

Research Lab Sheet

Lab Name	Genetics , molecular biology& immunology
Academic Year	2021 - 2022

Basic Information	
Department	Zoology
Location	Bulding 3
Total area (m ²)	20 m ²
Head of the Lab	Prof. Dr. Tito Habib
Establishment date	2000

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

Staff members					
#	Name	Scientific degree	e-mail	Specializations	C.V (Link of homepage)
1	Tito Habib	Prof.	titohabib99@science.sohag.edu titohabib99@yahoo.com	Genetics	
2	Ahmed Ali Dongol	Prof.	ahmed_ali@science.sohag.edu.eg	molecular biology	
3	Mohamed Omar	Ass. Prof.	altonsy_m_o@science.sohag.edu.eg	molecular biology	
4	Ahmed Selmy Ibrahim	Lecturer	asibraheem@yahoo.com	Immunology	
5	Gamal Eldeen Saad	Lecturer	gamal_amin@science.sohag.edu.eg	molecular biology	
6	Salah Abed El Moneam	Lecturer	aboghanem2002@science.sohag.edu.eg	molecular biology	

M. Sc. Theses

#	Title	Approval date
1	Tito N. Habib: Ecological and Cytochemical studies on one of the Egyptian polyplacophorans in the Red Sea.	1992
2	Al-Hussein A. Ali: Study of Genomic Instability in Squamous Cell Carcinoma of The Upper Aerodigestive Tract by Random Amplified Polymorphic DNA.	2001
3	Gamal El-Din S. Amin: Biological Studies on <i>Dosinia radiata</i> (Mollusca: Bivalvia) lives in the Egyptian water.	1993
4	Mohammed O. Ahmed: The effect of Progesterone hormone on the broiler chicken.	2004
5	Yasmin R. Bakir: Cytogenetic Assessment of Malignancy and Antitumor Effects in Domestic Rabbit (<i>Oryctolagus cuniculus</i>).	2016
6	Gehad S. Hammady: Augmentation of the differentiation response to antitumor effects of colon cancer in domestic Rabbit (<i>Oryctolagus cuniculus</i>).	2016
7	Hagar M. Hemdan: A study of the effects of zinc oxide nanoparticles on the kidney of adult male rabbits (histological, histochemical and genotoxicity).	2018

Ph.D. Theses

#	Title	Approval date
1	Tito N. Habib: The Use of Genetic Biomarkers for The Environmental Risk Assessment induce by Pollution.	1999
2	Badawy S. Badawy: The Use of DNA-markers for the early Detection of Squamous Cell Carcinoma in Patients with Head and Neck Cancer.	2004
3	Abdullah Radwan: The role of corticotropin-releasing hormone and interferon-gamma in rheumatoid arthritis.	2005
4	Gamal El-Din S. Amin: Study of Molecular and Immunohistochemical Characteristics induced by Scorpion venom in Rabbit (<i>Oryctolagus cuniculus</i>).	2015
5	Nadia M. Mahrous: The Effect of Scorpion venom (<i>Leiurus quinquestriatus</i>) on the prostate cancer induced in Rabbits.	2019

