

Research Lab Sheet

Lab Name	Animal physiology
Academic Year	2021 - 2022

Basic Information	
Department	Zoology
Location	Bulding 1
Total area (m ²)	64 m ²
Head of the Lab	Prof. Dr. El-Sabry Abu-Amra
Establishment date	1/10/1975

Lab Members				
No. of Prof.	No. of Ass. Prof.	No. of Lect.	No. of Ass. Lect. & Demonstr.	No. of technicians
4	1	3	2	0

Staff members

#	Name	Scientific degree	e-mail	Specializations	C.V (Link of homepage)
1	El-Sabry Abu-Amra	Prof.	elsabri.hassanain1@science.sohag.edu.eg elsabryabuamra@yahoo.com	Animal physiology	
2	Mohamed F. El-Sayed	Prof.	mohamed_farag@science.sohag.edu.eg m_mohamed6000@yahoo.com	Animal physiology	
3	Sohier Ali Abd El-Raheem	Prof.	sohier.ali@science.sohag.edu.eg	Animal physiology	
4	Hamdy M. A.Hassanein	Prof.	hamdy_ahmed@science.sohag.edu.eg hamdy7464@yahoo.com	Animal physiology- environmental pollution	
5	Hanan Ali Okail	Ass. Prof.	hanan_mahmoud@science.sohag.edu.eg hananokail@yahoo.com	Animal physiology	
6	Doaa Abass Abd Al kareem Gad	Lecturer	doaa_abass69@yahoo.com	Animal physiology- neuroscience	
7	Ahmed Badr	Lecturer	ahmedbadr@science.sohag.edu.eg ahmedbadr_11@yahoo.com	Animal physiology	
8	Walaa Magdy Abd El-sameeh	Lecturer	walaa_abdelsamie@science.sohag.edu.eg	Animal physiology	

Ass. Lecturers & Demonstrators

#	Name	Scientific degree	e-mail	Specializations	C.V (Link of homepage)
2	Hossam Abed Elrahman Mohamed	Demonstrator	hossamabdulrahman99@gmail.com	-	-
3	Rehab Mohamed Helmy	Demonstrator	Rehabhelmy70@gmail.com	-	-

Theses produced by the Lab

M. Sc. Theses

#	Title	Approval date
1)	Acetyl cholinesterase level in the uterus of experimental animals at different stages of activity	1983
2)	Effect of prostaglandins on the uterus of experimental animals using tracer radiocalcium.	1985
3)	A study of some biological and physiological parameters related to flight activity in birds	1996
4)	Role of some natural peptides extracted from marine venoms in healing of gastric ulcers induced by indomethacin in experimental animals	2006
5)	Physiological studies on the cardiac contractility in two vertebrate species (fishes and amphibia)	2009
6)	The effect of propolis on some physiological aspects and histological aspects of some organs of albino rats treated with aluminum chloride.	2009
7)	Effect of some natural products on the myocardial force in the experimental animals at different temperatures	2013
8)	Histopathological effects of collagen antibodies on the development and productivity of production centers in white rat exposed to microbial antigens.	2013
9)	Treating of cytotoxic effect of Lead by using DMSA or with Some Vitamins in Albino Rats	2014
10)	Augmentation of the differentiation response to antitumor effects of colon cancer in domestic Rabbit (<i>Oryctolagus cuniculus</i>).	2016
11)	Cytogenetic Assessment of Malignancy and Antitumor Effects in Domestic Rabbit (<i>Oryctolagus cuniculus</i>).	2016
12)	Study of the combined effect of cadmium and aluminum on the immune response of the albino rat and the therapeutic ability of zinc	2017
13)	Ameliorative effect of antioxidants (vitamins C and E) on histopathological and biochemical alternations against abamectin toxicity of male albino rats.	2017
14)	Establishment of anti- nuclear inflammatory model in rat liver induced by injecting different nuclear materials: histopathological study	2017
15)	Protective effect of melatonin and thymoquinone on lithium chloride-induced toxicity in the nervous system and some organs of male albino rats.	2019

