



CURRICULUM VITAE

Rouhollah Karami-Osboo (PhD)

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Academic qualifications

MSc:

Analytical Chemistry, Islamic Azad University (IAU), North Branch, Tehran. (2003).

BSc:

Applied Chemistry, Islamic Azad University (IAU), North Branch, Tehran. (2001).

PhD:

Medicinal chemistry, Medicinal and Natural Products Research Center, Shiraz University of Medical Sciences, (2014).

Research interests:

- Novel methods for mycotoxin detoxification in food and feed.
- Novel methods for determination and separation of Mycotoxins, Pesticides and Drug contamination in food stuff.
- Simultaneous method for analysis of Organic in food and feeds.

Selected research projects:

- Evaluation of *Saccharomyces cerevisiae* in prevention of *Aspergillus flavus* spores and reduction of aflatoxins G1, B2, B1, G2 in maize.

- Investigation of the possibility of fabrication of adsorbent nanoparticles and its efficiency in the extraction of deoxynivalenol in contaminated wheat.
- Investigation of the possibility of using adsorbent nanoparticles in the purification of aflatoxin group B in pistachios
- Investigation of absorption and reduction of mycotoxins by magnetized Nano zeolite
- Extraction of ochratoxin in raisins using nano-micro extraction method.
- Formulation of thyme essential oil microcapsules against *Aspergillus flavus* aflatoxin producing agent in pistachio through nanotechnology
- Investigation of the possibility of ethanol production from maize samples contaminated with high levels of aflatoxin
- Evaluation of mycotoxins in rice and wheat

Selected publications:

- 1) Extraction, Identification and Separation of effective compounds from *Thymus vulgaris* and *Lvandula officinalis* Planets in order to study of pesticide effect on fire blight Disease, Tehran. (M. Sc-2003).
- 2) Evaluation of Dispersive liquid-liquid microextraction-HPLC-UV for determination of Deoxynivalenol (DON) in wheat flour. Shiraz University of Medical Sciences. (M Phil.2012).
- 3) Novel extraction methods for extraction of, A) Antibiotics in milk and, B) Ochratoxin A in raisin. (PhD.2014).

Journals papers:

1. Babae, R., **Karami-Osboo, R.**, and Mirabolfathi, M. 2021. Evaluation of the use of Ozone, UV-C and Citric acid in reducing aflatoxins in pistachio nut. Journal of Food Composition and Analysis, 104276.
2. MHS. AliAbadi, **Karami-Osboo, R.**, Kobarfard, F., Nabi, M., Yazdanpanah H. 2021. Detection of lime juice adulteration by simultaneous determination of main organic acids using liquid chromatography-tandem mass spectrometry Journal of Food Composition and Analysis.: 104223.
3. F. Shaygan, **Karami-Osboo, R.** 2021. None destructive spectrometry methods in identification and quantitative measurement of various Mycotoxins in pistachio. journal of quantum chemistry and spectroscopy JQCS. Vol. 11, Issue 35. pp 1-22.

