Khairallah ALHARETH

Associate Professor
Université Paris Cité
4 avenue de l'observatoire, 75006 Paris
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Professional experiences:

2019-date **Associate Professor**
Chemical and biological technologies for health Lab (UTCBS), CNRS, INSEREM, Faculty of health, Université Paris Cité, France.

2016-2019 **Lecturer and researcher**
Chemical and biological technologies for health Lab (UTCBS), CNRS, INSEREM, Faculty of health, Université Paris Cité, France.

2015-2016 **Lecturer and researcher**
Pharmaceutical technology lab, Faculty of Pharmacie, Université Rennes 1, Rennes, France.

2014-2015 **Postdoctoral researcher**
Center for Research in Molecular Medicine and Chronic Diseases (CIMUS), Université de Saint-Jacques de Compostelle (USC), Espagne.

2012-2014 **Assistant professor**
Faculty of Pharmacy, Zarqa university, Zarqa, Jordan.

2010-2012 **Assistant professor**
Faculty of Pharmacy, International University of Science and Technology, Draa, Syria.

2006-2010 **PhD researcher**
Institut Galien Paris-Sud, Faculty of Pharmacy, Université Paris Saclay, France.

2001-2004 **Pharmacist analyst**
Ministry of health and regional office of world health organization (WHO), Damascus, Syria.

Education:

2010 **PhD in Pharmaceutical technology and Biopharmacy**
Université Paris Saclay, Châtenay-Malabry, France.

2006 **Master 2 in research and analytical development**
Université Paris-Sud XI, Châtenay-Malabry, France.

2005 **Master 1 in biological and medical Sciences**
Université Claude Bernard, Lyon, France.

2004 **Specialized Diploma in Drug Quality Control**
Ministry of health and regional office of world health organization (WHO), Damascus, Syria.

2000 **Diploma of Pharmacy.**
Damascus University, Damascus, Syria.

Expertise and research aera:

Pharmaceutical technology; nanomedicine; drug delivery; nanoparticles; liposomes; placental barrier; nasal administration; microfluidics-based nanoparticles production; Machine learning for drug development.

Scientific production:

Publications: (ORCID ID: 0000-0001-5976-6594)

(1) López-Viota, M.; Martín-Pozo, L.; Parera, B.; Vílchez, J. L.; Viota, J. L.; Alhareth, K.; El-Hammadi, M. Varying Coat Properties of Chitosan-Surface Modified Polya (Lactic-Co-Glycolic Acid) Nanoparticles for Controlled Delivery of 5-Fluorouracil. *J. Drug Deliv. Sci. Technol.* **2023**, 104982. https://doi.org/10.1016/J.JDDST.2023.104982.

(2) Oyoun, F.; Toncheva, A.; Henríquez, L. C.; Grougnet, R.; Laoutid, F.; Mignet, N.; Alhareth, K.; Corvis, Y. Deep Eutectic Solvents: An Eco-Friendly Design for Drug Engineering. *ChemSusChem*. John Wiley & Sons, Ltd 2023, p e202300669. https://doi.org/10.1002/cssc.202300669.

(3) Fliedel, L.; Mignet, N.; Fournier, T.; Andrieux, K.; Alhareth, K. Quantification of a Fluorescent Lipid DOPE-NBD by an HPLC Method in Biological Tissue: Application to Study Liposomes' Uptake by Human Placenta. *Methods Mol. Biol.* **2023**, *2622*, 289–302. https://doi.org/10.1007/978-1-0716-2954-3_26.

(4) Fliedel, L.; Alhareth, K.; Mignet, N.; Fournier, T.; Andrieux, K. Placental Models for Evaluation of Nanocarriers as Drug Delivery Systems for Pregnancy Associated Disorders. *Biomedicines* **2022**, *10* (5), 936. https://doi.org/10.3390/biomedicines10050936.

