

CV Mohyeddin Darwish Assali, PhD.

Personal Information

Nationality: Palestinian

Sex: Male

Marital status: Married

Contact information: Pharmacy department, An-Najah National University

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QUALIFICATIONS

- | | |
|------------------|--|
| 2008-2012 | PhD. degree with honor "cum laude" in medicinal chemistry-nanomedicine.

CSIC-Seville University-Spain |
| 2007-2008 | Master degree "Advances studies in chemistry", (molecular chemistry: synthesis and applications) at Seville University-Spain |
| 2002-2006 | B.Sc. Pharmacy with honor "my rank was the first of the graduates".
faculty of Pharmacy, An Najah National University, Nablus, Palestine. |
| 2002 | High school exam "Tawjihi"
Qadri Tuqan Secondary School-Nablus, Palestine.
Accum. Average: excellent. |

PROFESSIONAL EXPERIENCES

- May 2013- Present** **Assistant professor**
- Pharmacy department at An-Najah National University-Nablus, Palestine
- Teaching courses:* medicinal chemistry, organic chemistry, organic chemistry lab., drug delivery systems, advanced medicinal chemistry.
- Sep 2012-Jan 2013** **Research assistant**
- Centro de investigaciones cientificas isla de cartuja-Consejo superior de investigaciones cientificas "CSIC" Seville-Spain.
- July 2011** **Short stay**
- Prof. Patrick Schultz at Institute of Genetics, Molecular and Cellular Biology (IGBMC)-Strasbourg-France.
- Training at Transmission electron microscope "TEM".
- Aug 2006-July 2007** **Teaching & Research assistant**
- Pharmacy department at An-Najah National University-Nablus, Palestine.
- Jun 2006-Jul 2007** **Pharmacist**
- Al-Dahyaa pharmacy-Nablus-Palestine.
- 2005-2006** **Training Pharmacist**
- Hasan pharmacy-Nablus-Palestine
- Rafidia hospital pharmacy-Nablus-Palestine.

AWARDS

06-2014	University of Seville-Bruker prize for investigation
04-2014	cicCartuja-Ebro Foods 2013 prize for investigation
2008-2012	Spanish PhD scholarship from MAEC-AECID (Ministerio de Asuntos Exteriores y de Cooperación-Agencia Española de Cooperación Internacional para el Desarrollo).
2007-2008	Spanish master scholarship from Tres Culturas foundation and la junta de andalucia.

LANGUAGES

- Arabic: mother language.
- English: Fluent "reading, writing, speaking".
- Spanish: Fluent "reading, writing, speaking".

PROJECTS

➤ *Fund research projects:*

- **Project title:** Nano-antibiotics bullet: Highly functionalized carbon nanotubes and their antibacterial activity.
Principle investigator: Dr. Mohyeddin Assali
Funded by: Ministry of education and high education-Palestine
Validity: 01/12/2013-01/12/2015
Donation: 25000 JD
Reference: 100/1/2013
- **Project title:** Manipulación de la topología y funcionalidad de los carbohidratos para la síntesis de catalizadores nanométricos.
Principle investigator: Dr. Nouredine Khlar.
Fund by: ministry of science and innovation-Spain "Ministerio de Ciencia e Innovación".
Validity: 01/01/2011-31/12/2013
Donation: 78000 Euros
Reference: CTQ2010-21755-C02-01
- **Project title:** Nanocatálisis y catálisis supramolecular: nuevas herramientas para una química verde.
Principle investigator: Dr. Nouredine Khlar.
Fund by: Junta de Andalucía
Validity: 01/02/2008 - 31/01/2012
Donation: 297668 Euros
Reference: P07-FQM-02774.

Mohyeddin Assali

PhD DEGREE

Title: Biocompatible carbon nanotubes: synthesis and applications in biomedicine.

Supervisors: Prof. Inmaculada Fernandez Fernandez & Dr. Nouredine Khiar.

Organism: Seville University- CSIC.

MASTER DEGREE

Title: New nanobiomaterials: functionalization of carbon nanotubes with neoglycolipids.

Supervisors: Prof. Inmaculada Fernández Fernández & Dr. Nouredine Khiar

Organism: Seville University- CSIC

Courses of the master period: Advanced medicinal chemistry, polymer chemistry and biomaterials, synthesis of bioactives molecules, organometallics chemistry, molecular modeling, mechanisms of organic reactions, advance laboratory of spectroscopy, biotechnology of enzymes, quality control, and documentation in chemistry.