Ph.D. Theses		
1)	physiological studies on venom of Egyptian scorpion and snakes	1985
2)	Physiological studies of some natural effectors on Ca ²⁺ regulation in cardiac muscle	1989
3)	physiological studies of a separated fraction from the venom of an egyptian scorpion on the living cells of some organs	1990
4)	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
5)	Biochemical and histological studies of the grass carp “ <i>Ctenopharyngodon idella</i> ” under the effect of neem biopesticide Triology "	2005
6)	Modulation of physiological responses of dopamine D2 receptors by class C GPCR in rat brain striatal slice	2016
7)	Thermal tolerance of electrical excitation of the roach (<i>Rutilus rutilus</i>) heart.	2017
8)	Ameliorative effect of bee venom and its extracted bradykinin-potentiating factor on alteration induced by acrylamide in albino rats	2018
9)	Protective effect of some natural products on histopathological changes caused by long-term intake of aspartame by albino rats	2020

Articles produced by Lab members

#	Title
1)	Ahmed Y. Nassar; Khalil A.; Gamal A. Morsi; Borai F. and EL-Sayed, M. F (1987): Regulatory Effect of PGF ₂ a and PGA1 on Permeability of Endometrium. Egypt. J. Biochem. Vol. 6, No.1
2)	EL-Sayed, M. F (1987). Role of extracellular calcium on the heart muscle of ectothermic vertebrate (<i>Clarias lazira</i>): Effects of verapamil and caffeine. J. Egypt. Ger. Soc. Zool., 30:113-130
3)	Nassar, A. Y.; Abu-Sinna, G. and Abu-Amra, S. (1989): Isolated fractions from toxins of Egyptian scorpions and cobra, activated smooth muscle contraction and glomerular filtration. Toxicon, 27: 57
4)	EL-Sayed, M. F and H. Gesser (1989): Sarcoplasmic Reticulum: Calcium, Potassium, and Cardiac Muscle Force in Rainbow Trout and Plaice. Am. J. Physiol. 257 (Regulatory integrative Comp. Physiol. 26: R599-R604.
5)	Nassar, A. Y.; Abu-Sinna, G. and Abd-El-Rahim, S. (1990): Effect of a bradykinin potentiating fraction, isolated from venom of the Egyptian scorpion, <i>Buthus occitanus</i> , on the ovaries and endometrium of mice. Toxicon, 28: 525 - 534.
6)	Nassar, A. Y.; Abu-Sinna, G.; El-Saadani, M. and Abd-El-Rahim, S. (1991): Effect of a bradykinin potentiating fraction, isolated from venom of the Egyptian scorpion, <i>Buthus occitanus</i> , on spermatogenesis of premature mice. 10th World congress on animal, plant and microbial toxins. 3 - 8 November. Singapore.
7)	Abu-Amra, E., & Abd-El-Rahim, S. A. (1992). Effect of factors isolated from venoms of Egyptian snakes in plasma cholesterol, creatine kinase and alkaline phosphatase. J. Egypt. Ger. Soc. Zool, 9, 75-89.
8)	Nassar, A. Y.; Abu-Sinna, G.; Soliman, F. M.; Abd-El-Rahim, S. and El-Saadani, M. (1992): Bradykinin potentiating fraction, isolated from venom of <i>Buthus occitanus</i> , promotes spermatogenesis in premature mice. In Recent advances in toxinology research. Gopalakri. Shnakone. ed., Vol. 2 pp. 119- 129 Singapore.
9)	Abu-Amra, E., and S. A. Abd-El-Rahim. "Activation of some enzymes activities of the plasma and liver of white rat by a venom fraction isolated from scorpion and snake." Proc. Zool. Soc. ARE. Vol. 32. No. 1. 1992.
10)	Abd El-Rehim, S. A., and S. Abu Amra. "Effect of isolated venom fraction of the Egyptian scorpion, <i>Buthus occitanus</i> on the count of intestinal cells of testes and testosterone level." J. Egypt. Ger. Soc. Zool 9 (1992): 91-1.
11)	Abd-El-Rahim, S. A., & Abu-Amra, E. (1992). Effect of a bradykinin potentiating fraction from the venom of the Egyptian scorpion, <i>Buthus occitanus</i> on the testis of mature mice. Proc. Zool. Soc., AR Egypt, 23(Part I), 115-122.
12)	Soliman, F. M.; I. A. El-Elaimy and Hamdy M. a. Hamada (1993): The effect of malathion on the histopathological changes in the liver of <i>Gambusia affinis</i> . J. Pest Control & Environm. Sci., 5(1):17-30.
13)	Abu-Amra, E. (1994): Influence of venom extracted factors separated from snakes on serum insulin, serum glucose, liver glycogen and skeletal muscle pyruvate levels of rats. J. Egypt. Ger. Soc. Zool., 15 (A): 205 - 214.
14)	EL-Sayed, M. F (1994): Temperature, Contractility and Sarcoplasmic Reticulum in <i>Oreochromis niloticus</i> . Fac. Sci., Assiut univ. 23(1-E), PP. 1-20.
15)	EL-Sayed, M. F (1994): The Influence of Temperature on Force Development and Force-Frequency Relationships at Increased Extracellular Calcium and Potassium In The Myocardium of <i>Clarias lazera</i> . Egypt. Ger. Soc. Zool. Vol. 15 (A), Comparative Physiology. 259-279, July.

