

Murad N Abualhasan

Mobile: 00972595472322

P.O Box 182

Ramallah

Email: muradnsa@hotmail.com

m_abualhasan@najah.edu



EDUCATION:

2007-2011: PhD in Medicinal Chemistry, University of Strathclyde, UK.

2006-2007: Msc in pharmaceutical analysis, University of Strathclyde, UK.

1998-1999: MSc Clinical Epidemiology (Pharmacoepidemiology), NIHES, Erasmus University.

1991-1995: Bachelors of Pharmacy, Jadavpur University, Calcutta, India.

WORK EXPERIENCE:

Current: Full professor, Faculty of Pharmacy at An-Najah University (Taught course: Medicinal chemistry (BSc Students), Instrumental analysis theory + Lab (BSc Students), Scientific research (BSc Students), Pharmacognosy lab (BSc Students), Pharmacy legislation (BSc Students), Drug analysis (MSc. Students), Modern analytical techniques (MSc. Students), Structure elucidation in spectroscopy (MSc. Students) Pharmacoepidemiology (MSc. Students), Clinical epidemiology (MSc. Students), Advanced spectroscopy (PhD Students)

2007-2011: PhD student at the University of Strathclyde

2006-2007: Msc. Student in pharmaceutical analysis at the University of Strathclyde

2002-2006: Responsible pharmacist and Chief Drug analyst, Drug unit, Central Public Health Laboratory (M.O.H).

2002-2006: Part-time lecturer in pharmacy and chemistry subjects at the Modern Community College, Palestine, Ramallah.

1999-2006: Part time community Pharmacist in Al Faiha Community Pharmacy shop, Ramallah, Palestine

1996-2002: Drug inspectors at the Department of Drug Quality, Assurance, and Registration, Ministry of Health, Palestine.

April 1996- Sept.1996: Worked full-time as a responsible pharmacist in Red Crescent Society Hospital, Ramallah, Palestine.

SKILLS

- 1- Working experience on chemical and analytical equipment: Biotage flash chromatography system, Microwave reactor, NMR, HPLC, GC, UV-Vis, IR, ATR & LC-MS.
- 2- Working experience with drug virtual screening and docking programs like Insight II and the GOLD docking program.
- 3- Working experience on statistical packages: SPSS, Minitab
- 4- Microsoft packages: Excel, Word, Access, PowerPoint
- 5- Languages: good spoken and written foreign languages such as English, Hindi, and Dutch

AWARDS:

1. Zamalah fellowship for 4 months at the University of Strathclyde – UK, working with LC/MS/MS on a bioanalysis project
2. Scholarship Award from the Netherlands Organization for International Cooperation in Higher Education and Research (Nuffic) to complete my MSc. Clinical Epidemiology (Pharmacoepidemiology) Erasmus University (NIHES), Netherlands
3. Scholarship Award from the Said Foundation to complete my MSc in Pharmaceutical Analysis at the University of Strathclyde.
4. Scholarship Award from the University of Strathclyde to complete my PhD in Medicinal Chemistry

Training courses:

- A Pharmaceutical manufacturing training in Infar (India) limited, for one month in different sections of the company, August 1995, Calcutta, India.
- Pharmaceutical Inspection held by Pharmacies Sans Frontiers, June 1997, Ramallah, Palestine.
- Quality assurance and Drug inspection course held in the Pharmacy directorate, MOH, by a WHO representative, December 1997, Ramallah, Palestine.
- Integrated Production Control System Course, held by USAID, May 1998, Ramallah, Palestine.
- Drug Quality Control, a one-month training course at Birzeit University in the Centre for Environment & Occupational Health Science, June 1998, Birzeit, Palestine.
- Erasmus summer program August 10-28, 1998, Rotterdam, Netherlands.
- Dutch language course September-December 1998, Rotterdam, Netherlands.
- Pharmacoepidemiology & Clinical trials held by the Mediterranean School of Medical Statistics and Clinical Epidemiology, June 1999, Syracuse, Italy.
- Advanced instrumental analysis, one-month course in advanced instrumental analysis in the Central Public Health Laboratory (CPHL) funded by the Italian Cooperation, June 2004. Ramallah, Palestine
- Good Laboratory Practice (GLP) in Central Public Health laboratory (CPHL) funded by the Italian Cooperation, August 2004, Ramallah, Palestine.
- Development, Scale-up, and production of Biopharmaceuticals, National Institute of Pharmaceutical Education and Research (NIPER), August 2004, SAS Nagar, India.
- Basic Management course held by Primary Health Care Directorate, MOH, March 2006, Ramallah, Palestine.
- First Aid at Work, in Up-Front training Centre, October 2008, Glasgow, UK.

