



Parasitology Lab.,
Zoology and Entomology Department
Faculty of Science



Assiut University
Egypt

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Nationality: Egyptian

Place and date of Birth: 2nd City st. Awel Assiut, Assiut (71526), Egypt. (28/4/1986)

Academic education

2007 B. Sc (Excellent grade), Zoology Department, Faculty of Science, Assiut University, Egypt

2009 Diploma in Science, Zoology Department, Faculty of Science, Assiut University, Egypt

2012 M.Sc. (Zoology), Zoology Department, Faculty of Science, Assiut University, Egypt.

2017 Ph.D. (Zoology, Parasitology), Zoology Department, Faculty of Science, Assiut University, Egypt.

2022 Associate professor (Zoology, Parasitology), Zoology Department, Faculty of Science, Assiut University, Egypt.

Professional experience

At total of 17 years of experience (since 2007 till present) in the field of academic teaching, scientific research (Zoology, Parasitology), social activities, and development

Language skills

Arabic (native), English (very good), and Germany (Dutsch (Grundstufe I))

Scientific and technical Skills

- Excellent experience in Microsoft Office package.
- Some statistical analysis package (SPSS and Graph-Prism).
- Excellent experience in images analysis package (Imagej, Photoshop) and references softwares (EndNote).

- Excellent experience Parasitology techniques including invitro culture of protozoa on non-nutrient agar, blood and serum analysis, fecal examination, examination of external/internal parasites, fish parasites, camel parasites, and host-parasite interaction.
- Electrone Microscope, Electrophoresis (SDS–PAGE) technique, Western blotting, Histology and Immunohistochemistry for tissues microscopic preparations, ELISA (Enzyme Linked Immuno-Sorbant Assay), convential PCR, and RAPD-PCR.

Teaching Record

1. Instructor for undergraduate students (Faculties of; Science, Veterinary Medicine, Pharmacy, Education, and Agriculture) since 2007- till now the following practical Courses (Parasitology, Protozoology and helminthology, Cell Biology, Cytology, Histology, Taxonomy of Invertebrates, Taxonomy of vertebrates, and Fish Biology).
2. Teaching the postgraduated students, Faculty of Science since 2017 till now (theoretical courses of Parasitology, Immunoparasitology, Vector and intermediate hosts, and special topics in Parasitology).

Supervisions

1. **Faten Abdo Mohammed Hassan (PhD):** Characterization and pathogenic effect of *Acanthamoeba* spp. isolated from eye lenses: A trial for treatment. Zoology Department, Faculty of Science, Assiut University, Egypt.
2. **Shaimaa Hamdy Abdel-Sadek (PhD):** An experimental study on the effect of pumpkin oil and curcumin on *Trichnella spiralis* infection in mice. Department of Pathology and Clinical Pathology, Faculty of Veterinary Medicine, Assiut University, Egypt.
3. **Mona Mohammed Ali Khalaf (Mc.S):** Effect of Quercetin conjugated with silver nanoparticles on systematic infection with *Acanthamoeba* sp. In normal and immunosuppressed mice. Zoology Department, Faculty of Science, Assiut University, Egypt.
4. **Tasneem Mostafa Kamel (Mc.S):** Evidence of the Pathogenicity of *Acanthamoeba polyphaga* T4 genotype in Common carp. Zoology Department, Faculty of Science, Assiut University, Egypt.
5. **Fatma Atea Kamel (PhD):** Molecular and Parasitological investigation of Sarcocystis species isolated from cattle muscles in Assiut Governorate, Egypt. Department of Parasitology, Faculty of Veterinary Medicine, Assiut University, Egypt
6. **Salma Abde-samiee (MC.s):** under registration, Molecular biology institute, Assiut University, Assiut (71526), Egypt.

Activities at university

- Member of the Quality Management Board (QAAU) in the Faculty of Science, Assiut University since 2017 till now.
- Member and trainer in the Measurement and Evaluation Unit, Assiut University, Assiut, Egypt since 2021 till now.
- Supervisor on graduate project of students (Zoology and Zoochemistry) since 2018 till now.
- Member in the Parasitology group for oral and final exams Contribute for different grads.
- I participated in visits to civil society institutions, such as factories.

Scientific activities (non-university institution)

- Peer reviewer in number of impacted journal (Frontiers in Physiology, Scientific report, BMC of Veterinary Science, Aquatic toxicology, Scientific Africa, and Egyptian Academy journal of biological science).
- Guest editor in some journals such as Egyptian Academy J. of biological Science, Veterinary science research and medical diagnosis, and Madridge Journal of Clinical Research (MJCR).
- Member of Egyptian-German Society of Zoology.
- Member of Egyptian Society of Analytical Chemistry.
- Participate in reviewing the projects of middle school students.