Articles produced by Lab members

#	Title
16)	Sayed, M. F (1994): Force, Sarcoplasmic Reticulum and Potassium at Different Temperature in Cardiac Tissue of <i>Clarias lazira</i> . Egypt. Ger. Soc. Zool. Vol. 15 (A), comparative physiology. 509-526, July,
17)	EL-Sayed, M. F (1994): Force, Development and Force-Frequency Relationships in the Myocardium of <i>Oreochromis niloticus</i> : Effect of Temperature, Ca^{+2} and K^{+} . Fac. Sci., Assiut Univ. 23 (2-E), PP: 1-27.
18)	El-Sawi, N. M., Abdel-Nasser, M., Abu-Amra, E., & Seddek, A. S. (1994). Selected Minerals in Meat, Liver, Fat and Kidney in Buffalo and Cattle in Assiut, Egypt. ASSIUT VETERINARY MEDICAL JOURNAL, 30, 102-102.
19)	Abu-Amra, E., & Abd-El-Rahim, S. A. (1994). induction of gametogenesis in gorads by the injection of a fraction of scorpion venom ASSIUT VET MED.L J., 31(62), 63-73.
20)	Meki, Abdel-Raheim MA, Ahmed Y. Nassar, and Hervé Rochat. "A bradykinin-potentiating peptide (peptide K12) isolated from the venom of Egyptian scorpion <i>Buthus occitanus</i> ." Peptides 16.8 (1995): 1359-1365.
21)	EL-Sayed, M. F (1995): Effects of $[Ca^{2+}]_o$ on Contractility In The ventricular Muscle of Reptiles at Different Temperature. Proc. Zool. Soc. A. R.Egypt. Vol. 26.25-41.
22)	Abd-El-Rahim, S. A. (1995): Effect of extracted crude venom of the jelly- fish, <i>Eutonina indicans</i> on kidney function. J. Egypt. Ger. Soc. Zool., 18 (A): 131 - 147.
23)	EL-Sayed, M. F. and EL-Sabry A. Hassnin. (1995): Inotropic Effect of Temperature on Ryanodine and Caffeine Action hi Lizard Heart Muscle. Proc. Zool. Soc. A. R. Egypt. Vol. 26 . 42-58.
24)	Soliman, F. M.; I. A. El-Elaimy and Hamdy M. a. Hamada (1995): Physiological alterations of the liver function of <i>Gambusia affinis</i> . After exposure to the organophosphorus insecticide, malathion. Sohag Pure & Appl. Bull.Fac. Sci., 11:97-111.
25)	Soheir A. Abd El-Rehem, Nagwa M. El-Sawi and H.M. Aboul Dahab.AssiutVet. (1996): Effect of Extracted Crude Venom From Jelly Fish <i>Eutonina Indican</i> On Liver Function In Male Mice.Med. Journal, Vol. 34(68): 56-67.
26)	Banhawy, M. A.; Faiza M Soliman; Soheir A. Abdel-Rehim and Hamdy M. a. Hamada (1996): Metabolic changes in the Nile Bolti, <i>Oreochromis niloticus</i> eposed to different concentrations of the herbicide (Goal). Proc. Egypt. Acad. Sci., 46:99-117.
27)	Schröder, H.C., F.A. Badria, S.N. Ayyad, R. Batel, M. Wiens, H.M.A. Hassanein, B. Kurelec and W.E.G. Müller (1998): Inhibitory effects of extracts from the marine alga <i>Caulerpa taxifolia</i> and of toxin from <i>Caulerpa racemosa</i> on multixenobiotic resistance in the marine sponge <i>Geodia cydonium</i> . Environm. Toxicol. Pharmacol., 5: 119-126
28)	Müller, W.E.G., R. Batel, M. Lacorn, H. Steinhart, T. Simat, S. Lauenroth, H.M.A. Hassanein and H.C. Schröder (1998): Accumulation of cadmium and zinc in the marine sponge <i>Suberites domuncula</i> and its potential consequences on single-strand breaks and on expression of heat-shock protein: A natural field study. Mar. Ecol. Prog. Ser., 167: 127-135
29)	Müller, W.E.G., R. Batel, M. Lacorn, H. Steinhart, T. Simat, S. Lauenroth, H.M.A. Hassanein and H.C. Schröder (1998): Accumulation of cadmium and zinc in the marine sponge <i>Suberites domuncula</i> and its potential consequences on single-strand breaks and on expression of heat-shock protein: A natural field study. Mar. Ecol. Prog. Ser., 167: 127-135

