

## ASMAA W. M AL-ASMAR

PhD, Biotechnology

4/2025

### PERSONAL INFORMATION

**Name:** Asmaa W.M.  
**Surname:** Al-Asmar  
**Other surname:** Sabah  
**Marital Status:** Married  
**Gender:** Female  
**Date of birth:** 28/03/1987  
**Nationality:** Palestinian  
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**Mobile:** +972568936580  
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### Web pages

\* <https://staff.najah.edu/en/profiles/2840/>  
\* Research ID: <https://www.researchgate.net/profile/Asmaa-Al-Asmar/publications>  
\* ORCID: <https://orcid.org/0000-0003-0751-6301>  
\* Google Scholar:  
[https://scholar.google.com/citations?user=9TB\\_ttwAAAAJ&hl=en&oi=sra](https://scholar.google.com/citations?user=9TB_ttwAAAAJ&hl=en&oi=sra)

### WORK EXPERIENCES

2021 – Present	<b>Assistant Professor</b> Faculty of Sciences, An-Najah National University, Nablus (Palestine)
17/03/2025-Present	<b>Agriculture and Food Research Unit Coordinator</b> Energy, Water, and Food Security Research Center- Scientific Center, An-Najah National University, Nablus, Palestine
23/06/2020 - 2023	<b>Study Director</b> An-Najah National University, Nablus (Palestine) An-Najah BioScience Unit (NBU)
05/05/2020– 2023	<b>Calibration /Validation Technician</b> An-Najah National University, Nablus (Palestine) An-Najah BioScience Unit (NBU)
01/08/2016–30/11/2016	<b>Quality Assurance Auditor</b> An-Najah National University, Nablus (Palestine) An-Najah BioScience Unit (NBU)
01/03/2015-30/11/2016	<b>Head of Bio-Analytical Laboratories</b> An-Najah National University, Nablus (Palestine) An-Najah BioScience Unit (NBU)
01/01/2010-28/02/2015	<b>Lab.Technician</b> An-Najah National University, Nablus (Palestine) Analysis, Poison Control, and Calibration Center - Food Analysis - Chemical Analysis - Biological Analysis - Physical Analysis - Air Analysis

## **EDUCATION AND TRAINING**

**31/12/2016- 31/01/2020    PhD in Biotechnology**  
Department of Chemical Sciences  
University of Naples “Federico II” (UNINA)

**Project title:**“Nanoreinforced and crosslinked hydrocolloid films to prevent the formation of toxic products during food cooking and to extend food shelf-life”

**PhD Abroad Period 26/4/2018 -30/7/2018 Madrid-Spain**  
I had a three-month period abroad at Universidad Complutense de Madrid-Spain.  
Faculty of chemical science department of analytical chemistry.

**01/08/2005–01/12/2009    B. Sc. Applied Chemistry**  
An-Najah National University, Nablus (Palestine)

**2009                    Training Certificate**  
An-Najah National University, Nablus (Palestine)  
- Analysis of drugs, food supplements, and food additives by using HPLC/Waters and HPLC/Shimadzu

**2009                    Training Certificate**  
Palestinian Standards Institution (PSI), Ramallah (Palestine)  
Metrology and Calibration:  
- Introduction to metrology science  
- Calibration of electronic balance  
- Calibration of weights  
- Uncertainty calculation methods  
- Calibration of thermometers  
- Calibration of thermal devices/ indicators

**2011                    Training Certificate**  
Palestinian Standards Institution (PSI), Nablus (Palestine)  
- Calibration of Force Machines

**2011                    Training Certificate**  
Palestinian Standards Institution (PSI), Nablus (Palestine)  
- Calibration and Verification of Volume's Measuring Tools

**2013                    Training Certificate**  
International Pharmaceutical Research Center (IPRC), Amman (Jordan)  
- Good Clinical Practice (GCP)  
- Good Laboratory Practice (GLP)

