

## CURRICULUM VITAE

**Name:** Hala Ihlala Sa'adeh Al-Jaber  
**Position** Professor, Organic Chemistry  
Chemistry of Natural Products  
**Affiliation** Department of Chemistry, Faculty of  
Science, Al-Balqa Applied University  
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### ➤ Current position

- *Dean – Faculty of Science – Al-Balqa Applied University, Al-Salt - Jordan.*

### ➤ Education

- Ph.D, Chemistry Department - University of Jordan, February - 2007. Average: 3.80, Rating: *Excellent*.

**Thesis Title:** Chemical Constituents of Flora of Jordan – Part (XXI).

Chemical constituents of *Salvia palaestina* and *Osyris alba*

- M.Sc, Chemistry, University of Jordan, January - 1998. Average: 3.69, Rating: *Very Good*, Second on Class.

**Thesis Title:** Thienopyridone antibacterials. Part 3.

Synthesis and Bioassay of 4-oxothieno[2,3-b]pyridines Incorporating some 7-(N-aza-aliphatic) Appendages

- B.Sc, Chemistry, University of Jordan, May-1995. Avg. 76.9%, Rating: *Very Good*.

### ➤ Languages

- Arabic (Mother language).
- English (Excellent).
- French (Good).

### ➤ Research Interests

- Chemistry of Natural Products: Chemical and biological evaluation of medicinal, aromatic and edible plants including the isolation and characterization of Natural Product Compounds using different Spectroscopic Techniques.

- Enhancing the bioactivity of phytochemicals using novel drug delivery systems (nanoparticles).
- Organic Synthesis of Natural Products and Heterocyclic Biologically Active Compounds.

### ➤ **Practical Experiences**

- ***Professor of Organic Chemistry*** – Department of Chemistry – Faculty of Science, Al-Balqa Applied University, Al-Salt Jordan (September 2019 - Now)
- ***Professor of Organic chemistry*** – Department of Medical Allied Medical Sciences, Faculty of Pharmacy, Al-Ahliyya Amman University, Al-Salt-Jordan (**Sabbatical Leave:** 16/9/2018-15/9/2019;).
- ***Professor of Organic Chemistry-Natural Products***, Department of Physics and Basic Sciences, Al-Balqa Applied University, Amman – Jordan (March/2018)
- ***Associate professor*** of organic chemistry, Department of Physics and Basic Sciences, Faculty of Engineering Technology, Al-Balqa Applied University, Marka, Amman – Jordan, (March/2013- March-2017).
- ***Assistant Professor*** of organic Chemistry, Department of Applied Sciences, Faculty of Engineering Technology, Al-Balqa Applied University, Marka, Amman – Jordan, (2007 – 2013).
- ***Lecturer***, Department of Basic Sciences, Faculty of Engineering Technology, Al-Balqa Applied University, Marka, Amman – Jordan, (2000 – 2007).
- Chemist, Organic Pollutant Laboratory, Analytical Chemistry Department, Water Authority Laboratories, Ministry of Water and Irrigation, Amman, Jordan, (1998 – 2000).
- Research Assistant on a special project for the synthesis of pharmaceutical compounds at the Center for Consultation and Technical Services and Studies – The University of Jordan, (1998).
- Research Assistant on the special project: “Synthesis of New Heterocyclic Compounds and the study of their Biological Activity”, Chemistry Department, The University of Jordan, (1996 – 1997).
- Research Assistant on the special project: “Synthesis of New Heterocyclic Compounds and the study of their Biological Activity”, Chemistry Department, The University of Jordan, for the benefit of Al-Hikma Pharmaceutical Manufacturing Company (1995 – 1996).