4. Babaei, R., **Karami-Osboo, R.** and Mirabolfathy, M., 2021. An overview of effective detoxification methods for aflatoxin-contaminated pistachio. *Pistachio and Health Journal*, 4(2), pp.75-93.
5. Khodaverdi M, **Karami-Osboo, R.**, Hosseinian L, Mirabolfathy M. 2021. Evaluation of the Effect of Neem Extract Formulation on Reducing Aflatoxin-Producing Fungi in Pistachio. *Pistachio and Health Journal*. 2021; 4 (3)
6. **Karami-Osboo, R.** 2020. Nanofluid extraction of Ochratoxin A in food. *Journal of Food Composition and Analysis* 87: 103425.
7. **Karami-Osboo, R.**, Maham, M., & Nasrollahzadeh, M. 2020. Synthesised magnetic nano-zeolite as a mycotoxins binder to reduce the toxicity of aflatoxins, zearalenone, ochratoxin A, and deoxynivalenol in barley. *IET nanobiotechnology*, 14(7), 623-627.
8. **Karami-Osboo, R.**, Maham, M., & Nasrollahzadeh, M. 2020. Rapid and sensitive extraction of aflatoxins by Fe₃O₄/zeolite nanocomposite adsorbent in rice samples. *Microchemical Journal*, 158, 105206.
9. **Karami-Osboo, R.**, MHS. AliAbadi, Yazdanpanah H. 2020. Review on mycotoxins determination by infrared spectroscopy and chemometrics in food stuff. *journal of quantum chemistry and spectroscopy JQCS*. Vol. 9, Issue 32. pp 42-24.
10. Mirabolfathy M., **Karami-Osboo, R.** 2019. Important Mycotoxins, Iran Status. *Annals of Reviews & Research*. 5. 10.19080/ARR.2019.05.555651.
11. M Maham, **Karami-Osboo, R.**, MHS. AliAbadi. 2019. Authentication of consumed lemon juice in Golestan province using liquid chromatography-mass spectrometry. *Food Science and Technology* 16 (86), 325-334.
12. **Karami-Osboo, R.**, M Maham. 2018. Pre-concentration and Extraction of Aflatoxins from Rice Using Air-Assisted Dispersive Liquid-Liquid Microextraction. *Food Analytical Methods*, Volume 11, Issue 10, pp 2816–2821.
13. **Karami-Osboo, R.**, and M Mirabolfathy. 2017. A novel dispersive nanomagnetic particle solid-phase extraction method to determine aflatoxins in nut and cereal samples. *Food Analytical Methods* 10 (12), 4086-4093.
14. M Maham, **Karami-Osboo, R.** 2017. Extraction of Sulfathiazole from Urine Samples Using Biosynthesized Magnetic Nanoparticles. *Iranian journal of pharmaceutical research: IJPR* 16 (2), 462.
15. **Karami-Osboo, R.**, Miri, R., Kobarfard, F., and Javidnia, K. 2016. Simultaneous chloramphenicol and florfenicol determination by a validated DLLME-HPLC-UV method in pasteurized milk. *Iranian Journal of Pharmaceutical Research*. Accepted. 2016.

16. **Karami-Osboo, R.**, and M Mirabolfathy. 2016. Effect of different strains of *Saccharomyces cerevisiae* on reduction of aflatoxin B1, B2, G1 and G2. Journal of Food Hygiene, Vol. 6, No 23. 43-53.
17. **Karami-Osboo, R.**, M Maham, M Mirabolfathy. 2015. Magnetic nanoparticles solid phase extraction-HPLC-UV for determination of deoxynivalenol from wheat flour. Analytical Methods.7. 10266-10271.
18. A. M.S. Al-Hatmi, M. Mirabolfathy, Ferry Hagen, Normand Anne- Cécile, J. Benjamin Stielow, **R. Karami-Osboo**, Anne D. van Diepeningen, Jacques F. Meis, G. Sybren de Hoog.2015. DNA barcoding, MALDI-TOF and AFLP data support *Fusarium ficicrescens* as a distinct species within the *F. fujikuroi* species complex. Fungal Biology. Accepted.
19. **Karami-Osboo, R.**, Miri, R., Kobarfard, F., and Javidnia, K. 2015. Extraction and determination of sulfadiazine and sulfathiazole in milk using magnetic solid phase extraction-HPLC-UV, Analytical Methods. 7, 1586–1589.
20. R. Rezaeian-doloei, S. Rezaee, M. Mirabolfathy, H. Zamanizadeh, M. Razavi and **R. Karami-Osboo**. 2015. Genetic analysis of deoxynivalenol and nivalenol chemotypes of *Fusarium graminearum* on wheat in Iran. Appl. Ent. Phytopath. Vol. 83, No. 1.
21. **Karami-Osboo, R.**, Ramin Miri, Amir reza Jassbi. 2015. Comparative study of the volatiles in the essential oils of *Achillea wilhelmsii*, *A. vermicularis* and *A. eriophora* by hydrodistillation and head space-solid phase microextraction (HS-SPME) gas chromatography-mass spectroscopy (GC-MS) analyses. Journal of Essential Oil Bearing Plants. 18 (6), 1433-1440.
22. **Karami-Osboo, R.**, Ramin Miri, Katayoun Javidnia, Farzad Kobarfard, Mohammad Hossein Shojaee AliAbadi, Mehdi Maham. 2015. A validated dispersive Liquid-Liquid microextraction method for extraction of Ochratoxin A, from Raisin samples. Journal of Food Science and Technology.52 (4), 2440-2445
23. **Karami-Osboo, R.**, Ramin Miri, Assadolahi M. and Amir reza Jassbi. 2015. Comparison between Head-Space SPME and hydrodistillation-GC-MS of the volatiles of *Thymus daenensis*. Journal of Essential Oil Bearing Plants. 18:4, 925-930.
24. **Karami-Osboo, R.**, Miri, R., Kobarfard, F., and Javidnia, K. 2014. Simultaneous determination of six fluoroquinolones by validated QuEChERS-DLLME HPLC-FLD in milk, Analytical Methods. 6:5632-5638.
25. Morshedi D, T Salmani Kesejini, F Aliakbari, **Karami-Osboo, R.**, Shakibaei M, ,Marvian AT, Khalifeh M, Soroosh M. (2014) Identification and characterization of a compound from *Cuminum cyminum* essential oil with antifibrillation and cytotoxic effect. Research in Pharmaceutical Sciences 9:431-443

