In The Name of God

Curriculum Vitae

Last Update: June 2026

Parisa Soltan-Alinejad

Ph.D. in Medical Entomology

Personal Information:

First Name: Parisa **Surname: Soltan-Alinejad**

Birth Date: 22 Nov 1990 **Birth Place:** Urmia, West Azerbaijan Province, Iran

Marital Status: Single **Email:** parisaalinejad1369@gmail.com

Tel: 09148011569

Qualification:

Ph.D. Medical Entomology and vector Control. School of Public Health, Shiraz University of Medical Sciences (SUMS), **Shiraz, Iran,** (2017-2022).

M.Sc. Medical Entomology and vector Control. School of Public Health, Urmia University of Medical Sciences (UMSU), **Urmia, Iran,** (2013-2017)**.**

B.Sc. Plant Pathology. School of Agricultural Sciences, Urmia University, **Urmia, Iran,** (2009-2013).

Title of Thesis:

Doctoral Thesis: Characterization, expression and production of recombinant protein of phospholipase A2 coding gene in Iranian scorpion, *Scorpio maurus* and investigation of its leishmanacidal activity against *Leishmania major*, 2022

Master of Science Thesis: The utility of mitochondrial molecular marker for identification of some of scorpion species of West Azerbaijan Province, 2015

Experiences:

1- Teaching:

- **Molecular Entomology, Laboratory courses** (for M.Sc. of Vector Biology and Control of Disease)
- **Co-teaching in Medical Entomology, Laboratory courses** (for M.Sc. of Vector Biology and Control of Disease and Medicine)
- **Co-teaching in Malariology, Laboratory courses** (for M.Sc. of Vector Biology and Control of Disease)
- **Morphology and Physiology of insects, Laboratory courses (**for B.Sc. of Vector Biology and Control of Disease)
- **Malaria (**for M.Sc. of Vector Biology and Control of Disease)
- **Insect behavioral biology (**for B.Sc. of Vector Biology and Control of Disease)
- **Biology (**for B.Sc. of Vector Biology and Control of Disease)
- **Introduction to Laboratory Equipment and Instruments (**for B.Sc. of Vector Biology and Control of Disease)
- **Ecology (**for B.Sc. of Public Health)
- **Geographical pathology (**for B.Sc. of Public Health)
- **Medical Entomology (**for B.Sc. and M.Sc. of Vector Biology and Control of Disease, and B.Sc. of Public Health)

2- Research:

- **MRecombinant Protein**
- **Molecular cloning**
- **Venomous Arthropods**
- **Venom of Arthropods**
- **Molecular Entomology**
- **Molecular systematic of Disease Vectors**
- **Basic Medical Entomology**

Research experiences and skills

1. Basic Entomology techniques:

- **Sample collection** from field using different methods
- **Sample preparation** and Morphological Identification using standard keys

2. Technical Experiences:

- **DNA and RNA Extraction**
- **Different PCR amplification methods** (RT-PCR, Nested-PCR, …), Data Analysis (Gel Electrophoresis, …)
- **T/A cloning** (PCR Cloning)
- **Genetic Manipulation** (Competent cell preparation, Gene Digestion, Plasmid Preparation, Data Analysis,…)
- **Bacterial Transformation**
- **Gene Cloning**
- **Protein Expression in Prokaryotes**
- **Recombinant Protein**
- **Protein Purification**
- **Protein Expression Assay**
- **SDS-PAGE**
- **Dot blotting**
- **Western blotting**
- **ELISA**
- **MTT Assay**
- **Flowcytometry**
- **Cell Culture**

3. Bioinformatics

- **DNA, RNA Sequences analysis**
- **Protein Sequences and structure analysis**
- **Primer Designing**
- **Phylogenetic Analysis**
- **Genetic Distance Analysis**
- **Using Related Softwares** (MEGA7, BioEdit, Oligo7, GeneRunner, Chimera, Clustal W, Chromas …)

