Int. J. Nanomedicine** 8 (2013) 1721–1732.

[8] Nazik A. Elgindy, Kadria A. Elkhodairy, Abdullah M. Molokhia, **Ahmed O. Elzoghby**, Impact of different formulation variables on the biodegradability, surface area and porosity of biopolymeric microparticles, **J. Tissue Eng. Regen. Med.** 6 (Suppl. 1)(2012) 13.

[9] Nazik A. Elgindy, Kadria A. Elkhodairy, Abdullah M. Molokhia, **Ahmed O. Elzoghby**, Biopolymeric microparticles combined with lyophilized monophasic dispersions for controlled flutamide release, **Int. J. Pharm.** 411(2011) 113–120.

[10] Nazik A. Elgindy, Kadria A. Elkhodairy, Abdullah M. Molokhia, **Ahmed O. Elzoghby**, Biopolymericnanoparticles for oral protein delivery: Design and in vitro evaluation, **J.Nanomedic. Nanotechnol.** 2(2011) 1–8.

[11] Nazik A. Elgindy, Kadria A. Elkhodairy, Abdullah M. Molokhia, **Ahmed O. Elzoghby**, Lyophilized flutamide dispersions with polyols and amino acids: preparation and in vitro evaluation, **Drug Dev. Ind. Pharm.**37(2011) 446–455.

[12] Nazik A. Elgindy, Kadria A. Elkhodairy, Abdullah M. Molokhia, **Ahmed O. Elzoghby**, Lyophilization monophase solution technique for preparation of amorphous flutamide dispersions, **Drug Dev. Ind. Pharm.** 37(2011) 754–764.

[13] Nazik A. Elgindy, Kadria A. Elkhodairy, Abdullah M. Molokhia, **Ahmed O. Elzoghby**, Lyophilization monophase solution technique for improvement of the physicochemical properties of an anticancer drug, flutamide, **Eur. J. Pharm. Biopharm.** 74(2010) 397–405.

## II. Review Articles:

[1] **Ahmed O. Elzoghby**, Gelatin-based nanoparticles as drug and gene delivery systems: Reviewing three decades of research. **J. Control. Release** 172 (2013) 1075–1091.

[2] **Ahmed O. Elzoghby**, Wael M. Samy, Nazik A. Elgindy, Albumin-based nanoparticles as potential controlled release drug delivery systems, **J. Control. Release** 157 (2012)168–182.

[3]**Ahmed O. Elzoghby**, Wael M. Samy, Nazik A. Elgindy, Protein-based nanocarriers as promising drug and gene delivery systems, **J. Control. Release** 161 (2012) 38–49.

[4] **Ahmed O. Elzoghby**, Wael M. Samy, Nazik A. Elgindy, Casein-based formulations as promising controlled release drug delivery systems, **J. Control. Release** 53 (2011) 206–216.

## III. Book Chapters:

[1] **Ahmed O. Elzoghby**, Mayada M. Elgohary and Nayra M. Kamel, Implications of Protein- and Peptide-Based Nanoparticles as Potential Vehicles for Anticancer Drugs. In: Rossen Donev (Ed.), **Advances in Protein Chemistry and Structural Biology**, Vol. 98, Burlington: Academic Press, 2015, pp. 169-221.

## IV. Editorial:

[1] **Ahmed O. Elzoghby**, nanocarriers based on natural polymers for drug delivery applications, **Curr. Pharm. Des.** Accepted issue. *In Press*.

## 16. Professional Referees

- **Nazik A. Elgindy**, Emeritus Professor of Industrial Pharmacy, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, Egypt.  
**Email:** [d\\_nazik4@yahoo.com](mailto:d_nazik4@yahoo.com)

- **Kadria A. Elkhodairy**, Emeritus Professor of Industrial Pharmacy, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, Egypt.  
**Email:** [elkhodairy53@yahoo.com](mailto:elkhodairy53@yahoo.com)
- **Adnan A. Bekhit**, Professor of Pharmaceutical Chemistry, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Alexandria University, Egypt.  
**Email:** [adnbekhit@alex.uni.edu](mailto:adnbekhit@alex.uni.edu)
- **Magda W. Samaha**, Emeritus Professor of Industrial Pharmacy, Department of Industrial Pharmacy, Faculty of Pharmacy, Alexandria University, Egypt.  
**Email:** [maggysamaha@yahoo.com](mailto:maggysamaha@yahoo.com)
- **MahaA. Eldemellawy**, Professor and Head of Department of Medical Biotechnology, City for Scientific Research and Technology Application.  
**Email:** [meldemellawy@gmail.com](mailto:meldemellawy@gmail.com)
- **Ossama Y. Abdallah**, Emeritus Professor of Pharmaceutics, Department of Pharmaceutics, Faculty of Pharmacy, Alexandria University, Egypt.  
**Email:** [Ossama.y.abdallah@gmail.com](mailto:Ossama.y.abdallah@gmail.com)
- **Abdulla A. Molokhia**, Professor of Pharmaceutics and Chairman of European Egyptian Pharmaceutical Industries (EEPI), PHARCO Corporation, Alexandria, Egypt.  
**Email:** [molokhia@pharco.org](mailto:molokhia@pharco.org) [abdullamolokhia@gmail.com](mailto:abdullamolokhia@gmail.com)