26. Mirabolfathy M., **Karami-Osboo, R.** 2014. Ochratoxin A and ochratoxin-producing isolates of *Aspergillus section nigri* in raisin in Iran. *Iran. J. Plant Path.*, Vol. 50, No. 1
27. Aliakbari F, Mazhar S.F, **Karami-Osboo, R.**, P. Shariati, D. Morshedi, D. Farajzadeh. Decontamination of tomato, red cabbage, carrot, fresh parsley and fresh green onion inoculated with *Shigella sonnei* and *Shigella flexneri* by some Essential oils (*in vitro* conditions). *Novelty in Biomedicine*, 2, 36-47.
28. Mazhar S.F., Aliakbari F., **Karami-Osboo R.**, Morshedi D., Shariati P., Farajzadeh D. 2014. Inhibitory Effects of Several Essential Oils towards *Salmonella typhimurium*, *Salmonella paratyphi A* and *Salmonella paratyphi B*. *Appl Food Biotechnol*, Vol. 1, No. 1. 43-52.
29. **Karami-Osboo, R.**, Maham, M., Miri, R. Shojaee Ali Abadi, M.H., M. Mirabolfathy. K. Javidnia. 2013. Evaluation of Dispersive liquid-liquid microextraction-HPLC-UV for determination of Deoxynivalenol (DON) in wheat flour. *Food Anal. Chem. Food Analytical Methods*, 6 (1), 176-180.
30. Maham M., Kiarostami V., Waqif-Husain S., **Karami-Osboo R.**, Mirabolfathy M. (2013): Analysis of ochratoxin A in malt beverage samples using dispersive liquid-liquid microextraction coupled with liquid chromatography-fluorescence detection. *Czech J. Food Sci.*, 31: 520–525.
31. Maham, M., **Karami-Osboo, R.**, Kiarostami, V., Waqif-Husain, S. 2013. Novel Binary Solvents-Dispersive Liquid-Liquid Microextraction (BS-DLLME) Method for Determination of Patulin in Apple Juice Using High-Performance Liquid Chromatography. *Food Analytical Methods*, 6 (3) pp. 761 - 766.
32. M Mirabolfathy, **R Karami-Osboo**. 2013. Deoxynivalenol and don-producing *fusarium graminearum* isolates in wheat and barley crops in north and northwest areas of Iran. *Iranian Journal of Plant Path* 48 (4), 197-210.
33. Maham, M., V. Kiarostami, S. W. Husain, P. Abroomand ... and **Karami-Osboo, R.** 2013. Extraction and Determination of Cyproheptadine in Human Urine by DLLME-HPLC Method. *Iranian Journal of Pharmaceutical Research*, 12 (2): 311-318.
34. **Karami-Osboo, R.**, M. Mirabolfathy, R. Kamran, M.S.Boushehri, S Sarkari. (2012). Aflatoxin B1 in maize harvested over 3 years in Iran. *Food Control*, vol. 23: 271-274.
35. S.H. hoseiniyeh Faraahani, M. Mirabolfathy, H. Rezaie and **Karami-Osboo, R.** 2012. Effect of five essential oils on zearalenone production and growth of *Fusarium graminearum*. *Iran. J. Plant Path.* Vol. 80, No. 1.