## ➤ Teaching Experience

### Graduate Courses

- **Chemistry of Heterocyclic Compounds.**
- **Spectroscopic Identification of Organic Compounds.**

### Undergraduate Courses

- **Chemistry of Heterocyclic compounds.** Theoretical course.
- **Spectroscopic Identification of Organic compounds.**
- **Organic Chemistry for Chemistry Majors:** Theoretical and practical courses.
- **Pharmaceutical Organic Chemistry:** Theoretical and practical courses.
- **Organic Chemistry for Non chemistry Majors:** Theoretical and practical courses.
- **General Chemistry:** Theoretical and practical courses.
- **Analytical Chemistry:** Theoretical and practical courses.
- **Instrumental Analysis:** Theoretical and practical courses.

## ➤ Memberships

- Member of American Chemical Society (ACS – USA).
- Member in the **Jordanian Chemical Society** (JCS, Amman, Jordan).
- Member in the **International Society for Ethnopharmacology** (ISE) – 2015 (United Kingdom).

## ➤ Editorial Boards

- Editorial Board: *Annals of Chromatography and Separation Techniques* (ACST: 2015)

## ➤ Conferences and Workshops

1. Amman Antioxidants Congress, Amman-Jordan May 2-3, 2018, Royal Scientific Society, Amman-Jordan.  
(**Oral Presentation:** Medicinal plants growing wild in Jordan – phytochemical and bioactivity screening).
2. *Chemical Security Workshop, Chemical Security Program (CSP)*, May 9 – 12, 2016, Amman, Jordan.
3. *The First International Conference of Natural Products and Drug Discovery (NPDD)*, September 8-10, 2015, The University of Jordan, Amman – Jordan.  
(**Invited Speaker:** Phytochemical Investigation of Some Selected Plants Belonging to the Mediterranean Region).

4. *Conference cum Workshop on Herbal Drug Development for Socio-economic Uplift in Developing World (NASIC)*, September 6 – 8, 2015. Hamdi Mango Center for Scientific Research (HMCSR), The University of Jordan.
5. *The 15<sup>th</sup> International Congress of the International Society for Ethnopharmacology (15<sup>th</sup> ISE Congress)*, May 5 – 8, 2015, Petra-Jordan.  
(**Oral Presentation:** Isolation, characterization and bioactivity evaluation of the chemical constituents of two medicinal plants growing wild in Jordan).
6. *International Symposium of Essential oils 45 – (ISEO-45)*, September 7 – 10, 2014, Istanbul-Turkey.  
(**Oral presentation:** Variation of the volatile oil composition of some *Achillea* plants collected at different growth stages and different extraction methods).
7. *Metrology in Chemistry - Implementing the technical requirements of the ISO/IEC 17025 Workshop*, September 9 – 11, 2013, Hamdi Mango Center for Scientific Research (HMCSR), The University of Jordan, Amman, Jordan.
8. *IUPAC-2013, 44<sup>th</sup> World Chemistry Congress*, August 11 – 16, 2013, Istanbul-Turkey.  
(**Oral presentation:** Exploring Jordanian Flora: Isolation and characterization of the chemical constituents of some *Salvia* species growing wild in Jordan, *Co-Chair*).
9. *Chemical Safety and Security Officer Training Workshop (CSSO)*, June 2 – 6, 2013, Jordan University of Science and Technology (JUST), Irbid, Jordan.
10. *Computer-Aided Drug Design workshop (CADD)*, April 23 – 25, 2013, Chemistry Department, The University of Jordan, Amman, Jordan.
11. *International Conference of Young Chemists (ICYC)*, April 8 – 11, 2012, The University of Jordan – Amman – Jordan.  
(**Oral presentation:** Two new taraxasterol type triterpenes from *Pergularia tomentosa L.* growing wild in Algeria, *Co-Chair*).
12. *The 11<sup>th</sup> Eurasia Conference on Chemical Sciences (EuAsC<sub>2</sub>S-11)*, October 6 – 10, 2010, Dead Sea – Jordan.  
(**Oral presentation:** New terpenes from *Salvia palaestina* Benth. and *S. syriaca L.* growing wild in Jordan).
13. *The 8<sup>th</sup> Jordanian Chemical Conference (The 8<sup>th</sup> JCC)*, April 21<sup>st</sup>, 2008, Organized by Jordanian Chemical Society, in cooperation with Petra University.
14. *Petra International Chemistry Conference (PICC)*, June 25 – 28, 2007, Tafila – Jordan.  
(**Poster Presentation:** Chemical constituents of *Osyris alba* and their antiparasitic activity).