Articles produced by Lab members

#	Title
30)	Wiens, M., C. Koziol, H.M.A. Hassanein, R. Batel, H.C. Schröder and W.E.G. Müller (1998): Induction of gene expression of the chaperones 14-3-3 and HSP70 by PCB118 (2,3',4,4',5-pentachlorobiphenyl) in the marine sponge <i>Geodia cydonium</i> : novel biomarkers for polychlorinated biphenyls. <i>Mar. Ecol. Prog. Ser.</i> , 165: 247-257
31)	Batel, R., M. Fafandjel, B. Blumbach, H.C. Schröder, H.M.A. Hassanein, I.M. Müller and W.E.G. Müller (1998): Expression of the human XPB/ERCC-3 excision repair gene-homolog in the sponge <i>Geodia cydonium</i> after exposure to ultraviolet irradiation. <i>Mutat. Res.</i> , 409: 123-133.
32)	Krasko, A., H.C. Schröder, H.M.A. Hassanein, R. Batel, I.M. Müller and W.E.G. Müller (1998): Identification and expression of the SOS-response, aidB-like, gene in the marine sponge <i>Geodia cydonium</i> : Implication for the phylogenetic relationships of metazoan acyl-CoA dehydrogenases and acyl-CoA oxidases. <i>J. Molec. Evol.</i> , 47: 343-352
33)	El- Sayed, F. (1999). Role of extracellular calcium on the heart muscle of ectothermic vertebrate (<i>Clarias lazira</i>): Effects of verapamil and caffeine. <i>J. Egypt. Ger. Soc. Zool.</i> , 30(A): 113-130
34)	Schröder, H.C., H.M.A. Hassanein, S. Lauenroth, C. Koziol, T.A.-A.A. Mohamed, M. Lacorn, H. Steinhart, R. Batel and W.E.G. Müller (1999): Induction of DNA strand breaks and expression of HSP70 and GRP78 homolog by cadmium in the marine sponge <i>Suberites domuncula</i> . <i>Arch. Environm. Contam. Toxicol.</i> , 36: 47-55.
35)	Schröder, H.C., R. Batel, S. Lauenroth, H.M.A. Hassanein, M. Lacorn, T. Simat, H. Steinhart and W.E.G. Müller (1999): Induction of DNA damage and expression of heat shock protein HSP70 by polychlorinated biphenyls in the marine sponge <i>Suberites domuncula</i> Olivi. <i>J. Exp. Mar. Biol. Ecol.</i> , 233: 285-300.
36)	Wiens, M., J. Seack, C. Koziol, H.M.A. Hassanein, R. Steffen, M. Korzhev, H.C. Schröder and W.E.G. Müller (1999): 17 β -Estradiol-dependent regulation of chaperone expression and telomerase activity in the marine sponge <i>Geodia cydonium</i> . <i>Marine Biol.</i> , 133: 1-10.
37)	Hassanein, H.M.A., M.A. Banhaway, F.M. Soliman, S.A. Abdel-Rehim, W.E.G. Müller and H.C. Schröder (1999): Induction of HSP70 by the herbicide oxyfluorfen (Goal) in the Egyptian Nile fish, <i>Oreochromis niloticus</i> . <i>Arch. Environm. Contam. Toxicol.</i> , 37: 78-84
38)	Schröder, H.C., R. Batel, H.M.A. Hassanein, S. Lauenroth, H-St. Jenke, T. Simat, H. Steinhart and W.E.G. Müller (2000): Correlation between the level of the potential biomarker, heat-shock protein and the occurrence of DNA damage in the dab, <i>Limanda limanda</i> : a field study in the north sea and english channel. <i>Marine Environm. Research</i> , 49: 201-215
39)	Wiens, M., Ammar, M.S., Nawar, A. H., Koziol, C., Hassanein, H.M.A., Eisinger, M., Müller, I. M. and Müller, W.E.G. (2000): Induction of heat-shock (stress) protein gene expression by selected natural and anthropogenic disturbances in octocorals <i>Dentronephthya klunzingeri</i> . <i>J. Exp. Mar. Biol. Ecol.</i> , 245: 265-275.
40)	EL-Sayed, M. F (2000). Role of calcium channel in the development of cardiac force in the <i>Clarias lazira</i> : Effects of verapamil and caffeine. <i>J. Egypt. Soc. Zool.</i> , 31 (A): 111 - 124.
41)	Abu-Amra, E. (2000): Physiological studies on diabetic male albino mice treated with a bradykinin potentiating factors (BPF) separated from jellyfish and cobra snake venoms. 1-Effect of BPF7 and BPF3 on diabetic. <i>J. Egypt. Ger. Soc. Zool.</i> , 33 (A): 211- 233.
42)	Abu-Amra, E. and Abd-El-Rahim, S. A. (2000): Stimulation of some enzymes and cellular proliferation by factors separated from scorpion and jellyfish. <i>J. Egypt. Ger. Soc. Zool.</i> , 31: 273 - 287.