(5) Renault–Mahieux, M.; Mignet, N.; Seguin, J.; Alhareth, K.; Paul, M.; Andrieux, K. Co–Encapsulation of Flavonoids with Anti–Cancer Drugs: A Challenge Ahead. *Int. J. Pharm.* **2022**, *623* (May), 121942. https://doi.org/10.1016/j.ijpharm.2022.121942.

(6) Difonzo, M.; Fliedel, L.; Mignet, N.; Andrieux, K.; Alhareth, K. How Could Nanomedicine Improve the Safety of Contrast Agents for MRI during Pregnancy? *Sci* **2022**, *4* (1), 11. https://doi.org/10.3390/sci4010011.

(7) Rebollo, R.; Oyoun, F.; Corvis, Y.; El-Hammadi, M. M.; Saubamea, B.; Andrieux, K.; Mignet, N.; Alhareth, K. Microfluidic Manufacturing of Liposomes: Development and Optimization by Design of Experiment and Machine Learning. *ACS Appl. Mater. Interfaces* **2022**, *14* (35), 39736–39745. https://doi.org/10.1021/acsami.2c06627.

(8) Fliedel, L.; Alhareth, K.; Seguin, J.; El-Khashab, M.; Chissey, A.; Mignet, N.; Fournier, T.; Andrieux, K. Influence of Liposomes' and Lipoplexes' Physicochemical Characteristics on Their Uptake Rate and Mechanisms by the Placenta. *Int. J. Mol. Sci.* **2022**, *23* (11), 6299. https://doi.org/10.3390/ijms23116299.

(9) Ahmed, S.; Salmon, H.; Distasio, N.; Do, H. D.; Scherman, D.; Alhareth, K.; Tabrizian, M.; Mignet, N. Viscous Core Liposomes Increase SiRNA Encapsulation and Provides Gene Inhibition When Slightly Positively Charged. *Pharmaceutics* **2021**, *13* (4), 479. https://doi.org/10.3390/pharmaceutics13040479.

(10) Ahmed, S.; Alhareth, K.; Mignet, N. Advancement in Nanogel Formulations Provides Controlled Drug Release. *Int. J. Pharm.* **2020**, *584*, 119435. https://doi.org/10.1016/j.ijpharm.2020.119435.

(11) Alnahas, F.; Yeboah, P.; Fliedel, L.; Abdin, A. Y.; Alhareth, K. Expired Medication: Societal, Regulatory and Ethical Aspects of a Wasted Opportunity. *Int. J. Environ. Res. Public Health* **2020**, *17* (3). https://doi.org/10.3390/ijerph17030787.

(12) Ahmed, S.; Corvis, Y.; Gahoual, R.; Euan, A.; Lai-Kuen, R.; Couillaud, B. M.; Seguin, J.; Alhareth, K.; Mignet, N. Conception of Nanosized Hybrid Liposome/Poloxamer Particles to Thicken the Interior Core of Liposomes and Delay Hydrophilic Drug Delivery. *Int. J. Pharm.* **2019**, *567*, 118488. https://doi.org/10.1016/j.ijpharm.2019.118488.

(13) Alhareth, K.; Valero, L.; Mohamed, K. E.; Fliedel, L.; Roques, C.; Gil, S.; Mignet, N.; Fournier, T.; Andrieux, K. Qualitative and Quantitative Analysis of the Uptake of Lipoplexes by Villous Placenta Explants. *Int. J. Pharm.* **2019**, *567*. https://doi.org/10.1016/j.ijpharm.2019.118479.

(14) Valero, L.; Alhareth, K.; Romero, J. E.; Viricel, W.; Leblond, J.; Chissey, A.; Dhotel, H.; Roques, C.; Arruda, D. C.; Escriou, V.; Mignet, N.; Fournier, T.; Andrieux, K. Liposomes as Gene Delivery Vectors for Human Placental Cells. *Molecules* **2018**, *23* (5), 1085. https://doi.org/10.3390/molecules23051085.