## ➤ Supervision of Graduate Students

- Title: '*Isolation and Identification of the Chemical constituents of Nepeta curviflora and Salvia multicaulis*'. (PhD in Chemistry, Faculty of Graduate Studies - The University of Jordan, **Co-supervisor**, Degree granted on July, 2018)
- Title: '*Synthesis of new nanocarriers suitable for loading bioactive phytochemicals and extracts*'. (PhD in Chemistry, Faculty of Graduate Studies - The University of Jordan, **Co-supervisor**, Degree granted on December, 2016).
- Title: '*Phytochemical and biological screening of Solanum elaeagnifolium growing wild in Jordan and attempting chemical modifications of some model compounds*'. (PhD in Pharmaceutical Sciences, Faculty of Graduate Studies - The University of Jordan, **Co-supervisor**, Degree granted on April, 2016).

## ➤ Organizing Conferences and Workshops

1. Member of the Scientific Committee of the Seventh Jordanian International Conference of Chemistry, 19-21 April – 2016, Yarmouk University, Irbid, Jordan.
2. Member of the Organizing and Scientific Committees of the First International Conference of Natural Products and Drug Discovery (**NPDD**), September 8 – 10, 2015, The University of Jordan, Amman, Jordan.
3. Chemical Safety and Security Officer Training Workshop (CSSO), June 8 – 12, 2014, Hamdi Mango Center for Scientific Research (HMCSR), The University of Jordan, Amman, Jordan.
4. Member of the Scientific Committee of the International Conference of Young Chemists (**ICYC**), April 8 – 11, 2012, The University of Jordan, Amman, Jordan.
5. Member of the National Organization Committee (NOC) of the 11<sup>th</sup> Eurasia Conference on Chemical Sciences (**EuAsC<sub>2</sub>S-11**), 6-10 October 2010, Dead Sea, Jordan.

## ➤ Funded Projects

- Deanship of Scientific Research – Al-Balqa Applied University. Title of the project: **Phytochemical and bioactivity screening of Sedum rubens L. growing wild in Jordan**. (Funded, July-2020, Ongoing).
- Deanship of Scientific Research – Al-Ahliyya Amman University. Title of the project: **HPLC profiling of important phenolics and flavonoid in selected Salvia species from Jordan**. (Funded, January 2019-2020, Closed).
- Deanship of Scientific Research – Al-Balqa Applied University. Title of the project: **Phytochemical evaluation of Salvia ceratophylla from Jordan**. (Funded, April 2018, Ongoing).

- A researcher in the research team funded by the Deanship of Scientific Research – The University of Jordan. Title of the project: **Screening some selected medicinal plant from the Flora of Jordan for their Acetyl cholinesterase and butyryl cholinesterase Inhibitory activity.** (Funded, 2016; Ongoing).
- Deanship of Scientific Research – Al-Balqa Applied University. Title of the project: **Isolation and characterization of the chemical constituents of *Gladiolus atroviolaceus* Boiss growing wild in Jordan.** (2015-2017; Completed).
- Deanship of Scientific Research – Al-Balqa Applied University. Title of the Research: **Seasonal and regional variation of the essential oil composition of *Inula viscosa* growing wild in Jordan.** (Funded, 2014-2016, Completed).
- A researcher in the research team funded by the Scientific Research Support Fund, Title of the Research: **Do flavonoids attenuate nitrate tolerance? Impact on cardiovascular diseases.** (Funded, 2009-2013; Completed).

