



Research Lab Sheet

Lab Name	Embryology lab
Academic Year	2021-2022

Basic Information	
Department	Zoology
Location	Faculty of science building no.3
Total area (m ²)	16 m ²
Head of the Lab	Prof. Dr. Fakhr El-Din Moustafa Lashein

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



حاصلة على شهادة الاعتماد من الهيئة القومية
لضمان جودة التعليم والاعتماد في 2012/7/12م



Staff members					
#	Name	Scientific degree	e-mail	Specializations	C.V
1	Fakhr El-Din Moustafa Lashein	Prof.	F Lashein@yahoo.com	Embryology	
2	Amin Abdou Seleem	Prof.	amin_seleem@yahoo.com	Embryology	
3	Abeer Atef Ahmed Talab	Lecturer	abeeratef456@yahoo.com	Embryology	
Ass. Lecturers & Demonstrators					
#	Name	Scientific degree	e-mail	Specializations	
1	Alyaa sayed ahmed el sayed	Demonstrator	alyaa .sayed @ science.sohag. edu. eg	-	

Theses produced by the Lab		
M. Sc. Thesis		
#	Title	Approval date
1	Effect of a natural Bradykinin potentiator factor on the Cadmium toxicity during the embryogenesis of white rat.	2004
2	Role of some natural peptides extracted from marine venoms in healing of gastric ulcers induced by indomethacin in experimental animals	2006
3	The Alternative Effect of Retinoic Acid and Caffeine During Embryogenesis of Mice.	2016
4	Amelioration of Gibberellic Acid-induced Maleformations in Prenatal and Early Life Stages of White Mice using Olive Oil .	2021
Ph.D. Thesis		
1	Amelioration Effect of Bee Venom and Bradykinin Potentiating Factor Against Acrylamide-Induced Complications in white mice.	2019
2	Experimental Study on The Effect of The Fungicide Penconazole on Pregnant Female White Mice and Their Embryos.	2020

