

## مكتب العلاقات الدولية

## كلية الصيدلة

#### **Template for a Staff Curriculum Vitae**

**Contact Details:** 

Name: Marwa Ahmed Elsayed Sallam

Title: Ass. Prof. Dr.

**Department**: Industrial Pharmacy

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## **Biography**

#### **Academic Qualifications:**

**PhD:** PhD in pharmaceutical sciences, Faculty of Pharmacy Alexandria university (2011)

Thesis title: Potential pharmaceutical applications of some modern colloidal drug carriers.

**Master:** PhD in pharmaceutical sciences, Faculty of Pharmacy Alexandria university (2008)

Thesis title: Microemulsions as suitable carrier for some cosmeceutical preparations.

**B.SC:** Faculty of Pharmacy Alexandria university- (2002) Distinction with honor.

#### **Career History and Professional Experience**

**February 2018- present**: **Associate professor** at the Department of Industrial Pharmacy, Faculty of Pharmacy, **Alexandria University.** 

May 2019- May 2020: Postdoctoral research Fellow at School of engineering and applied sciences and Wyss institute of biologically inspired engineering, Harvard University, USA.

May 2018-August 2018: Visiting professor school of pharmaceutical sciences, Geneva, Switzerland.

**2011-2018 Lecturer** of pharmaceutical technology Faculty of Pharmacy, **Alexandria University**.

**2013-2017**: Part time lecturer of pharmaceutical technology, Pharos university, Alexandria.

**2008-2011 Assistant Lecturer** at the Department of Industrial Pharmacy, Faculty of Pharmacy, **Alexandria University**.

**2002-2008**: **Teaching assistant** at the Department of Industrial Pharmacy, Faculty of Pharmacy, **Alexandria University**.

**2002-2003 Teaching assistant** at the Department of Pharmaceutics, Faculty of Pharmacy, **Alexandria University** 

2002-2003 Community Pharmacist.



Research Interest	Dermal drug delivery and immune-modulation Cancer Immunotherapy
	Drug delivery targeting Inflammatory diseases
Publications	<ol> <li>Sallam, M.A., Prakash, S., Krishnan, V., Todorova, K., Mandinova, A. and Mitragotri, S. (2020), Hyaluronic Acid Conjugates of Vorinostat and Bexarotene for Treatment of Cutaneous Malignancies. Adv. Therap., 3: 2000116. doi:10.1002/adtp.202000116</li> <li>Dolz-Pérez I, Sallam MA, Masiá E, Morelló-Bolumar D, Pérez Del Caz MD, Graff P, Abdelmonsif D, Hedtrich S, Nebot VJ, Vicent MJ. Polypeptide-corticosteroid conjugates as a topical treatment</li> </ol>
	approach to psoriasis. <b>J Control Release</b> . 2020 Feb;318:210-222. doi: 10.1016/j.jconrel.2019.12.016.
	3. Lapteva M, <u>Sallam MA</u> , Goyon A, Guillarme D, Veuthey JL, Kalia YN. Non-invasive targeted iontophoretic delivery of cetuximab to skin. <b>Expert Opin Drug Deliv.</b> 2020 Apr;17(4):589-602. doi: 10.1080/17425247.2020.1731470.
	<ol> <li>Hala M. Helal, Wael M. Samy, Esmail M. El-Fakharany, Elbadawy         A. Kamoun, Sana M. Mortada, <u>Sallam MA</u>, Maltodextrin-α-tocopherol conjugates of vitamin E: Influence of degree of derivatization on physicochemical properties and biological evaluation, <i>J. Drug Delivery Sci. and Tech.</i>, 2020, 60, 102097, https://doi.org/10.1016/j.jddst.2020.102097.     </li> </ol>
	<ol> <li>Abo Aasy NK, Ragab D, <u>Sallam MA</u>, Abdelmonsif DA, Aly RG, Elkhodairy KA. A comparative study: the prospective influence of nanovectors in leveraging the chemopreventive potential of COX-2 inhibitors against skin cancer. Int J Nanomedicine. 2019 Sep 17;14:7561-7581.</li> </ol>
	6. <u>Sallam MA</u> , Elzoghby AO. Flutamide-Loaded Zein Nanocapsule Hydrogel, a Promising Dermal Delivery System for Pilosebaceous Unit Disorders. <b>AAPS PharmSciTech. 2018 Jul;19(5):2370-2382.</b> doi: 10.1208/s12249-018-1087-z.
	7. Abdelmoneem MA, Mahmoud M, Zaky A, Helmy MW, <u>Sallam M</u> , Fang JY, Elkhodairy KA, Elzoghby AO, Dual-Targeted Casein Micelles as Green Nanomedicine for Synergistic Phytotherapy of Hepatocellular Carcinoma, <i>J Control Release</i> 287 (2018) 78-93.
	8. Abdelmoneem MA, Mahmoud M, Zaky A, Helmy MW, <u>Sallam M</u> , Fang JY, Elkhodairy KA, Elzoghby AO. Decorating protein nanospheres with lactoferrin enhances oral COX-2 inhibitor/herbal therapy of hepatocellular carcinoma.
	<ol> <li>Nanomedicine (Lond). 2018 Oct;13(19):2377-2395.12.</li> <li>MM Gabr, Mortada SM, Sallam MA Carboxylate cross-linked cyclodextrin: A nanoporous scaffold for enhancement of rosuvastatin oral bioavailability. European Journal of Pharmaceutical Sciences, 2018, (111)PP. 1-12.</li> </ol>