Articles produced by Lab members

#	Title
43)	Abu-Amra, E. (2001): Physiological studies on diabetic male albino mice treated with a bradykinin potentiating factors of BPF7 and BPF9 on some physiological parameters. Egypt. J. Zool., 36: 207 - 224.
44)	Abu-Amra, E. (2001): Physiological and structural studies on diabetic male mice treated with a bradykinin potentiating factor (BPF) separated from jellyfish venom. 4- Effect of BPF7 on the total protein ,neuclic acids and leukocytic count. Egypt. J. Zool., 37: 93 - 110.
45)	Abu-Amra, E. (2001): Physiological and structural studies on diabetic male mice treated with a bradykinin potentiating factor (BPF) separated from jellyfish venom. 4- Effect of BPF7 on fertility. Egypt. J. Zool., 36: 529 - 548.
46)	Abu-Amra, E.; Abd El-Rehim, E.; Khalifa, M. H. and Abd El-Satter, M. (2002). Influence of tetrodotoxin extracted from the overy and liver of pufferfish, Arothron hispidus, on somehaemtological parameters and liver function in albino rat J. Egypt. Ger. Soc. Zool., 37(A): 17-39.
47)	Abu-Amra, E.; Abd El-Rehim, E.; Khalifa, M. H. and Abd El-Satter, M. (2002). Effect of tetrodotoxin extracted from the ovary and liver of pufferfish, Arothron hispidus, on the kidney function in albino rat. J. Egypt. Ger. Soc. Zool., 37(A): 353-367.
48)	Hussein, A.A; Meki, A.M.A, and H.M.A. Hassanein (2002): Apoptosis and expression of the heat shock protein-70 (HSP-70) induced by aflatoxin B1 in rat liver: Protective effect of melatonin. J. Union Arab Biol. Cairo, 17(A): 357-373.
49)	Abu-Amra, E-S. (2002):"Physiological studies on diabetic male albino mice treated with a bradykinin potentiating factor (BPF) separated from Jelly fish venom. 4. Effect of BPF7 on fertility." JOURNAL-EGYPTIAN GERMAN SOCIETY OF ZOOLOGY 37.A 75-98.
50)	Abu-Amra, E-S., H. M. A. Hassanein, and A-RA El-Shater. (2002): "Influence of natural toxins extracted from puffer fish Arothron hispidus on the expression of hest enzymes in certain tissues of rat." JOURNAL-EGYPTIAN GERMAN SOCIETY OF ZOOLOGY 39.A 1-16.
51)	Abu-Amra; E.; Hamdy M.A. Hassanein and F . M. Lashein (2003): Physiological studies on diabetic male albino mice treared with bradykinin potentiating factors (BPFS) sperated from jelly fish and copra snake venoms. 2- Effect of BPF7 and BPF3 on liver function. J. Egypt. Ger. Soc. Zool., 40 (A): 429-445.
52)	Schröder, H.C., A. Krasko, G. Le Pennec, T. Adell, M. Wiens., H.M.A. Hassanein, I.M. Müller and W.E.G. Müller (2003): Silicase, an enzyme which degrades biogenous amorphous silica: contribution to metabolism of silica deposition in demosponge Suberites domuncula. Prog. Mol. Subcell. Biol., 33: 249-268.
53)	El-Sayed, M. F. (2003). The Stimulatory Effect of The Extracellular calcium on The Negative Action of Cadmium, Verapamil and Some Factors Isolated From The Jelly Fish and Octopus Venoms on The Cardiac Force in The Catfish Heart. Egypt. J. Zool., 41:201-227.
54)	El-Saadani M.A. and El-Sayed, M. F. (2003). A bradykinin potentiating peptide from Egyptian cobra venom strongly affects rat atrium contractile force and cellular calcium regulation. Comp. Biochem. Physiol. C Toxicol. Pharmacol. 136(4):387-395.
55)	Hassanein, H.M.A. (2004): Gene expression of heat shock protein (HSP70) in some body organs of the fish Tilapia zilli after exposure to the neem biopesticide; triology. J. Egypt. Ger. Soc. Zool., 44 (c):1-15