Articles produced by Lab members	
#	Title
1)	Faiza, M. S.; Agamy, E. I. and Lashein, F. M. (1992). Development of the digestive system of the fresh water teleost, <i>Gambusia affinis holbrooki</i> 1. Buccal cavity. J. Egypt. Ger. Soc. Zool., Vol. (8B): 31 – 45.
2)	Faiza, M. S.; Agamy, E. I. and Lashein, F. M. (1992). Development of thr digestive system of the fresh water teleost, <i>Gambusia affinis holbrooki</i> 111. Oesophagus. J. Egypt. Ger. Soc. Zool., Vol. (8B): 65 - 81.
3)	Agamy, E. I.; Faiza, M. S. and Lashein, F. M. (1992). Development of thr digestive system of the fresh water teleost, <i>Gambusia affinis holbrooki</i> 11. Pharyngeal region. J. Egypt. Ger. Soc. Zool., Vol. (8B): 47 - 63.
4)	Agamy, E. I.; Faiza, M. S. and Lashein, F. M. (1992). Development of thr digestive system of the fresh water teleost, <i>Gambusia affinis holbrooki</i> IV. Liver and Pancreas J. Egypt. Ger. Soc. Zool., Vol. (8B): 83 - 105.
5)	Agamy, E. I.; Faiza, M. S. and Lashein, F. M. (1992). Development of thr digestive system of the fresh water teleost, <i>Gambusia affinis holbrooki</i> V . Intestine. J. Egypt. Ger. Soc. Zool., Vol. (8B): pp.
6)	Agamy, E. I.; Faiza, M. S. and Lashein, F. M. (1992). Development of thr digestive system of the fresh water teleost, <i>Gambusia affinis holbrooki</i> . V1. Intestinal caecum. J. Fac. Sci., El-Menofia University.
7)	Lashein, F.M. (1998). Toxic effect of mercury on the developing liver of larval guppy, <i>Poecilia reticulata</i> . Bull. Fac. Sci., Assiut Univ., 27 (2E): 21 – 33.
8)	Lashein, F.M. (1999a). Effect of cadmium and lead on ontogeny and function of chloride cells in the larval stages of the grass carp, <i>Ctenopharyngodon idella</i> (Cuvier and Val., 1844). Egypt. J. Zool., 32: 125 – 140.
9)	Lashein, F.M. (1999b). Effect of cadmium and lead on the skin neuromast cell differentiation and larval growth of the grass carp, <i>Ctenopharyngodon idella</i> (Cuvier and Val., 1844). Egypt. J. Zool., 33: 307 – 320.
10)	Hussain, H. M.; Lashein, F.M.; Hussain, A. A. (2000). Het shock protein (HSP70) development and induction as a biomarker for lead intoxication in larval stages of the grass carp, <i>Ctenopharyngodon idella</i> (Cuvier and Val., 1844). Egypt. J. Zool., 35: 27 – 36.
11)	Lashein, F.M. (2000). Effect of cadmium on the gills, intestine and major lymphoid organs of the larval stages of the grass carp, <i>Ctenopharyngodon idella</i> (Cuvier and Val., 1844). Egypt. J. Zool., 35: 189 – 207.
12)	Lashein, F.M. (2001). Induction of skeletal and morphological disorders by cadmium during embryogenesis and larval stages of the grass carp, <i>Ctenopharyngodon idella</i> (Cuvier and Val., 1844). J. Egypt. Soc. Toxicol., 24: 77 – 80.
13)	Lashein, F.M. and Hussain, A. A. (2001). Effect of low pH on cadmium toxicity during the embryonic development of the grass carp, <i>Ctenopharyngodon idella</i> (Cuvier and Val., 1844). Egypt. J. Zool., 37 : 267 – 280.
14)	Lashein, F.M. and Hussain, A. A. (2002). Effect of cadmium on pigment cell development and differentiation during embryonic and larval development of the grass carp, <i>Ctenopharyngodon idella</i> (Cuvier and Val., 1844). Egypt. Ger. Soc. Zool., 39C: 83 – 97.
15)	Habib, T. N.; Hussain, A. A.; Lashein, F.M. (2002). Involvement of random polymorphic DNA (RAPDs) genotypes in susceptibility to aflatoxin B1. Egypt. Ger. Soc. Zool., 39 C: 533 – 547

Articles produced by Lab members

#	Title
16)	Abu-Amra, S.; Hussain, H. M.; Lashein, F.M. (2003). Physiological studies on diabetic male albino mice treated with bradykinin potentiating factors (BPFs) separated from jelly fish and cobra snake venoms. 2 – Effect of BPF7 and BPF3 on liver function. Egypt. Ger. Soc. Zool., 40 (A): 429 – 445.
17)	Mekkawy, I. A. Lashein, F.M. (2003): The effect of lead and cadmium on LDH and G-6-PDH isoenzyme patterns exhibited during the early embryonic development of the teleost fish, Ctenopharyngodon idellus with emphasison the corresponding morphological variations. The Big Fish Bang., Bergen, Norway. 275 – 292 .
18)	Lashein, F.M.; Abu-Amra, S. and Seleem, A. (2003). Effect of natural bradykinin potentiator on cadmium-induced developmental skeletal defects in albino rat, Rattus rattus. Egypt. J. Zool., 41 (A): 61 – 87.
19)	Lashein, F.M. (2004). Protective role of Olive Oil against lead-induced developmental malformations during embryogenesis of chick (Gallus domesticus). Egypt. Ger. Soc. Zool., 41 C.
20)	Lashein, F.M. (2007). Protective and ameliorative effects of extra virgin olive oil on some cadmium-induced complications in male rabbit (Oryctolagus cuniculus). Egypt. J. Zool., 49 (A).
21)	Lashein, F.M. and Seleem, A (2007). Effect of natural bradykinin potentiator on cadmium-induced alteration in embryos, new borns and females of white rat, Rattus rattus. Egypt. Ger. Soc. Zool., 46 C.
22)	Lashein, F.M. and Seleem, A. (2007). Effect of a bradykinin-potentiating factor extracted from the jelly fish, Cssiopia Andromeda, on cadmium-induced hepatotoxicity in the whit rat. Egypt. J. Zool. 50 (A)
23)	Amin Abdou Seleem Mohamed (2011). Connective tissue growth factor in eye development of mice. Lambert Academic Publishing, Germany. ISBN 978-3-8454-1202-3 (Book).
24)	Junglas B, Kuespert S, Seleem A Abdou, Struller T, Ullmann S, Bösl M, Bosserhoff A, Köstler J, Wagner R, Tamm ER, Fuchshofer R. (2012). Connective tissue growth factor causes glaucoma by modifying the actin cytoskeleton of the trabecular meshwork. Am J Pathol. 180(6):2386-403 .
25)	Lashein, F.M. and Amin Abdou Seleem (2012). Effect of Caffeine on connective tissue growth factor (CTGF) and transforming growth factor (TGFβ2) during development of liver and kidney in chick embryo. Egypt. J. Zool., 58:141-162.
26)	Lashein, F.M. and Amin Abdou Seleem (2012). Effect of Caffeine on the developing chick embryos: Morphological and skeletal alterations. Egypt. J. Zool., 58:105-124.

