Mohamed M. Issa, PhD (Uppsala, Sweden)

Associate Professor
*Head of Pharmacy Practice Department **(PPD)**, Faculty of Pharmacy, Beirut Arab University (BAU)*
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CAREER and RESEARCH INTERESTS:

- Designing and delivering training courses and workshops on "Interactive online learning strategies" using LMS e.g. MOODLE platform.
- Designing and delivering lectures, short courses and workshops especially tailored for the enhancement of the **soft skills** of pharmacists (15 years of teaching experience).
- Reforming and developing pharmacy curricula to meet international accreditation standards.
- Development of formulations and delivery (*in vitro* and *in vivo*) of biotechnology-based pharmaceuticals especially nucleic acids (pDNA and siRNA).
- Solid-state technology: Enhancement of the solubility of poorly water-soluble drugs through solid-state manipulation.

EDUCATION

2002-2006 PhD researcher at the department of Pharmacy, **Uppsala University, Uppsala, Sweden**. The PhD thesis has the title:" Linear and branched chitosan oligomers as delivery systems for pDNA and siRNA *in vitro* and *in vivo*"**.**

1998-2000 Passed general and special courses (two-year study) for the preparation of the Master degree in the pharmaceutical sciences, Department of Pharmaceutics, University of Alexandria, Alexandria, Egypt.

1991-1996 BSc.Pharm.University of Alexandria, Alexandria, Egypt. General Grade: **Distinction (Honors)**, **Top 5%, ranked 4th** out of 255 students.

PROFESSIONAL EXPERIENCE

Sept. 2022 Associate Professor and Head of the Pharmacy Practice Department (PPD) at Beirut Arab University (**BAU**)

May 2021–June 2022 **Assistant Professor** at the pharmacy practice department, Delta University for Science and Technology,Egypt.

2012-Dec 2020 **Assistant Professor** at the pharmacy practice department (**PPD**), Beirut Arab University (**BAU**), Lebanon:

- Cofounder of the Pharmacy Practice department at the Faculty: vision, mission, objectives, ILOs, expected competences, courses specifications.
- Designing, establishing and developing the **professional experiential program**.
- Cofounder of the **first** interprofessional education (**IPE**) program at the BAU.
- Designing and implementing the **first** faculty **continuing education program** for the Lebanese pharmacists.
- Certified trainer-of-trainers (**TOT**), Box Hill Institutes, Melbourne, Australia.
- Designing regular professional workshops and seminars delivered to the faculty and university faculty members through continuing faculty development program.
- Diploma in the psychology of learning.

2009 to 2012 **Assistant Professor** at the departments of pharmaceutics, Beirut Arab University (**BAU**), Lebanon (**teaching and lab supervision**): Introduction to pharmaceutics, physical pharmacy, design and formulation of drug delivery systems, principles and kinetics of drug stability, community pharmacy, **communication skills for pharmacists**.

- Supervising Masters and PhD students at the department of Pharmaceutics.

2007 – 2009 **Lecturer** of Pharmaceutics at the department of pharmaceutics, University of Alexandria, Egypt (Solid dosage forms and Micromeritics, Cosmetics, Skin and transdermal delivery systems).

1998 – 2002 **Post graduate student:** teaching practical courses of pharmaceutics to undergraduate pharmacy students at the Department of Pharmaceutics, Faculty of Pharmacy, Alexandria, Egypt.

1997 – 1998 **Pharmacist** at private pharmacies in Alexandria, Egypt.

Research SKILLS

Very good experience at:

- Formulation and physical characterization (size, shape, surface charge and physical stability) of nucleic acids.
- Handling and developing cell culture-based assays.
- The use of laboratory animals as in vivo models for gene expression analysis.
- Imaging techniques e.g. Confocal microscopy.
- Chromatographic analysis (HPLC) and method development and validation.
- Solid-drug characterization: DSC

PUBLICATIONS in peer-reviewed journals (Citations: more than 700, Scopus 2026)