Articles produced by Lab members

#	Title
56)	Badria, F.; Hassanein, H. M. A.; El-Nketi, M. And Saad, H. (2004): Heat shock protein (hsp70): A novel biomarker for narcotic and hepatotoxic agents. The second annual internat. conf. on the Environm. and Health Saf., 13-15 April, 2004, Mansoura Uni. Egypt.
57)	S. A. Abdel-Rehim, "Influence of Extracted Crude Venom of Jellyfish Cassiopea Andromeda on Healing of Experimental Gastric Ulcers in Mice," Journal of the Egyptian German Society of Zoology, Vol. 48, 2005, pp. 257-278.
58)	Hamdy M. A. Hassanein ; Shehata E. Elowa and Abd Allah B. Hussein (2005): Changes in the hepatic (HSP70) and (GST) of the Nile fish, Oreochromis niloticus exposed to the pesticides temephos and lambada-cyhalothrin. J. Egypt. Ger. Soc. Zool. (48A):299-317.
59)	Hamdy M.A. Hassanein and H. A. Okail (2008): Toxic Impacts of the Biopesticide (Triology®) on Some Histological and Biochemical Aspects of Body Organs in Grass Carp " Ctenopharyngodon idella".1-Liver. J. Egypt. Ger. Soc. Zool. 56 (A):157-179.
60)	Hamdy M.A. Hassanein and H. A. Okail (2008): Biochemical changes in proteins and DNA in Ctenopharyngodon idella in response to treatment with the biopesticide (Triology®). Egypt. Acad. J. Biol. Sci. 1(2): 51-64.
61)	Hamdy M.A. Hassanein and H. A. Okail (2008): Toxicity determination and hypoglycaemic effect of neem biopesticide on the grass carp "Ctenopharyngodon idella " Egypt. Acad. J. Biol. Sci. 1(2): 37-49.
62)	Hamdy M.A. Hassanein (2008): Induction of the molecular chaperone protein (hsp70) and inhibition of Cholinesterase (ChE) by the carbamate pesticide (Methomyl) in Oreochromis niloticus Egypt. J. Zool., 51: 1-14.
63)	Hamdy M.A. Hassanein and H. A. Okail (2008): Toxic Impacts of the Biopesticide (Triology®) on Some Histological and Biochemical Aspects of Body Organs in Grass Carp " Ctenopharyngodon idella".2-Kidney. Proc. 5th Int. Con. Biol. Sci. (Zool): 5: 142-155.
64)	I. A. El-Elaimy, H. M. Hassanein, S. E. Hassab El –Nabi and Y. S. Alawthan (2008): DNA damage and expression of hsp70 by chlorpyrifos: Ameliorative effect of silymarin and eugenol. Proc. 5th Int. Con. Biol. Sci. (Zool): 5: 151-157.
65)	Hamdy M.A. Hassanein , A. A. Hussein and H. A. Soliman (2009): Estimation of some heavy metals in water and organs of Oreochromis niloticus and their impact on hsp70 and DNA: a field study. J. Egypt. Acad. Soc. Environ. Develop., 10(1): 53-63.
66)	Hamdy M.A. Hassanein (2009): Biochemical and haematological changes induced by the biopesticide "neem" in rabbits. Egypt. J. Zool Volume (52)- 177-192.
67)	El-Sayed, M. F.; Ibraheim, A. S.; Okail, H.A. and Abdel-Karim, D.A. (2010). The role of sarcoplasmic reticulum and regulation of cardiac contractility at different time and higher extracellular potassium in the cardiac muscle of Catfish and toad. Egypt. Acad. J. biolog. Sci., 2(2): 99 – 113.
68)	Ibrahim, A.S., Okail, H.A., El-Sayed, M. F. and Abd-Karim, D.A. (2011). Physiological studies on the role of sarcoplasmic reticulum and potassium on cardiac force of catfish and toad. J. Egypt. Ger. Soc. Zool., 63(A): 277-295.
69)	Madeha Al-Seeni1 Nagwa El-Sawi Soad Shaker Asma Al-Amoudi (2011) : Investigation of the Biochemical and Histological Changes Induced by Zearalenone Mycotoxin on Liver in Male Mice and the Protective Role of Crude Venom Extracted from Jellyfish Cassiopea Andromeda Food and Nutrition Sciences, 2, 314-322