No.	Articles produced by Lab members
1	T.N. Habib, El-Sawi N.M., Mohamed Z.M. (2002): The Antitumor Effects of the Egyptian Nigella sativa L. Oil induced by Microcystine-LR in Male Mice. <i>J. Union Arab Biol. Cairo Vol. 17(A): Zoology</i> , 451-556.
2	T.N. Habib, A.A. Hussein, F.E.D.M. Lashein (2002): Involvement of random amplified polymorphic DNA (RAPDS) genotypes in susceptibility of grass carp, ctenopharyngodon idella to aflatoxin B1. <i>J. Egypt. Ger. Soc. Zool.</i> , 39 (C), 533-548.
3	T.N. Habib, A.A. Hussein (2004): The role of BRCA1 gene mutations in patients with breast cancer. <i>J. Egypt. Ger. Soc. Zool.</i> , 43 (C), 59-76.
4	A.A. Hussein, T.N. Habib (2004): The detection of genomic instability by random amplified polymorphic DNAs (RAPDs) in patients with laryngeal and pharyngeal squamous cell carcinoma <i>J. Egypt. Ger. Soc. Zool.</i> , 43 (C), 197-208.
5	Ramadan H. Sayed, Tito N. Habib (2004): The role of genetic instability in tumor differentiation in patients with laryngeal and pharyngeal squamous cell carcinoma , <i>South Valley Univ. Med. J.</i> , 8(2): 237-246.
6	El-Nadi N.A., Sharaf Z.A., Habib, T.N. (2004): Pediculus humanus capitis as a Potential Transmitter for Hepatitis C Virus. <i>South Valley Univ. Med. J.</i> , 8(2) 335-342.
7	El-Sawi N. M., Habib, T.N. (2004): The Genetic Susceptibility of Male Mice exposed to Verrucar J Toxin. <i>J. Egypt. Ger. Soc. Zool.</i> , 45C: 307-326.
8	Khedre A.M., Habib, T.N. (2005): The Inheritance Patterns and Occurrence of Spontaneous Mutations in the Eye Colour of Chrysomya albiceps (Wiedemann) (Diptera: Calliphoridae). <i>Egypt. J. Zool.</i> , 45. 225-243.
9	T.N. Habib, Salama M.S. (2006): Role of Loss of Heterozygosity and Microsatellites' Instability in Susceptibility and Severity of Rheumatoid Arthritis. <i>J. Union Arab Biol. Cairo</i> , 26 (A):15-25.
10	Abou-Elhamd, K. E. A., & Habib, T. N. (2007). The flow cytometric analysis of premalignant and malignant lesions in head and neck squamous cell carcinoma. <i>Oral oncology</i> , 43(4), 366-372.
11	Abou-Elhamd, K.A., Habib, T.N. (2008): Response to the comments by Gandolfo et al. on 'The flow cytometric analysis of premalignant and malignant lesions in head and neck squamous cell carcinoma published on oral oncology. <i>Oral Oncology</i> , 44(1), pp. 102.
12	Abou-Elhamd, K. E. A., Habib, T. N., Moussa, A. E., & Badawy, B. S. (2008). The role of genetic susceptibility in head and neck squamous cell carcinoma. <i>Europ. Arch. oto-rhino-lary.</i> , 265(2), 217-222.
13	Abou-Elhamd, K. E. A., & Habib, T. N. (2008). The role of chromosomal aberrations in premalignant and malignant lesions in head and neck squamous cell carcinoma. <i>Europ. Arch. oto-rhino-lary.</i> , 265(2), 203-207.
14	Badawy, B. S., Ahmad, M. A. K., Sayed, R. H., & Habib, T. N. (2010). Role of microsatellites instability in carcinogenesis of postcricoid carcinoma on top of plummer-vinson syndrome. <i>Ind. J. Otolary. Head & Neck Surg.</i> , 62(4), 417-420.
15	Altonsy, M.O., Habib, T.N., Andrews, S.C. (2012): Diallyl disulfide-induced apoptosis in a breast-cancer cell line (MCF-7) may be caused by inhibition of histone deacetylation. <i>Nutrition and Cancer</i> , 64(8), pp. 1251-1260.
16	Almsatar, T.M., T.N. Habib, El-Sayed, M.F. (2014): Ecological significance indicators for estimation of DNA quantity and purity by the use of RAPD technique for Sardina aurita fish at Libyan coastal areas. <i>Inter. J. Develop. Sustain.</i> , 3 (6): 1317-1325.
17	T.Y.S. Kapiel, S.A. Rahoud, A.A. Algarni, T.N. Habib, A. Mergai, L.N. Ahmed (2015): Evaluation of Genetic Polymorphisms in CD36 Gene and Other Co-factors in Al-Baha Population with Myocardial Infarction Disease. <i>Merit Res. J. Microbiol. Biol. Sci.</i> , 3(2): 20-27.