- **10.** <u>Sallam MA</u>, Marín Boscá MT. Mechanistic analysis of human skin distribution and follicular targeting of adapalene loaded biodegradable nanospheres with an insight into hydrogel matrix influence, in-vitro skin irritation and in-vivo tolerability. *J. Pharm. Sci.* 2017(106) pp. 3140-3149.
- 11. MM Gabr, Mortada SM, <u>Sallam MA</u>, Hexagonal liquid crystalline nanodispersions proven superiority to cubosomes for enhanced oral delivery of rosuvastain: in-vitro characterization and in-vivo pharmacokinetic study. *J. pharm. Sci.* 2017 (106) pp. 3103-3112
- 12. **Sallam MA**, Helal HM, Mortada, SM Rationally designed nanocarriers for intranasal therapy of allergic rhinitis: influence of carrier type on in vivo nasal deposition. *Int J. Nanomedicine* 2016; 11: 2345-2357.
- **13.** Helal HM, Mortada SM, <u>Sallam MA</u>, Paliperidone-Loaded Nanolipomer System for Sustained Delivery and Enhanced Intestinal Permeation: Superiority to Polymeric and Solid Lipid Nanoparticles. *AAPS PharmSciTech*. 2016, 18 (6), 1946-1959.
- **14.** <u>Sallam MA</u>, Marín Boscá MT, Optimization, ex vivo permeation, and stability study of lipid nanocarrier loaded gelatin capsules for treatment of intermittent claudication. **Int J Nanomedicine.** 2015 Jul 13;10:4459-78.
- 15. Muñoz Ortega B, **Sallam MA**, Marín Boscá MT, Methacrylate micro/nano particles prepared by spray drying: a preliminary in vitro/in vivo study. **Drug Deliv.** 2015 Jul 25:1-6.
- 16. <u>Sallam MA</u>, Motawaa AM, Mortada SM An insight on human skin penetration of diflunisal: lipogel versus hydrogel microemulsion. *Drug Dev Ind Pharm*. 2015 Jan;41(1):141-7.
- 17. <u>Sallam MA</u>, Motawaa AM, Mortada SM., A modern approach for controlled transdermal delivery of diflunisal: optimization and invivo evaluation. *Drug Dev Ind Pharm.* 2013 Apr;39(4):600-10.