**2015                    Training Workshop Certificate**  
An-Najah National University, Nablus (Palestine)  
- Good Clinical Practice (GCP)

**2016**

**Training Certificate**

An-Najah National University, Nablus (Palestine)

- Good Clinical Practice (GCP)
- Good Laboratory Practice (GLP)

**2021-2022**

**Training Certificate**

An-Najah National University, Nablus (Palestine)

- Good Clinical Practice (GCP)
- Good Laboratory Practice (GLP)

**PERSONAL SKILLS**

**Mother tongue(s)**

Arabic

**Other language(s)**

**English**

UNDERSTANDING

SPEAKING

WRITING

Listening

Reading

interaction

production

C1

C1

C1

C1

Levels:

- A1 and A2: Basic user
- B1 and B2: Independent user
- C1 and C2 : Proficient user

Common European Framework of Reference for Languages

**Communication skills**

- Good communication skills gained through my experience in the Analysis, Poison Control, and Calibration Center (APCC), An-Najah National University, Palestine.

**Organizational/  
managerial skills**

- Good team leading skills as head of bio-analytical laboratories

**Job-related skills**

- Good in the tests of nutritional screening in food like protein, carbohydrate, fat, vitamins, minerals such as (Cl, Cu, Cr, Cd, Fe, Pb, Zn, k, Na, Ca,... etc), sucrose in honey and analysis of olive oil (acidity, peroxide value, phenol content and  $\Delta K$ ).
- Good in tests detergents material (measurement of the chlorine, salt, pH, minerals and active substance).
- Good in the different food analysis like all chemical, microbiological and physical analysis.
- Good of the analysis of water chemical/microbial composition.
- Good on the preparation and writing the standard operating procedure (SOP).
- Good in the microbiological tests include (CFU/g of bacteria in all types of food, pharmaceutical and cosmetics) and very good in the vitamins analysis.
- Good on writing reports and audit.

- I was responsible for the training courses (olive oil, microbial, HPLC and food chemistry analysis in the Analysis, Poison control and Calibration Center at An-Najah National University.
- Preparation of edible films and characterization for mechanical, physiochemical and permeability analysis.

## **Other skills**

### **Certified trainer in An-Najah N. University for the following training:**

- ✓ HPLC training course, for undergraduate and post-graduation students, and also for Palestinian food processing and pharmaceutical factories.
- ✓ Microbiology training course, for under graduation and post-graduation student, also for Palestinian food processing and pharmaceutical factories.
- ✓ Detergent training course, for under graduation and post-graduation student, also for factories.
- ✓ Food analysis and quality control training course for undergraduate and post-graduation students, as well as for Palestinian food processing factories.

### ***Experience in using the following devices:***

- UV-spectrometer
  - HPLC
  - LC-MS/MS
  - FT-IR
  - Kjeldahl for protein analysis
  - TGA/DSC thermal analysis
  - Atomic absorption
  - Flame photometer
  - Viscometer
  - pH, conductivity meter and moisture balance
  - Lactoscan for milk analysis
  - Rotary evaporator
  - Soxhlet extraction
  - Zetasizer NANO-ZSP
  - Instron for mechanical measurement
  - ExtraSolution instruments for permeability testing
  - SDS-page
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## **ADDITIONAL INFORMATION**

### **Communications of Conference and Workshops**

- ✓ Scientific Conference Second Palestinian International Conference On Material Science and Nanotechnology (PICNM2016). 23-24, March, 2016. An-Najah National University, Nablus, Palestine.

- ✓ Workshop BIO/10 (99 Poster of Biochemistry Teachers and Researchers of the University of Campania). Napoli-Italy. 18, January 2017. Aula Magna del Complesso delle Biotecnologie.
- ✓ Workshop on NanoBiomedicine in Naples: The next future of Theranostics. Napoli-Italy. 22, March 2019.
- ✓ Sustainable polymers for a circular economy. Napoli-Italy. 24, June 2019. Aula Magna, Complex of San Giovanni, Federico II University. 5<sup>th</sup> Blue Sky Conference.