18	Altonsy, M.O., T.N. Habib, Hassanain E.A., Mokhtar, G.S. (2015): Diallyl Disulfide Protects against Colon Cancer in vitro, of HT-29 Cells and in Male Rabbits of Colon Cancer Model: An Analysis of Genetic and Epigenetic Variations. <i>Molecular Biology</i> , 4(3): 1-7.
19	T.N. Habib, M.O. Altonsy, S.A. Abd El-Raheem, Y.R. Bakeer (2016): Diallyl disulfide protects against rectal cancer in vivo model of male rabbits: II-Analysis of histological and cytogenetic variations. <i>Journal of Cancer Research and Experimental Oncology</i> , 8 (1), 1-14.
20	R. Newton, S.V. Shah, M. O. Altonsy, A. N Gerber (2017): Glucocorticoid and Cytokine Crosstalk: Feedback, Feedforward and Co-regulatory Interactions Determine Repression or Resistance. <i>Journal of Biological Chemistry</i> 292(17): jbcR117.777318.
21	Chris R., M O. Altonsy, M. Mostafa, R. Newton (2018): Long-Acting β2-Adrenoceptor Agonists Enhance Glucocorticoid Receptor (GR)-Mediated Transcription by Gene-Specific Mechanisms Rather Than Generic Effects via GR. <i>Molecular Pharmacology</i> 94(3):mol 118.112755.
22	T. N. Habib, H. O. Abdel-Aziz, E. Ragab (2018): Zinc oxide nanoparticales induced histological, histochemical and genotoxicity effects in kidney of adult male rabbits. <i>J. Ecosys. Ecograph.</i> , (8) DOI: 10.4172/2157-7625-C2-036.
23	Nadia S Mahrous, Hemely A Hassan, Fayza M Ali, T.N. Habib (2018): Antitumor effect of scorpion venom peptides in vivo of male rabbit and in vitro of DU145 cells of prostate cancer model. <i>J Ecosys. Ecograph.</i> , (8) DOI: 10.4172/2157-7625-C2-036.
24	T.N. Habib, H.A. Hassan, F.M. Ali, N. Mahrous (2019): Evaluation of <i>Leiurus quinquestriatus</i> scorpion venom anticancer potential against Prostate Cancer Cell Lines (PC3). <i>J. Env. Studies</i> 19 (1), 7-13.
25	T.N. Habib, M.F. El-Sayed, F.M. Ali, T.M. Almsatar (2019): Marine Pollution of Chemicals Detergents Contamination Induced Apoptosis and Necrosis in Fish Liver (Sardine aurita) by Flow Cytometry DNA Measurements. <i>Journal of Biotechnology Research</i> 5 (11), 113-122.
26	T.N. Habib, M.F. El-Sayed, F.M. Ali, T.M. Almsatar (2019): RAPD-Contaminant Indicative Bands Induced by Sodium Lauryl Sulfate of Economic Fish (Sardine Aurita) from Libyan Coasts. <i>Journal of Biotechnology Research</i> 5 (8), 69-76.
27	Habib, T.N. (2020): Extended Abstract. Proteomics Congress 2018: Genes and the Environment: The Science of Epigenetics. <i>J. Clinical Epigenetics</i> . 6(2). https://clinical-epigenetics.imedpub.com/proteomics-congress-2018-genes-and-the-environment-the-science-of-epigenetics-tito-n-habib-sohag-university-egypt.pdf .
28	M.O. Altonsy, Anutosh G., Matthias A., P. R. Mydlarski (2020): Beta3-Tubulin Is Critical for Microtubule Dynamics, Cell Cycle Regulation, and Spontaneous Release of Microvesicles in Human Malignant Melanoma Cells (A375). <i>International Journal of Molecular Sciences</i> 21(5):1656.
29	M.O. Altonsy, Habib A. K., Gilles J. L., P. R. Mydlarski (2020): <i>Corynebacterium tuberculostearicum</i>, a human skin colonizer, induces the canonical nuclear factor-κB inflammatory signaling pathway in human skin cells. <i>Immunity, Inflammation and Disease</i> 8(2) 62-79.
30	Habib, T. N., Amin, G. E. D. S., Hussien, A. A., Salama, M., Ahmed, M. O., & Mahmoud, M. E. (2021). Changes in RAPD-DNA Markers and Plasma Protein Profile in Progesterone-Treated Chicken. <i>Journal of Food and Nutrition Research</i> , 9(9), 477-483.