[1-93]

References

1. M. Abualhasan Mousa, M. Izhiman, H. Alkhatib, M. Aghbar, I. *International Journal of Analytical Chemistry* 2026;(2026):6287324
<https://doi.org/https://doi.org/10.1155/ianc/6287324>.
2. M. Hawash Mahmutoğlu, B. Abualhasan, M. Kahraman, D. C. Baytas, S. N. *Journal of Xenobiotics* 2026;(16):47
3. M. Abualhasan Assali, M. Mahmoud, A. Zaid, N. A. Malkieh, N. *Current Drug Delivery* 2022;(19):117-28 <https://doi.org/http://dx.doi.org/10.2174/1567201819666211220162535>.
4. M. Abualhasan Awad, M. Sweileh, W. *BMC Health Serv Res* 2025;(25):891
<https://doi.org/10.1186/s12913-025-13028-6>.
5. M. Abualhasan Basim, A. salahat, A. Sofan, S. Al-Atrash, M. *Public Health* 2018;(165):136-41 <https://doi.org/https://doi.org/10.1016/j.puhe.2018.09.015>.
6. M. Abualhasan Batrawi, N. Zaid, A. Watson, D. *Drug research* 2013;(63):300-4
<https://doi.org/10.1055/s-0033-1337939>.
7. M. Abualhasan Haider, H. Odeh, A. Daraghme, A. *Pharmaceuticals* 2025;(18):561
<https://doi.org/https://doi.org/10.3390/ph18040561>.
8. M. Abualhasan Hawash, M. Aqel, S. Al-Masri, M. Mousa, A. Issa, L. *ACS Omega* 2023;(8):38597-606 <https://doi.org/10.1021/acsomega.3c05695>.
9. M. Abualhasan Jaradat, N. *Pharmacognosy Journal* 2015;(7):276-9
<https://doi.org/10.5530/pj.2015.5.4>.
10. M. Abualhasan Jaradat, N. Abu-Hasan, N. Almasri, M. Taha, A. A. Rabbaa, A. Natsheh, N. Shalalfeh, S. Najib, M. *Pharmacognosy Journal* 2014;(6):38
<https://doi.org/10.5530/pj.2014.2.7>.
11. M. ABUALHASAN JARADAT, N. AL-RIMAWI, F. SHAHWAN, M. MANSOUR, D. ALHEND, Z. ALSOROGHLI, Y. MOUSA, A. *Food Science and Technology* 2022;(42)
<https://doi.org/https://doi.org/10.1590/fst.57122>
12. M. Abualhasan Jaradat, N. Hawash, M. Shraim, N. Asaad, M. Mousa, A. Mousa, Z. Tobeh, R. Mlitat, B. *Open Life Sciences* 2023;(18) <https://doi.org/doi:10.1515/biol-2022-0767>.
13. M. Abualhasan Jaradat, N. Maslamani, R. Nofal, D. Omar, L. *Heterocyclic Communications* 2022;(28):124-9 <https://doi.org/doi:10.1515/hc-2022-0013>.
14. M. Abualhasan Jaradat, N. Sawaftah, Z. Mohsen, H. Najjar, D. Zareer, W. *Open Life Sciences* 2019;(14):448 <https://doi.org/https://doi.org/10.1515/biol-2019-0050>.
15. M. Abualhasan Naffa, L. Alarda, R. a. Zahi, B. Amireh, A. Al-Atrash, M. *Journal of Environmental Science and Health, Part C* 2024;(42):1-15
<https://doi.org/10.1080/26896583.2023.2281199>.
16. M. Abualhasan Odeh, N. W. Younis, G. N. Zeidan, O. F. *Int J Anal Chem* 2020;(2020):5672183 <https://doi.org/10.1155/2020/5672183>.