## ➤ Publications

### Refereed International Journals

1. Mahmoud A. Al-Qudah, Fida E. Allahham, Safwan M. Obeidat, Hala I. Al-Jaber, and Jamil N. Lahham, Sultan T Abu Orabi. In vitro Antioxidant Activities, Total Phenolics and Total Flavonoids of the Different Extracts of *Capparis spinosa* L. and *Capparis decidua* Edgew (Forssk.) from Jordan. *International Journal of Pharmaceutical Research*, 12(3): 1226-1236 (2020).
2. Hala I. Al-Jaber, Ashok K. Shakya, Zaha A. Elagbar. HPLC Profiling of selected phenolic acids and flavonoids in *Salvia eigii*, *Salvia hierosolymitana* and *Salvia viridis* growing wild in Jordan and their in vitro antioxidant activity. *PeerJ*, 8:e9769 <https://doi.org/10.7717/peerj.9769> (August, 2020).
3. Reem N. Dabaibeh, Lina M. Brhoumi, Omar Bdair, Hala I. Al-Jaber, Fatma U. Afifi, Mahmoud A. Al-Qudah, Ismaeil F. Abaza, Musa H. Abu-Zarga, Sultan T. Abu-Orabi. The effect of the geographic location and ontogenesis on the essential oil composition and spontaneously emitted volatile organic compounds of *Inula viscosa* (L.) Greuter. (Astraceae) Growing in Jordan. *Asian Journal of Chemistry*. (In Press, 2020).
4. Hala I. Al-Jaber, Safwan M. Obeidat, Fatma U. Afifi, Musa H. Abu Zarga. Aroma Profile of Two Populations of *Salvia verbenaca* Collected from Two Bio-geographical Zones from Jordan. *Chemistry & Biodiversity*. 17(2): e1900553 (February - 2020); <https://doi.org/10.1002/cbdv.201900553>. (2020)
5. Hala I. Al-Jaber, Omar Bdair, Lina M. Barhoumi, Reem N. Dabaibeh, Musa H. Abu-Zarga, Ismael F. Abaza, Fatma U. Afifi. Characterization of Chemical components in Organs Emissions of two *Salvia dominica* L. Populations from Jordan. *Journal of Oleo Science*, 69(7), 759-765.
6. Zaha ElAgbar, Ashok K. Shakya, Hala I. Al-Jaber. Phytochemical Diversity and Pharmacological Properties of *Rhus coriaria*. *Chemistry & Biodiversity* (March - 2020); <https://doi.org/10.1002/cbdv.201900561>.
7. Sultan T. Abu-Orabi, Noura R. Saleh, Tareq T. Bataineh, Safwan M. Obeidat, Mohammed S. Al-Sheraideh, Hala I Al-Jaber, Hasan I. Tashtoush, Jamil N. Lahham. Chemical Composition of Essential Oils from Flower Buds and Leaves of *Cistus creticus*