Voluntary activities

- Member of Women society for the development of environment and community service, Assiut University, Egypt.
- Member of Assiut Alliance for Women.
- I participated in veterinary caravans.

List of Publications

1. Mansour, A., Karar, Y. F., Hassan, H. A. S., Mohamadain, H. S., & **Abdel-Hakeem, S. S.** (2025). Integrative supporting techniques for the taxonomy of *Schistorchis carneus* Lühe, 1906 (Digenea: Megaperidae) with perspective for the existence of species complexes. Zootaxa, 5569(2), 299-327.
2. **Abdel-Hakeem, S. S.**, Megahed, G., Al-Hakami, A. M., Tolba, M. E., & Karar, Y. F. (2025). Impact of trypanosomiasis on male camel infertility. Frontiers in Veterinary Science, 11, 1506532.
3. **Abdel-Hakeem, S. S.**, Alnasser, S. M., Meshal, A., Abdel-Samiee, M. A. Z., Youssef, M. S. E., Elsadek, S. H. A., & Abd-Elrahman, S. M. (2024). Pumpkin seed oil: unveiling its potential in controlling inflammation and pathogenicity during experimental trichinellosis. BMC Veterinary Research, 20(1), 419.
4. **Abdel-Hakeem, S. S.**, Fadladdin, Y. A. J., Khormi, M. A., & Abd-El-Hafeez, H. H. (2024). Modulation of the intestinal mucosal and cell-mediated response against natural helminth infection in the African catfish *Clarias gariepinus*. BMC Veterinary Research, 20(1), 335.
5. **Abdel-Hakeem, S. S.**, Hassan, F.A.M., Hifney, A.F. Salem, S.H. (2024). Combating the causative agent of amoebic keratitis, *Acanthamoeba castellanii*, using *Padina pavonica* alcoholic extract: toxicokinetic and molecular docking approaches. Scientific report, 14:13610.
6. Abd-Elrahman, S. M., Abdel-Rahman, S. M., Bakir, H. Y., Othman, R. A., Khedr, A. A., Khalifa, M. M., & **Abdel-Hakeem, S. S.** (2024). Genetic relatedness and diversity of *Capillaria* species infecting bayad (*Bagrus bajad*) in upper Egypt. BMC Veterinary Research, 20 (1), 1-9.
7. Abd-Elrahman, S. M., Dyab, A. K., Kamel, F. A., Khedr, A. A., Khalifa, M. M., Mohamed, S. M., & **Abdel-Hakeem, S. S.** (2024). Assessment of Cattle Tick Infestation: Molecular

Insights into *Rhipicephalus annulatus* and the Efficacy of Garlic Oil and Nanoemulsion as Acaricidal Agents. *Veterinary Parasitology*, 110211.