17. M. Abualhasan Qutob, T. Obedat, S. Yahyia, D. Watson G, D. *Palestinian Medical and Pharmaceutical Journal (PMPJ)* 2017;(2):55-62
18. M. Abualhasan Shraim, F. Alawni, H. Hamdan, S. Khaseeb, H. *International Journal of Analytical Chemistry* 2022;(2022):3882682 <https://doi.org/10.1155/2022/3882682>.
19. M. Abualhasan Sutcliffe, O. Kozielski, F. Mackay, S. *Journal of Pharmacy and Pharmacology* 2010;(62):1367- <https://doi.org/https://doi.org/10.1016/j.bmcl.2018.07.007>.
20. M. Abualhasan Tahan, S. Nassar, R. Damere, M. Salameh, H. Zyoud, H. *J Health Popul Nutr* 2023;(42):99 <https://doi.org/10.1186/s41043-023-00444-9>.
21. M. N. Abualhasan Al- Masri, M. Y. Manasara, R. Yadak, L. Abu-Hasan, N. S. *Scientifica* 2020;(2020):9817502 <https://doi.org/10.1155/2020/9817502>.
22. M. N. Abualhasan Assali, M. Zaid, A. N. Jaradat, N. Tarayra, R. Hamdan, A. Ardah, R. *International Journal of Pharmacy and Pharmaceutical Sciences* 2015
23. M. N. Abualhasan Batrawi, N. Sutcliffe, O. B. Zaid, A. N. *Scientia pharmaceutica* 2012;(80):977 <https://doi.org/https://doi.org/10.3797/scipharm.1207-13>.
24. M. N. Abualhasan Dwaikat, S. Ataya, R. E. Ali, A. Al-Atrash, M. *Food Science and Technology International* 2021 <https://doi.org/https://doi.org/10.1590/fst.01621>.
25. M. N. Abualhasan Ghanem, M. M. Assali, M. Zaid, A. N. *Journal of Applied Pharmaceutical Science* 2015;(5):143-6 <https://doi.org/https://dx.doi.org/10.7324/JAPS.2015.50822>.
26. M. N. Abualhasan Good, J. A. Wittayanarakul, K. Anthony, N. G. Berretta, G. Rath, O. Kozielski, F. Sutcliffe, O. B. Mackay, S. P. *European journal of medicinal chemistry* 2012;(54):483-98 <https://doi.org/https://doi.org/10.1016/j.ejmech.2012.05.034>.
27. M. N. Abualhasan Hamad, V. N. Abdulsamd, M. Robe, T. Y. Al Atrash, M. *British Journal of Pharmaceutical Research* 2015;(8):1-7 <https://doi.org/10.9734/BJPR/2015/20302>.
28. M. N. Abualhasan Mansour, J. Jaradat, N. Zaid, A. N. Khadra, I. *International Scholarly Research Notices* 2017;(2017):7 <https://doi.org/10.1155/2017/2624947>.
29. M. N. Abualhasan Nidal, j. Hawash, M. Khayat, R. Khatatbeh, E. Ehmidan, M. Al-Atrash, M. *Evidence-Based Complementary and Alternative Medicine* 2020;(2020):7631562 <https://doi.org/10.1155/2020/7631562>.
30. M. N. Abualhasan Zaid, A. N. Jaradat, N. Mousa, A. *International Journal of Analytical Chemistry* 2017;(2017):5 <https://doi.org/10.1155/2017/1728414>.
31. N. Al-Maharik Jaradat, N. Qneibi, M. Abualhasan, M. N. Emwas, N. *Evidence-Based Complementary and Alternative Medicine* 2020;(2020):4195272 <https://doi.org/10.1155/2020/4195272>.
32. D. Altarifi Harb, T. Abualhasan, M. *BMC Health Services Research* 2024;(24):514 <https://doi.org/10.1186/s12913-024-10983-4>.
33. J. N. Amin Abualhasan , M. Motasem, A.-M. Ibrahim, S. R. Ass' ad, J. M. Ayed, A. M. *International Journal of Pharmacognosy and Phytochemical Research* 2015;(7):137-43