Articles produced by Lab members

#	Title
70)	Al-Eissa Mohammed Saad;Alhamidi A. R.;Mohamed Abd El Kader Sandouka; Ibraheem A. S.;Hamad Al-Yahya;AL-Farraj S.;SaadAlkahtani; and Al-Dahmash B. (2011): Scrotal, testicular and semen characteristics of the mountain gazelle (<i>Gazella gazella</i>) males. AJMR. Vol. 5(28), pp. 5137-5141.
71)	Okail, H.A., Ibrahim, A.S., El-Sayed, M. F. and Abd-Karim, D.A. (2012). Sarcoplasmic reticulum, sarcolemma, potassium and the twitch force in the catfish and toad after 15 minutes. J. Egypt. Ger. Soc. Zool., 64(A): 113-130.
72)	El-Sayed, M.F.; Abu-Amra, E. and Badr, A. (2012).Effect of changes in temperature on the force-frequency relationship in the heart of catfish (<i>Clarias gariepinus</i>). J. Basic and App. Zool. 65: 274-281
73)	Ibraheem, A. S., El-Sayed, M. F., and Ahmed, R. A. (2013). Lymph node histopathological studies in a combined adjuvant–collagen induced arthritis model in albino rat " <i>Rattus rattus</i> ". J. of Basic and Applied Zoology, 66(4), 195-205.
74)	El-Sabry Abu-Amra, Faiza M. Soliman, Richard D. Handy, Mohammed O. A. Al-Tonsy, Soliman, H. A. M (2013):Uptake of copper sulphate and copper nanoparticles using whole gut sacs of rainbow trout (<i>Oncorhynchus mykiss</i>). Egy. J. aquac.,Vol. 3, No.4:1-17.
75)	El-Sabry Abu-Amra, Faiza M. Soliman, Richard D. Handy, Mohammed O. A. Al-Tonsy, Soliman, H. A. M (2013): Developing and characterizing primary intestinal cells culture of rainbow trout (<i>Oncorhynchus mykiss</i>) for use in study of copper sulphate and copper nanoparticles accumulation. Egy. J. aquac.,Vol. 3, No.4:19-38.
76)	Masoud A. Farag and Hamdy M. A. Hassanein (2014): Impact of neem, <i>Azadiracta indica</i> extract on adrenaline and noradrenaline in rabbits. Egypt. Acad. J. Biol. Sci., 6(1):97-105
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#	Title
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Articles produced by Lab members