Articles produced by Lab members

#	Title
27)	Lashein, F.M. and Amin Abdou Seleem (2012). Effect of Caffeine on connective tissue growth factor (CTGF) and transforming growth factor (TGF β 2) during development of liver and kidney in chick embryo. Egypt. J. Zool., 58:141-162.
28)	Lashein, F.M. and Amin Abdou Seleem (2012). Effect of Caffeine on the developing chick embryos: Morphological and skeleton alterations. Egypt. J. Zool., 58:105-124.
29)	Laila H. Abdel-Rahman, Rafat M. El-Khatib, Lobna A.E. Nassr, Ahmed M. Abu-Dief, Fakhr El-Din Lashin (2013). Design, characterization, teratogenicity testing, antibacterial, antifungal and DNA interaction of few high spin Fe(II) Schiff base amino acid complexes. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 111: 266–276.
30)	Amin A. Seleem (2014). Effect of Streptozotocin- and Alloxan-Induced Hyperglycemia on the First Anagen Cycle in Skin of Mice, Mus musculus. IJAR, 2(5):1-15 .
31)	F.M. El-Hossary, A.M. AbdEl-Rahman, M. Raaf, A.A. Seleem, M. Abo El-Kassem (2014). Effect of RF plasma carbonitriding on the biocompatibility and mechanical properties of AISI 321 Austenitic stainless steel. Advances in Materials Physics and Chemistry, 4: 33-42
32)	Lashein, F.M. (2014); Effect of Lanthanum on Pro-Angiogenic Growth Factors in Chick Embryos Int. J. of Adv. Res. 2 (6): 395-406.
33)	Laila H. Abdel-Rahman, Rafat M. El-Khatib, Lobna A.E. Nassr, Ahmed M. Abu-Dief, Mohamed Ismael, Amin Abdou Seleem (2014). Metal based pharmacologically active agents: Synthesis, structural characterization, molecular modeling, CT-DNA binding studies and in vitro antimicrobial screening of iron (II) bromosalicylidene amino acid chelates. Spectro. Acta Mole. Biomole. Spectro., 117 (3): 366-378.
34)	Lashein, F.M. . (2014). TNFR2, TGF β 2 and HSP70 In Uranium Exposed Larvae Of Grass Carp, Ctenopharyngodon idella. Int. J. of Adv. Res.2(10): 674 – 661.
35)	Abu Amra, E.; Abd- El-Rehim, S.; Lashein, F. M. et al., (2015). Influence of Bradykinin Potentiating Factor on Protecting The Liver and Kidney Against the Toxicity of Indomethacin in Male Mice. J. International Academic Research for Multidisciplinary, 3(5): 328 – 342.
36)	Abu Amra, E.; Abd- El-Rehim, S.; Lashein, F. M. et al., (2015). The Protective Role of Bradykinin Potentiating Factor on Gastrointestinal Alteration Induced by Indomethacin in Experimental Animals. Int. J. of Adv. Res.3 (6): 311 -322.
37)	Abu-Amra, E.; Abd-EL-Rehim, S. A.; Lashein, F.M.; Seleem, A. A.; Shoaeb, H. S. I. (2015). Ameliorative Effect of Bradykinin Potentiating Factor on Haematological and Biochemical Changes Induced by Indomethacin in model ulcer animals. International Journal of Advanced Research. 3(6): 323-335.