34. M. Assali Abualhasan, M. Sawaftah, H. Hawash, M. Mousa, A. *Journal of Chemistry* 2020;(2020):6393428 <https://doi.org/10.1155/2020/6393428>.
35. M. Assali Abualhasan, M. Zohud, N. Ghazal, N. *Int J Anal Chem* 2020;(2020):1894907 <https://doi.org/10.1155/2020/1894907>.
36. M. Assali Zaid, A. N. Abualhasan, M. Jaradat, N. Tarayra, R. Hamdan, A. Ardah, R. *Journal of Chemical and Pharmaceutical Research* 2014;(6):1-4
37. I. Badran Qut, O. Manasrah, A. D. Abualhasan, M. *Environmental Science and Pollution Research* 2021;(28):14694-706 <https://doi.org/10.1007/s11356-020-11679-y>.
38. N. Batrawi Wahdan, S. Abualhasan, M. *Analytical Chemistry Insights* 2017;(12):1177390117690152 <https://doi.org/10.1177/1177390117690152>.
39. A. M. Eid Abualhasan, M. Khaliliya, Y. Sinan, Z. Khaliliya, A. *Biomedicine (Taipei)* 2025;(15):24-35 <https://doi.org/10.37796/2211-8039.1663>.
40. A. M. Eid Hawash, M. Abualhasan, M. Naser, S. Dwaikat, M. Mansour, M. *Coatings* 2023;(13):1441 <https://doi.org/https://doi.org/10.3390/coatings13081441>.
41. M. Hawash Abdallah, S. Abudayyak, M. Melhem, Y. Abu Shamat, M. Aghbar, M. Çapan, I. Abualhasan, M. Kumar, A. Kamiński, M. Góral, T. Dominiak, P. M. Sobuh, S. *European Journal of Medicinal Chemistry* 2024;(271):116397 <https://doi.org/https://doi.org/10.1016/j.ejmech.2024.116397>.
42. M. Hawash Eid, A. M. Jaradat, N. Abualhasan, M. Amer, J. Naser Zaid, A. Draghmeh, S. Daraghmeh, D. Daraghmeh, H. Shtayeh, T. Sawaftah, H. Mousa, A. *Heterocyclic Communications* 2020;(26):157-67 <https://doi.org/https://doi.org/10.1515/hc-2020-0105>.
43. M. Hawash Jaradat, N. Abualhasan, M. Amer, J. Levent, S. Issa, S. Ibrahim, S. Ayaseh, A. Shtayeh, T. Mousa, A. *Open Chemistry* 2021;(19):855-63 <https://doi.org/doi:10.1515/chem-2021-0078>.
44. M. Hawash Jaradat, N. Abualhasan, M. Jadallah, J. Fashafsheh, L. Zaid, S. Qamhia, N. Qneibi, M. Qaoud, M. T. Tari, O. Merski, M. Boşnak, A. S. Mousa, A. Issa, L. Eid, A. M. 3 *Biotech* 2024;(14):255 <https://doi.org/10.1007/s13205-024-04103-6>.
45. M. Hawash Jaradat, N. Abualhasan, M. Qaoud, M. T. Joudeh, Y. Jaber, Z. Sawalmeh, M. Zarour, A. Mousa, A. Arar, M. 3 *Biotech* 2022;(12):342 <https://doi.org/10.1007/s13205-022-03408-8>.
46. M. Hawash Jaradat, N. Abualhasan, M. Qneibi, M. Rifai, H. Saqfelhait, T. Shqirat, Y. Nazal, A. Omarya, S. Ibrahim, T. Sobuh, S. Zarour, A. Mousa, A. *Letters in Drug Design & Discovery* 2023;(20):1994-2002 <https://doi.org/10.2174/1570180819666220819151002>.
47. M. Hawash Jaradat, N. Abualhasan, M. Şüküroğlu, M. K. Qaoud, M. T. Kahraman, D. C. Daraghmeh, H. Maslamani, L. Sawafta, M. Ratrout, A. Issa, L. *BMC Chemistry* 2023;(17):11 <https://doi.org/10.1186/s13065-023-00924-3>.
48. M. Hawash Jaradat, N. Abualhasan, M. Thaher, M. Sawalhi, R. Younes, N. Shanaa, A. Nuseirat, M. Mousa, A. *Scientific Reports* 2022;(12):18223 <https://doi.org/10.1038/s41598-022-23050-x>.

