

## Research Lab Sheet

|                      |                     |
|----------------------|---------------------|
| <b>Lab Name</b>      | <b>Fish Biology</b> |
| <b>Academic Year</b> | <b>2020-2021</b>    |

| Basic Information                 |                                  |
|-----------------------------------|----------------------------------|
| <b>Department</b>                 | <b>Zoology</b>                   |
| <b>Location</b>                   | <b>Bulding 1 -</b>               |
| <b>Total area (m<sup>2</sup>)</b> | <b>20 m<sup>2</sup></b>          |
| <b>Head of the Lab</b>            | <b>Prof. Dr. Fawzy A . Boray</b> |
| <b>Establishment date</b>         | <b>1/10/1975</b>                 |

| Lab Members  |                   |              |                               |                    |
|--------------|-------------------|--------------|-------------------------------|--------------------|
| No. of Prof. | No. of Ass. Prof. | No. of Lect. | No. of Ass. Lect. & Demonstr. | No. of technicians |
| 2            | 1                 | 1            | -                             | -                  |

### Staff members

| #                              | Name                                      | Scientific degree | e-mail                                   | Specializations                          | C.V   |
|--------------------------------|-------------------------------------------|-------------------|------------------------------------------|------------------------------------------|-------|
| 1                              | Fawzy Ahmed Boray                         | Prof.             | fawzi.boraie@science.sohag.edu.eg        | Fish biology and fisheries               |       |
| 2                              | Fayza Mohamed Soliman                     | Prof.             | fayza_soliman@science.sohag.edu.eg       | Fish biology                             |       |
| 3                              | Hamdy A M Soliman                         | Ass. Prof.        | hamdy_soliman@science.sohag.edu.eg       | Fish biology and environmental pollution |       |
| 4                              | Fatma El-Zahraa Abdel-Hameed Abdel-Rahman | Lecturer          | fatmaelzahraa_ahmed@science.sohag.edu.eg | Biology of fish diseases                 |       |
| Ass. Lecturers & Demonstrators |                                           |                   |                                          |                                          |       |
| #                              | Name                                      | Scientific degree | e-mail                                   | Specializations                          |       |
| 1                              | -----                                     | -----             | -----                                    | -----                                    | ----- |

| Theses produced by the Lab |                                                                                                                                                                              |               |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| M Sc Thesis                |                                                                                                                                                                              |               |
| #                          | Title                                                                                                                                                                        | Approval date |
| 1                          | Biological studies on the effect of some pesticides on fresh water fish, <i>Gambusia affinis</i> .                                                                           | 1990          |
| 2                          | Biological and physiological studies of <i>Oreochromis Niloticus</i> in River Nile in Sohag Governorate                                                                      | 1999          |
| 3                          | Biological studies and fisheries on <i>Oreochromis niloticus</i> in the River Nile at Sohag Governorate                                                                      | 2008          |
| 4                          | Biology, Dynamics and stock assessment of the common species of family : <i>lutjanidae</i> from the red sea, Egypt                                                           | 2018          |
| Ph.D. Thesis               |                                                                                                                                                                              |               |
| 1                          | Histological, histochemical and physiological studies on the effect of environmental pollution with the herbicide, Goal on the fresh water fish <i>Oreochromis niloticus</i> | 1999          |
| 2                          | Biochemical and histological studies of the grass carp " <i>Ctenopharyngodon idella</i> " under the effect of neem biopesticide Triology "                                   | 2005          |
| 3                          | Development of trout intestinal cell culture model to study dietary metals and nanomineral in fish                                                                           | 2014          |
| 4                          | The role of chitosan nanoparticles as a potential antimicrobial agent and immune stimulant against fish pathogens                                                            | 2021          |