Scientific Training Courses:

1) **Dynamic of vector born disease in mosquitoes'** online workshop, October 14th, Shiraz University of Medical Sciences, 2021.
2) **Identification, management and treatment of scorpion sting** online workshop, July 27th, Ahvaz Jondishapur University of Medical Sciences, 2021
3) **Utilization of biological and microbial factors in vector borne disease control** online workshop, September 15th, Ahvaz Jondishapur University of Medical Sciences, 2021
4) **Maggot therapy** online workshop, July 12th, Ilam University of Medical Sciences, 2021
5) **Primer Designing** workshop, February 4th, Shiraz University of Medical Sciences, 2021
6) **Rapid response to vector-borne disease** workshop**,** May 29th to June 2end, Pasture Institution of Iran, 2021
7) **Primer Designing** workshop, February 4th, Shiraz University of Medical Sciences, 2021

8) **GraphPad Prism V8** workshop, December 20th, Shiraz University of Medical Sciences, 2020.
9) **Advanced Statistical Analysis of Data with SPSS Software** workshop, September 30th, Shiraz University of Medical Sciences, 2020.
10) **Plagiarism types and how to avoid theme in written English** workshop**,** October 12th, Shiraz University of Medical Sciences, 2020.
11) **How to write a paragraph** workshop, September 9th, Shiraz University of Medical Sciences, 2020.
12) **How to write a Credible Letter and Prepare a Convincing Curriculum Vitae** workshop**,** August 17th, Shiraz University of Medical Sciences, 2020.
13) **Basic and Advanced Statistical Analysis of Data with SPSS Software** workshop**,** February 18th and 19th**,** Shiraz University of Medical Sciences, 2019.
14) **Activities of business accelerator centers** workshop**,** October 23th**,** Shiraz University of Medical Sciences, 2019.
15) **How to choose a topic with an emphasis on changes in the research process in the last two years** workshop**,** December 9th, Shiraz University of Medical Sciences, 2019.
16) **Teaching methods** workshop, January 15th, Shiraz University of Medical Sciences, 2019.
17) **Principles of HSE in laboratory** workshop, May 9th, Shiraz University of Medical Sciences, 2019.
18) **Iran at great risk of emerging arboviral diseases** workshop, February 25th, Shiraz University of Medical Sciences, 2018.
19) **Scorpions: capture, identification, farming, and venom milking** workshop, May 24th, Shiraz University of Medical Sciences, 2018.
20) **Professional Ethics** workshop**,** February 1، Shiraz University of Medical Sciences, 2018.
21) **Primer Designing** workshop**,** April 25th and 26th, Urmia University of Medical Sciences, 2015.

Research Projects:

1) **Investigation of secondary complications of Kalaazar treatment in recovered people in Meshkin Shahr from 2014 to 2023,** Ardabil University of Medical Sciences, Ardabil, Iran
2) **Standardization and construction of a questionnaire to Investigating Knowledge, Attitudes, and Practice towards Cutaneous leishmaniasis in selected endemic and non-endemic regions of Iran,** Ardabil University of Medical Sciences, Ardabil, Iran
3) **Molecular investigation of contamination of Culicidae mosquitoes with *Dirofilaria immitis* and *D. repens* microfilariae as main agents of dirofilariasis in Ardabil Province,** Ardabil University of Medical Sciences, Ardabil, Iran
4) **Investigation of the natural infection of Dengue virus in Aedes Mosquitoes collected from Ardabil Province using RT-PCR assay, 2024,** Ardabil University of Medical Sciences, Ardabil, Iran
5) **Molecular investigation on Aedes aegypti and Aedes albopictus species, collected from Iran,** Ardabil University of Medical Sciences, Ardabil, Iran
6) **Investigation of the bacterial microbiome in the telson and venom of *Hemiscorpius lepturus* scorpion, an Iranian medically important scorpion,** Ardabil University of Medical Sciences, Ardabil, Iran
7) **Molecular Identification and Phylogenetic Analysis of Ticks in Ardabil Province Based on the Mitochondrial COI Marker,** Ardabil University of Medical Sciences, Ardabil, Iran
8) **Knowledge, Attitude and Practice of Residents in Ardabil Regarding Scorpion and Scorpion Stings in 2025,** Ardabil University of Medical Sciences, Ardabil, Iran
9) **Uncommon Complications of Scorpion Sting Worldwide: a review study,** Ardabil University of Medical Sciences, Ardabil, Iran
10) **Unmasking Borrelia species: A Comprehensive Review of its Prevalence and Presence in Iran,** Ardabil University of Medical Sciences, Ardabil, Iran
11) **Investigating the relationship between meteorological variables and predicting**