36. Z Aliakbari, M. Mirabolfathy, **Karami-Osboo, R.** 2012. *Fusarium* species and Deoxynivalenol in maize product of Moqan region. Iran. J. Plant Path. Vol. 79, No. 2. 163-180.

37. **Karami-Osboo, R.**, M.Khodaverdi, F. Aliakbari.2010. Antibacterial effect of effective compounds of *Satureja hortensis* and *Thymus vulgaris* essential oils against *Erwinia amylovora* J. Agricultural Science and Technology (JAST) Vol. 12: 35-45.

38. F Aliakbari, **Karami-Osboo, R.**, SF Mazhar, P Shariati, D Faradjzadeh, D Morshedi. Essential Oils Usage as a Natural Pesticide. Journal of Biotechnology 150, 481.

39. **Karami-Osboo, R.**, M. Mirabolfathy, F. Aliakbari. 2010. Natural deoxynivalenol contamination of corn produced at Golestan and Moqan areas in Iran. J. Agricultural Science and Technology (JAST) Vol. 12(2): 233-239

40. A. Lahoojh, M. Mirabolfathy and **Karami-Osboo, R.** 2010., Effect of *zataria multiflora* and *satureja hortensis* essential oils, thymol and carvacrol on growth of *fusarium gramineum* isolates and deoxynivalenol production. Iran. J. Plant Path. Vol. 46, No. 1, 11-13.

41. Khanafari, A., Soudi, H., Miraboufathi, M., and **Karami-Osboo, R.** 2009. In vitro investigation of *Aspergillus flavus* inhibition growth and Aflatoxin B1 uptake by *Lactobacillus plantarum*, PAJOUHESH-VA-SAZANDEGI 21, 146-139.

42. **Karami-Osboo, R.**, M. Mirabolfathy.2008. Natural zearalenone contamination wheat from Golestan province, northern Iran. Iran. J. Plant Path.Vol. 44

43. Khanafari, H. Soudi, M. Miraboufathi and **Karami-Osboo, R.** 2007, An in vitro Investigation of Aflatoxin B1 Biological Control by *Lactobacillus Plantarum*, . Pakistan Journal of Biological Sciences 10: 1596-1603.

44. F. Aliakbari, M. Mirabolfathy, M. Emami, S.F. Mazhar and **Karami-Osboo, R.** 2007. Natural Occurrence of *Fusarium* species in Maize Kernels at Gholestan Province in Northern Iran. Asian Journal of Plant Sciences Vol: 6 Issue: 8 Pages: 1276-1281

45. Mirabolfathy, M., **Karami-Osboo, R.**, & Amini, H. 2006. Fumonisin B1 contamination of Golestan corn product. Iranian Journal of Plant Pathology, 42(2).

Conference papers:

- 1) **Karami-Osboo, R.** Reduction of aflatoxins by zeolite and bentonite nanocomposites in rice methanolic extract. 2th international conference on modern technologies in sciences.2019 Amol university of modern technologies in sciences.
- 2) **Karami-Osboo, R.,** M. Mirabolfathy, Ramin Miri, Katayoun Javidnia. Evaluation of two different *Saccharomyces cerevisiae* strains in reduction of aflatoxin B1, B2, G1 and G2. The 3rd Iranian Congress of Natural Toxins 2014. Shahid Beheshti University of medical science. P56-60.
- 3) Maham, M., **Karami-Osboo, R.,** M. Mirabolfathy. Analysis of deoxynivalenol in wheat samples based on magnetic nano particles as adsorbents. The 3rd Iranian Congress of Natural Toxins 2014. Shahid Beheshti University of medical science.
- 4) Farhang Aliakbari, Seyedeh Felour Mazhar, **Rouhollah Karami-Osboo,** Davoud Farajzadehe, Dina Morshedi. (2012). Decontamination of vegetables inoculated with *Shigella flexneri* by Essential oils. IBS. Korea.
- 5) **Karami-Osboo, R,** M. Mirabolfathy, R. Kamran, M. Boushehri and S. Sarkari. (2010). Aflatoxin B1 evaluation in two hybrids of maize crop harvested over 3 years in Iran. International Mycotoxin Conference - MycoRed 2010. 1- 4 December 2010, Penang- Malaysia.
- 6) R. Rezaeian-Doloei, S. Rezaee, M. Mirabolfathy, H. Zamanizadeh and **Karami-Osboo, R.** (2010). Detection of deoxynivalenol and nivalenol chemotypes genes in the Iranian *Fusarium graminearum* isolates. International Mycotoxin Conference - MycoRed 2010. 1- 4 December 2010, Penang- Malaysia.
- 7) M. Mirabolfathy and **Karami-Osboo, R.** (2010). Study on *Fusarium* species associated with fig fruits produced in Fars province and their mycotoxin potential production. International Mycotoxin Conference - MycoRed 2010. 1- 4 December 2010, Penang- Malaysia.
- 8) F. Aliakbari, **Karami-Osboo, R,** S.F. Mazhar, P.Shariati, D. Faradjzadeh,D.Morshedi.(2010). Essential Oils Usage as a Natural Pesticide. Special Abstracts / Journal of Biotechnology 150S. S1–S576 S481
- 9) S. Hosseinieh Farahani, M. Mirabolfathy and **R. Karami-Osboo.** The effect of *Thymus vulgaris*, *Satureja hortensis*, *Anethum graveolens*, *Mentha sativa* and *Capsicum annum* essential oils toward inhibition of zearalenone production and zearalenoneproducing fungus.19th Iranian Plant Protection Congress, 31 July-3 August 2010. P.244.
- 10) M. Mirabolfathy, A. Hasanpoor and **R. Karami-Osboo.** Study on *Fusarium* species associated with fig fruits produced in Fars province and their mycotoxin potential production. 19th Iranian Plant Protection Congress, 31 July-3 August 2010. P.336.

- 11) M. Mirabolfathy, A. Hasanpoor and **R. Karami-Osboo**. Study on aflatoxin and aflatoxin-producing fungi in fig (*Ficus carica*) of Fars province. 19th Iranian Plant Protection Congress, 31 July-3 August 2010. P.335.
- 12) **Karami-Osboo, R**, M Mirabolfathi, Aflatoxin determination in black Tea, 26-30 October 2009, Beirut, Lebanon.
- 13) Farhang Aliakbari, Seyedeh Flour Mazhar, **Karami-Osboo, R** and Parvin. Shariati. Decontamination of maize artificially inoculated with *Fusarium verticillioides* with *Mentha pulegium*, *Mentha viridis* and *Saturiea hortensis* essential oils Worldwide Mycotoxin Reduction in Food and Feed Chains. ISM Conference 2009. 9- 11 September 2009, Tulln, Austria. **P 72**.
- 14) Z. Aliakbari, H. Aminian, M. Mirabolfathi & **Karami-Osboo, R**. Determination of deoxynivalenol in maize crop at Ardabil province in Iran and related *Fusarium* species in 2007-2008. VII International Symposium on Chemical and non-Chemical Soil and Substrate Disinfestation Ghent. Belgium
- 15) F. Aliakbari, **Karami-Osboo, R**, S.F. Mazhar. 2008. Antimicrobial Effect of *Saturiea Hortensis* And Thyme Essential Oils against Shigella Spp. Seminar of Molecular Biotechnology. Tehran Iran
- 16) F. Aliakbari, **Karami-Osboo, R**, S.F. Mazhar. 2008. Decontamination Of Raw Chicken Inoculated With Salmonella Spp. With *Thymus Vulgaris* and Saturiea. Seminar of Molecular Biotechnology. Tehran Iran
- 17) F. Aliakbari, **Karami-Osboo, R**, S.F. Mazhar. 2008. Inhibitory Effect of *Thymus Vulgaris* and *Saturiea Hortensis* Essential Oils against *Salmonella Spp.* seminar of Molecular Biotechnology. Tehran Iran.
- 18) **Karami-Osboo, R**, M. Mirabolfathy, 2007, Comparative: study of Immunoaffinity-HPLC and Immunoaffinity- Fluorometry to determination of zearalenone contamination in wheat, 15th Iranian seminar of Analytical Chemistry, Feb 2007, Shiraz.
- 19) **Karami-Osboo, R**, Khodaverdi, M 2006, A Study of Lavandula Officinalis Essential Oil Compounds Effect on Fire Blight's Disease. Ninth Arab Congress of Plant Protection, 19-23 November 2006, Damascus, Syria.
- 20) H. Soudi, Khanafari, A, M. Miraboufathi and **R. Karami Osboo**, 2006, bio control of aflatoxin by *Lactobacillus plantarum* (ptcc1058). 11th international symposium on microbial ecology-11, vienna, Austria, p.390.
- 21) **Karami-Osboo, R** and M. Mirabolfathy, 2006, Determination of Zearalenone in wheat crop product of Golestan in north of Iran. 17th Iranian Plant Protection congress, P.506