| Articles produced by Lab members |                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #                                | Title                                                                                                                                                                                                                                                                                                                                                                          |
| 1)                               | <b>Soliman, H. A. M (2017). Protein analysis and heavy metals accumulation in muscles of wild and farmed Nile Tilapia (<i>Oreochromis niloticus</i>). Ass. Univ. Bull. Environ. Res. Vol. 20 No. 1.</b>                                                                                                                                                                        |
| 2)                               | <b>Alaa El-Din H. Sayed and Soliman, H. A. M (2017): Developmental toxicity and DNA damaging properties of silver nanoparticles in the catfish (<i>Clarias gariepinus</i>). Mutat Res Gen Tox En. 34–40. (Impact Factor: 1.996 ).</b>                                                                                                                                          |
| 3)                               | <b>Sahar F Mehanna, Taha S Baker, Faiza M Soliman and Soliman, H. A. M (2017): Some biological aspects and population dynamics of The five-lined snapper, <i>Lutjanus quinquelineatus</i> (Family: Lutjanidae) from Red Sea off Hurghada, Egypt. International Journal of Fisheries and Aquatic Studies; 5(5): 321-326.</b>                                                    |
| 4)                               | <b>Soliman, F. M., Mehanna, S. F., Soliman, H. A. M &amp; Baker, T. S. (2018). Meristic and Morphometric Characteristics of five-lined snapper, <i>Lutjanus quinquelineatus</i> (Bloch, 1790) from the Red Sea, Egypt. Egyptian Journal of Aquatic Biology and Fisheries, 22(1), 41-48.</b>                                                                                    |
| 5)                               | <b>Alaa El-Din H. Sayed and Soliman, H. A. M (2018): Modulatory effects of green tea extract against the hepatotoxic effects of 4-nonylphenol in catfish (<i>Clarias gariepinus</i>). Ecotoxicology and Environmental Safety. Volume 149, Pages 159–165. (Impact Factor: 3.974 ).</b>                                                                                          |
| 6)                               | <b>Soliman, H. A. M and Ragab, S. M. M. (2018). Oxidative stress and histomorphological markers in the offspring of <i>Poeciliareticulata</i> maternally exposed to metallic and nanoformulated copper. Egyptian Journal of Aquatic Biology and Fisheries, 22(2), 51-60.</b>                                                                                                   |
| 7)                               | <b>Mohamed, Z. A., Bakr, A., &amp; Soliman, H. A. M. (2018). Bioavailability of bound microcystins in mice orally fed with contaminated tilapia edible tissues: Implications to human health. Toxicon, 151, 34-36. (Impact Factor: 2.9).</b>                                                                                                                                   |
| 8)                               | <b>Sayed, A. E. D. H., Soliman, H. A. M. &amp; Mitani, H. (2019). UVA-induced neurotoxicity in Japanese medaka (<i>Oryzias latipes</i>). Photochemical &amp; Photobiological Sciences, 18, 71-79. DOI: 10.1039/C8PP00169C, (Impact Factor: 2.902).</b>                                                                                                                         |
| 9)                               | <b>Soliman, H. A. M., Hamed, M., Lee, J., Sayed, A. E. D. H. (2019). Protective effects of a novel pyrazolecarboxamide derivative against lead nitrate induced oxidative stress and DNA damage in <i>Clarias gariepinus</i>. Environmental Pollution 247, 678- 684, (Impact Factor: 4.358).</b>                                                                                |
| 10)                              | <b>Hamed, M., Soliman, H. A., Osman, A. G., &amp; Sayed, A. E. D. H. (2019). Assessment the effect of exposure to microplastics in Nile Tilapia (<i>Oreochromis niloticus</i>) early juvenile: I. Blood Biomarkers. Chemosphere. (Impact Factor: 4.427).</b>                                                                                                                   |
| 11)                              | <b>M.A.M. Soliman, A.M. Batran, H.A.M. Soliman and S.A.A. Gomha (2018), Utilization of mung bean (<i>vigna radiate</i>, linnaeus) as a protein source in experimental diets for fry Nile tilapia (<i>oreochromis niloticus</i>): effects on growth performance, feed utilization and apparent DIGESTIBILITY CO-EFFICIENCY. Egyptian J. Nutrition and Feeds 21(2): 559-572.</b> |
| 12)                              | <b>Mohamed Hamed &amp; Hamdy A. M. Soliman &amp; Alaa El-Din H. Sayed (2019). Ameliorative effect of <i>Spirulina platensis</i> against lead nitrate-induced cytotoxicity and genotoxicity in catfish <i>Clarias gariepinus</i>. Environmental Science and Pollution Research, (Impact Factor: 2.8).</b>                                                                       |