RESEARCH INTERESTS

- Pharmaceutical nanotechnology “nanomedicine”:
 - Biofunctionalizations and coating of nanomaterials “carbon nanotubes, gold nanoparticles, graphene, and other metal nanoparticles” for biomedical applications in cancer and infectious diseases.
 - Synthesis of supramolecular compounds such as liposomes, lipid nanotubes and nanogels and their applications in biology and medicine.
 - Characterization of nanomaterials by adequate techniques such as TEM, SEM, AFM, TGA, RAMAN, UV-VIS, FTIR, SAXS,
- Organic and medicinal chemistry
 - Organic synthesis of biological molecules especially carbohydrate chemistry for their applications in viral and bacterial therapies.
 - Analyzing bioorganic compounds by HPLC, NMR, column chromatography, mass spectroscopy, FTIR, elemental analysis.
- Molecular modeling in designing new therapeutic drugs.
 - Using different software programs in quantum chemistry like AUTODOCK, CHEM DRAW 3D, HYPERCHEM, SYPYL.

RESEARCH & TECHNICAL SKILLS

➤ Technical skills:

- Nuclear magnetic resonance "NMR, ¹H, ¹³C, COSY, HMQC, DOSY".
- High pressurized liquid chromatography "HPLC".
- Fourier transform infrared spectroscopy "FTIR".
- UV-Vis spectroscopy.
- RAMAN spectroscopy.
- Thermo-gravimetric analysis "TGA".
- Transmission electron microscopy "TEM".
- Scanning electron microscopy "SEM".
- Atomic force microscopy "AFM".
- Dynamic light scattering "DLS".
- Differential scanning calorimetry "DSC".
- Flash chromatography.
- Fluorescence Microscopy.

➤ Computer skills

- Microsoft office "word, powerpoint, excel"
- Adobe programs
- Origin, Endnote
- WSxM 5.0 for managing AFM images
- topspin for managing NMR spectra
- Scopus
- Scifinder
- Endnote

➤ Personal characters

- Dynamic and independent person
- High capacity for leadership
- High communication skills.
- Highly motivated for research
- High work & planning capacity
- Good team worker
- high capability for adaptation

THESIS SUPERVISION

I am supervising the following Msc. student theses at An-Najah N. University

1. Farah Abdallah, BSc. Pharmacy.

Title of MSc. Thesis: Nano-antibiotics bullet: Highly functionalized carbon nanotubes and their antibacterial activity.

2. Majd Bani-Odeh, BSc. Pharmacy

Title of MSc. Thesis: Drug-loaded polymer nanoparticles: synthesis and their biopharmaceutical applications

3. Deema Fahim Hamad, BSc. Pharmacy

Title of MSc. Thesis: Bio-functionalization of SWCNTs with combretastatin A4 for targeted cancer therapy

THESIS EXAMINATION

I have examined different Msc. Graduated student's theses at An-Najah N. University

OTHER PROFESSIONAL EXPERIENCES

- Member of various committees at department level and University level (such as master program of pharmaceutical sciences, globalization of An Najah University journals, and much others)
- Membership of Real Sociedad Española de Química since 2011.
- Membership of Pharmaceutical Association in Palestine since 2006.
- I attended an informative course about scopus titled: Scopus-Jornadas Parques Científicos (Sevilla)-El descubrimiento y la difusión de la investigación.
- I was one of the organizers of first Poison Prevention Week for the first time in Palestine in March of 2006.

PUBLICATIONS

1. Murad Abualhasan , Mashhour M. Ghanem, **Mohyeddin Assali**, and Abdel Naser Zaid. The effect of non-compliance of PPI instruction on the stability of reconstituted oral antibiotics. *Pharmacy practice* **2014**. Submitted.

2. Murad Abualhasan, **Mohyeddin Assali**, Nidal Jaradat, Rana Tarayra, Aseel Hamdan, Rula Ardah and Abdel Nasr Zaid. Synthesis and Formulation of Ibuprofen Pro-Drugs for enhanced Transdermal Absorption. *International Journal of Pharmacy and Pharmaceutical Sciences*, **2015**, *7*, 352-354.
3. **Mohyeddin Assali**, Murad Abualhasan, Nidal Jaradat, Rana Tarayra, Aseel Hamdan, Rula Ardah, Abdel Nasr Zaid. Synthesis of Naproxen Pro-Drugs for enhanced Transdermal Absorption. *Journal of chemical and pharmaceutical research*, **2014**, *6*, 1-4.
4. Abdel Naser Zaid, **Mohyeddin Assali**, Aiman Qaddomi, Mashhour Ghanem, Yara Abu Zaaror. Preparation and Stability Evaluation of Extemporaneous Oral Suspension of Valsartan Using Commercially Available Tablets. *International journal of pharmaceutical compounding*, **2014**, *18*, 169-174.
5. **Mohyeddin Assali**, Juan-José Cid, Inmaculada Fernández and Nouredine Khier. Supramolecular Diversity through Click Ligation: Switching from Self-Assembled Spherical Nanomicelles to 1D-Tubular Nanostructures and Tridimensional Gels. *Chemistry of Materials*, **2013**, *25*, 4250. (impact factor: 8.24).

