

Research Lab Sheet

Lab Name	Central Lab of Genetic Engineering
Academic Year	2021 / 2022

Basic Information	
Department	Botany and Microbiology Department
Location	Faculty of Science, Sohag University
Total area (m²)	50 m²

Lab Members				
No. of Prof.	No. of Ass. Prof.	No. of Lect.	No. of Ass. Lect. & Demonstr.	No. of lab specialist
2	-	-	2	1

Staff members					
	Name	Scientific degree	e-mail	Specializations	C.V
1	Prof. Bahig El-Deeb	Professor	bahig1978@gmail.com	Molecular biology and nanobiotechnology	https://scholar.google.com/citations?user=wowtKgQAAAJ&hl=en
2	Prof. Khalid Abdalla Ali AbdelRahim	Professor	khalidfp7@gmail.com	Molecular microbiology	http://staffsites.sohag-univ.edu.eg/khaled.abdelreham1
Ass. Lecturers & Demonstrators					
	Name	Scientific degree	e-mail	Specializations	
1	Ebtisam Asem Mohamed Abd El-Rhman	Demonstrator	ebtisamasem@gmail.com	Bacteriology	
2	Amira Atef Rashad Ahmed	Demonstrator	amira.aatef26@gmail.com	Bacteriology	

Theses produced by the Lab

M Sc Thesis

	Degree	Title	Approval date
1	M.Sc.	Study on some human pathogenic bacteria from urine and wounds of diabetic and no-diabetic persons.	2015
2	M.Sc.	Bacteriological Assessment of Different Water Resources in Sohag governorate	2013
3	M.Sc.	Genetics and biochemical Studies on Mycobacterium tuberculosis strains isolated from patients belong to different regions in Egypt	2012
4	M.Sc.	Some Ecological and Physiological Studies on halophilic Bacteria Isolated from the Red Sea	2012
5	M.Sc.	Plasmid incidence in bacteria isolated from agricultural soil and its role in bioremediation.	2007
Ph.D. Thesis			
1	Ph.D.	Genetic multiplicity of alpha-tumor necrosis factor in patients who suffer from nose adenoids manifold accompaniment to the sensitivity of the chest	2014

Articles produced by the Lab		
	Title	Journal information
1	Biosynthesis of cadmium selenide quantum dots by <i>Providencia vermicola</i>	RS Abou-Assy, BA El-Deeb , AD Al-Talhi, NY Mostafa African Journal of Microbiology Research 13 (6), 106-121, 2019
2	Biosynthesis, Characterization, Optimization of Silver Nanoparticles from Marine <i>S. griseoflavus</i> and Their Role in Improving Antibiotic Susceptibility of Multidrug Resistance Pathogenic Fungi	M Al-Otaibi, B El-Deeb , N Mostafa American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS), 2018
3	Antibiofilm potential of biogenic silver nanoparticles against <i>Kocuria rosea</i> and <i>Kocuria rhizophila</i> .	H Elhariry, E Gado, B El-Deeb , A Altalhi Microbiology (00262617), 2018
4	Effectiveness of silver nanoparticles against root-knot nematode, <i>Meloidogyne incognita</i> infecting tomato under greenhouse conditions	AHN El-Deen, BA El-Deeb Journal of Agricultural Science 10 (2), 2018
5	Biological Synthesis and Structural Characterization of Selenium Nanoparticles and Assessment of Their Antimicrobial Properties	B El-Deeb , A Al-Talhi, N Mostafa, R Abou-assy American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS), 2018
6	SeNPs/PLGA Inhibits Biofilm Formation by Cultivable Oral Bacteria Isolated from Caries-Active Children	A El-Tarras, Y Al Thomali, B El-Deeb , H El-hariry Int. J. Curr. Microbiol. App. Sci 6 (5), 1-15,