- and *Cistus salvifolius* and their antioxidant activity. *Arabian Journal of Chemistry*. 13(7), 6256-6266 (2020).
8. Hala I. Al-Jaber, Mahmoud A. Al-Qudah, Fadwa M. Odeh and Musa H. Abu Zarga. Two New 28-Noroleanane Type Triterpenoids and Other Constituents from *Gladiolus atroviolaceus* Growing Wild in Jordan. *Jordan Journal of Chemistry*, 14(1): 11-16 (2019).
  9. Mahmoud A Al-Qudah, Hasan I Tashtoush, Ethar F Khlaifat, Sahar O Ibrahim, Ayman M Saleh, Hala I Al-Jaber, Musa H Abu Zarga, Sultan T Abu Orabi. Chemical constituents of the aerial parts of *Salvia judaica* Boiss. from Jordan. *Natural Product Research*, doi: 10.1080/14786419.2019.1597349, (2019).
  10. Mahmoud A Al-Qudah, Safwan M. Obeidat, Ayman M. Saleh, Ahmad A. El-Oqlah, Eman Al-Masaeed, Hala I. Al-Jaber, Sultan T. Abu Orabi. Volatile Components Analysis, Total Phenolic, Flavonoid Contents, and Antioxidant Activity of *Phlomis* Species Collected from Jordan. *Journal of Essential Oil Bearing Plants*, 21(3): 583-599 (2018).
  11. Mahmoud A. Al-Qudah, Musa H. Abu Zarga, Monther A. Khanfar, Hala I. Al-Jaber Sultan T. Abu Orabi and Konrad Seppelt. Two New Cyclopropane Monoterpene Epimers from *Varthemia iphionoides* of Jordanian Origin. *Phytochemistry letters*, 26: 60-63 (2018).
  12. Hala I. Al-Jaber, Musa H. Abu Zarga, Amal F. Al-Aboudi, Mahmoud A. Al-Qudah, Ali F. Al-Shawabkeh, Ismail F. Abaza, Marwa N. Abuaisheh & Fatma U. Afifi. Essential Oil Composition and Anticholinesterase Activity Evaluation of *Achillea fragrantissima* Growing Wild in Jordan. *Journal of Herbs, Spices & Medicinal Plants*, 24(3): 272–281 (2018).
  13. Mahmoud A. Al-Qudah, Safwan M. Obeidat, Hala I. Al-Jaber, Bahaa Al-Trad, Riyadh Muhaidat and Jamil N. Lahham. Intercomparative investigation of the total phenol, total flavonoids, in vitro and in vivo antioxidant activities of *Capparis cartilaginea* (Decne.) Maire & Weiller and *Capparis ovata* Desf. from Jordan. *Pharmacology Magazine*, 14(55): 154 (2018).
  14. Khadidja Aya Beladjila, Djemaa Berrehal, Amal Al-Aboudi, Zahia Semra, Hala Al-Jaber, Khaldoun Bachari, Zahia Kabouche. Composition and antioxidant, anticholinesterase and antibacterial activities of the essential oil of *Salvia buchanaei* from Algeria. *Chemistry of Natural Compounds*, 54(3): 581-583 (2018).
  15. Lina M. Barhoumi, Hala I. Al-Jaber, Musa H. Abu Zarga. Volatile Organic Compounds and Essential Oil Composition of Selected Organs of *Nepeta curviflora* Collected from Two Regions in Jordan. *Jordan Journal of Chemistry*, 12(2): 95-106 (2017).
  16. Mahmoud A. Al-Qudah, Ayman M. Saleh, Naif L. Alhawsawi, Hala I. Al-Jaber, Syed A. Rizvi, Fatma U. Afifi. Composition, Antioxidant and Anticancer activities of the Essential Oil from Fresh and Air-Dried Aerial Parts of *Pallenis spinosa*. *Chemistry & Biodiversity*, 14(8): e1700146, Doi: 10.1002/cbdv.201700146 (May-2017, Published online).
  17. Mahmoud A. Al-Qudah, Noor K. Otoom, Hala I. Al-Jaber, Ayman M. Saleh, Musa H. Abu Zarga and Sultan T. Abu Orabi. New flavonol glycoside from *Scabiosa prolifera* L. aerial parts with *in-vitro* antioxidant and cytotoxic activities. *Natural Product Research*, 31(24): 2865-2874 (2017).