## Conferences and Workshops

## • Conference talks, posters and abstracts:

- ➤ M A.Sallam , Prakash S. Mitragotri S. Hyaluronic acid conjugates for treatment of cutaneous malignancies, oral presentation in controlled release society annual meeting 29 june-2 July 2020.
- ➤ M. Sallam, H. Helal, W. Samy, E. Kamoon, E. El-Fakharany, D. Abdelmonsif, S. Mortada The Impact of Tailored Amphiphilic Nanomicellar Carriers On Seizing Tacrolimus Associated Nephrotoxicity. Poster presentation in controlled release society annual meeting 29 june-2July 2020.
- ➤ I. Dolz-Pérez, **Sallam MA** M.J. Vicent . Polypeptide-based materials as versatile tools for topical delivery to the skin. 21st International



- Symposium on Microencapsulation , 27-29 september 2017, Faro, Algarve, Portugal.
- ➤ <u>Sallam MA</u>, Aboelela RM, Wasfy M Samy W, Mixed micellar system for enhancement of the chemopreventive activity of kaempferol against breast cancer, poster presentation at 5<sup>th</sup> future international conference for pharmaceutical sciences, Cairo, Egypt 28-30 Jan, 2019.
- Abdelmoneem MA, Helmy MW, <u>Sallam MA</u>, Elkhodairy KA, Elzoghby AO, "Dual-targeted spray-dried casein micelles coloaded with berberine and diosmin for treatment of hepatocellular carcinoma", *ACS Alexandria University Student Chapter, Nano Chemistry Conference*, Faculty of Science, Alexandria, April 29th, 2017.
- M. Sallam, D. Morelló-Bolumar, L. Tortajada, V. Melis, I. Dolz-Perez, M. D. Pérez del Caz, V. J. Nebot, and M. J. Vicent Design and assessment of polypeptide-drug conjugates as cutaneous dermatotherapeutics. poster presentation at the Controlled Release Society Annual Meeting & Exposition, July 16 19, 2017.
- Sallam, D. Morelló-Bolumar, L. Tortajada, V. Melis, I. Dolz-Perez, M. D. Pérez del Caz, V. J. Nebot, and M. J. Vicent cutaneous delivery of polypeptide-drug conjugates for topical treatment of specific skin disorders. Poster presentation in 11th international symposium on polymer therapeutics: from laboratory to clinical practice. 23-25 May 2016, Valencia, Spain.
- M. Sallam, D. Morelló-Bolumar, L. Tortajada, V. Melis, I. Dolz-Perez, M. D. Pérez del Caz, V. J. Nebot, and M. J. Vicent. Polypeptide nano-conjugates as novel targeted therapeutics for chronic skin diseases. Poster presenation in 8th international scientific conference of faculty of pharmacy, cairo university April 2017.
- ➤ Irene Dolz Pérez, Esther Masiá Sanchis, Daniel Morelló Bolumar, Luz Tortajada, Marwa Sallam, Vicent Josep Nebot Carda, María Jesús Vicent Docón. Development of Polymer Therapeutics for the treatment of skin diseases. Poster presentation XXXVI Biennial Meeting Spanish Royal Society of Chemistry (RSEQ), Sitges, 25 29 June, 2017.
- ➤ <u>Sallam MA</u>, Investigating The Transdermal Delivery of Naproxen via Lipogel Microemulsions, poster presentation in, FIP Congress in Dublin (Ireland) August 2013 https://www.fip.org/abstracts
- M. Sallam, B. Muñoz Ortega, M.T. Marín Boscá, Formulation and optimization of antidiabetic solid nanoemulsion preconcentares. XI CONGRESO DE LA SOCIEDAD ESPANOLA DE FARMACIA INDUSTRIAL Y GALENICA: SEFIG 2013"P. Alicante, Spain.
- M. Sallam, B. Muñoz Ortega, M.T. Marín Boscá, Microemulsion lipogels as a promising vehicle for transdermal delivery of



- Mefenamic acid across human skin. Poster presentation in XI CONGRESO DE LA SOCIEDAD ESPANOLA DE FARMACIA INDUSTRIAL Y GALENICA: SEFIG 2013"Alicante, Spain.
- ➤ <u>Sallam MA</u>, Motawaa AM, Mortada SM, Optimization strategy design and stability study of antihyperlipidimic preconcentares. Presented in Biovision conference, bibliotheca Alexandria April 2012.
- Aly D., Sallam MA, Elzoghby AO Microencapsulated Lactoferrin Nanocarriers for Targeted Delivery of Anticancer Drugs to Colorectal Cancer. Poster presentation in PUA international conference Alexandria, Egypt. Oct, 2015
- ➤ V.J. Nebot, <u>M. Sallam</u>, D. Morelló-Bolumar, L. Tortajada-Comeche,
- M. Sallam, B. Muñoz Ortega, M.T. Marín Boscá, Spray dried methacrylate microparticles for colon delivery: Fabrication, optimization and invivo appraisal. Presentation in FUE International Conference of Pharmaceutical Sciences. February 9-11, 2015.
- Aboelela R, Samy W, Wasfy M, <u>Sallam MA</u>, Hybrid micelles-based formulations for enhanced chemopreventive activity of kaempferol against breast cancer International Conference on "Pharmaceutical and Healthcare Sciences" Alexandria, Egypt on 6-7 November 2019.