		2017
7	Toxicity of biosynthetic silver nanoparticles on the growth, cell ultrastructure and physiological activities of barley plant	KA Fayez, BA El-Deeb , NY Mostafa Acta Physiologiae Plantarum 39 (7), 1-13, 2017
8	Mycobiota of oil-contaminated soil samples and their abilities for dibenzothiophene desulfurization	Y Gherbawy, B El-Deeb , AA Hazzani, A Maher, A Shehata Geomicrobiology Journal 33 (7), 618-624, 2016
9	Antimicrobial Activity of Silver and Gold Nanoparticles Biosynthesized Using Ginger Extract.	B El-Deeb , H Elhariry, NY Mostafa Research Journal of Pharmaceutical Biological and Chemical Sciences, 2016
10	Diagnosis of Pulmonary Tuberculosis and Detection of Resistance to ifampin and Isoniazid through Direct Molecular Methods in Stool Samples	Sulaiman Ali Al Yousef, Khalid Abdullah Ali AbdelRahim, Asmaa O. Ahmed, Khalid Salmeen Almaary and Ahmed Mohamed Ali Mohamed Annals of Clinical & Laboratory Science, vol. 46, no. 6, 2016
11	Extracellular biosynthesis of silver nanoparticles using Rhizopus stolonifer.	Khalid AbdelRahim , Sabry Younis Mahmoud, Ahmed Mohamed Ali, Khalid Salmeen Almaary, Abd El-Zaher M.A. Mustafa, Sherif Moussa Hussein Saudi Journal of Biological Sciences, 2016
12	Evaluation of Silver Nanoparticles for the Control of Phragmidium Species in Vitro and Taif'rose Rust Disease in Field.	EAM Gado, B El-Deeb , EF Ali, NY Mostafa, SA Bazaid Research Journal of Pharmaceutical Biological and Chemical Sciences, 2016
13	Antimicrobial and antibiofilm effects of selenium nanoparticles on some foodborne	GM Khiralla, BA El-Deeb LWT-Food Science and Technology 63 (2),

	pathogens	1001-1007, 2015
14	Molecular Characterization of Black <i>Aspergillus</i> Species from Onion and Their Potential for Ochratoxin A and Fumonisin B2 Production	GM Khiralla, BA El-Deeb Foodborne pathogens and disease 12 (5), 414-423, 2015
15	Molecular Characterization of Black <i>Aspergillus</i> Species from Onion and Their Potential for Ochratoxin A and Fumonisin B2 Production	Youssuf Gherbawy, Hesham Elhariry, Sándor Kocsubé, Abdulaziz Bahobial, Bahig El Deeb , Abdulla Altalhi, János Varga, Csaba Vágvolgyi Foodborne pathogens and disease 12 (5), 414-423, 2015
16	Bactericidal and Antibiotics synergistic effect of Nanosilver against Methicillin-Resistant staphylococcus aureus.	Khalid AbdelRahim and Ahmed Mohamed Ali Jundishapur Journal of Microbiology 8(11), 2015
17	Bacterial Prevalence in Urine, Burns and Wounds in Diabetes and non-Diabetes.	Magdy A. Abu-Gharbia, Khalid A. Ali , Mohamed M. Abd El-Fatah Egyptian Journal of botany and Microbiology, 2015
18	Prevalence, plasmids and antibiotic resistance correlation of enteric bacteria in different drinking water resources in Sohag, Egypt	Khalid A. A. AbdelRahim , Ahmed M. Hassanein, Heikal A. Abd El- Azeiz Jundishapur Journal of Microbiology 8(1), 2015
19	Prevalence of Extended Spectrum β -lactamase-Producing <i>Klebsiella pneumoniae</i> in Clinical Isolates.	Khalid A. Ali AbdelRahim and Ahmed Mohamed Ali Mohamed Jundishapur J Microbiol.; 7(11), 2014
20	Improvement of postharvest quality of cut rose cv. 'First Red' bybiologically	B El-Deeb , FAS Hassan, EF Ali Scientia Horticulturae 179, 340-348, 2014