the spread of pediculosis in Ardabil province from the year 1395 to 1403, Ardabil University of Medical Sciences, Ardabil, Iran

12) **The Impact of Environmental Factors on The Midgut Microbiome Structure in Mosquitoes: A Narrative Review,** Ardabil University of Medical Sciences, Ardabil, Iran
13) **Analysis of Crimean-Congo Hemorrhagic Fever Surveillance Data in Ardabil Province: Temporal Trends, Patient Characteristics, and Prognosis,** Ardabil University of Medical Sciences, Ardabil, Iran
14) **Spatio-temporal analysis of mortality due to arthropod contact and the impact of climatic factors on it in Iran from 2016-2023.** Ardabil University of Medical Sciences, Ardabil, Iran
15) **Assessing Vector competence of Aedes aegypti and Aedes albopictus for dengue virus: A systematic review and meta-analysis ,** Ardabil University of Medical Sciences, Ardabil, Iran
16) **Establishment of a Medical Entomology Insectarium at Ardabil University of Medical Sciences , 2025,** Ardabil University of Medical Sciences, Ardabil, Iran
17) **The relationship between parental education and family income level with the risk of head lice infestation in children: A systematic review and meta-analysis, 2026,** Ardabil University of Medical Sciences, Ardabil, Iran
18) **Scientific Evaluation of the Academic Advisors' Program Regarding Educational Counseling and Their Duties at Ardabil University of Medical Sciences, 2026,** Ardabil University of Medical Sciences, Ardabil, Iran
19) **Investigation of Borrelia infection, the causative agent of endemic relapsing fever, in ticks and livestock blood in northwest Iran in 2026,** Ardabil University of Medical Sciences, Ardabil, Iran
20) **Study of telson histology in five species of Iranian scorpions of Buthidae, Hemiscorpiidae and Scorpionidae to evaluate the structure of venom glands apparatus 2021,** Shiraz University of Medical Sciences, Shiraz, Iran
21) **Morphometric study and sexual dimorphism analyses of Iranian population of Scorpio maurus (Scorpiones Scorpionidae) in selected parts of Fars Province, 2021,** Shiraz University of Medical Sciences, Shiraz, Iran
22) **Faunistic study and biodiversity on venomous Arachnidas in Assaluyeh county**

of Bushehr province and Parsian county of Hormozgan province, 2021, Shiraz University of Medical Sciences, Shiraz, Iran