49. M. Hawash Jaradat, N. Sabobeh, R. Abualhasan, M. Qaoud, M. T. ACS Omega 2023;(8):29512-26 <https://doi.org/10.1021/acsomega.3c03256>.
50. M. Hawash Jaradat, N. Shekfeh, S. Abualhasan, M. Eid, A. M. Issa, L. BMC Chemistry 2021;(15):40 <https://doi.org/10.1186/s13065-021-00766-x>.
51. M. Hawash Qneibi, M. Jaradat, N. Abualhasan, M. Amer, J. Amer, E. L. H. Ibraheem, T. Hindieh, S. Tarazi, S. Sobuh, S. Drug and Chemical Toxicology 2022;(45):2292-300 <https://doi.org/10.1080/01480545.2021.1935397>.
52. M. Hawash Shweiki, N. Qaoud, M. T. Çapan, I. Abualhasan, M. Kumar, A. Olech, B. Dominiak, P. M. BMC Chemistry 2025;(19):288 <https://doi.org/10.1186/s13065-025-01659-z>.
53. N. Jaradat Abualhasan, M. Pharm Sci. 2016;(22) <https://doi.org/10.15171/PS.2016.19>.
54. N. Jaradat Abualhasan, M. Hawash, M. Qadi, M. Al-Maharik, N. Abdallah, S. Mousa, A. Zarour, A. Arar, M. Sobuh, S. Hussein, F. Issa, L. Jaber, A. Hamduni, H. Alshahatit, S. Chemical and Biological Technologies in Agriculture 2023;(10):25 <https://doi.org/10.1186/s40538-023-00396-6>.
55. N. Jaradat Abualhasan, M. N. Qadi, M. Issa, L. Mousa, A. Allan, F. Hindi, M. Alhrezat, Z. BioMed Research International 2020;(2020):8821319 <https://doi.org/10.1155/2020/8821319>.
56. N. Jaradat Al-lahham, S. Abualhasan, M. N. Bakri, A. Zaide, H. Hammad, J. Hussein, F. Issa, L. Mousa, A. Speih, R. BioMed Research International 2018;(2018):9 <https://doi.org/10.1155/2018/4034689>.
57. N. Jaradat Al-lahham, S. Abualhasan, M. N. Ghannam, D. Mousa, K. Kolayb, H. Hussein, F. Issa, L. Mousa, A. Arabian Journal for Science and Engineering 2019 <https://doi.org/10.1007/s13369-019-03980-x>.
58. N. Jaradat Al-Maharik, N. Hawash, M. Abualhasan, M. N. Qadi, M. Ayeshe, O. Marar, R. a. A. Kharroub, H. Abu-Hait, T. Arar, M. Mousa, A. Arabian Journal for Science and Engineering 2022;(47):6869-79 <https://doi.org/10.1007/s13369-021-06555-x>.
59. N. Jaradat Barkat, A. Khasati, A. Abualhasan, M. Scientific Reports 2025;(15):16305 <https://doi.org/10.1038/s41598-025-92835-7>.
60. N. Jaradat Dacca, H. Hawash, M. Abualhasan, M. N. BMC Chemistry 2021;(15):41 <https://doi.org/10.1186/s13065-021-00768-9>.
61. N. Jaradat Eid, A. Abdelwahab, F. Isa, L. Abdulrahman, A. Abualhasan, M. Hussein, A. M. A. Pharmaceutical Sciences 2015;(21) <https://doi.org/10.15171/PS.2015.38>.
62. N. Jaradat Ghanim, M. Abualhasan, M. N. Rajab, A. Kojok, B. Abed, R. Mousa, A. Arar, M. J Complement Integr Med 2021 <https://doi.org/10.1515/jcim-2021-0206>.
63. N. Jaradat Hawash, M. Abualhasan, M. Letters in Drug Design & Discovery 2020;(17):1117-25 <https://doi.org/10.2174/1570180817999200420114402>.
64. N. Jaradat Hawash, M. Abualhasan, M. Al-Maharik, N. Qadi, M. Qabaha, R. Amarneh, K. Qabaha, A. Qassarwi, S. Issa, L. Makhkamov, T. Ergasheva, N. Sattarov, A. Journal of Herbal Medicine 2024;(48):100954 <https://doi.org/https://doi.org/10.1016/j.hermed.2024.100954>.