	synthesized silver nanoparticles	
21	Extracellular Biosynthesis of AgNPs by the Bacterium <i>Proteus mirabilis</i> and Its Toxic Effect on Some Aspects of Animal Physiology	MS Al-Harbi, BA El-Deeb , N Mostafa, SAM Ame Advances in Nanoparticles 2014
22	Optimization of green synthesis of gold nanoparticles using bacterial strain <i>Alcaligenes faecalis</i>	B El-Deeb , NY Mostafa, S Tork, N El-Memoni Nanoscience and Nanotechnology Letters 6 (5), 372-384, 2014
23	Heavy Metals and Antibiotics Resistance of 8 Halophilic Bacteria Isolated from Different Areas in Red Sea, Egypt. Egypt. Acad.	Khalid A. Ali AbdelRahim , El-Sayed Mohamed Soltan, Magdy A. AbuGarbia, and Fathia El-Zien J. Biolog. Sci., 6(1): 77 – 89, 2014
24	Isolation and characterization of endophytic bacteria from <i>Plectranthus tenuiflorus</i> medicinal plant in Saudi Arabia desert and their antimicrobial activities	B El-Deeb , K Fayez, Y Gherbawy Journal of plant interactions 8 (1), 56-64, 2013
25	Prevalence and Antibiotic Resistance Profile of Intestinal Bacteria Isolated from Captive Adult Houbara Bustards () Exposed to Natural Weather Conditions in Saudi Arabia	MY Shobrak, SA Hassan, C Stiévenart, BA El-Deeb , YA Gherbawy Glob. Vet 10, 276-284, 2013
26	Plasmid-mediated Molluscicide Bayluscide Degradation by Bacterial Strain Isolated from Schistosoma Vector Snail <i>Bulinus truncatus</i>	B El-Deeb , Y Gherbawy Geomicrobiology Journal 30 (5), 391-398, 2013
27	Isolation and Characterization of	B El-Deeb , A Altalhi, G Khiralla, S Hassan, Y

	Endophytic Bacilli Bacterium from Maize Grains Able to Detoxify Aflatoxin B1	Gherbawy Food biotechnology 27 (3), 199-212, 2013
28	Extracellular Biosynthesis of Silver Nanoparticles by Bacteria <i>Alcaligenes Faecalis</i> with Highly Efficient Anti-Microbial Property	YGY El-Deeb B, Mostafa NY, Altalhi A International Journal of Chemical Engineering 30 (2), 1137-1144, 2013
29	Correlation Between Physicochemical and Microbiological Characteristics of River Nile Water in Sohag Governorate	Khalid A.A. AbdelRahim , A.M. Hassanein, M. Sabry Younis and A. Abd ElAzeiz Heikal Egypt. J. Pure and Applied microbiology. Vol. 7(Spl. Edn., p. 63-77. 9,2013.
30	Resistance and Genetic Discrimination of <i>Shigella flexneri</i> Strains, using ERIC and ITS PCR.	Khalid A. Ali AbdelRahim J. Pure and Applied microbiology. December, Vol. 7(4), p. 2947-2955. 10, 2013.
31	Plasmids in races of <i>Xanthomonas axonopodis</i> pv. <i>malvacearum</i> (Xam), the causal agent of bacterial blight of cotton.	Khalid A. Ali AbdelRahim, Abdullah A. Al-Arfaj, Ashraf M. A. Mashaly and Klaus Rudolph African Journal of Microbiology Research Vol. 7(9), pp. 807-813, 2013.
32	Rapid mini-prep isolation of high quality small and large plasmids from phytopathogenic Gram negative bacteria.	Abdullah A. Al-Arfaj, Khalid A. A. Abdelrahim , Sobhy M Yakout ³ and Sherif, H. Abd- Alrahman African Journal of Microbiology Research Vol. 7(15), pp. 1415-1420, 2013.
33	Evaluation of Nitrate Reduction Assay as a Simple Procedure for Drug Susceptibility Testing of <i>Mycobacterium tuberculosis</i> .	Khalid A. Ali AbdelRahim J. Pure and Applied microbiology. Vol. 7(3) p-2179-2182, 2013.
34	Characterization of endophytic bacteria associated with rose plant (<i>Rosa damascena</i>)	B El-Deeb , S Bazaid, Y Gherbawy, H Elhariry Journal of plant interactions 7 (3), 248-253,