Articles produced by Lab members

#	Title
38)	Abu-Amra, E.; Abd-EL-Rehim, S. A.; Lashein, F.M.; Seleem, A. A.; Shoaeb, H. S. I. (2015). Influence of Bradykinin Potentiating Factor on protecting the liver and kidney against the toxicity of Indomethacine in Male Mice. J. of Interna. Academic research Multiclip. 3(5) .
39)	Amin A. Seleem (2015). Expression of alpha-synuclein during eye development of mice (<i>Mus musculus</i>), chick (<i>Gallus gallus domesticus</i>) and fish (<i>Ctenopharyngo donidella</i>) in a comparison study. Tissue and Cell., 47: 359–365.
40)	F.M. El-Hossary, N.Z. Negma, A.M. Abd El-Rahman, M. Raaif, A.A. Seleem, A.A. Abd El-Moula (2015). Tribo-mechanical and electrochemical properties of plasma nitriding titanium. Surface & Coatings Technol., 276: 658–667.
41)	Laila H. Abdel Rahman, Ahmed M. Abu-Dief, Nahla Ali Hashem and Amin Abdou Seleem (2015). Recent Advances in Synthesis, Characterization and Biological Activity of Nano Sized Schiff Base Amino Acid M(II) Complexes. Int. J. Nano. Chem. 1, No. 2, 79-95.
42)	Laila H. Abdel Rahman, Ahmed M. Abu-Dief, Samar Kamel Hamdan, Amin Abdou seleem (2015). Nano structure Iron (II) and Copper (II) Sciff base Complexes of a NNO-Tridentate Ligand as new Antibiotic Agents: Spectral, Thermal Behaviors and DNA binding Ability. Int. J. Nano. Chem. 1, No, 2, 65-77.
43)	Lashein, F.M. . (2015). Restriction Of TGF β 2 in Developing Organs in Embryos of Mice Under Maternal Exposure of Retinoic Acid. Int. J. Pure and Appl. Zool., 3 (4): 302 – 311.
44)	MF El-Sayed, SK Abdel-Ghafar, MA Adly, AA Salim, WM Abdel-Samei (2015). The ameliorative effects of DMSA and some vitamins against toxicity induced by lead in the testes of albino rats. II. The Journal of Basic & Applied Zoology 71, 60-65.
45)	Mohamed F. El-Sayed, Sary Kh. Abdel-Ghafar Mohamed A. Adly, Amin Abdo Salim, Walaa M. Abdel-Samei (2015). The ameliorative effects of DMSA and some vitamins against toxicity induced by lead in the testes of albino rats., J. of Basic &Applied Zool., (71), 60-65.
46)	Omya A. Abd Allaha, Ahmed M. El-Saghiera, Asmaa M. Kadrya, Amin A. Seleem (2015). Synthesis and Evaluation of Some Novel Curcumin Derivatives as Anti-inflammatory Agents. Int. J. Pharm. Sci. Rev. Res., 32(1): 87-92.
47)	A Awaad, AA Seleem (2016). Histochemical changes in neonatal liver caused by vaginal instillation of magnetic nanoparticles in pregnant mice. Biotechnic & Histochemistry, 91(1): 91(1):48-62.
48)	AA Seleem, FEDM Lashein (2016). Effect of verapamil on some of the pro-and apoptotic factors during prenatal retinal differentiation of mice, <i>Mus musculus</i> .The Journal of Basic & Applied Zoology 75, 28-35.
49)	AA Seleem. (2016). The protective effect of bee venom against verapamil embryotoxicity during prenatal liver and kidney development of mice <i>Mus musculus</i> .The Journal of Basic & Applied Zoology 75, 13-27.
50)	AS Ibraheem, AA Seleem, MF El-Sayed, BH Hamad (2016) .Single or combined cadmium and aluminum intoxication of mice liver and kidney with possible effect of zinc .The Journal of Basic & Applied Zoology 77, 91-101.