## Oral presentations

1. **Al-Asmar A.**, Giosafatto C.V.L., Mariniello L. Edible coatings and films to reduce acrylamide formation in fried foods and to extend strawberry shelf-life. Workshop BIO/10 (Biochemistry Teachers and Researchers of the University of Campania) Napoli-Italy, Aula Magna del Complesso delle Biotecnologie, 17<sup>th</sup> May 2019
2. **Al-Asmar A.**, Giosafatto C.V.L., García Almendárez B.E., Mariniello L. Pectin-based film wrapping reinforced by mesoporous silica nanoparticles to extend the shelf life of strawberry. 9<sup>o</sup> Shelf Life International Meeting (SLIM 2019), Naples-Italy, 17-20<sup>th</sup> June 2019
3. Mariniello L., **Al-Asmar A.** Sustainable hydrocolloid-based bioplastics for obtaining healthier foods. 60<sup>th</sup> Congress of the Italian Society of Biochemistry and Molecular Biology (SIB). Lecce-Italy, 18-20, September 2019.
4. Sabbah M., **Al-Asmar A.**, Mansor N., Yaseen D. (2020). Bio-plastics and edible films for food packaging. Congress entitled Challenges of Environment in the Arab Region Focus on Status of Environment in Palestine. Al-Quds University and the Arab Academic and Scientists Union (AASU) 28/11/2020.

## Publications

### A. Papers:

1. Sabbah M, **Al-Asmar A.**, Jaradat Y, Hasan NM, Younis D. Impact of pectin-based sachets with olive and guava leaf extracts on chicken powder stock properties. Journal of Plastic Film & Sheeting. 2025;. doi:10.1177/87560879251336620.....**IF=2.1**
2. Sabbah, M.; **Al-Asmar, A.**; Younis, D.; Al-Rimawi, F.; Famiglietti, M.; Mariniello, L. Production and Characterization of Active Pectin Films with Olive or Guava Leaf Extract Used as Soluble Sachets for Chicken Stock Powder. *Coatings* 2023, *13*, 1253. <https://doi.org/10.3390/coatings13071253...> .....**IF=2.9**
3. Sabbah, M., **Al-Asmar, A.** (2022). Evaluation the quality and safety of raw table eggs in north Palestinian markets. An-Najah University Journal for Research - A (Natural Sciences), 37.

4. Yaseen, D.; Sabbah, M.; **Al-Asmar, A.**; Altamimi, M.; Famiglietti, M.; Giosafatto, C.V.L.; Mariniello, L. (2021). Functionality of films from nigella sativa defatted seed cake proteins plasticized with grape juice: use in wrapping sweet cherries. *Coatings*, 11, 1383. <https://doi.org/10.3390/coatings11111383>.....**IF= 2.881**
  
5. **Al-Asmar A.**, Giosafatto, C. V. L., Sabbah, M., Mariniello, L. (2020). Hydrocolloid-based coatings with nanoparticles and transglutaminase crosslinker as innovative strategy to produce healthier fried kobbah. *Foods*. 9, 698-718.....**IF=4.092**
  
6. Giosafatto, C.V.L., Fusco, A., **Al-Asmar, A.**, Mariniello, L. (2020). Microbial Transglutaminase as a Tool to Improve the Features of Hydrocolloid-Based Bioplastics. *International Journal of Molecular Sciences*: 21, 3656.....**IF=4.556**
7. **Al-Asmar A.**, Giosafatto C.V.L., Sabbah M., Sanchez A., Villalonga Santana R., Mariniello L. (2020). Effect of mesoporous silica nanoparticles on physico-chemical properties of pectin packaging material for strawberry wrapping. *Nanomaterials*: 10, 526 71.....**IF=4.034**
  