	trigintipeta) during flowering stage and their plant growth promoting traits	2012
35	Molecular screening of Streptomyces isolates for antifungal activity and family 19 chitinase enzymes	Y Gherbawy, H Elhariry, A Altalhi, B El-Deeb , G Khiralla Journal of Microbiology 50 (3), 459-468, 2012
36	Molecular identification and biofilm-forming ability of culturable aquatic bacteria in microbial biofilms formed in drinking water distribution networks	H Elhariry, Y Gherbawy, B El-Deeb , A Altalhi Geomicrobiology Journal 29 (6), 561-569, 2012
37	Molecular Characterization and Biofilm Formation Ability of Aquatic Bacteria Isolated from Drinking Water Distribution...	Hesham Elhariry, Youssuf Gherbawy, Bahig El-deeb Geomicrobiology Journal, 2012
38	Genetic and Biochemical studies on Mycobacterium tuberculosis in Egypt, (concept and Methods).	AbdelRahim, Khalid Abdalla Ali , and Ali, Ahmed Mohamed Cuvillier Verlag Göttingen, 2012.
39	Response of antioxidant enzymes and some metabolic activities in wheat to Fusarium spp. Infections	Y Gherbawy, M El-Tayeb, T Maghraby, Y Shebany, B El-Deeb Acta Agronomica Hungarica 60 (4), 319-333, 2012
40	Microbial quality and content aflatoxins of commercially available eggs in Taif, Saudi Arabia	AAS Bahobail, SA Hassan, BA El-Deeb African Journal of Microbiology Research 6 (13), 3337-3342, 2012
41	Molecular characterization of endophytic bacteria from metal hyperaccumulator aquatic plant (Eichhornia crassipes) and its role in heavy metal removal	B El-Deeb , Y Gherbawy, S Hassan Geomicrobiology Journal 29 (10), 906-915, 2012

42	Bacterial load of fresh vegetables and their resistance to the currently used antibiotics in Saudi Arabia	SA Hassan, AD Altalhi, YA Gherbawy, BA El-Deeb Foodborne pathogens and disease 8 (9), 1011-1018, 2011
43	RAPD analysis and antibiotic susceptibility for Mycobacterium tuberculosis strains isolated from different locations in Egypt.	AbdelRehim, Khalid Abdalla Ali , Soltan, El-Sayed Mohamed and Ali, Ahmed Mohamed Malaysian Journal of Microbiology, Vol 7 (3), pp. 139-145, 2011.
44	RAPD analysis and antibiotic susceptibility for Mycobacterium tuberculosis strains isolated from different locations in Egypt.	AbdelRehim Khalid A. A. and Elsaid M. Soltan Fourth Saudi Science Conference March 21-24th, p. 44. Biology Abstracts, 2010.
45	Genetic and chemical analysis of seed coat of cowpea and bean cultivars in relation with resistance to weevil pest.	Abdel-Sabour G. A. KHALED, Obiadalla H. A. and AbdelRehim K. A. Journal of Crop Science and Biotechnology, 2009.
46	Localization of zearalenone detoxification gene (s) in pZEA-1 plasmid of <i>Pseudomonas putida</i> ZEA-1 and expressed in <i>Escherichia coli</i>	AD Altalhi, B El-Deeb Journal of Hazardous Materials 161 (2-3), 1166-1172, 2009
47	Molecular markers for Fusarium oxysporumformae speciales characterization.	Y Gherbawy, B El-Deeb , S Hassan, A Altalhi, M Rai Current Advances in Molecular Mycology, 139-169, 2009
48	Degradative plasmid and heavy metal resistance plasmid naturally coexist in phenol and cyanide assimilating bacteria	BE Deeb , AD Altalhi Am J Biochem Biotechnol 5 (2), 84-93, 2009
49	Plasmid mediated tolerance and removal of	B El-Deeb