8. **Abdel-Hakeem, S. Sara.**, Abdel-Samiee, M. A. Z., Youssef, M. S. E., Abd-ElSadek, S. H., Abd-Elrahman, S. M., & Abdel-Hakeem, S. Sally. (2024). Nanocurcumin: A Promising Therapeutic Candidate for Experimental Trichinellosis. *Microscopy and Microanalysis*, ozae007.
9. Fouad, A. M., Abd El-Lateif, R. S., Abo-Al-Ela, H. G., & **Abdel-Hakeem, S. S.** (2024). Cytotoxicity and immunological impact of *Trypanosoma* sp. infection on blood parameters of wild African catfish, *Clarias gariepinus*. *Parasitology Research*, 123(1), 10.
10. Ahmed, A. A., Dyab, A. K., Mohamed, S. A. A., Nasr, A. A., & **Abdel-Hakeem, S. S.** (2024). Prevalence and diversity of zooplankton in different fresh water supplies in Assiut Governorate. *Assiut Veterinary Medical Journal*, 70(183), 361-369.
11. Alnasser, S. M., Alotaibi, M., Ramadan, N. K., Abd ElHafeez, H. H., and **Abdel-Hakeem, S. S.** (2023). The Efficiency of *Schistosoma mansoni* Crude Antigens in Inhibition of Heat Shock Protein, Apoptosis, and Lysosomal Activity: An Immunohistochemical Study. *Microscopy and Microanalysis*, 29(2), 739-753.
12. Abd ElSadek, S. H., Abdel-Samiee, M. A. Z., Youssef, M. S. E., & **Abdel-Hakeem, S. S.** (2023). Hepatoprotective role of Nanocurcumin and Pumpkin seed oil in *Trichinella Spiralis* infection: pathogenesis and modulation of matrix metalloproteinase (MMP9). *Assiut Veterinary Medical Journal*, 69(179), 100-114.
13. **Abdel-Hakeem, S. S.**, Fadladdin, Y. A. J., El-Sagheer, A. M., and Adel, A. (2022). New host record, *Sclerophrys regularis* (Bufonidae), for *Rhabdias africanus* (Rhabdiasidae,) based on molecular and morphological evidence. *Saudi Journal of Biological Sciences*, 29, 103366.
14. Hassan, F. A., Tolba, M. E. M., Omar, H. M., Abed, G. H., and **Abdel-Hakeem, S. S.** (2022). Isolation and identification of free-living amoeba from contact lenses: Thermal and osmotic tolerance in relation to their pathogenicity. *Assiut University Journal of Multidisciplinary Scientific Research*, 51(1), 40-56.
15. Romaan Hayat Khattak, Zhensheng Liu, Liwei Teng, Sher Ahmed, Said Sajjad Ali Shah, **Sara Salah Abdel-Hakeem.** (2021). Investigation on Parasites and some Causes of Mortality in Captive Punjab urial (*Ovis vignei punjabiensis*), Pakistan. *Iran J Parasitol*, 16 (1), 64-71.
16. Hassan, F. A., Tolba, M. E. M., Abed, G. H., Omar, H. M., and **Abdel-Hakeem, S. S.** (2021). Contact lenses contamination by *Acanthamoeba* spp. in Upper Egypt. *PloS one*, 16(11), e0259847.
17. Hanan H. Abd-Elhafeez, Soha A. Soliman, Abdelraheim H. Attaai, **Sara S. Abdel-Hakeem,** Abeera M. El-Sayed and Alaa S. Abou-Elhamd (2021). Endocrine, Stemness, Proliferative, and Proteolytic Properties of Alarm Cells in Ruby-Red-Fin Shark (Rainbow Shark), *Epalzeorhynchus frenatum* (Teleostei: Cyprinidae). *Microscopy and Microanalysis*, 27(5), 1251-1264.

18. **Abdel-Hakeem, S. S.**, Khalifa, M. M., and Mohammad, W. A. (2021). Parasitic contamination of two commonly consumed leafy vegetables in El-Kharga Oasis, Upper Egypt, and evaluation of hygiene practices among the vendors. *Journal of the Egyptian Society of Parasitology*, 51(2), 289-296.
19. **Sara Salah Abdel-Hakeem**, Hossam El- din Mohamed Omar, Gamal Hassan Abed, Faten Abdo Mohammed Hassan, Osama A. Al-Bedak and Mohammed Essa Marghany Tolba (2021). Bioactive Compounds of *Ziziphus spina-christi* Seeds Extract and Cellulase Enzyme Attenuates the Growth of *Acanthamoeba polyphaga* Isolated from Contact Lenses. *Egypt. Acad. J. Biolog. Sci.*, 13(2), 307-321.
20. **Abdel Al-Hakeem, S. S.**, & Omar, M. (2020). Ovine fascioliasis: environmental epidemiology and meta-analysis of the prevalence, Agro-ecological and economic factors in five provinces of the Nile Delta region of Egypt. *Damanhour Journal of Veterinary Sciences*, 3(1), 23-31.
21. **Abdel-Hakeem, S. S.**, Abdel-Samiee, M. A., & Abed, G. H. (2020). An Insight into the Potential Parasitological Effect of *Schistosoma mansoni* Antigens in Infected Mice: Prophylactic Role of Cercarial Antigen. *Microscopy and Microanalysis*, 26(4), 708-716.
22. Mahmoud, G. A. E., Osman, Y. A., and **Abdel-Hakeem, S. S.** (2020). Hydrolytic bacteria associated with natural helminth infection in the midgut of Red Sea marbled spinefoot rabbit fish *Siganus rivulatus*. *Microbial Pathogenesis*, 147, 104404.
23. Khaled A. S. El-Khabaz, **Sara S. Abdel-Hakeem**, Mohsen I. Arfa (2019): Protozoan and helminthes parasites endorsed by imported camels (*Camel dromedaries*) to Egypt. *J Parasit Dis*, 43 (4): 607-615. <https://doi.org/10.1007/s12639-019-01138-y>.
24. **Sara Abdel-Hakeem**, Soha A. Soliman, Hanan H. Abdel-Hafeez, Enas Abdel-Hafez and Rania S. Zaki (2019): Occurrence of Metacercarial Cyst of *Ascocotyle* (*Ascocotyle* sp.) in the Gills of Ruby-Red-Fin Shark (Rainbow Shark) *Epalzeorhynchus frenatum* (Teleostei: Cyprinidae): Light Microscopic Study. *EC clinical and experimental anatomy*, 2 (7): 296-304.
25. **Sara S. Abdel-Hakeem**, Ghada Abd-Elmonsef Mahmoud and Hanan H. Abdel-Hafeez (2019): Evaluation and microanalysis of parasitic and bacterial agents of Egyptian fresh sushi, *Salmo salar*, *Microscopy and Microanalysis*, 1-11. <https://doi.org/10.1017/S143192761901506X>.
26. **Sara Salah Abdel-Hakeem**, Mahmoud Abdel-Zaher Abdel-Samiee, Gamal Hassan Abed and Nathalie Chacon Fonseca (2019): Prediction of Long-Term Humoral and Cellular Immune Response: A Comparison of Three *Schistosoma mansoni* Antigens. *Research and Reviews: Journal of Medicinal Chemistry*, 1 (1): 10-25.
27. Alaa El-Din H. Sayed, Hanem Abdel-Tawab, **Sara S. Abdel Hakeem**, Imam Mekkawy (2013): The Protective Role of Quince Leaf Extract against the Adverse Impacts of Ultraviolet-A Radiation on Some Tissues of *Clarias gariepinus* (Burchell, 1822). *Journal of Photochemistry and Photobiology B: Biology*, 119,9-14.