## • PATENTS

- ➤ Title: Compositions and methods relating to combinatorial hyaluronic acid conjugates, U.S. Provisional Application No. 63/042,652, filed June 23, 2020 (Harvard University) Inventors, Marwa Sallam, Samir Mitragotri.
- Title: Lactoferrin-targeted gliadin nanospheres for treatment of hepatocellular carcinoma (Application: 421/2018) Inventors:, Mona Abdelmoneem, Marwa Sallam, Kadria A. Elkhodairy. Ahmed Elzoghby
- ➤ Title: Dual tumor-targeted casein-based micelles for combined drug delivery to hepatocellular carcinoma ()Application: 422/2018)

Inventors: Mona Abdelmoneem, Marwa Sallam, Kadria A Elkhodairy, Ahmed Elzoghby

#### • INVITED PRESENTATIONS:

Marwa Sallam "Some approaches for targeted dermal delivery of bioactives towards better localized topical treatment of selected dermatological conditions" oral presentation at school



of engineering and applied sciences, Harvard University, 17 October 2019.

- Marwa Sallam "Iontophoretic delivery of monoclonal antibody for topical treatment of skin cancer" oral presentation at Ecole Pharmacie Geneve Lausanne EPGL, Geneva, Switzerland, August 2018.
- Marwa Sallam "Poly peptide nanoconjugates as targeted therapeutics for chronic skin disorders" seminar at polymer therapeutics meeting, Centro Investigation Principe Felipe, Valencia Spain, 2015.
- Marwa Sallam "Polymer therapeutics, current implementation and future prespective" Seminar conducted at the Faculty of Pharmacy. Alexandria University. April. 2016.
- Marwa sallam "Implementation of natural nanocarriers versus synthetic polymers for effective management of skin disorders" presentation at Science & Technology Development Fund (STDF), Ministry of Scientific Research, Egypt. July 2014.
- Marwa Sallam "Targeted Nanoparticles: Preparation and Pharmaceutical applications" Seminar conducted at the Faculty of Pharmacy. Alexandria University. June. 2010.
- Marwa Sallam "Microemulsions for drug delivery" Seminar conducted at the Faculty of Pharmacy. Alexandria University. Feb. 2011.

## • Training workshops:

- ➤ A number of professional trainings in Faculty of arts and Science, school of engineering and applied sciences and Wyss institute of biological inspired engineering, **Harvard university** in the period from May2019-October 2019 including:
- General Lab safety and lab biosafety training,
- Enclosed laser instrument safety and radioactive materials safety
- Working with IACUC (Faculty of arts and science and Harvard Medical School).
- o Introduction to mice and Euthanasia of rodents.
- Introduction to ROPPA (university wide)
- Principals and Practices of rodent surgery.
- Use of chemical substances and agents and working with biological materials in animals.
- Safety plans for building evacuation (Wyss institute).
- Introduction to flow cytometry and panel design and flow cytometry analysis.