65. N. Jaradat Hawash, M. Abualhasan, M. N. Qadi, M. Ghanim, M. Massarwy, E. Ammar, S. A. Zmero, N. Arar, M. Hussein, F. Issa, L. Mousa, A. Zarour, A. *BMC Complementary Medicine and Therapies* 2021;(21):143 <https://doi.org/10.1186/s12906-021-03314-1>.
66. N. Jaradat Hawash, M. Qadi, M. Abualhasan, M. Odetallah, A. Qasim, G. Awayssa, R. Akkawi, A. Abdullah, I. Al-Maharik, N. *Molecules* 2022;(27):5721 <https://doi.org/https://doi.org/10.3390/molecules27175721>.
67. N. Jaradat Khasati, A. Abu-Shanab, B. A. Al-lahham, S. Naser Zaid, A. Abualhasan, M. N. Qneibi, M. Hawash, M. *Phytothérapie* 2019 <https://doi.org/10.3166/phyto-2019-0134>.
68. N. Jaradat Qadi, M. Abualhasan, M. N. Al-lahham, S. Al-Rimawi, F. Hattab, S. Hussein, F. Zakarneh, D. Hamad, I. Sulayman, I. Issa, L. Mousa, A. *European Journal of Integrative Medicine* 2020;(34):101066 <https://doi.org/https://doi.org/10.1016/j.eujim.2020.101066>.
69. N. Jaradat Qneibi, M. Hawash, M. Al-Maharik, N. Qadi, M. Abualhasan, M. N. Ayesh, O. Bsharat, J. Khadir, M. Morshed, R. Yaaqbeh, S. Marei, S. a. Hamayel, S. Mousa, A. Daqqa, M. Bdir, S. *Industrial Crops and Products* 2022;(176):114360 <https://doi.org/https://doi.org/10.1016/j.indcrop.2021.114360>.
70. N. A. Jaradat Abualhasan, M. Ali, I. *Journal of Applied Pharmaceutical Science* 2015;(5):101-6 <https://doi.org/https://dx.doi.org/10.7324/JAPS.2015.50417>.
71. N. A. Jaradat Ali, I. Zaid, A. N. Abualhasan, M. *Jordan Journal of Pharmaceutical Sciences* 2017;(10)
72. N. A. Jaradat Al-lahham, S. Zaid, A. N. Hussein, F. Issa, L. Abualhasan, M. N. Hawash, M. Yahya, A. Shehadi, O. Omair, R. Mousa, A. *European Journal of Integrative Medicine* 2019;(30):100933 <https://doi.org/https://doi.org/10.1016/j.eujim.2019.100933>.
73. N. A. Jaradat Damiri, B. Abualhasan, M. N. *Pak J Pharm Sci* 2016;(29):325-30
74. M. Kharoaf Malkieh, N. Abualhasan, M. Shubitah, R. Jaradat, N. Zaid, A. N. *International Journal of Pharmacy and Pharmaceutical Sciences* 2012;(4):284-90
75. A. Murad Amal, Q. Salam, Q. Tasneem, K. *Current Pharmaceutical Analysis* 2021;(17):822-8 <https://doi.org/http://dx.doi.org/10.2174/1573412916999200415180046>.
76. A. Murad David, G. W. *Current Analytical Chemistry* 2019;(19) <https://doi.org/http://dx.doi.org/10.2174/1573411014666180516093353>.
77. A. Murad Mohyeddin, A. Nidal, J. Tala, S. *Letters in Drug Design & Discovery* 2019;(16):685-95 <https://doi.org/http://dx.doi.org/10.2174/1570180816666181108114706>.
78. Murad Abualhasan Nidal, Z. Kefah Abu, S. Nasr, S. *Current Pharmaceutical Design* 2021;(27):2872-80 <https://doi.org/http://dx.doi.org/10.2174/1381612826666200904171940>.
79. H. Natsheh Qneibi, M. Kittana, N. Jaradat, N. Assali, M. Shaqour, B. Abualhasan, M. Mayyala, A. Dawoud, Y. Melhem, T. Alhadi, S. A. Hammoudi, O. Samaro, A. Mousa, A. Bdir, S. Bdair, M. Aldwaik, S. *Int J Pharm* 2025;(682):125904 <https://doi.org/10.1016/j.ijpharm.2025.125904>.
80. M. Qadi Jaradat, N. 2020;(2020):6965306 <https://doi.org/10.1155/2020/6965306>.