- 22) Mirabolfathy. M and **Karami-Osboo, R.** 2006, Determination of Deoxynivalenol in wheat and barley product of Golestan province in 2004-2005. 17th Iranian Plant Protection congress, P.505.
- 23) H. Soudi, Khanafari, A, M. Mirabolfathy and **Karami-Osboo, R.** 2006, Reducing aflatoxin B1 using 2 strain of lactic acid Bacteria. 17th Iranian Plant Protection congress, P.504.
- 24) Aliakbari, F., Emami, M., Mirabolfathy. M and **Karami-Osboo, R.** 2006, Monitoring of Deoxynivalenol (DON) in maize crop at Golestan province. 17th Iranian Plant Protection congress, P.509.
- 25) **Karami-Osboo, R.** Khodaverdi, M., Hussein, S.V., Qutb-sharif, S.J. 2004, Identification of *Lavendula Officinalis* essential oil compounds by GC-MS. 3rd National Basic Science Congress Young Researchers club. Goran. P.299
- 26) Khodaverdi, M., **Karami-Osboo, R.** Bahmaee, M., Qutb-sharif, S.J. 2004, Identification of *Rosmarinus Officinalis* essential oil compounds. 3rd National Basic Science Congress Young Researchers club. Gorgan. P. 277.
- 27) **Karami-Osboo, R.**, Shamlo, A., Tadaion, F. 2000, Synthesis of phthalocyanine pigment with wet method. The 2nd congress of chemistry of I.A.U., in cooperation of Louis Pasteur University.

Theses supervised:

Software and E-publications:

Other achievements:

1. Contribution to prepare the Iranian National Standard method for determination of Vitamin C. No 11243.
2. Contribution to prepare the Iranian National Standard Method Animal and vegetable fats and oils- Determination of cocoa butter equivalents in milk chocolate. No 12961.
3. Contribution to prepare the Iranian National Standard method for Animal and vegetable fats and oils- Cocoa butter equivalents in cocoa butter and plain chocolate part 1: Determination of the presence of cocoa butter equivalents. No. 12961-1

4. Contribution to prepare the Iranian National Standard method for Animal and vegetable fats and oils- Cocoa butter equivalents in cocoa butter and plain chocolate- Part 2: Quantification of cocoa butter equivalents ICS:67.200.10. No.12961-2.
5. Contribution to prepare the Iranian National Standard method for determination of Caffeine.
6. Contribution to prepare the Iranian National Standard method for determination of tetracycline in milk.
7. Contribution to prepare the Iranian National Standard method for Determination of pesticide residues using GC-MS and/or LC-MS/MS following acetonitrile extraction/partitioning and cleanup by dispersive SPE— QuEChERS-method— Foods of plant origin