1. Epidemiology, antimicrobial resistance patterns, management, and predictors of mortality in diabetic foot infections in a Lebanese hospital: A retrospective observational study. A.A. Ahmad, E. Sokhn, C. Dib, P. Shuhaiber, M. Issa, R. Itani. Journal of Infection and Public Health (2026), 19(8), 103282. https://doi.org/10.1016/j.jiph.2026.103282
2. Umbilical cord mesenchymal stem cell exosomes in breast cancer. False hope or a real solution? D. Jammoul, T. Torossian, M. Issa, M. Saab, C. Harmouch, R. Mhanna, K.K. Abla. Clinica Chimica Acta (2026), 586, 120915. https://doi.org/10.1016/j.cca.2026.120915
3. Prescribing of Proton Pump Inhibitors for Gastrointestinal Bleeding Prophylaxis in the Lebanese outpatient setting: patterns, compliance with guidelines and risks. L.Soubra and M.Issa. International Journal of Pharmacy Practice. Accepted for publication Aug; 27(4):386-392 (2019).
4. Design and preparation of controlled floating gastroretentive delivery systems for enhanced fexofenadine hydrochloride oral bioavailability. May Saab, Wael Samy, Mohamed Issa, Hoda El-Maradny. Tropical Journal of Pharmaceutical Research April 2018; 17 (4): 569-576.
5. Current practices of community pharmacists counselling patients on smoking cessation in Beirut: A questionnaire-based study. M.Issa, M. ElSolh, L. Soubra. BAU Journal of Health and Wellbeing. (2018), 1, 55-67.

6. Alternative approaches in formulating floating hollow tablets via sublimation technique; a platform tailored drug release profile. M. Saab, M. Issa, W. Samy, H. El-Maradny. Die Pharmazie (2016), 71, 701-708.
7. Intrinsically floating gastroretentive tablets of sulbutamol sulphate using different sublimable/release retarding materials: A comparative study. May Saab, Mohamed Issa, Wael Samy and Hoda El-maradny, International Journal of Pharmacy & Technology (2015), 7(1): 8094-8109.
8. Tailoring of chitosans for gene delivery: novel self-branched glycosylated chitosan oligomers with improved functional properties. Sabina P. Strand, Issa MM, Bjørn E. Christensen, Kjell M. Vårum and Per Artursson, Biomacromolecules (2008), 9(11): 3268-3276.
9. Targeted gene delivery with oligosaccharide-substituted chitosans in vitro and after lung administration in vivo. Issa M, Koping-Hoggard M, Tømmeraas K, Vårum KM, Christensen BE, Strand SP, Artursson P. J. Control. Rel. (2006), 115 (1): 103-112.
10. A miniaturized nebulization catheter for improved gene delivery to the mouse lung, Koping-Hoggard M*, Issa MM*, Kohler T, Tronde A, Varum KM, Artursson P. J Gene Med. 7(9) (2005) 1215-22. * shared first authorship.
11. Chitosan and the mucosal delivery of biotechnology drugs. Mohamed M. Issa, Magnus Köping-Höggård and Per Artursson. Drug Discovery Today: Technologies (2005), 2 (1) 1-6.
12. Improved chitosan-mediated gene delivery based on easily dissociated chitosan polyplexes of highly defined chitosan oligomers. Koping-Hoggard M, Varum KM, Issa M, Danielsen S, Christensen BE, Stokke BT, Artursson P. Gene Ther. 11(19) (2004) 1441-52.

AWARDS

1. **AAPS Graduate Award for outstanding thesis research in the field of biotechnology.** The award was delivered at the AAPS (American Association of Pharmaceutical Sciences) Annual Meeting and Exposition, October 29- November 2, 2006, San Antonio, **Texas**, **USA**.
2. **Best Poster Award** at the 6th European Consortium of Pharmacy Schools meeting, July 8-17, 2003, **Paris**, **France (**the award was delivered by **Professor A.T. Florence**, Dean of the school of Pharmacy in London**)**.