28. **Sara S. Abdel-Hakeem** and Mahmoud A. Abdel-Samiee (2018): Case Study: Dioctophyma renale Infection in Mice, Incidental Finding during experimental studies. Egypt. Acad. J. Biolog. Sci., 10(1): 83- 91.
29. Imam A.A. Mekkawy, U.M. Mahmoud and **Sara Salah Abdel-Hakeem** (2017): Atrazine-induced Changes in some Biochemical Parameters of the Early Developmental Stages of the African Catfish Clarias gariepinus (Burchell, 1822). American Journal of Biochemistry and Molecular Biology, 7(1): 21-40.
30. Mahmoud Abdel- Zaher, Gamal H. Abed, **Sara S. Abdel Hakeem** (2016): Ultrastructural changes of Schistosoma mansoni worms with administration of its polyvalent vaccine. The journal of Zoology studies, 3(6): 1-12.
31. **Sara S. Abdel Hakeem**, Mahmoud Abdel- Zaher, Gamal H. Abed, (2016): Haematological parameters and cellular immune response associated with administration of polyvalent Schistosoma mansoni vaccine in mice. International journal of Science and research, 5(12): 1548-1555.
32. Alaa El-Din H. Sayed, **Sara S. Abdel Hakeem**, Usama M. Mahmoud, Imam A. Mekkawy (2012): 4-Nonylphenol induced morphological and histopathological malformations in Egyptian toad tadpoles. Global Advanced Research Journal of Environmental Science and Toxicology, 1(6): 143-151.

Books

1. The biological effect of atrazine on the embryos of *Clarias gariepinus*”, authored by **Sara Abdel-Hakeem**. The book was released by Lambert Academic Publishing in June, 2018 and bears ISBN 978-613-9-85396-0.

Awards

1. Award of the best scientific research in Principal Sciences (Zoology) in 2020-2021, Faculty of Science, Assiut University, Assiut (71516), Egypt

Workshops

1. (1-21/7/2006) attended undergraduate training (3 weeks) on "**Scanning, Transmission, Electron Microscope Usage, and Slides Preparation Workshop**" in the Electron Microscope Unit at Assiut University, Egypt.
2. (6/4-10/4/2008) attended the workshop on "**Methods in Molecular Biology and its Applications in the Monitoring of the Environmental stress and Ecotoxicology**", at Zoology Department, Faculty of Science, Assuit University, Assiut, Egypt.
3. (31/3-1/4/2009) attended the workshop on "**Principles of protein analysis**", at the Molecular Biology Research Unit of Assiut University, Egypt.
4. (8/11-10/11/2009) attended the workshop on "**PCR principals and Applications (Level 1)**" at the Molecular Biology Research Unit of Assiut University, Egypt.
5. (26th March 2009) attended the training course to enhance the Egyptian Participation in the Seventh Framework program of the Scientific Research, financed by the European Union organised by Food Technology Center- Project of MEDA GO TO EUROUB.