Articles produced by Lab members

#	Title
51)	BW Magdy, FE Mohamed, AS Amin, SS Rana (2016). Ameliorative effect of antioxidants (vitamins C and E) against abamectin toxicity in liver, kidney and testis of male albino rats .The Journal of Basic & Applied Zoology 77, 69-82
52)	Lashein, F. M. Amin, A. Seleem and Abeer A. Ahmed (2016). EFFECT OF MATERNAL CAFFEINE AND RETINOIC ACID INTAKE ON LIVER DURING PRE- AND POSTNATAL DEVELOPMENT OF MICE, MUS MUSCULUS . Int. J.Pure and Appl. Zool., 4 (2): 189 – 202.
53)	Lashein, F. M. Amin, A. Seleem and Abeer A. Ahmed. (2016). Effect of caffeine and retinoic acid on skeleton of mice embryos. The J. of Basic and Appl. Zool., 75: 36 – 45.
54)	AA Seleem, ARS Sultan, A Said, MM Shahat, MA Moustafa (2018). Localization of connective tissue growth factor (CTGF) and transforming growth factor beta-2 (TGF-β2) during eye development of four species of birds .Journal of Histotechnol., 41 (3), 111-125. https://doi.org/10.1080/01478885.2018.1475861
55)	AA Seleem, BHM Hussein (2018).Synthesis and effect of a new Terbium gibberellic complex onthe histopathological alteration induced by Gibberellic acid on liver and kidney of mice Mus musculus Chemical biology & drug design 92 (1), 1288-1300. https://doi.org/10.1111/cbdd.13191
56)	Amin A. Seleem and Fakhr El-Din M. Lashein (2018). Expression of alpha-synuclein during eye development of Bufo arabicus. CURRENT SCIENCE, 115 (7): 1305 – 1311.
57)	El-Sabry Abu Amra, Fakhr El-Din M Lashein*, Amin A Seleem and Amira H Badr (2018). Counter effect of bee venom and its extracted bradykinin-potentiating factor on acrylamide and chips administration induced complications in the liver and kidney of male mice. The Journal of Basic and Applied Zoology 79(1),1-15
58)	FEDM Lashein, ESA Amra, A. A Seleem, AH Badr (2018). Ameliorative effect of bee venom and its extracted bradykinin-potentiating factor on neurological alteration induced by acrylamide and chips administration . The Journal of Basic and Applied Zoology 79 (1),1-13.
59)	Mohamed F.El-Sayed, Sarry Kh. Abdel-Kgaffar, Amin A. Seleem, Ramy A. Mohamed (2018). Ameliorative Roles of Vitamins C, E and DMSA on Hepatic Renal Functions in Male Albino Rats. J. Pharm. Appl. Chem., 4, No. 1, 23-32.
60)	Seleem A. A. (2019). Teratogenicity and neurotoxicity effects induced by methomyl insecticide on the developmental stages of Bufo arabicus .Neurotoxicology and teratology 72, 1-9
61)	Seleem, A. A. (2019). Induction of hyperpigmentation and heat shock protein 70 response to the toxicity of methomyl insecticide during the organ development of the Arabian toad, Bufo arabicus (Heyden, 1827). Journal of histotechnology, 42(3), 104-115.
62)	Amra, E. S. A., Fakhr El Din, M. L., Seleem, A. A., & Saleh, M. M. (2020). The protective role of olive oil against gibberellic acid-induced embryotoxicity at prenatal stages of mice. The Journal of Basic and Applied Zoology, 81(1), 1-13.