SELECTED CONFERENCES AND SEMINARS

1. Köping-Höggård, M., **Issa, M**. et al. A new approach to chitosan-mediated gene delivery. **AAPS** Annual Meeting and Exposition, October 26-30, **2003**, Salt Lake City, USA.
2. **Issa, M** et al. Branched Chitosan Oligomers as Gene Delivery Systems In Vitro and after Lung Administration In Vivo. **AAPS** Annual Meeting and Exposition, November 6-10, **2005**, Nashville, USA.
3. **Issa M**. Chitosan oligomers as transfection vehicles for gene delivery. 3rd annual Meeting of the Swedish Society of Gene Therapy (**SSGT**), March 10-11, **2006**, Stockholm, Sweden.
4. **Issa, M** et al. Branched Chitosan Oligomers Enhance Gene Delivery In Vitro and after Lung Administration In Vivo. 9th Annual meeting of the American Society of Gene Therapy (**ASGT**), May 31-June 4, **2006**, Baltimore, USA.
5. **Issa, M** et al. Chitosan oligomers as siRNA delivery systems in vitro. 10th Annual meeting of the American Society of Gene Therapy (**ASGT**), May 30-June 3, **2007**, Seattle, USA.
6. **Issa, M** et al. Solid dispersions of Ezetimibe with improved dissolution rate and physical stability. **AAPS** Annual Meeting & Exposition, October 23-27, **2011**, Washington, DC, USA.
7. Saab, M., **Issa, M** et al. Formulation and in-vitro release kinetics of gastroretentive floating tablets of fexofenadine hydrochloride. 20th Annual **LAAS** conference (Lebanese Association for the Advancement of science), New Frontiers in sciences, March 27-29**, 2014.**

<u>SELECTED</u> WORKSHOPS: Delivered to the faculty, university staff members and pharmacists

1. Effective presentation skills for staff members: Please make your audience happy!
2. Understanding and managing different behavioral styles: Towards the lost gift of teamwork.
3. Learning styles: Do we learn the same way?
4. The power of assertive behavior: It is all about respect!
5. Emotional intelligence: Are we ready to succeed together?
6. Leadership skills: Understanding leadership: Can you lead your success?
7. Conflict management: From a curse into a bless!
8. Motivational interviewing: Helping people (patients) change
9. Adding fun to active learning: A win-win situation.

INVITED SPEAKER AT

1. **AAPS** Annual Meeting and Exposition, October 29- November 2, 2006, San Antonio, **Texas**, **USA**. "From high molecular weight conventional chitosans to targeted chitosan oligomers: A journey towards efficient DNA delivery". ***The AAPS Graduate Award for outstanding thesis research in the field of biotechnology was delivered to the candidate during this event.**
2. Lebanese Order of Pharmacists (**OPL**) 22nd annual congress 24-26 October 2014, Hilton Habtour, **Beirut**, **Lebanon**. "Stability of pharmaceutical products: Role of the pharmacist"
3. Lebanese Order of Pharmacists (**OPL**) 23nd annual congress 16-18 October 2015, BIEL, **Beirut**, **Lebanon**. "Leadership skills: Can you lead your success?"
4. First Forum on Advancing Pharmacy Education in the GCC and Middle-East, "Active learning strategies" 6-8 December 2015, college of Pharmacy, **Qatar.**
5. Arab Pharmacist Union (**APU**) Congress, BAU, June 6, 2015, **Beirut**, **Lebanon**. "Medication errors in pharmacy practice: A brief overview"
6. Second Forum on Advancing Pharmacy Education in the GCC and Middle-East, "Team teaching in integrated courses" 8-11 February 2017, **Kuwait.**
7. Third Forum on Advancing Pharmacy Education in the GCC and Middle-East, "Assessment in pharmacy education" 8-9 May 2018, BAU, Beirut, **Lebanon**. *** The forum was organized and coordinated by Dr Issa.**
8. Education and student affairs deanship, Faculty of Pharmacy, Alexandria University. A workshop entitled "Assessment: The real driver for competency-based Pharmacy education" was delivered as part of the Pharmacy curriculum reform process. July 18, 2018, Faculty of Pharmacy, **Alexandria**, **Egypt**.
9. Lebanese Order of Pharmacists (**OPL**) 26th annual congress 16-18 November 2018, Hilton Habtour, **Beirut**, **Lebanon**. "Motivational Interviewing: Helping patients change".
10. Spring seminar series of the College of Pharmacy, Natural & Health Sciences at Manchester University, **Indiana**, **USA**. March 6, 2019. "Gene therapy: A promise not yet fulfilled!"
11. International Pharmacy Student Federation (**IPSF**) event on patient counselling. A webinar-based workshop entitled "Patient counselling: It is more than talking!" December 14, 2021.