(Highlighted as the article of the month of May 2014 of ciccartuja)
6. **Mohyeddin Assali**, Juan-José Cid, Manuel Pernía leal, Miguel Muñoz-Bravo, Inmaculada Fernández, Ralf E. Wellinger, Nouredine Khier. Glyconanosomes: Disc-shaped Nanomaterials for the Water Solubilization and Controlled Delivery of Hydrophobic Molecules. *Acs nano*, **2013**, *7*, 2145. (impact factor: 12.1).

(Highlighted as the article of the month of May 2013 of ciccartuja, gained the 3rd position of cicCartuja-Ebro Foods prize as the best article for 2013)
7. **Mohyeddin Assali**, Manuel Pernía-Leal, Inmaculada Fernández and Nouredine Khier. Synthesis and biofunctionalization of carbon nanotubes rings. *Nanotechnology*, **2013**, *24*, 085604. (impact factor: 3.84)
8. Manuel Pernía Leal, **Mohyeddin Assali**, Inmaculada Fernandez, and Nouredine Khier. Copper-Catalyzed Azide–Alkyne Cycloaddition in the Synthesis of Polydiacetylene: "Click Glycoliposome" as Biosensors for the Specific Detection of Lectins. *Chemistry- a European journal*, **2011**, *17*, 1828. (impact factor: 5.9)

(Highlighted as the article of the month of March 2011 of ciccartuja)
9. **Mohyeddin Assali**, Manuel Pernía Leal, Inmaculada Fernández, Pablo Romero-Gomez, Rachid Baati, and Nouredine Khier. Improved Non-Covalent Biofunctionalization of MWCNTs using Carbohydrates Amphiphiles with a Butterfly-like Polyaromatic Tail, *Nano research*, **2010**, *3*, 764. (impact factor: 7.39).

(Highlighted as the article of the month of December 2010 of Ciccartuja.

10. **Assali, M.**; Pernía Leal, M.; Fernández, I.; Baati, R.; Mioskowski, C.; Khiar, N. Non-covalent functionalization of carbon nanotubes with glycolipids: Glyconanomaterials with specific lectin-affinity. *Soft Matter* **2009**, *5*, 948. (impact factor: 4.39)
11. **Mohyeddin Assali**, Juan-José Cid, Manuel Pernía-Leal, Inmaculada Fernández and Nouredine Khiar. An Efficient Route to S-linked Glycoconjugates. Submitted to *journal of organic chemistry*.
12. **Mohyeddin Assali**, Manuel Pernía Leal, Miguel Muñoz-Bravo, Ralf E Wellinger, Inmaculada Fernandez, Nouredine Khiar. Improvement of the non-covalent functionalization of SWNTs by photopolymerized glyconanorings with specific interaction with *E. coli*. *In preparation*.
13. Juan-José Cid, **Mohyeddin Assali**, Inmaculada Fernández and Nouredine Khiar. Synthesis of Water-Soluble SWCNTs Covalently-Functionalized with Carbohydrates through Diazonium Coupling of Amino-substituted Sugars. *In preparation*.

Conferences

1. **Authors:** Mohyeddin Assali.
Title: Sweet Nanomaterials: synthesis and biomedical applications
Congress: 4th Biomedical Research Symposium (organized by Palestinian Forum for Medical Research)
Date: 26 April 2014
Type: Oral presentation
Place: Nablus, Palestine
2. **Authors:** Mohyeddin Assali.
Title: Biofunctionalization of carbon nanotubes for biomedical and pharmaceutical applications
Congress: The 15th Scientific Congress of the Jordanian Pharmacists Association
Date: 03-05 April 2014
Type: Oral presentation
Place: Amman, Jordan
3. **Authors:** Juan-José Cid, **Mohyeddin Assali**, Manuel Pernía-Leal, Inmaculada Fernández, Miguel Muñoz, Ralf Wellinger and Nouredine Khiar.
Title: Sweet Nanomaterials: Carbohydrate-Coated Carbon Nanotubes and Glyconanosomes as Advanced Nanovectors for Drug Delivery.