(15) Valero, L.; Alhareth, K.; Gil, S.; Lecarpentier, E.; Tsatsaris, V.; Mignet, N.; Fournier, T.; Andrieux, K. Nanomedicine as a Potential Approach to Empower the New Strategies for the Treatment of Preeclampsia. *Drug Discovery Today*. May 2018, pp 1099–1107. https://doi.org/10.1016/j.drudis.2018.01.048.

(16) Valero, L.; Alhareth, K.; Espinoza Romero, J.; Simasotchi, C.; Gil, S.; Roques, C.; Mignet, N.; Andrieux, K.; Fournier, T. Evaluation of Liposomes as Gene Silencing Vectors for the Treatement of Preeclampsia. *Placenta* **2018**, *69*, e8–e9. https://doi.org/10.1016/j.placenta.2018.06.005.

(17) Valero, L.; Alhareth, K.; Gil, S.; Simasotchi, C.; Roques, C.; Scherman, D.; Mignet, N.; Fournier, T.; Andrieux, K. Assessment of Dually Labelled PEGylated Liposomes Transplacental Passage and Placental Penetration Using a Combination of Two Ex-Vivo Human Models: The Dually Perfused Placenta and the Suspended Villous Explants. *Int. J. Pharm.* **2017**, *532* (2), 729–737. https://doi.org/10.1016/j.ijpharm.2017.07.076.

(18) Alhareth, K.; Sancey, L.; Tsapis, N.; Mignet, N. How Should We Plan the Future of Nanomedicine for Cancer Diagnosis and Therapy? *International Journal of Pharmaceutics*. 2017, pp 657–659. https://doi.org/10.1016/j.ijpharm.2017.05.037.

(19) Alsirawan, M. B.; Mohammad, M. A.; Alkasmi, B.; Alhareth, K.; El-Hammadi, M. Development and Validation of a Simple HPLC Method for the Determination of Ibuprofen Sticking onto Punch Faces. *Int. J. Pharm. Pharm. Sci.* **2013**, *5* (SUPPL.4), 227–231.

(20) Alhareth, K.; Vauthier, C.; Bourasset, F.; Gueutin, C.; Ponchel, G.; Moussa, F. Conformation of Surface-Decorating Dextran Chains Affects the Pharmacokinetics and Biodistribution of Doxorubicin-Loaded Nanoparticles. *Eur. J. Pharm. Biopharm.* **2012**, *81* (2), 453–457. https://doi.org/10.1016/j.ejpb.2012.03.009.

(21) Alhareth, K.; Vauthier, C.; Gueutin, C.; Ponchel, G.; Moussa, F. HPLC Quantification of Doxorubicin in Plasma and Tissues of Rats Treated with Doxorubicin Loaded Poly(Alkylcyanoacrylate) Nanoparticles. *J. Chromatogr. B Anal. Technol. Biomed. Life Sci.* **2012**, *887–888*, 128–132. https://doi.org/10.1016/j.jchromb.2012.01.025.

(22) Alhareth, K.; Vauthier, C.; Gueutin, C.; Ponchel, G.; Moussa, F. Doxorubicin Loading and in Vitro Release from Poly(Alkylcyanoacrylate) Nanoparticles Produced by Redox Radical Emulsion Polymerization. *J. Appl. Polym. Sci.* **2011**, *119* (2), 816–822. https://doi.org/10.1002/app.32789.

Communications (orals and posters):

(1) Hanley, G.; Chavrier, P.; Tiboni, M.; Casettari, L.; Alhareth, K.; Andrieux, K. From Thin-Film Hydration to Microfluidics: A Translational Approach for the Preparation of Liposomes Functionalized with a Peptide Isolated from VAR2CSA for Placenta Targeting. In *6th Nanomed workshop, Patras, Greece*; 2023; Poster.

(2) Zambonino, M.; Richard, C.; Alhareth, K. Functionalization of Persistent Luminescence Inorganic Nanoparticles: Comparison between Bench and Microfluidic Technology. In *6th Nanomed workshop, Patras, Greece*; 2023; Poster.