- ➤ Hands on cell culture techniques workshop in center of regenerative medicine and stem cell research Communication Skills, Faculty of medicine Alexandria University, April 2019.
- Faculty and Leadership Development center (FLDC), Alexandria, Egypt, June 13-15, 2006.
- ➤ Effective teaching, Faculty and Leadership Development center (FLDC), Alexandria, Egypt, April 9-14, 2005.
- ➤ Effective thinking skills, Faculty and Leadership Development center (FLDC), Alexandria, Egypt, June 20-22, 2006.
- Scientific Research Methodology, Faculty and Leadership Development center (FLDC), Alexandria, Egypt, November 10-12,2007.
- ➤ Time and Conference management, Faculty and Leadership Development center (FLDC), Alexandria, Egypt, November 13-15, 2007.
- Quality Standards in Teaching, Faculty and Leadership Development center (FLDC), Alexandria, Egypt, Oct, 3-5, 2009.
- Scientific proposal writing workshop, Project management units, Alexandria University, Alexandria, Egypt, June 15-17, 2010.
- Research ethics, Faculty and Leadership Development center (FLDC), Alexandria, Egypt, May, 26-28, 2009.
- ➤ International publication of scientific research, Faculty and Leadership Development center (FLDC), Alexandria, Egypt, Oct, 27-29, 2009.
- ➤ Effective Presentation Skills, Faculty and Leadership Development center (FLDC), Alexandria, Egypt, July 28-30,2009.
- ➤ University code of ethics, Faculty and Leadership Development center (FLDC), Alexandria, Egypt, Sep.21-2, 2010.
- Communication skills, Faculty and Leadership Development center (FLDC), Alexandria, Egypt, July31- August 2, 2008.
- Euro-Mediterranean winter school workshop on research promotion, technology transfer and business creation.22-24 Nov, 2010.
- Statistical analysis of scientific data using SSPS, (FLDC), Alexandria, Egypt, 24-27 August, 2016.
- Reference management system, (FLDC), Alexandria, Egypt, 13-14 March, 2017.
- University legal and financial aspects, (FLDC), Alexandria, Egypt 19-20 April, 2017
- Designing and developing the digital content, (FLDC), Alexandria, Egypt, 24-25 May, 2017.
- Funded research implementation and research team management, (FLDC), Alexandria, Egypt, 21-22 June 2017.



# Professional and Scientific Activities

## • RESEARCH PROJECTS

- Science Technology and development fund (STDF) Grant Project short term fellowship 2014 Cycle 5 project No. 12362
- ➤ Bibliotheca Alexandrina funded Grant for project entitled: 2016 " Investigating the potential of natural nanocarriers versus synthetic polymers as a vehicle for optimized topical treatment of skin disorders.

## • MASTER/PHD THESES SUPERVISION

Mohamed Rady (2011) M.Sc. in Industrial Pharmacy, Faculty of Pharmacy

Thesis: Formulation of multilayer tablets for industrial purpose. >

- ➤ Hala Helal. (2012). M.Sc. in Industrial Pharmacy, Faculty of Pharmacy Thesis: A contribution to nanopharmaceuticals as an active vector for drug delivery
- ➤ Abelrahman Yassin (2014) M.Sc. in Industrial Pharmacy, Faculty of Pharmacy

Thesis: Implementation of selected polymeric nanocarriers for the delivery of some anticancer drugs

- ➤ Mona Abdelmonem, (2015) M.Sc. in Industrial Pharmacy, Faculty of Pharmacy
- Thesis: Biocompatible nanomedicines as potential liver-targeted therapy for hepatocellular carcinoma
- Rania Aboelela (2015) M.Sc. in Industrial Pharmacy, Faculty of Pharmacy

Thesis: Design and evaluation of pharmaceutical delivery systems for nutraceuticals of possible chemopreventive activity.

- ➤ Dalia A. Ramadan, (2015); M.Sc. in Industrial Pharmacy, Faculty of Pharmacy
- Thesis: Polymeric drug delivery systems for colon targeting of some drugs with potential anti-cancer activity
- Noha Khalifa (2016) PhD. in Industrial Pharmacy, Faculty of Pharmacy

Thesis: Nanocarriers as a trend for optimizing drug delivery via the skin.

➤ Hala Shafik (2017) PhD. in Industrial Pharmacy, Faculty of Pharmacy

Thesis: Rationally designed nanocarriers for effective drug delivery in selected chronic diseases.