Articles produced by Lab members

#	Title
63)	El-Shershaby, A. E. F. M., Lashein, F. E. D. M., Seleem, A. A., & Ahmed, A. A. (2020). Toxicological potential of penconazole on early embryogenesis of white mice <i>Mus musculus</i> in either pre-or post-implantation exposure. <i>Environmental Science and Pollution Research</i> , 97(9), 9943-9956.
64)	El-Shershaby, A. E. F. M., Lashein, F. E. D. M., Seleem, A. A., & Ahmed, A. A. (2020). Developmental neurotoxicity after penconazole exposure at embryo pre-and post-implantation in mice. <i>Journal of Histotechnology</i> , 43(3), 135-146.
65)	El-Shershaby, A. M.; Lashein, F. M.; Seleem, A. A. and Ahmed, A. A. (2020). Developmental Neurotoxicity after Penconazole Exposure at Pre- and Post-implantation in mice. <i>The Journal of Histotechnology</i> . 1-12. DOI: 10.1080/01478885.2020.1747214.
66)	El-Shershaby, A. M.; Lashein, F. M.; Seleem, A. A. and Ahmed, A. A. (2020). Toxicological potential of penconazole on early embryogenesis of white mice <i>Mus musculus</i> in either pre- or post-implantation exposure. <i>Environmental Science and Pollution Research</i> . 27:9943-9956. DOI: 10.1007/s11356-020-07637-3. I F: 2.914.
67)	Seleem, A. A. (2020). Immunohistochemical localization of alpha-synuclein in the retina of some nocturnal and diurnal animals. <i>Biotechnic & Histochemistry</i> , 95(5), 360-372.

Lab instruments

#	Device	quantity	Quality			
			Good	Poor	Need maintenance	malfunction
1	Rotary Microtome	1	✓			
2	Microwave	1	✓			
3	Incubator	1	✓			
4	Hot air Oven	1	✓			
5	Hot plate	1		✓		
7	Axiocam light microscope	1	✓			
8	Axiocam fluroscence microscope	1	✓			
8	Light microscope	2	✓			
	Dissecting microscope	1	✓			

Instruments Description	
Device image	Description /use
	This microtome can cut Paraffin Blocks into very thin sections.
	This kind of microscope with a camera can used in a variety of scientific fields for many different purposes as: - View different types of cells, tissues and analyzing them. - Study chemical composition in normal and abnormal tissues. - Provided with a camera for tissues photographing.
	This kind of microscopes with or without a camera can used in a variety of scientific fields for many different purposes as: - View different types of cells, tissues and analyzing them. - Study chemical composition in normal and abnormal tissues.

Instruments Description	
Device image	Device image
	Used for retrieval enzymes in immunostaining sections.
	Incubators use in lab are: - Provide an optimal condition of temperature, humidity, and other - Used to increase the growth rate of organisms. - Provide a controlled condition for tissue slides storage before they can be stained.
	- 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.

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Instruments Description	
Device image	Device image
	This kind of microscope with a camera can be used in a variety of scientific fields for many different purposes as: • investigate different types of cells, tissues stained with fluorescent dyes and analyzing them. • Study chemical composition in normal and abnormal tissues. • Provided with a camera for tissues photographing.
	Hot plate is a device used for: • Controlling the heating directly or to create a heat bath. • To heat samples before chemical analysis. • With magnetic stirrers, used for mixing different chemicals at certain temperatures before their applying in different staining analyses.
	Dissecting or stereo microscope is used • to view three-dimensional objects and larger specimens. • to study the surfaces of specimens and their surfaces. • to carry out close work such as dissection.

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.		✓	