18. Hala I. Al-Jaber. Essential oil composition, total phenol, total flavonoid content and *in-vitro* antioxidant properties of the hydro-alcoholic and water extracts of *Salvia deserti* growing wild in Jordan. *Jordan Journal of Chemistry*, 12(1): 11-19 (2017).
19. Hala I. Al Jaber, Safwan M. Obeidat, Mahmoud A. Al-Qudah, Ismail F. Abaza, Jamil N. Lahham, Musa H. Abu-Zarga and Fatma U. Afifi. Patterns in Volatile Emission of Different organs of *Inula viscosa* growing wild in Jordan. *Journal of Essential Oil Bearing Plants*, 20(1): 24-35 (2017).
20. Mohammad Barham, Hala I. Al-Jaber, Mahmoud A. Al-Qudah and Musa H Abu Zarga. New aristolochic acid and other chemical constituents from *Aristolochia maurorum* L. growing wild in Jordan. *Natural Product Research*. 30(3): 245-252 (2016).
21. Hala I. Al-Jaber. *Salvia ceratophylla* from Jordan: Volatile Organic Compounds, Essential oil composition and antioxidant activity. *Jordan Journal of Chemistry*, 11(2): 108-119 (2016).
22. Mahmoud A. Al-Qudah, Noor K. Otoom, Hala I. Al-Jaber, Hasan I. Tashtoush, Abdulraouf S. Mayyas, Ibrahim N. Trawenh, Jamil N. Lahham and Sultan T. Abu Orabi. Chemical Composition of Essential Oil of Jordanian *Scabiosa prolifera* at Different Flowering Stages. *Jordan Journal of Chemistry*. 11(2): 99-107 (2016).
23. Fatma U. Afifi, Violet Kasabri, Hala I. Al-Jaber, Barakat E. Abu-Irmaileh, Mahmoud A. Al-Qudah and Ismail F. Abaza. Volatile oil composition and some biological studies with two more *Salvia* species from Jordan: *Salvia judaica* Boiss. and *Salvia multicaulis* Vahl. *Natural Product Communications*. 11(4): 535-538 (2016).
24. Mohammed R. Hasan, Hala I. Al-Jaber, Mahmoud A. Al-Qudah, Musa H. Abu Zarga. New sesterterpenoids and other constituents from *Salvia dominica* growing wild in Jordan. *Phytochemistry Letters*. 16: 12-17 (2016).
25. Hala Al-Jaber. Variation in essential oil composition of *Iris nigricans* Dinsm. (Iridaceae) endemic to Jordan at different flowering stages. *Arabian Journal of Chemistry*, 9, S1190-S1196 (2016).
26. Hala I. Al Jaber, Hana M. Hammad, Mahmoud A. Al-Qudah, Ismail F. Abaza, Jehan Y. G. Al-humaidi, Dima F. Khater, Ayman M. Saleh, Mohammad Barham, Musa H. Abu-Zarga and Fatma U. Afifi. *Achillea santolina*: growth dependent variation in essential oil composition and some *in-vitro* bioactivity screenings. *European Journal of Medicinal Plants*. 13(1): 1-11(2016).
27. Mahmoud A. Al-Qudah, Ayman M. Saleh, Hala I. Al-Jaber, Hasan I. Tashtoush, Jamil N. Lahham, Musa H. Abu Zarga, Fatma U. Afifi and Sultan T. Abu Orabi. New isoflavones from *Gynandrisis sisyinchium* and their antioxidant and cytotoxic activities. *Fitoterapia*. 107: 15-21 (2015).
28. Hala Al-Jaber. Essential oil composition of the aerial parts of fresh and air-dried *Salvia verbenaca* growing wild in Jordan. *Journal of Essential Oil Bearing Plants*. 18(3): 718-724 (2015).
29. Mahmoud A. Al-Qudah, Areeg M. Al-Ghoul, Ibrahim N. Trawenh, Hala I. Al-Jaber, Tareq M. Al Shboul, Musa H. Abu Zarga, Sultan T. Abu Orabi. Antioxidant activity and chemical composition of essential oils from Jordanian *Ononis natrix* L. and *Ononis sicula* Guss. *Journal of Biologically Active Products from Nature*. 4(1): 52-61 (2014).
30. Hala I. Al Jaber, Hana M. Hammad, Mahmoud A. Al-Qudah, Ismail F. Abaza, Jehan Y. G. Al-humaidi, Musa H. Abu-Zarga and Fatma U. Afifi. Volatile oil composition and



antiplatelet activity of Jordanian *Achillea biebersteinii* collected at different growth stages. *Journal of Essential Oil Bearing Plants*, 17(4):584-598 (2014).