(3) Chen, H.; Alhareth, K. Optimization of the Ethanol Removal Step of Liposome Production Using Microfluidics. In *6th Nanomed workshop, Patras, Greece*; 2023; Oral presentation.

(4) Oyoun, F.; Laoutid, F.; Mignet, N.; Alhareth, K.; Corvis, Y. Preparation and Physico-Chemical Characterization of Green Nanoparticles Stabilized by Bio-Compatible Co-Polymers. In *XXXèmes Journées de l'AECCPCM*; 2023; Oral presentation.

(5) Oyoun, F.; Toncheva, A.; Mendez-Lopez, S.; Seguin, J.; Mignet, N.; Laoutid, F.; Alhareth, K.; Corvis, Y. Preparation and Surface Decoration of Eutectic Nanoparticles for Cancer Treatment. In *6th Nanomed workshop, Patras, Greece*; 2023; Poster.

(6) Oyoun, F.; Laoutid, F.; Mignet, N.; Alhareth, K.; Corvis, Y. Preparation of Organic Solvent-Free Nanoparticles Based on Therapeutic Deep Eutectic Solvents for Cancer Treatment. In *The 30th*

Young Research Fellows Meeting - Société Chimie Thérapeutique, Paris,France; 2023; Oral presentation.

(7) Mendez-Lopez, S.; Oyoun, F.; Alhareth, K.; Corvis, Y. Therapeutic Nanoparticles by Green Synthesis: Formulation, Stability Assessment, and in Vitro Evaluation. In *6th Nanomed workshop, Patras, Greece*; 2023; Poster.

(8) Alhareth, K. Development and Optimization of Liposomes Manufacturing Method Using Microfluidics Techniques and Machine Learning. In *AG association Francophone des enseignants de Pharmacie Galénique, Paris, France*; 2022; Oral presentation.

(9) Ma, P.; Oyoun, F.; Martin, B.; Seguin, J.; Mignet, N.; Alhareth, K.; Corvis, Y. Engineering of Nanocrystals to Deliver Various Active Pharmaceutical Ingredients into Pathological Tissues. In *XXIXèmes Journées de l'Association des Enseignants-Chercheurs de Chimie Physique et de Chimie Minérale en Pharmacie, Lille, France*; 2022; Poster.

(10) Nsamela, A.; Helaine, N.; Chacon, F.; Garlan, B.; Jacob, D. Lipid Nanoparticles Synthesis with Pressure Based Microfluidic Flow Control : On the Road for Faster Drug and Vaccine Development. In *Nanobiotech Conference, Montreux, France*; 2022; Poster.

(11) Oyoun, F.; Toncheva, A.; Laoutid, F.; Mignet, N.; Alhareth, K.; Corvis, Y. Organic Therapeutic Deep Eutectic Solvents for Drug Engineering and Development. In *The 29th Young Researcher Fellows Meeting, Nantes,France*; 2022; Poster.

(12) Salim, M.; Fliedel, L.; Alhareth, K.; Andrieux, K. Preparation and Biological Evaluation of Liposomes Decorated with a Specific Ligand to Target the Placenta for Pregnancy Disorder Therapy. In *5th Nanomed workshop, Pavia, Italy*; 2022; Oral presentation.

(13) Nsamela, A.; Helaine, N.; Chacon, F.; Jacob, D.; Mignet, N.; Guérinier, T.; Simmchen, J.; Alhareth, K. Real Time Monitoring of Liposome Production in Microfluidics with Time Resolved In-Line DLS Size Characterization. In *7th SFNano Annual Meeting, Strasbourg, France*; 2022; Oral presentation.

(14) Schievano, G.; Oyoun, F.; Chacon, F.; Kaoua, L.; Mignet, N.; Alhar. Screening of Cationic Liposomes Formulation with Microfluidics. In *5th Nanomed workshop, Pavia, Italy*; 2022; Poster.