8. Romano A., Giosafatto C.V.L., **Al-Asmar A.**, Masi P., Romano R., Mariniello L. (2019). Structure and in vitro digestibility of grass pea (*Lathyrus sativus* L.) flour following transglutaminase treatment. *European Food Research and Technology*. 245, 1899 1905.....**IF=2.01**
  
9. **Al-Asmar A.**, Giosafatto C.V. L., Panzella L., Mariniello L. (2019). The effect of transglutaminase to improve the quality of either traditional or pectin-coated falafel (Fried Middle Eastern Food). *Coatings*, 9: 331 343.....**IF=2.436**
  
10. Giosafatto C.V.L., Sabbah M., **Al-Asmar A.**, Esposito M., Sanchez A., Villalonga Santana R., Cammarota M., Mariniello L., Di Pierro P., Porta R. (2019). Effect of mesoporous silica nanoparticles on glycerol-plasticized anionic and cationic polysaccharide edible films. *Coatings*, 9:172-181.....**IF= 2.436**
  
11. Romano A., Giosafatto C.V.L., **Al-Asmar A.**, Aponte M., Masi P., Mariniello L. (2019). Grass pea (*Lathyrus sativus*) flour: microstructure, physico-chemical properties and in vitro digestion. *European Food Research and Technology*, 245: 191 -198.....**IF= 2.010**
  
12. Giosafatto C.V.L., **Al-Asmar A.**, D'Angelo A., Roviello V., Esposito M., Mariniello, L. (2018) Preparation and characterization of bioplastics from grass pea flour cast in the presence of microbial transglutaminase. *Coatings*, 8: 435-446.....**IF= 2.436**

13. **Al-Asmar A.**, Naviglio D., Giosafatto C.V. L., Mariniello L. (2018). Hydrocolloid-Based Coatings are Effective at Reducing Acrylamide and Oil Content of French Fries. *Coatings*, 8: 147-159..... **IF= 2.4**

#### **B. Conference Papers:**

1. **Al-Asmar A.**, Giosafatto C.V. L., Panzella L., Mariniello L. Improving the health quality of fried falafel (Middle Eastern food) by using transglutaminase and/or pectin coating. 1st Coatings and Interfaces Web Conference. 15-29<sup>th</sup> March, 2019.
2. Rasem Hasan, Amjad I.A. Hussein, **Asmaa Al-Asmar**, Abdelhaleem Khader, Hanan A. Jafar, Tawfiq Saleh. Long term monitoring of air pollution from quarries with health effects - managerial and technical solution. International Workshop on Air Pollution and Public Health.5-7 February, 2020 India

#### **C. Chapter in Book:**

1. Hasan, A. F. R., Hussein, A. I., A., **Al-Asmar. A.**, Khader, A., Jafar, H. A., Saleh, T. Long term monitoring of air pollution from quarries with health effects—case of Palestine. El-Gendy N. S. and Mathur V. (Eds.). In book. Air Pollution and Public Health Challenges, Interventions and Sustainable Solutions. (2021). ISBN: 978-93-90951-00-0.
2. Giosafatto C.V.L., **Al-Asmar A.**, and Mariniello L. (2018). Transglutaminase protein substrates of food interest. In, *Enzymes in Food Technology: improvement and innovation*. Springer. pp. 293-317. DOI: 10.1007/978-981-13-1933-4-15.

#### **D. Posters:**

1. Giosafatto C.V.L., Sarcina R., Esposito M., **Al-Asmar A.**, De Gregorio A., and Mariniello L. "*Edible films from transglutaminase-crosslinked environmentally friendly biomacromolecules*". XXI IUPAC - CHEMRAWN World Conference on Solid Urban Waste Management. CNR, Piazzale Aldo Moro, 7 - 00185, Rome, Italy, 6-8 April 2016.
2. Giosafatto C.V.L., **Al-Asmar A.**, Di Pierro P., De Gregorio A., and Mariniello L. "*Antioxidant properties and in vitro gastric digestion of Lathyrus sativus*". XIV Congress of the Italian Federation of Life Sciences (FISV), Rome, Italy, 20-23 September 2016.