31. Mahmoud M. Al-Qudah, Hala I. Al-Jaber, Musa H. Abu Zarga, Sultan T. Abu Orabi. Flavonoid and phenolic compounds from *Salvia palaestina* L. growing wild in Jordan and their antioxidant activities. *Phytochemistry*, 99: 115-120 (2014).
32. Hana M. Hammad, Suzan A. Matter, Simona-carmenLitescu, Sawsan Abuhamdah, Hala I. Al-Jaber, Fatma U. Afifi. Biological activities of the hydro-alcoholic and aqueous extracts of *Achillea fragrantissima* (Forssk.) grown in Jordan. *Natural Science*, 6(1): 23-30 (2014).
33. Hana M. Hammad, Simona-Carmen Litescu, Suzan A. Matar, Hala I. Al Jaber, and Fatma U. Afifi. Biological Activities of the Hydro-alcoholic and Aqueous Extracts of *Achillea falcata* L. (Asteraceae) Grown in Jordan. *European Journal of Medicinal Plants*, 4(3):259-270 (2014).
34. Riyadh Muhaidat, Mahmoud A Al-Qudah, Ahmad Al-Shayeb, Jacob H. Jacob, Hala I Al-Jaber, Emad Hussein, Ibrahim N Al-Tarawneh, Sultan T Abu Orabi. Chemical profile and antibacterial activity of crude fractions and essential oils of *Capparis ovata* Desf. And *Capparis spinosa* L. (Capparaceae) from Jordan. *International Journal of Integrative Biology*, 14 (1): 39-47 (2013).
35. Musa H. Abu Zarga, Hala I. Al-Jaber, Zahra Y. Baba Amer, Lakhdar. Sakhrib, Mahmoud A. Al-Qudah, Jehan Y.G. Al-humaidi, Ismail F. Abaza and Fatma U. Afifi. Chemical Composition, Antimicrobial and Antitumor Activities of Essential Oil of *Ammodaucus leucotrichus* Growing in Algeria. *Journal of Biologically Active Products from Nature*, 3(3): 224-231 (2013).
36. Hana M. Hammad, Camelia Albu, Suzan A. Matar, Simona-Carmen Litescu, Hala I. Al Jaber, Amal S. Abualraghib and Fatma U. Afifi. Biological activities of the hydro-alcoholic and aqueous extracts of *Achillea biebersteinii* Afan. (Asteraceae) grown in Jordan. *African Journal of Pharmacy and Pharmacology*, 7(25): 1686-1694 (2013).
37. Zohra Y. Baba Amer, Lakhdar. Sakhri, Hala I. Al-Jaber, Mahmoud A. Al-Qudah and Musa H. Abu Zarga. Two new taraxasterol type triterpenes from *Pergularia tomentosa* growing wild in Algeria. *Journal of Asian Natural Products Research*, 14(12):1137-1143 (2012).
38. Mahmoud A. Al-Qudah, Riyadh Muhaidat, Ibrahim N. Trawenh, Hala I. Al Jaber, Musa H. Abu Zarga and Sultan T. Abu orabi. Volatile Constituents of Leaves and Bulbs of *Gynandrisis sisyrinchium* and their Antimicrobial activities. *Jordan Journal of Chemistry*, 7(3), 287-295 (2012).
39. Mahmoud A. Al-Qudah, Riyadh Muhaidat, Emad Hussein, Ahmed A. Al-omary, Hala I. Al-Jaber, Ibrahim N. Trawenh, Tareq T. Bataineh, Musa H. Abu Zarga and Sultan. T. Abu Orabi. Investigating chemical composition and antimicrobial effects of essential oil and crude extracts from Jordanian *Sedum micrcarpum* (SM.) Schonl. *Pharmacognosy Journal*, 4(33), 1-6 (2012).
40. Hala I. Al-Jaber, Mahmoud A. Al-Qudah, Lina M. Barhoumi, Ismail F. Abaza, Fatma U. Afifi. Variation in the essential oil composition of *Eremostachys laciniata* from Jordan at different flowering stages. *Journal of Essential Oil Research*, 24(3), 289–297 (2012).
41. Hala I. Al-Jaber, Khadeja K. Abrouni, Mahmoud A. Al-Qudah & Musa Abu-Zarga. New terpenes from *Salvia palaestina* Benth. and *Salvia syriaca* L. growing wild in Jordan. *Journal of Asian Natural Products Research*, 14, (7), 618-25 (2012).