6. (13/10-14/10/2010) attended the workshop on "**Means safety and safety in laboratories**", at Faculty of Science, Assuit University, Assiut, Egypt.
7. (24/10-25/10/2010) attended the workshop on "**Protein analysis and applications**", at the Molecular Biology Research Unit in Assiut University, Egypt.
8. (29th September 2014) attended the workshop on "**How to cope with the scientific literature?**", at the Multidisciplinary Research Center Of Exchange.
9. (21/3-25/3/2015) attended a completed training course in **Electron Microscopy (Techniques and Interpretation)**, at the Electron Microscope Unit (EMU), Assiut, Egypt.
10. (29/5-31/5/2016) attended the training course of "**Applications of Molecular Markers in Biology**" in Molecular biology laboratory at Faculty of Agriculture, Assiut University, Egypt.
11. (13/9-14/9/2017) attended and participated in the workshop titled "**From RNA extraction to Real Time PCR and data analysis**" at Medical Research center, Faculty of Medicine, Assiut University, Egypt.
12. (26/11-27/11/2017) training program on "**How to design the electronic courses**" (15 hours) at Faculty and leadership development center, Assiut University, Egypt.
13. (12/11-13/11/2017) training program on "**E- learning (advanced)**" (15 hours) at Faculty and leadership development center, Assiut University, Egypt.
14. (12/12-13/12/2017) training program on "**Strategic planning**" (15 hours) at Faculty and leadership development center, Assiut University, Egypt.
15. (19/12-20/12/2017) training program on "**Statistical analysis in Scientific research**" (15 hours) at Faculty and leadership development center, Assiut University, Egypt.
16. (20/1-21/1/2017) training program on "**Analysis and creative thinking in teaching**" (15 hours) at Faculty and leadership development center, Assiut University, Egypt.
17. (23/10-2019) Module in **cell press excellence in publishing: discover, network and practice-Webiner** at Assiut University, Egypt.
18. (27/10-2019) Module in "**How to review a manuscript**" on researchacademy.com.
19. (25/6-2019) Module in "**Plagiarism**" on researchacademy.com.
20. (15-16/3-2020) attended the workshop on "**Isolation, culturing, and banking of mesenchymal stem cells from adipose tissue and compact bones**", at the Molecular Cell Biology Lab., Zoology Dept., Faculty of Science, Assiut University, Egypt.
21. (16-17/9-2020) attended the online workshop on "**Measurment and Evaluation methods and the preparation of test item**", Measurment and Evaluation unit, Higher Education Development Projects Management Unit at Ministry of Higher Education and Scientific Research.
22. (9/12-2020) attended the workshop on "**Content Analysis**" at Measurment and Evaluation Unit, Assiut University, Egypt.
23. (16/12-2020) attended the workshop on "**Preparing Sellybus**" at Measurment and Evaluation Unit, Assiut University, Egypt.
24. (28/12-2020) attended the workshop on "**Electronic Evaluation**" at Measurment and Evaluation Unit, Assiut University, Egypt.

25. (20/1-2021) Module in "**Sample preparation for immunohistochemistry-lesson 7**" by Oxford Andor.
26. (13/3-2021) participated in scientific webinar entitled "**Scientific Publishing Strategies in the International Journals**" via the online platform-Zoom application of Academics and Researchers Platforms (IFAD).
27. (2-3/10-2021) attended and participated in the workshop on "**Protein Electrophoresis and its applications**" at Zoology Department, Faculty of Science, Assiut University, Egypt.
28. (9-11/9-2021) attended the workshop on "**Basics of Bioinformatics**" organized by Genetics Department, Faculty of Agriculture, Assiut University, Egypt.

Conferences/Presentations

1. (**4th-5th March, 2009**) attended the First International Conference of Biological Sciences, Assiut University, Assiut, Egypt.
2. (**19th-20th April, 2011**) attended The Third Conference for Young Researchers, Basic Science & Technology, Assiut university, Assiut, Egypt.
3. (**28th-29th December, 2019**) attended the 6th International conference of Biotechnology, Environment, and Engineering Sciences "Sustainability and circular Bioeconomy", Alexandria, Egypt.
4. (**8th – 10th November, 2020**) attended The ten Conference for development and Ecology in the Arabic nation, Assiut University, Egypt.