- Congress:** Nanobiomed
Date: 23-26 April 2013
Type: Poster
Place: Bilbao, Spain
4. **Authors:** Nouredine Khiar, **Mohyeddin Assali**, Manuel Pernía-Leal, Inmaculada Fernández, Miguel Muñoz, Ralf Wellinger, and Juan-José Cid.
Title: SWCNTs/Glycolipids: New Biologically-active Supramolecular Assemblies.
Congress: XXIV Reunión Bienal De Química Orgánica.
Date: 11-13 July 2012
Type: Poster flash (oral communication).
Place: San Sebastián, Spain.
5. **Authors:** N. Khiar, **M. Assali**, M. Pernía Leal, J.J. cid, I. Frenández.
Title: Sweet Nanotubes: New Biologically active Nanosystems.
Congress: Challenges in Bioorganic & Organic Medicinal Chemistry: 13th Tetrahedron Symposium.
Date: 26-29 June 2012.
Type: Poster.
Place: Amsterdam, Netherlands.
6. **Authors:** **Mohyeddin Assali**, Manuel Pernía Leal, Inmaculada Fernández, Miguel Muñoz, Ralf Wellinger, Nouredine Khiar.
Title: Sweet Carbon Nanotubes: New biologically active Glyconanosystems
Congress: VIII Simposio de Jóvenes Investigadores-RSEQ.
Date: 25-28 October 2011.
Type: oral communication
Place: Malaga, Spain
7. **Authors:** Nouredine Khiar, **Mohyeddin Assali**, Manuel Pernía Leal, Inmaculada Fernández, Rachid Baati, Miguel Muñoz, Ralf Wellinger
Title: Supramolecular Self-Organization of Neoglycolipids on Carbon Nanotubes: New Bioactive Glyconanosystems.
Congress: 17th European Symposium of Organic Chemistry (ESOC 2011)
Date: 10-15 July 2011.
Type: Poster
Place: Crete (Greece).
8. **Authors:** **Assali, M**, Fernández, I, Muñoz, M, Wellinger, R, Khiar, N.
Title: Carbon Nanotubes-Carbohydrates: New Functional Nanosystems Against Bacterial Infections.

- Congress:** III Reunión de Jóvenes Farmacólogos de Andalucía
Date: 16-17 June 2011
Type: Poster
Place: Sevilla, Spain.
9. **Authors:** Navas, R.; Assali M.; Fernandez, I. ; Rotello, V.M.; Khiar, N.
Title: Nanopartículas De Oro Y Quantum Dots: Nuevas Nanosistemas Para El Transporte De Fármacos.
Congress: III Reunión de Jóvenes Farmacólogos de Andalucía
Date: 16-17 June 2011
Type: Poster
Place: Sevilla, Spain.
10. **Authors:** N. Khiar, **M. Assali**, M. Muñoz Bravo, I. Fernández.
Title: Carbohydrates Amphiphiles for Non-Covalent Functionalization of MWCNTs: Biocompatible Nanoglycoarrays.
Congress: X Jornadas de carbohidratos.
Date: 15-18 September 2010
Type: Poster
Place: Granada, Spain.
11. **Authors:** N. Khiar, **M. Assali**, M. Pernía, R. Recio, I. Fernández, R. Baati.
Title: Supramolecular Self-Organization of Neoglycolipids on Carbon Nanotubes: Glyconanoabacus with Biomimetic Multivalent Display of Carbohydrates.
Congress: Challenges in Organic Chemistry and Chemical Biology (ISACS1).
Date: 6-9 July 2010
Place: San Francisco, USA.
12. **Authors:** N. Khiar, **M. Assali**, M. Pernía, R. Baati, R. Recio, I. Fernández, and C. Mioskowski.
Title: Bioengineering of Carbon Nanotubes: Glyconanoabacus with Biomimetic Display of Carbohydrates.
Congress: Nanospain 2010
Date: 23-26 march 2010
Place: Malaga, Spain.
13. **Authors:** N. Khiar, **M. Assali**, R. Navas, J.F Moya, I. Fernández, R. Baati.
Title: A Butterfly-like model for non-covalent functionalization of MWCNTs as a biocompatible nanoglycoarrays
Congress: Nanospain 2010
Date: 23-26 march 2010
Place: Malaga, Spain.

14. **Authors:** N. Khiar, M. Pernia Leal, **M. Assali**, R. Baati, I. Fernandez Fernandez, C. Mioskowski
Title: Self-Assembly and Photopolymerization of Diacetylene-Based Glycolipids on Carbon Nanotubes: Glyconanoabacus With Biomimetic Display of Carbohydrates
Congress: 16th European Symposium on Organic Chemistry.
Date: 12-16 July 2009
Place: Prague, Czech Republic.
15. **Authors:** **M. Assali**, M. Pernia Leal, I. Fernández, R. Baati, C. Mioskowski and N. Khiar.
Title: Non-covalent functionalization of carbon nanotubes with glycolipids: glyconanomaterials with specific lectin-affinity
Congress: Nanospain 2009
Date: 9-12 March 2009
Place: Zaragoza, Spain.