23) **Genetic Diversity and taxonomic evaluation of the Large-Clawed scorpion species *Scorpio maurus* L., 1758 (Scorponida: Scorpionidae) from south-western parts of Iran using molecular data set of COI gene,** 2020**,** Shiraz University of Medical Sciences, Shiraz, Iran
24) **Characterization, expression and production of recombinant protein of phospholipase A2 coding gene in Iranian scorpion, *Scorpio maurus* and investigation of its leishmanacidal activity against *Leishmania major***, 2020, Shiraz University of Medical Sciences, Shiraz, Iran.
25) **The effects of color and some climatic factors on oviposition rate of mosquitoes under semi-field condition in Shiraz County,** 2019**,** Shiraz University of Medical Sciences, Shiraz, Iran
26) **Physico -chemical characteristics of larval habitats and biodiversity of Culicidae mosquitoes in Shiraz,** 2018, Shiraz University of Medical Sciences, Shiraz, Iran
27) **The identification of flea species of human and animal dwelling and evaluation of their molecular systematics based on COI fragment in West Azerbaijan Province, 2016,** Urmia University of Medical Sciences, Urmia, Iran
28) **Molecular characterization of dirofilariasis vectors and investigation of their infection with *Dirofilaria immitis* by molecular method in West Azerbaijan Province,** 2016, Urmia University of Medical Sciences, Urmia, Iran
29) **The utility of mitochondrial molecular marker for identification of some of scorpion species of West Azerbaijan Province,** 2015, Urmia University of Medical Sciences, Urmia, Iran
30) **Evaluation of the Chikungunya and Sindbis virus infection by RT-PCR (Reverse Transcription) method in Culicidae mosquitoes of West Azerbaijan province**, 2015, Urmia University of Medical Sciences, Urmia, Iran.

Publications:

1. Motevasseli M, Moradi-Asl E, **Soltan-Alinejad P***. Genetic variation and evolutionary relationships of dominant ticks in Northwestern Iran utilizing COI and ITS2. Parasitol Res. 2026;125(1):27.
2. **Soltan-Alinejad, P**., Ramezani, A., Asgari, Q., Alipour, H., Soltani, A., Bahreini, M.S., Nikbakhtzadeh, M. and Azizi, K., 2025. The recombinant protein of scorpion venom phospholipase A2 exhibits potential anti-leishmanial activity. Scientific Reports.
3. **Soltan-Alinejad P**, Kargar-Jahromi H, Karimi F, Azizi K. Comparative histological characterization of the venom apparatus in five Iranian scorpion species. J Arthropod Borne Dis. 2025.
4. **Soltan-Alinejad P**, Nikbakhtazadeh M, Moradi-Asl E. Unmasking Borrelia species: A comprehensive review of their presence in Iran. Int J Parasitol Parasites Wildl. 2025:101123.
5. **Soltan-Alinejad, P**., Rezaei, F., Babazadeh, S., Akhtari, A., Fakour, S., Kamrani, S., Abbasi-Ghahramanloo, A., Adham, D., & Moradi-Asl, E. (2025). Assessment of knowledge, attitude, and practice of livestock farmers in northwest Iran regarding myiasis. BMC Veterinary Research, 21(1), 436.
6. **Soltan-Alinejad, P**., Bahrami, S., Keshavarzi, D., Shahriari-Namadi, M., Hosseinpour, A. and Soltani, A., 2023. Physicochemical characteristics of larval habitats and biodiversity of mosquitoes in one of the most important metropolises of southern Iran. Heliyon.
7. Moazzeni, P., Tangsiri, M., **Soltan-Alinejad, P.,** Shahriari-Namdadi, M., Daghighi, E., & Soltani, A. (2023). The effect of color and environment on mosquito oviposition and biodiversity under semi-field conditions. International Journal of Tropical Insect Science, 43, 1–9.