81. M. Qadi Jaradat, N. Al-lahham, S. Ali, I. Abualhasan, M. N. Shraim, N. Hussein, F. Issa, L. Mousa, A. Zarour, A. Badrasawi, A. Baarah, A. M. Al-Omari, R. *BioMed Research International* 2020;(2020):6965306 <https://doi.org/10.1155/2020/6965306>.
82. M. Qneibi Jaradat, N. Hamed, O. Hawash, M. Abualhasan, M. Qadi, M. Bdir, S. *Scientific Reports* 2025 <https://doi.org/10.1038/s41598-025-30649-3>.
83. A. Radwan Shraim, N. Abualhasan, M. Salim, L. Nazzal, R. AbuAbaid, Y. *BMC Pregnancy and Childbirth* 2025;(25):223 <https://doi.org/10.1186/s12884-025-07360-2>.
84. N. Salameh Shraim, N. 2020;(2020):4851879 <https://doi.org/10.1155/2020/4851879>.
85. N. Salameh Shraim, N. Jaradat, N. El Masri, M. Adwan, L. K'aibni, S. Alkowni, R. Radwan, A. AbuAlhasan, M. *BioMed research international* 2020;(2020) <https://doi.org/10.1155/2020/4851879>.
86. B. Shaqour Natsheh, H. Kittana, N. Jaradat, N. Abualhasan, M. Eid, A. M. Moqady, R. AbuHijleh, A. Abu Alsaleem, S. Ratrou, S. De Wever, L. Vervet, C. Vanhoorne, V. *ACS Biomaterials Science & Engineering* 2024;(10):3833-41 <https://doi.org/10.1021/acsbmaterials.4c00476>.
87. N. Shraim Abualhasan, M. Radwan, A. Ali, I. Shraim, F. Khasat, A. Ali, A. Souqi, N. *Pakistan Journal of Analytical & Environmental Chemistry* 2025;(26):183-93 <https://doi.org/10.21743/pjaec/2025.12.02>.
88. A. N. Zaid Abualhasan, M. Aiman, Q. Shehdeh, J. *International Journal of Drug Delivery* 2012;(4):229
89. A. N. Zaid Abualhasan, M. Al-Masri, M. Jaradat, N. Ziada, I. Ayash, N. Daowd, A. *Asian Journal of Pharmaceutics* 2016;(10):S276 <https://doi.org/https://doi.org/10.22377/ajp.v10i03.765>.
90. A. N. Zaid Abualhasan, M. N. Jaradat, N. Marar, M. Mansoor, K. Qa'dan, F. *Journal of Pharmaceutical Investigation* 2016:1-7 <https://doi.org/10.1007/s40005-016-0264-x>.
91. A. N. Zaid Abualhasan, M. N. Watson, D. G. Mousa, A. Ghazal, N. Bustami, R. *Drug Des Devel Ther* 2015;(9):5315-21 <https://doi.org/10.2147/DDDT.S87938>.
92. A. N. Zaid Natur, S. Qaddomi, A. Abualhasan, M. Al-Ramahi, R. Shraim, N. Khammash, S. Jaradat, N. *Pak. J. Pharm. Sci* 2014;(27):755-62
93. A. n. Zaid Qaddomi, A. Ghanem, M. Shehadeh, L. Abualhasan, M. Natur, S. Khammash, S. *Dissolution Technologies* 2015 <https://doi.org/dx.doi.org/10.14227/DT220315P32>.