Instruments Description		
Device name	Device name	Device name
ميكروسكوب مقلوب Inverted Microscope XDS-3		Cell culture assay
جهاز تسخين بمقلب مغناطيسي (Hot plate & magnetic stirrer) MS-300HS		Heating and stirring samples
حمام مائي (water bath) XMTD-308 T		Heating samples
جهاز قياس الأس الهيدروجيني pH meter (pH 211)		To measure pH
جهاز تقطير زجاجي (Distillator)		to produce distilled water
ساعة إيقاف (Dual alarm) PHILIPS		to measure time
مضخة هواء ماركة رينا Vacuum Pump C-022546		مضخة هواء
Quantitative PCR MyGenie 96 Thermal block		Amplification of DNA and rtRNA fragments and genetic markers
Micropipette 200:1000ul Micropipette 20:200ul Micropipette 2:20 ul		fluid withdrawal

Digital Balance TE124S		Samples weight
ELIZA reader and shaker incubator Stat fax2200		Antibody and hormone analysis
ELIZA reader Stat fax2100		Antibody analysis
Gel documentation system جهاز توثيق نتائج البروتينات والأحماض الأمينية		Documentation and imaging of the results of protein DNA separation
UV trans illuminator جهاز تصوير بالأشعة فوق البنفسجية		DNA& RNA فصل
جهاز الطرد المركزي Cooled Micro high speed centrifuge (up to 20.000 rpm) Micro17TR		Separation of samples and hormones under low temperatures
جهاز الطرد المركزي Centrifuge Pico™ 21		DNA & RNA separation products
جهاز الطرد المركزي Micro centrifuge MIKRO 120		sampls separation
Sample shaker 1 VRN-200		samples stirring
Sample shaker 2 VX4-S17		samples stirring
Vortex mixer 1 VM-300		samples stirring

Vortex mixer 2 MIX20		samples stirring
Carbon Dioxide Incubator MITRE 4000		Preparation of cell cultures and chromosomal divisions MTT Assay
Incubator T-5042		Provide an optimal condition of temperature, humidity, and other
Microbiological safety cabinets TopSafe TM Class II Model 1.2		Sample preparation and tissue culture under aseptic conditions
Autoclave SA26-MA		sterilization solutions
Sample refrigerator (-40 °C) Angelantoni Scientifica		Sample preservation
Light Microscope Zeiss German Zeiss		Examination of tissue and cell samples
Gel Electrophoresis Bio-Rad		Separation of protein molecules and disease markers
Refrigerator (-20 °C)		Sample preservation
Liquid Nitrogen Container		Keep samples at -180 °C

Lab instruments						
#	Device	quantity	Quality			
			Good	Poor	Need maintenance	malfunction
1)	Inverted Microscope (XDS-3)	1	✓			
2)	(Hot plate & magnetic stirrer)	1	✓			
3)	water bath (XMTD-308 T)	1			✓	
4)	pHmeter (pH 211)	1			✓	
5)	Distillator	1			✓	
6)	(Dau al alarm)	1	✓			
7)	Vacuum Pump2546 C-02)	1	✓			
8)	Quantitative PCR MyGenie 96 Thermal block	1	✓			
9)	Micropipette 200:1000ul , 20:200ul & 2:20 ul	3	✓			
10)	Digital Balance (TE124S)	1	✓			
11)	ELIZA reader and shaker incubator(Stat fax2200)	1			✓	
12)	ELIZA reader(Stat fax2100)	1			✓	
13)	Gel documentation system	1	✓			
14)	UV trans illuminator	1	✓			
15)	Cooled Micro high speed centrifuge (Micro17TR)	1	✓			
16)	Centrifuge(Pico™ 21)	1	✓			
17)	Micro centrifuge(MIKRO 120)	1	✓			
18)	Sample shaker 1 (VRN-200)	1	✓			
19)	Sample shaker 2 (VX4-S17)	1	✓			
20)	Vortex mixer 1(VM-300)	1	✓			
21)	Vortex mixer 2 (MIX20)	1	✓			
22)	Carbon Dioxide Incubator	1	✓			
23)	Incubator (T-5042)	1	✓			
24)	Microbiological safety cabinets	1	✓			
25)	Autoclave (SA26-M)	1	✓			
26)	Sample refrigerator (-40 °C)	1	✓			
27)	Light Microscope Zeiss	1	✓			
28)	Gel Electrophoresis	1	✓			
29)	Refrigerator (-20 °C)	1	✓			
30)	Liquid Nitrogen Container	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 f