(15) Fliedel, L.; Alhareth, K.; Seguin, J.; El-Khashab, M.; Chissey, A.; Gil, S.; Fournier, T.; Mignet, N.; Andrieux, K. Study of Liposomes' Uptake by the Placental Barrier Using Complementary in Vitro and Ex Vivo Models. In *PBP world meeting, Rotterdam, Pays-Bas*; 2022; Poster.

(16) Rebollo, R.; Alhareth, K. Automatic Fabrication of Pegylated Liposomes Using Microfluidics. In *4th Nanomed workshop, Angers, France*; 2021; Oral presentation.

(17) Fliedel, L.; Alhareth, K.; Seguin, J.; Difonzo, M.; Chissey, A.; Gil, S.; Fournier, T.; Mignet, N.; Andrieux, K. Conception and Evaluation of Conventional and Peptide-Functionalized Liposomes for Pregnancy Associated Disorders. In *7th annual meeting of french society for nanomedicine, SFNano, Angers, France*; 2021; Oral presentation.

(18) Rebollo, R.; Oyoun, F.; Alnahas, F.; Corvis, Y.; Andrieux, K.; Mignet, N.; Alhareth, K. Development and Optimization of Liposomes Manufacturing Method Using Microfluidics and Artificial Neural Network. In *7th annual meeting of french society for nanomedicine, SFNano, Angers, France*; 2021; Poster.

(19) Oyoun, F.; Laoutid, F.; Mignet, N.; Alhareth, K.; Corvis, Y. Nanocrystals Preparation for Cancer Treatment. In *C'NANO conference, Roz Armor-ERQUY, France*; 2021; Poster.

(20) Ma, P.; Oyoun, F.; Martin, B.; Seguin, J.; Mignet, N.; Alhareth, K.; Corvis, Y. Optimization of Organic Nanocrystal Formulations for Active Pharmaceutical Ingredients Delivery. In *7th annual meeting of french society for nanomedicine, SFNano, Angers, France*; 2021; Poster.

(21) Difonzo, M.; Fliedel, L.; Alhareth, K.; Andrieux, K. Preparation, Characterization, and Evaluation of Peptide-Functionalized Liposomes for the Targeting of Placenta. In *4th Nanomed workshop, Angers, France*; 2021; Oral presentation.

(22) Fliedel, L.; Alhareth, K.; Seguin, J.; El-Khashab, M.; Chissey, A.; Gil, S.; Fournier, T.; Mignet, N.; Andrieux, K. Study of Liposomes' Uptake by the Placental Barrier Using Complementary in Vitro and Ex Vivo Models. In *12th PBP World Meeting, online*; 2021; Poster.

(23) Hameedat, F.; Fliedel, L.; Alhareth, K.; Andrieux, K. Targeted Delivery of Splice-Switching Oligonucleotide Lipoplexes for Preeclampsia Treatment: Formulation, Characterization and in-Vitro Evaluation. In *4th Nanomed workshop, Angers, France*; 2021; Poster.

(24) El-Khashab, M.; Fliedel, L.; Alhareth, K.; Andrieux, K. Study of Liposomes' Internalization Mechanisms by the Placental Cells. In *3rd Nanomed workshop, Pavia, Italie*; 2020; Oral presentation.

(25) Ahmed, S.; Corvis, Y.; Cakilkaya, P.; Gahoual, R.; Alhareth, K.; Mignet, N. Conception of Lipogel by Cross Flow Technique. In *2nd PSL Chemical Biology Symposium, Paris, France*; 2019; Poster.

(26) Euan, A.; Ahmed, S.; Alhareth, K. Development of a Lipid-Polymer Hybrid Nanocarrier: Encapsulation and Release Study. In *2nd Nanomed workshop, Patras, Greece*; 2019; Poster.