3. Giosafatto C.V.L., Romano A., Esposito M., **Al-Asmar A.**, and Mariniello L. "*Phenolic content, antioxidant activity and protein digestibility of grass pea flour*". 1st Conference on Food Bioactives and Health, Norwich, UK, 13-15 September 2016.
4. **Al-Asmar A.**, Naviglio D., Giosafatto C.V.L., and Mariniello L." *Hydrocolloid-based coatings to prevent acrylamide formation in fried foods*". 59th Congress of the Italian Society of Biochemistry and Molecular Biology (SIB).Caserta-Italy, 20-22. September 2017.
5. Giosafatto C.V.L., Roviello V., **Al-Asmar A.**, Regalado-Gonzales C., D'Angelo A., and Mariniello L. "*Preparation and characterization of grass pea-based bioplastic prepared in the presence of transglutaminase*". 59th Congress of the Italian Society of Biochemistry and Molecular Biology (SIB).Caserta-Italy, 20-22. September, 2017.
6. **Al-Asmar A.**, D'Angelo A., Esposito, M., and Mariniello, L. "*Effect of mesoporous silica nanoparticles on the pectin film mechanical properties*".XV FISV Congress. Roma-Italy, 18-21 September 2018.
7. Giosafatto C.V.L., Romano A., **Al-Asmar A.**, Abdalrazeq M., and MarinielloL. "*Microbialtransglutaminase as effective tool to modify functional properties and in vitro digestibility of grass pea (Lathyrus sativus L.) flour*". 6<sup>th</sup> international conference of food digestion Granada 2019. Granada-Spain, 2-4 April 2019.

#### Summer School

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- ***In Silico Methods for Food Safety***, 13-15, June, 2017, Parma –Italy.
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#### Teaching Courses

- 2020/2021 Faculty of Graduate Studies for Natural Sciences. "***Water & Environmental Engineering***".

- Aquatic Chemistry.
- Water Quality Lab.

2021/2022 Faculty of Agriculture and Veterinary Medicine

**"Department of Nutrition and Food Technology"**

- Food Packaging.
- Seminar in Nutrition and Food Technology.

2021/2022 Faculty of Graduate Studies for Natural Sciences

**"Department of Nutrition and Food Technology"**

- Food Chemistry and Biochemistry.

2022/2023 Faculty of Medicine & Health Sciences

**" Department of Biomedical Sciences"**

- Principles of Biochemistry and Metabolic Biochemistry Lab.

2023/2024 Faculty of Medicine & Health Sciences



**" Department of Biomedical Sciences"**

- Principles of Biochemistry and Metabolic Biochemistry Lab.  
2023/2024 Faculty of Sciences

**" Department of Chemistry"**

- Practical General Chemistry for health studies  
- Practical General Chemistry (I)

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**Memberships**

- ✓ **2012-2016.** Member of Committee in the Palestinian Standards Institution (PSI) for Food and Cosmetics.
- ✓ **From 2018-Present.** Italian Society of Biochemistry and Molecular Biology (SIB). Società Italiana di Biochimica e Biologia Molecolare 2018. <http://www.biochimica.it/en/principal/>

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**Reviewer**

- Chemical Engineering Transactions Journal
- Foods/MDPI
- Applied Sciences/MDPI
- Biocatalysis and Biotransformation

**References**

- Prof. Loredana Mariniello. Department of Chemical Science. University of Naples Federico II. [loredana.mariniello@unina.it](mailto:loredana.mariniello@unina.it). +393335496290
- Prof. Reynaldo Villalonga Santana. Department of Chemical Science. Complutense University of Madrid, Spain, email (rvillalonga@quim.ucm.es)
- Dr. Naim Kittana. Associate Professor, Department of Biomedical Sciences, Head of An-Najah BioSciences Unit (NBU), An-Najah National University, Palestine, [naim.kittana@najah.edu](mailto:naim.kittana@najah.edu). +970599840556

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