	heavy metals by Enterobacter sp	American Journal of Biochemistry and Biotechnology 5 (1), 47-53, 2009
50	Natural combination of genetic systems for degradation of phenol and resistance to heavy metals in phenol and cyanide assimilating bacteria	B El-Deeb Malaysian J Microbiol 5, 94-103, 2009
51	Isolation, characterization and application of bacterial population from agricultural soil at Sohag Province, Egypt.	Bahig A. E., Aly E.A., Khalid A. A. and Amel K.A. Malaysian Journal of Microbiology, Vol 4(2), pp. 42- 50, 2008.
52	Optimization of bacteriocin production by Lactobacillus plantarum AA135	Bahig A. El-Deeb and Abdullah D. Altalhi Abo-Amer, A. E Romanian Archives of Microbiology and immunology 67, 30-36, 2008
53	Localization of Zearalenone Detoxification Gene (s) in pZEA-1 Plasmid of Pseudomonas putida sp. strain ZEA-1 and Expressed in <i>Escherichia coli</i> .	AD Altalhi, B El-Deeb Malaysian Journal of Microbiology 3 (2), 2936, 2007
54	Preliminary localization of zearalenone detoxification gene (s) in pZEA-1 plasmid of Pseudomonas sp. Strain ZEA-1 and expressed in <i>Escherichia coli</i>	AD Altalhi, B El-Deeb International Journal of Biotechnology & Biochemistry 3 (2-3), 179-194, 2007
55	Assessment of genetic relationships among five onion (<i>allium cepa</i>) cultivars using morphological traits and RAPD markers.	H. A. Obiadalla Ali, A. A. Hemeida, and K. A. A. AbdelRehim Iter. Conf. Genetic engineering & Its application (Nov., 14 – 17 2006: 11 – 24), 2006.
56	Plasmid-and chromosome-mediated	BA El-Deeb

	assimilation of phenol and cyanide in <i>Pseudomonas</i> sp. strain PhCN	Journal of microbiology and biotechnology 16 (7), 1068-1077, 2006
57	Isolation and characterization of soil bacteria able to degrade zearalenone	BA El-Deeb Botany 32, 3-30, 2005
58	Phenotypic and genetic characterization of newly isolated phytopathogenic xanthomonads.	AbdelRehim K Dissertation, Göttingen University. Cuvillier Verlag Göttingen, 2005
59	Physiological, chemotaxonomical and genetic characterization of new <i>Xanthomonas</i> strains isolated from different host plants.	AbdelRehim, K.; Mavridis, A.; Rudolph, K. Mitt. Biol. Bundesanst. Land- und Forstwirtschaft. 396, 531, 2004.
60	The plasmid pattern of different races of the phytopathogenic bacterium <i>Xanthomonas axonopodis</i> pv. <i>Malvacearum</i> causing bacterial blight of cotton.	AbdelRehim, K.; Mavridis, A.; Rudolph, K. Mitt. Biol. Bundesanst. Land- und Forstwirtschaft. 396, 560, 2004.
61	Sensitivity to antibiotics and heavy metals and plasmid profile for characterization of different races of <i>Xanthomonas campestris</i> pv. <i>malvacearum</i> from different origins.	AbdelRehim, K.; Rudolph, K. In 8 th International Symposium (New Aspects of Resistance Research on Cultivated Plants Bacterial Diseases) November 15-16, 2001, Aschersleben, Germany, 2002.
62	Catabolic plasmid-mediated heavy metal resistance in herbicide diuron-degrading <i>Pseudomonas</i> species	A Bahig Journal of microbiology and biotechnology 11 (1), 7-12, 2001
63	Plasmid-mediated aniline assimilation by <i>Pseudomonas</i> sp. B10	BA El-Deeb Journal of microbiology and biotechnology 11 (1), 79-84, 2001
64	Comparison between the plasmid profiles of	AbdelRehim, K.; Rudolph, K.

	two different races of <i>Xanthomonas campestris</i> pv. <i>malvacearum</i> causing bacterial blight of cotton.	Abstract in Phytomedizen März 2001 Nr. 1. p.42, 2001.
65	Detoxication of the herbicide diuron by <i>Pseudomonas</i> sp.	BA El-Deeb, SM Soltan, AM Ali, KA Ali Folia microbiologica 45 (3), 211-216, 2000
66	Some evidences for the involvement of plasmid in diuron herbicide degradation.	BA El-Deeb, AM Ali, KA Ali Acta microbiologica et immunologica Hungarica 47 (1), 63-73, 2000

Instruments Description	
Device image	Description /use
	Hormone measurment
	Bacterial culture
	Absorbance measurment
	Bacterial growth

		Water distillation
		Sample centrifugation
		Polymerase chain reaction (PCR)

Lab instruments						
#	Device	quantity	Quality			
			Good	Poor	Need maintenance	malfunction
1	Fully automated Eliza	1	(√)			
2	1200 FLV Laminar flow	1	(√)			
3	Spectrophotometer	1	(√)			
4	Shaking Incubator	1	(√)			
5	Water purification system	1			(√)	
6	Cold Centrifuge	1	(√)			
7	Thermocycler	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.			