(27) Ahmed, S.; Corvis, Y.; Gahoual, R.; Euan, A.; Lai-Kuen, R.; Seguin, J.; Alhareth, K.; Mignet, N. Development of Hybrid Liposome/Poloxamer Nanoparticles to Delay Hydrophilic Drug Delivery by Thickening the Interior Core of Liposomes. In *6th annual meeting of french society for nanomedicine, SFNano, Dijon, France*; 2019; Poster.

(28) Fliedel, L.; Alhareth, K.; Seguin, J.; Mignet, N.; Fournier, T.; Andrieux, K. Evaluation of Cationic and Neutral Lipomes' Uptake by Human Villous Placental Explants. In *6th annual meeting of french society for nanomedicine, SFNano, Dijon, France*; 2019; Poster.

(29) Valero, L.; Alhareth, K.; Romero, J. E.; Simasotchi, C.; Gil, S.; Roques, C.; Mignet, N.; Fournier, T.; Andrieux, K. Evaluation of Liposomes as Antisense Therapy Vectors for the Treatment of Preeclampsia. In *3rd European conference on pharmaceutics, Bologna, Italy*; 2019; Oral presentation.

(30) Fliedel, L.; Alhareth, K.; Valero, L.; Roques, C.; Mignet, N.; Gil, S.; Fournier, T.; Andrieux, K. Qualitative and Quantitative Assessment of the Lipoplexes' Uptake by the Villous Placental Explants. In *Journées scientifiques de l'ED MTCI, Paris, France*; 2019; Poster.

(31) Alhareth, K.; Collina, S.; Ahmed, S.; Andrieux, K.; Mignet, N. Reproducible Production of Liposomes by an Automated Microfluidic Based Apparatus. In *6th annual meeting of french society for nanomedicine, SFNano, Dijon, France*; 2019; Poster.

(32) Cakilkaya, P.; Ahmed, S.; Gahoual, R.; Corvis, Y.; Alhareth, K.; Mignet, N. Automated Cross-Flow Injection Process for Thermo-Sensitive Liposome-Hydrogel Formulations. In *1st Nanomed workshop, Paris, France*; 2018; Poster.

(33) Ahmed, S.; Corvis, Y.; Cakilkaya, P.; Gahoual, R.; Alhareth, K.; Mignet, N. Conception of Lipogel by Cross Flow Technique. In *5th annual meeting of french society for nanomedicine, SFNano, Montpellier, France*; 2018; Poster.

(34) Valero, L.; Alhareth, K.; Gil, S.; Simasotchi, C.; Scherman, D.; Mignet, N.; Fournier, T.; Andrieux, K. Design and Evaluation of Nanocarriers for the Treatment of Preeclampsia. In *1st Nanomed workshop, Paris, France*; 2018; Oral presentation.

(35) Valero, L.; Alhareth, K.; Romero, J. E.; Simasotchi, C.; Gil, S.; Roques, C.; Mignet, N.; Andrieux, K. Evaluation of Liposomes as Antisense Therapy Vectors for the Treatment of Preeclampsia. In *IFPA 2018 Tokyo, Clinical Growth via Placenta, Tokyo, Japan*; 2018; Oral presentation.

(36) Le Guyader, G.; Vieillard, V.; Pauc, C.; Andrieux, K.; Alhareth, K.; Astier, A.; Paul, M. First Comparative Permeation Study of Different Topical Rapamycin Formulations Proposed for the Treatment of Facial Angiofibromas in Tuberous Sclerosis Complex. In *11th world meeting on Pharmaceutics, Biopharmacy and pharmaceutical technology, Granada, Spain*; 2018; Poster.

(37) Alhareth, K.; Valero, L.; Gil, S.; Simasotchi, C.; Roques, C.; Scherman, D.; Mignet, N.; Fournier, T.; Andrieux, K. Nanomedicine for Pregnancy Disorders: Setting up of Villous Placenta Explants Ex Vivo Model. In *11th world meeting on Pharmaceutics, Biopharmacy and pharmaceutical technology, Granada, Spain*; 2018; Poster.