➤ **Reham Galil** (2018) M.Sc. in Industrial Pharmacy, Faculty of Pharmacy

Thesis: Implementation of polymer Inorganic hybrid nanocarriers for targeted drug delivery applications



- Shimaa Ghoniem (2018).M.Sc. in Industrial Pharmacy, Faculty of Pharmacy Thesis: Development of polymer therapeutics for selected dermatological disorders
- Marwa Hafez (2017) M.Sc. in Industrial Pharmacy, Faculty of Pharmacy
  - Thesis: Development and Evaluations of Polymeric Drug Delivery Systems for the management of some Dental disorders
- Yomna Mohamed (2018). M.Sc. in Industrial Pharmacy, Faculty of Pharmacy

Thesis: Design and evaluation of colon targeted biopolymeric drug delivery systems

Sara Mokhtar (2018) M.Sc. in Industrial Pharmacy, Faculty of Pharmacy

Thesis: Self assembled amphiphilc nanocarriers for improved delivery of selected poorly soluble drugs.

#### VISITING PROFESSORS TO FOREIGN UNIVERSITIES

- Postdoctoral research Fellow at School of Engineering and applied sciences and Wyss institute of biologically inspired engineering, HARVARD UNIVERSITY, USA, May 2019-May 2020
- Visiting scientist at ECOLE PHARMACIE GENEVE-LAUSANNE, EPGL , Switzerland May- August 2018
- Visiting Scientist at polymer therapeutics lab, CENTRO INVESTIGATION PRINCIPE PHILIPE, (CIPF) Valencia Spain July-September 2015
- ➤ A visiting lecturer to the department of pharmaceutical technology, Faculty of Pharmacy, UNIVERSITY OF GRANADA, Spain in September 2012.

#### • <u>TEACHING ACTIVITIES</u>

My academic work included teaching various practical and theoretical courses in a variety of subjects in the field of pharmaceutical sciences, pharmaceutical technology and formulation aspects such as unit operations, pharmaceutical calculations, novel colloidal drug delivery systems, controlled drug delivery systems, basic physical pharmacy pharmaceutical packaging, quality assurance and good manufacturing practice.

#### This includes:

➤ Teaching *pharmaceutical technology* for 4th year undergraduate students (Bachelor year), topics include: flow of powder, powder mixing, wet and dry granulation, direct compression, coating, size



reduction and separation, filtration, Crystallization & Crystal engineering, centrifugation, emulsification, packaging, freeze drying, spray drying, material balance, microencapsulation, distillation.

- > Teaching Special course (Recent drug delivery systems) to PhD students at Industrial pharmacy department.
- ➤ Teaching *special courses for master students* planning to conduct research in pharmaceutical technology. This includes advanced pharmaceutical technology and recent drug delivery systems with emphasis on topical, transdermal and non-invasive drug delivery.
- ➤ Teaching pharmaceutical unit operations and technology for students in **Diploma degree in industrial pharmacy** with special emphasis on safe additives and excipients used in pharmaceutical products.
- Teaching **Good manufacturing practice** and **quality assurance** including quality control of packaging materials.
- Presenting lectures for clinical pharmacy program students including advances in pharmaceutical technology and Good manufacturing practice.
- Teaching pharmacy orientation and pharmaceutical unit operations in Pharos university, Alexandria, Egypt.

#### SCIENTIFIC AND ACADEMIC ACTIVITIES

- ➤ Peer reviewer in International Journal of Nanomedicine, International journal of pharmaceutics, pharmaceutical research, Bioenginerering and translational medicine, expert opinion on drug delivery, British journal of pharmaceutical sciences, current drug delivery and Journal of liposome Research.
- ➤ Member of the Faculty committee of education and student affairs for the clinical pharmacy program. Faculty of pharmacy Alexandria university, 2011- 2016.
- ➤ Member of the Faculty committee of education and student affairs for the bachelor of pharmacy program. Faculty of pharmacy Alexandria university, 2011- 2016.
- Member of the supervisor committee for elections of dean and head of departments of Faculty of pharmacy Alexandria university, 2011- 2015.
- Member of the international relations office, 2017-present.
- ➤ Member of the Faculty committee of community service and environmental affairs 2015-2019.



- ➤ Member of the Quality assurance and accreditation unit Faculty of pharmacy Alexandria university, 2012- 2017.
- ➤ Member of animal care and use ethical committee 2011- 2019.
- ➤ Participated in the organization of the\_18<sup>th</sup> congress on biotechnology, Geneva, Switzerland, 1-4 July, 2018.
- ➤ Participated in 32<sup>nd</sup> Seminar in pharmaceutical sciences " from idea to the patient" held in Zermatt, Switzerland (27-30 August 2018)