#	Title
100)	Hamdy M.A. Hassanein; El-Sabry Abu_Amra; Faiza M. Soliman and Hanan A. Okail (2019): Toxic impacts of the neembiopesticide (Triology®) on the histological structure of gills and intestine in the Grass Carp " Ctenopharyngodonidella". 3rd International conf. Applied Chemistry, 23-26 Octob., Hurghada, Egypt.
101)	Okail, H.A., Ibrahim M. A., Anjum, S., Taher,. A., and Emam N. M. (2019): Protective Potential of The Avocado's Aqueous Seed Extract Against Chromium Induced Neurotoxicity in Rabbits. Jokull Journal, Vol. 69, No. 12.
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110)	Moustafa, Amr & Ahmed, Walaa & Khodairy, Ahmed & Mabied, Ahmed & Moustafa, Ahmed & El-Sayed, Mohamed. (2021). Synthesis and Anti-hyperglycemic Evaluation of Novel Carboximidamides Derived from Cyanamides. <i>Journal of Molecular Structure</i> . 1230. 129888.
111)	El-Sabry Abu Amra, Sohir Ali Abed El Rehim Fakhr El-Din M Lashein*, Heba Seleem Shoaeb (2021). Effect of bradykinin-potentiating factor separated from honey bee venom on thyroid and testis in hypothyroid white rats <i>The Journal of Basic and Applied Zoology</i>

Instruments Description		
Device name	Device image	Description /use
Desk top Computer		Through software we can: • Enhance image resolutions. • Analyzing specimen images. • Make statistical analyses. • Write & read scientific articles. • Prepare art-drawings.
UV-vis Spectrophotometer (model UV2300)		It is widely used in biochemistry to measure enzymes and hormones
Spectrophotometer (SPEKOL. 11)		
Complete Blood Count (CBC) (model:HA-Vet)		It is used in the field of medical analyzes to help diagnose some diseases, as a complete picture is given through it and the following tests are performed: white blood cell count)) red blood cell count Blood platelet count (PLTs). Hemoglobin concentration (Hgb) erythrocyte particle size (MVC) heamatocrite (HCT)
lyophilizer (model:conclab)		• It is used to dry samples in solid form, and this allows the product to be stored for long periods of time
Myopolygraph (model Grass 79 polygraph)		• It is used to measure cardiac and skeletal muscle beats

Instruments Description		
Device name	Device image	Description /use
Deep Freezer		Preservation of chemicals and biological samples at low temperatures for a long period
Centrifuge		- This device is used to separate: - Components of blood from each other: - Cells suspended in urine: such as epithelial cells, blood cells, and parasites.
water distiller		To produce water distiller
evaporator Rotary		A device used to efficiently and gently remove solvents from samples by evaporation.

Instruments Description		
Device name	Device image	Description /use
Fridge		This fridge is used to store important chemical and Nano biological materials that used in histological, histochemical and Nano biological researches.
Hot air Oven		- It is mainly used for the sterilization of glass wares like pipettes, bottles test tubes, Petri dishes etc. - Preparing wax embedding steps for tissue sectioning. - Drying or dehydrating of samples – Removing moisture from samples.
Incubators		Incubators use in: - Provide an optimal condition of temperature, humidity, and other - Provide a controlled condition for sample storage before they can be processed in the laboratories.
Digital balance		A digital balance is used to weigh different chemical substances that used during different studies as histology, histopathology, histochemistry, behavioral studies, and ecological experiments.

Lab instruments						
#	Device	quantity	Quality			
			Good	Poor	Need maintenance	malfunction
1)	Desk top Computer	1	✓			
2)	UV-vis Spectrophotometer (model UV2300)	1	✓			
3)	Complete Blood Count (CBC) (model:HA-Vet)	1			✓	
4)	lyophilizer (model:conclab)	1	✓			
5)	Fridge	1	✓			
6)	Deep Freezer (-80C)	1	✓			
7)	Evaporator Rotary	1			✓	
8)	Centrifuge	1	✓			
9)	water distiller	1	✓			
10)	Hot air Oven	1	✓			
11)	Incubators	1	✓			
12)	Digital balance	1	✓			

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.	✓		

1. Minimum area: 1m² for each person.
2. Doors characteristics: Consists of one movable piece - opening to the inside.
3. The appropriate temperature is 18-25 °C in winter and 28°C in summer due to air-condition use.
4. Providing adequate lighting and good ventilation: windows area 10-15% of the floor area
5. Security and safety requirements: evacuation plan / evacuation responsible person/ fire distinguishers / bucket of sand / water source / good condition extinguish hoses / alarm system against fire).