(38) Mohamed, K. E.; Valero, L.; Fournier, T.; Mignet, N.; Alhareth, K.; Andrieux, K. Quantifying Placental Uptake of Lipoplexes. In *1st Nanomed workshop, Paris, France*; 2018; Poster.

(39) Alhareth, K.; Valero, L.; Mohamed, K. E.; Roques, C.; Dhotel, H.; Gil, S.; Fournier, T.; Mignet, N.; Andrieux, K. Quantifying Placental Uptake of Lipoplexes by HPLC Equipped with Fluorescence Detector. In *5th annual meeting of french society for nanomedicine, SFNano, Montpellier, France*; 2018; Oral presentation.

(40) De la Fuente, M.; Alhareth, K.; Curras, M. J.; Massoumi, F.; Lores, S.; Diez-villares, S.; Vazquez-Rios, A.; Lopez-Lopez, R.; Alonso, M. J. Tailored Lipidic Nanoemulsions to Increased Immunogenicity of Pancreatic Cancer. In *XII Spanish-Portuguese Conference on Controlled Drug Delivery, CRS Spanish Portuguese Local Chapter, Coimbra, Portugal*; 2018; Poster.

(41) Valero, L.; Alhareth, K.; Gil, S.; Simasotchi, C.; Roques, C.; Scherman, D.; Mignet, N.; Fournier, T.; Andrieux, K. Design and Evaluation of Nanocarriers for the Treatment of Preeclampsia. In *4th annual meeting of french society for nanomedicine, SFnano, Bordeaux, France*; 2017; Oral presentation.

(42) Vazquez-Rios, A.; Alhareth, K.; Curras, M. J.; Massoumi, F.; Lores, S.; Diez-villares, S.; Lopez-Lopez, R.; Alonso, M. J.; de la Fuente, M. Increased Immunogenicity of Pancreatic Cancer Cells by Lipidic Nanoemulsions. In *12th annual event of the European Technology Platform on Nanomedicin ETPN, Malaga, Spain*; 2017; Poster.

(43) Alhareth, K.; Vauthier, C.; Bourasset, F.; Gueutin, C.; Ponchel, G.; Moussa, F. Effect of Polymerization Method on in Vivo Biodistribution of a Drug Model Associated with Nanoparticles. In *Colloids and Nanomedicine conference, Amsterdam, The Netherlands*; 2012; Poster.

(44) Alhareth, K.; Vauthier, C.; Bourasset, F.; Ponchel, G.; Moussa, F. Pharmacokinetics and Biodistribution of Poly(Alkylcyanoacrylate) Nanoparticles Obtained by Redox Radical Polymerization. In *Innovation in Drug Delivery: From Preformulation to Development through Innovative Evaluation Process, Aix-en-Provence, France*; 2010; Poster.

(45) Alhareth, K.; Vauthier, C.; Gueutin, C.; Moussa, F. Les Nanoparticules de Poly(Cyanoacrylate d'alkyle) Recouvertes de Polysaccharide : Chargement En Principe Actif et Libération in Vitro. In *Journée de l'école doctoral ED425, Châtenay Malabray, France*; 2009; Poster.

(46) Alhareth, K.; Vauthier, C.; Gueutin, C.; Ponchel, G.; Moussa, F. Les Nanoparticules de Poly(Cyanoacrylate d'alkyle) Recouvertes de Polysaccharide : Chargement En Principe Actif et Libération in Vitro. In *XXIVième Journées Scientifiques du G.T.R.V, Paris, France*; 2009; Poster.

(47) Alhareth, K.; Gueutin, C.; Vauthier, C.; Moussa, F. Purification of Poly(Alkylcyanoacrylate) Nanoparticles by Gel Filtration. In *The 2th conference of pharmaceutical science, Aleppo University, Aleppo, Syria*; 2008; Poster.