8. **Soltan-Alinejad P**, Alipour H, Soltani A, Asgari Q, Ramezani A, Mehrabani D, Azizi K. Molecular Characterization and In Silico Analyses of Maurolipin Structure as a Secretory Phospholipase A_2 (sPLA$_2$) from Venom Glands of Iranian *Scorpio maurus* (Arachnida: Scorpionida). J Trop Med. (2022) Oct 3;2022:1839946. doi: 10.1155/2022/1839946.
9. **Soltan-Alinejad P**, Soltani A., (2021) Vector-borne diseases and tourism in Iran: Current issues and recommendations**,** Travel Medicine and Infectious Disease. 2021/09/01/;43:102108. ***(IF: 20.44)**
10. **P. Soltan-Alinejad,** H. Alipour, D. Meharabani and K. Azizi, (2021) Therapeutic Potential of Bee and Scorpion Venom Phospholipase A2 (PLA2): A Narrative Review**,** Iranian Journal of Medical Sciences,10.30476/IJMS.2021.88511.1927.
11. **Soltan-Alinejad, P**., Parsaei, S., Dianat, A., Nikbakhtazadeh, M., & Azizi, K. (2021) Morphometric study and sexual dimorphism analyses of Iranian population of Scorpio maurus (Scorpiones Scorpionidae), Ecology and Evolution, 11, 15630–15638. https://doi.org/10.1002/ ece3.8211
12. **Soltan-Alinejad, P**., Rafinejad, J., Dabiri, F., Onorati, P., Terenius, O., Chavshin, A. (2021) Molecular analysis of the mitochondrial markers COI, 12S rDNA and 16S rDNA for six species of Iranian scorpions, BMC Res Notes 14, 40 (2021). https://doi.org/10.1186/s13104-021-05449-3
13. **Soltan-Alinejad, P**, Vahedi, M, Turki, H, Soltani, A,. (2021) A comprehensive entomological survey and evaluation of the efficacy of different therapies on a suspected delusional parasitosis case (2021), Brain and behavior, 11(1):e01945.
14. **Soltan-Alinejad, P**, Ramezani, Z, Edalat, H, Telmadarraiy, Z, Dabiri, F, Vatandoost, H**,** *et al.* (2020) Molecular characterization of Ribosomal DNA (ITS2) of hard ticks of Iran, in understanding the conspecificity of *Dermacentor marginatus* and *D. niveus* , BMC Research Notes.2020, 10.21203/rs.3.rs-60239/v1.
15. Farrokh Dabiri, Ehsan Radi, Kamran Akbarzadeh, **Parisa Soltan-Alinejad**, Mehdi Khoobdel and Seyed Javad Seyedzadeh, (2020) The Survey of Medically-Important Blowfly (Diptera: Calliphoridae) in Urmia County, Northwest of Iran, Environmental Research Journal, 14: 76-79.

English Abstracts (International and National Conferences):

1. **A comprehensive entomological survey on a suspected delusional parasitosis case in Shiraz,** November 13-15th , 2nd International Congress of Vector –Born Disease and Climate Change & The 4th National Congress of Medical Entomology, Shiraz University of Medical Sciences, Shiraz, Iran, 2019 **(Poster).**
2. **Evaluation of the scorpion venom anti-cancer peptides function on breast cancer cells**, November 14th, The 3th Provincial Congress of Researcher in Medical and Biological Sciences ,Urmia, Iran 2016 **(Oral).**
3. **Utilization of semi-chemicals in the disease vector control to reduce the side effects of chemical insecticides**, November 14th, The 3th Provincial Congress of Researcher in Medical and Biological Sciences ,Urmia, Iran 2016 **(Poster).**
4. **Investigation of parasitoids of Synanthropic flies in order to biological control in Iran**, April 15th, National Congress on Food and Health, Mazandaran University of Medical Sciences, Sari, 2016 **(Poster).**
5. **Utilization of plant-based products in the control of agricultural and health pests to reduce the side effects of chemical insecticides,** April 15th, National Congress on Food and Health, Mazandaran University of Medical Sciences, Sari, 2016 **(Poster).**

Submitted Sequences in GenBank:

	Title	Accession number	Date
1	*Trichomonas vaginalis* isolate Met-E22 ferredoxin gene, partial cds	KU738860.1	2016
2	*Trichomonas vaginalis* isolate Met-E21 ferredoxin gene, partial cds	KU738859.1	2016
3	*Trichomonas vaginalis* isolate Met-E20 ferredoxin gene, partial cds	KU738858.1	2016
4	*Trichomonas vaginalis* isolate Met-E19 ferredoxin gene, partial cds	KU738857.1	2016
5	*Trichomonas vaginalis* isolate Met-E4 ferredoxin gene, partial cds	KU738850.1	2016
6	*Trichomonas vaginalis* isolate Met-E18 ferredoxin gene, partial cds	KU738856.1	2016
7	*Trichomonas vaginalis* isolate Met-E28 ferredoxin gene, partial cds	KU738855.1	2016
8	*Trichomonas vaginalis* isolate Met-E3 ferredoxin gene, partial cds	KU738849.1	2016
9	*Trichomonas vaginalis* isolate Met-E9 ferredoxin gene, partial cds	KU738851.1	2016
10	*Trichomonas vaginalis* isolate Met-E26 ferredoxin gene, partial cds	KU738853.1	2016
11	*Trichomonas vaginalis* isolate Met-E16 ferredoxin gene, partial cds	KU738852.1	2016
12	*Trichomonas vaginalis* isolate Met-E27 ferredoxin gene, partial cds	KU738854.1	2016
13	*Androctonus crassicauda* isolate Urmia 12S ribosomal RNA gene, partial sequence; mitochondrial	KU705366.1	2016
14	*Mesobuthus caucasicus* isolate Makoo 12S ribosomal RNA gene, partial sequence; mitochondrial	KU705360.1	2016
15	*Mesobuthus caucasicus* isolate Makoo 12S ribosomal RNA gene, partial sequence; mitochondrial	KU705360.1	2016
16	*Mesobuthus eupeus* isolate Makoo 12S ribosomal RNA gene, partial sequence; mitochondrial	KU705363.1	2016
17	*Odontobuthus doriae* isolate WAS302 cytochrome c oxidase subunit I (COI) gene, partial cds; mitochondrial	KT972142.1	2016

18	*Scorpio maurus isolate* Mahabad 12S ribosomal RNA gene, partial sequence; mitochondrial	KU705359.1	2016
20	*Mesobuthus eupeus* isolate WAS300 cytochrome c oxidase subunit I (COI) gene, partial cds; mitochondrial	KT972140.1	2016
21	*Mesobuthus eupeus* isolate WAS301 cytochrome c oxidase subunit I (COI) gene, partial cds; mitochondrial	KT972141.1	2016
22	*Mesobuthus caucasicus* isolate Sardasht 16S ribosomal RNA gene, partial sequence; mitochondrial	KU705355.1	2016
23	*Scorpio maurus* isolate Mahabad 16S ribosomal RNA gene, partial sequence; mitochondrial	KU705354.1	2016
24	*Mesobuthus caucasicus* isolate Sardasht 12S ribosomal RNA gene, partial sequence; mitochondrial	KU705361.1	2016
25	*Androctonus crassicauda* isolate Sardasht 16S ribosomal RNA gene, partial sequence; mitochondrial	KU705358.1	2016
26	*Hottentotta saulcyi* isolate Sardasht 16S ribosomal RNA gene, partial sequence; mitochondrial	KU705357.1	2016
27	*Androctonus crassicauda* isolate Urmia 16S ribosomal RNA gene, partial sequence; mitochondrial	KU705356.1	2016
28	*Hottentotta saulcyi* isolate Sardasht 12S ribosomal RNA gene, partial sequence; mitochondrial	KU705364.1	2016
29	*Mesobuthus eupeus* isolate Shahin-Dej 12S ribosomal RNA gene, partial sequence; mitochondrial	KU705362.1	2016
30	*Androctonus crassicauda* isolate WA-UKN 12S ribosomal RNA gene, partial sequence; mitochondrial	KU705365.1	2016
31	*Androctonus crassicauda* isolate WAS100 16S ribosomal RNA gene, partial sequence; mitochondrial	KT972136.1	2016
32	*Androctonus crassicauda* isolate WAS200 12S ribosomal RNA gene, partial sequence; mitochondrial	KT972133.1	2016
33	*Mesobuthus eupeus* isolate WAS201 12S ribosomal RNA gene, partial sequence; mitochondrial	KT972134.1	2016
34	*Mesobuthus eupeus* isolate WAS101 16S ribosomal RNA gene, partial sequence; mitochondrial	KT972137.1	2016