42. Hala I. Al-Jaber, Mahmoud A. Al-Qudah, Lina M. Barhoumi, Ismail F. Abaza & Fatma U. Afifi. Essential oil composition of the aerial parts of fresh and air-dried *Salvia palaestina* Benth. (Lamiaceae) growing wild in Jordan. *Natural Product Research*, 26 (13), 1179-1187 (2012).
43. Mahmoud A. Al-Qudah, Hala I. Al-Jaber, Riyadh Muhaidat, Emad I. Hussein, Amer Al Abdel Hamid, Ismail F. Abaza and Fatma U. Afifi and Sultan T. Abu-Orabi. Chemical Composition and Antimicrobial Activity of the Essential Oil from *Sinapis alba* L. and *Sinapis arvensis* L. (Brassicaceae) growing wild in Jordan. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 2 (4), 1136-1144 (2011).
44. Jalal A. Zahra, Hala I. Al-Jaber, Mustafa M. El-Abadelah, and Mohammed M. Abadleh. Heterocycles [H]-fused to 4-oxoquinoline-3-carboxylic acid. Part IX. Synthesis of 2,6-dioxotetrahydro-1Hpyrrolo[3,2-H]quinolone-7-carboxylic acid. *Heterocycles*, 83 (9), 2165-2175 (2011).
45. Safa A. Shaheen, Musa H. Abu Zarga, Ibrahim K. Nazer, Rula M. Darwish and Hala I. Al-Jaber. Chemical Constituents of Jordanian Propolis. *Natural Product Research*, 25 (14), 1312-1318 (2011).
46. Mahmoud A. Al-Qudah, Hala I. Al-Jaber, Sultan T. Abu-Orabi, and Musa H. Abu Zarga. Chemical Composition of the essential oil from *Dittrichia viscosa* Grown in Jordan. *Jordan Journal of Chemistry*, 5(4), 343-348 (2010).
47. Hala I. Al-Jaber, Ibrahim M. Mosleh, Abdallah Mallouh, Omar M. Abu Salim and Musa H. Abu Zarga. Chemical constituents of *Osyris alba* and their antiparasitic activity. *Journal of Asian Natural Products Research*, 12(9), 814-820 (2010).
48. Hala I. Al-Jaber, Musatafa M. El-Abadelah, Salim S. Sabri, Taleb H Al-Tel and Wolfgang Voelter. Thienopyridone Antibacterials. Part V[1]. Synthesis of some N(7)-azacyclohexyl-4-oxothieno[2,3-b]pyridine-5-carboxylic Acids and related congeners. *Zeitschrift fuer Naturforschung*, 64b, 1625-1632 (2009).

### ➤ Books and Chapters in Books

- Fadwa Odeh, Hala Al-Jaber and Dima Khater. Nanoflora — How Nanotechnology Enhanced the Use of Active Phytochemicals, Application of Nanotechnology in Drug Delivery. (**Chapter in a Book**, Chapter 10). Editor: Ali Demir Sezer (PhD.), ISBN: 978-953-51-1628-8, InTech, DOI: 10.5772/58704.  
Available from: <http://www.intechopen.com/books/application-of-nanotechnology-in-drug-delivery/nanoflora-how-nanotechnology-enhanced-the-use-of-active-phytochemicals>. (Published July, 2014).
- Hala I. Al-Jaber. A laboratory Manual for General Chemistry. Arab Community Library for Publishing and Distribution (2014, 1<sup>st</sup> edition).
- Hala I. Al-Jaber & Hamdu Al-Zubi. A Laboratory Manual for Analytical Chemistry Arab Community Library for Publishing and Distribution (2015, 1<sup>st</sup> edition).
- Hala I. Al-Jaber & Hamdi Al-Zubi. Laboratory Manual for Instrumental Analysis, Arab Community Library for Publishing and Distribution (2015, 1<sup>st</sup> edition).
- Selected Chapters in Chemistry Text for High School Students in Saudi Arabia (2008-2009).