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| 13) | Faiza M. Soliman, Mohamed A. Adly, <b>Hamdy A.M. Soliman</b> , Mansour El-Matbouli, Mona Saleh, "Fatma El Zahraa" A.A. Ahmed (2019). <b>Recent advances in applications of chitosan and its nanoparticles in fish medicine: A review.</b> Research in Veterinary Science, (Impact Factor: 1.616). underreview.                                                                  |
| 14) | Fatma Ahmed, Gokhlesh Kumar, Faiza M. Soliman, Mohamed A. Adly, <b>Hamdy A.M. Soliman</b> , Mansour El-Matbouli, Mona Saleh (2019). <b>Proteomics for understanding pathogenesis, immunomodulation and host pathogen interactions in aquaculture: A review.</b> Comparative Biochemistry and Physiology - Part D: Genomics and Proteomics, (Impact Factor: 2.913). underreview. |
| 15) | <b>Hamed, M., Soliman, H. A., Osman, A. G., &amp; Sayed, A. E. D. H. (2020). Antioxidants and molecular damage in Nile Tilapia (Oreochromis niloticus) after exposure to microplastics. Environmental Science and Pollution Research, 1-8.</b>                                                                                                                                  |
| 16) | Sayed, A. E. D. H., AbdAllah, E. A., Hamed, M., & <b>Soliman, H. A.</b> (2020). <b>Hepato-nephrotoxicity in late juvenile of Oreochromis niloticus exposed to gibberellic acid: Ameliorative effect of Spirulina platensis.</b> Pesticide Biochemistry and Physiology, 167, 104600.                                                                                             |
| 17) | <b>Soliman, H. A., &amp; Sayed, A. E. D. H. (2020). Poikilocytosis and tissue damage as negative impacts of tramadol on juvenile of Tilapia (Oreochromis niloticus). Environmental toxicology and pharmacology, 78, 103383.</b>                                                                                                                                                 |
| 18) | Ahmed, F., Soliman, F. M., Adly, M. A., <b>Soliman, H. A.</b> , El-Matbouli, M., & Saleh, M. (2020). <b>In vitro assessment of the antimicrobial efficacy of chitosan nanoparticles against major fish pathogens and their cytotoxicity to fish cell lines.</b> Journal of Fish Diseases, 43(9), 1049-1063.                                                                     |
| 19) | Sayed, A. E. D. H., Hamed, M., & <b>Soliman, H. A.</b> (2021). <b>Spirulina platensis Alleviated the Hemotoxicity, Oxidative Damage and Histopathological Alterations of Hydroxychloroquine in Catfish (Clarias gariepinus).</b> Frontiers in Physiology, 12.                                                                                                                   |
| 20) | Ahmed, F., Soliman, F. M., Adly, M. A., <b>Soliman, H. A.</b> , El-Matbouli, M., & Saleh, M. (2021). <b>Dietary Chitosan Nanoparticles: Potential Role in Modulation of Rainbow Trout (Oncorhynchus mykiss) Antibacterial Defense and Intestinal Immunity against Enteric Redmouth Disease.</b> Marine drugs, 19(2), 72.                                                        |
| 21) | <b>Soliman, H. A., Hamed, M., &amp; Sayed, A. E. D. H. (2021). Investigating the effects of copper sulfate and copper oxide nanoparticles in Nile tilapia (Oreochromis niloticus) using multiple biomarkers: the prophylactic role of Spirulina.</b> Environmental Science and Pollution Research, 1-12.                                                                        |
| 22) | Hamed, M., <b>Soliman, H. A.</b> , Badrey, A. E., & Osman, A. G. (2021). <b>Microplastics induced histopathological lesions in some tissues of tilapia (Oreochromis niloticus) early juveniles.</b> Tissue and Cell, 71, 101512.                                                                                                                                                |
| 23) | Sayed, A. E. D. H., Hamed, M., Badrey, A. E., Ismail, R. F., Osman, Y. A., Osman, A. G., & <b>Soliman, H. A.</b> (2021). <b>Microplastic distribution, abundance, and composition in the sediments, water, and fishes of the Red and Mediterranean seas, Egypt.</b> Marine Pollution Bulletin, 173, 112966.                                                                     |
| 24) | Sayed, A. E. D. H., Hamed, M., Badrey, A. E., & <b>Soliman, H. A.</b> (2021). <b>Bioremediation of hemotoxic and oxidative stress induced by polyethylene microplastic in Clarias gariepinus using lycopene, citric acid, and chlorella.</b> Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology, 250, 109189                                             |
| 25) | Sayed, A. E. D. H., Hamed, M., <b>Soliman, H. A.</b> , & Authman, M. (2021). <b>The protective role of lycopene against toxic effects induced by the herbicide Harness® and its active ingredient acetochlor on the African catfish Clarias gariepinus (Burchell, 1822).</b> Environmental Science and Pollution Research, 1-14.                                                |

**Evaluate the fulfillment of lab to appropriateness of areas, building installations, facilities and human resources standards**

| Areas of assessment     |    | Indicators                                                                        | Yes | Somewhat | No |
|-------------------------|----|-----------------------------------------------------------------------------------|-----|----------|----|
| Floor area and capacity | 1  | Adequacy of the total capacity of the lab for the number of researcher(1).        |     |          | √  |
| Windows and doors       | 2  | Availability of windows for adequate ventilations.                                | √   |          |    |
|                         | 3  | Ease of use of windows.                                                           |     |          | √  |
|                         | 4  | There are two exits (doors) at least (2).                                         |     |          | √  |
|                         | 5  | There are signs to locate directions of emergency exits                           | √   |          |    |
| Equipment               | 6  | Appropriate temperature during the lectures (3).                                  |     |          | √  |
|                         | 7  | Availability of good ventilation (4).                                             | √   |          |    |
|                         | 8  | The existence of adequate lighting (4).                                           | √   |          |    |
|                         | 9  | Lab is connected to the Internet                                                  | √   |          |    |
|                         | 10 | The existence of directions inside the Lab showing entrances and emergency exits. |     |          | √  |
| Security and Safety     | 11 | Existence of firefighting equipment near the hall (5).                            | √   |          |    |
|                         | 12 | Cleanliness of the room.                                                          | √   |          |    |