35	*Odontobuthus doriae* isolate WAS202 12S ribosomal RNA gene, partial sequence; mitochondrial	KT972135.1	2016
36	*Mesobuthus eupeus* isolate WAS102 16S ribosomal RNA gene, partial sequence; mitochondrial	KT972138.1	2016
37	*Androctonus crassicauda* isolate Makoo 12S ribosomal RNA gene, partial sequence; mitochondrial	KU705367.1	2016
38	*Odontobuthus doriae* isolate WAS103 16S ribosomal RNA gene, partial sequence; mitochondrial	KT972139.1	2016
39	*Mesobuthus caucasicus* isolate 7D-Urmia cytochrome oxidase subunit I (COI) gene, partial cds; mitochondrial	MN017360.1	2019
40	*Dermacentor marginatus* isolate Ardabil-P10 cytochrome oxidase subunit I gene, partial cds; mitochondrial	MK863424.1	2019
41	*Dermacentor niveus* isolate Khorasan-Shomali-L3 cytochrome oxidase subunit I gene, partial cds; mitochondrial.	MK863423.1	2019
42	*Dermacentor marginatus* isolate Ardabil-L2 cytochrome oxidase subunit I gene, partial cds; mitochondrial	MK863422.1	2019
43	*Dermacentor marginatus* isolate Ardabil-1L cytochrome oxidase subunit I gene, partial cds; mitochondrial	MK863421.1	2019
44	*Androctonus crassicauda* isolate 13D-Sardasht cytochrome oxidase subunit I gene, partial cds; mitochondrial	MK814934.1	2019
45	*Androctonus crassicauda* isolate 1D-Makoo cytochrome oxidase subunit I gene, partial cds; mitochondrial	MK814933.1	2019
46	*Mesobuthus eupeus* isolate 5W-Sardasht cytochrome oxidase subunit I gene, partial cds; mitochondrial	MK814932.1	2019
47	*Odontobuthus doriae* isolate 18D-Qom cytochrome oxidase subunit I gene, partial cds; mitochondrial	MK814931.1	2019
48	*Scorpio maurus* isolate 2D-Sardasht cytochrome oxidase subunit I gene, partial cds; mitochondrial	MK814930.1	2019
49	*Hottentotta saulcyi* isolate 6W-Sardasht cytochrome oxidase subunit I gene, partial cds; mitochondrial	MK814935.1	2019

50	*Dermacentor niveus* voucher Khorsan-Shomali-b3 internal transcribed spacer 2, partial sequence	MK848411.1	2019
51	*Dermacentor niveus* voucher Khorsan-Shomali-b6 internal transcribed spacer 2, partial sequence	MK848410.1	2019
52	*Dermacentor marginatus* voucher Ardebil-b5 internal transcribed spacer 2, partial sequence	MK848409.1	2019
53	*Dermacentor marginatus* voucher Ardebil-b2 internal transcribed spacer 2, partial sequence	MK848408.1	2019
54	*Dermacentor marginatus* voucher Ardebil-b1 internal transcribed spacer 2, partial sequence	MK848407.1	2019
55	*Lucilia sericata* netrin-1 mRNA, partial cds	MG891747.1	2022
56	*Scorpio maurus* phospholipase A2 (PLA2) mRNA, partial cds	MW241004.1	2022

Software abilities:

- **Bioinformatics analysis software's** (MEGA 7, BioEdit, ClustalW, Oligo7, …)
- **Using Molecular Biology Databases** (NCBI, Uniprot, EMBL, Swiss-Model, …)