Reviewing and editing:

- Reviewer: International Journal of Pharmaceutics, Pharmaceutics, Nanoscale Advances, Drug Delivery, Acta Biomaterialia, ACS Applied Materials & Interfaces, Saudi Pharmaceutical Journal, Cancers.
- Guest editor, Pharmaceutics MDPI, Special Issue "Biological Evaluation and Biomedical Application of Nanoparticles-Based Formulations" 2021
- Remote Referee: **Evaluation of ERC Starting grant** 2020

Seminars:

Alhareth K., How to change the biodistribution of drugs by a nano delivery system. Faculty of Medicine, Jordan University, Amman, Jordan, 2012. (Invited by Pr. Said Ismail)

Alhareth K., Drug delivery systems for pancreatic cancer therapy. Health Research Institute of Santiago de Compostela, Santiago de Compostela, Spain, 2015. (Invited by Dr. Maria de la Fuente Freire)

Alhareth K., Nanomedicine for severe diseases. Saarland University, Saarbrücken, Germany, 2018. (Invited by Pr. Claus Jacob)

Alhareth k., Introduction to Nanomedicine: principles, applications and perspective, Global Classroom, Saarland University, online, 2021.

Alhareth k., Nanomedicine: principles, applications and perspective, Study Bridge Ukraine-Saar course, Saarland University, online, 2023.

Workshops:

Alhareth K., How to read a research paper. IUST career center, IUST, Ghabageb, Syria, 2010.

Alhareth K., Oral presentation skills. Faculty of Pharmacy, Zarqa University, Zarqa, Jordan, 2014.

Alhareth K., Prise de parole en public. Centre de Formation Alpha comm'unic, Rennes, France, 2016.

Alhareth K., How to give a scientific talk. UTCBS France-China Summer school, Paris Descartes University, Paris, France, 2017.

Alhareth K., Writing skills. The international week for science, Saarland University, Saarbrücken, Germany, 2018.

Animation of UTCBS PhD Club, since 2019 to present.

Participation in thesis Jury:

- PhD thesis of Sainza Lores Tourino," Nanosystems for the intracellular delivery of antitumoral molecules" under the supervison of Dr. Maria De la Fuente Freire, University Santiago de Compostela (USG), Santiago de Compostela, Spain. 2022.
- PhD Thesis of Louise Fliedel, "Conception, characterization of nanocarriers and evaluation of their interaction with the placental barrier: conception of placental-targeting liposomes and lipoplexes for oligonucleotide delivery to treat placental associated disorders" under the supervision of Pr. Karine Andrieux, Unviersité Paris Cité, Paris, France. 2022.
- PhD Thesis of Shayan Ahmed, "Conception of nanosized hybrid liposome/polymer particles for hydrophilic drug delivery" under the supervision of Dr. Nathalie Mignet, Unviersité Paris Cité, Paris, France. 2020.
- Pharmacy thesis of Celest Attiach " Développement de nouvelles méthodes pour l'administration orale de peptides et protéines thérapeutiques, l'exemple de l'insuline" under the supervision of Pr. Kawthar Bouchemal, Université Paris Saclay, Chatenay-Malabry, France. 2021.
- Pharmacy thesis of Sonia Lombardo "Les nanoparticules polymériques : de l'échelle du laboratoire à l'échelle industrielle" under the supervision of Pr. Vincent Faivre, Université Paris Saclay, Chatenay-Malabry, France. 2020.

Participation in European projects for education:

- Co-coordination of Erasmus Mundus European Master (EMJMD) Nanomedicine for Drug Delivery, 4 European partners (Université Paris cité- France, University of Patras- Greece, University of Pavia- Italy, Univeristy of Angers- France), September 2021 until present.
- Co-coordination of Erasmus+ project Dominos (Digital Osce for Medical specialties - INnOvation for Students), 6 European Partners (Université Paris cité- France, Charité Universitätsmedizin Berlin- Germany, KU Leuven- Belgium, Sapienza University of Rome- Italy, University of Ljubljana- Slovenia, Medical University of Warsaw- Poland) March 2022 until present.