

Ministry of Education 043 IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

# FACULTY FULL NAME: Mahmoud M. Berekaa

**POSITION:** 

# Personal Data

Nationality | Egyptian Date of Birth | 07/07/1967 Department | Environmental Health Official UOD Email | mberekaa@iau.edu.sa Office Phone No. |01333 31304

# Language Proficiency

Language	Read	Write	Speak
Arabic	Native	Native	Native
English	Excellent	Excellent	Excellent
Others (Deutsch)	Very good	Good	Very good

# Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
April 2001	PhD In Molecular	Munster University	Institute for Molecular Microbiology
	Microbiology &	(wilhelm Klemm Universitat	and Biotechnology", Universität
	Biotechnology	Munster), Germany	Münster, 48149-Münster, Germany
August 1994	MSc In Microbiology	Faculty of Science,	Alexandria, Egypt
		Alexandria University	
May 1989	BSc In Microbiology	Faculty of Science,	Alexandria, Egypt
		Alexandria University	

# PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

Postdoctoral	Duquesne University, Pittsburg, Pennsylvania, USA (2005-2006)
Fellow	
PhD	Award from Egyptian Ministry of Higher Education for five years to get Ph.D. degree from German
fellowship	University (Molecular Microbiology and Biotechnology Institute, Munster University (wilhelm
	Klemm Universitat Munster)), Munster, Germany. (1969-2001)



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# Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
Professor in Molecular microbiology &	Faculty of Science, Alexandria University, Egypt	2014- Present
Biotechnology		
Assistant Professor in Microbiology	College of public Health, Imam Abdulrahman Bin Faisal University, Saudi Arabia	2016- present
Assistant Professor in Microbiology	College of Applied medical Sciences, Imam Abdulrahman Bin Faisal University, Saudi Arabia	2012 - 2016
Assistant Professor in Microbiology	College of Education, Dammam University, Saudi Arabia	2007 - 2011
Assistant Prof. in Molecular Microbiology and Biotechnology	Faculty of Science, Alexandria University, Alexandria, Egypt.	2007 - 2013
Lecturer in Molecular Microbiology and Biotechnology	Environmental Sciences Department, Faculty of Science, Alexandria University, Alexandria, Egypt.	2002 - 2006
Lecturer and Ph.D. Postgraduate Student	Institute for Molecular Microbiology and Biotechnology, Muenster University, Muenster, Germany.	1996 - 2001
Demonstrator	Botany and Microbiology Department, Faculty of Science, Alexandria University, Alexandria, Egypt	1990 - 1994

# Scientific Achievements

#### Published Refereed Scientific Researches

(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	Munthir M. Almoslem, Talal A. Alshehri, Arwa A. Althumairi, Mohammed T. Aljassim, Mohamed E. Hassan, Mahmoud M. Berekaa	Handwashing Knowledge, Attitudes, and Practices among Students in Eastern Province Schools, Saudi Arabia	, 2021. Journal of Environmental and Public Health, vol. 2021, Article ID 6638443, 10 pages, 2021. https://doi.org/10.1155/2021/66 38443
2	Mahmoud M. Berekaa	Insights into the COVID-19 pandemic: Origin, pathogenesis, diagnosis, and therapeutic interventions.	Frontiers in bioscience (Elite edition), 13: 117-139, 2021. DOI: 10.2741/874.
3	Alsubaie A.S. and Berekaa M.M.	Food Safety in Saudi Arabia: A Public Health Priority	Annals of Medical and Health Sciences Research, 10(6): 1142-



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			1147, 2020.	
4	Waleed O. Younis, Mahmoud M. Berekaa and Abdel-Aleem H. Mohamed	Enhanced Microbial Decontamination Using Non-thermal Low Pressure Argon Plasma Jet	Pakistan J. Biol. Sci., 23: 248-256. http://10.3923/pjbs.2020.248.256 , 2020.	
5	Amal A. Aljuraifani, Mahmoud M. Berekaa, Azzah A. Ghazwani	Bacterial biopolymer (polyhydroxyalkanoate) production from low-cost sustainable sources	MicrobiologyOpen. 2018/e755, 1 of 7. <u>https://doi.org/10.1002/mbo3.75</u> <u>5</u> , 2019.	
6	Amal A. Aljuraifani, Mahmoud M. Berekaa, Azzah A. Ghazwani	Perspectives of Polyhydroxyalkanoate (PHAs) Biopolymer Production Using Indigenous Bacteria: Screening and Characterization	J. Pure Appli. Microbiol., 12(4): 5340. http://dx.doi.org/10.22207/JPAM 12.4.36, 2018.	
7	Mahmoud M. Berekaa and Mohamed F. Ezzeldin	Exopolysaccharide from Bacillus mojavensis DAS10-1; Production and Characterization	J. Pure Appli. Microbiol., 12(2): 633 – 640, 2018.	
8	Mahmoud Berekaa, Khaled Salama, Khaled Alkharsah	Antibiotics Sensitivity and Heavy Metals Resistance in PHB-Producing Bacilli Isolated from Eastern Province, Saudi Arabia	Int. J. Agric. Biol., http://doi.10.17957/IJAB/15.0235 , 2016.	
9	Mahmoud M. Berekaa and Adil M. Al Issa	Enhanced production of Polyhydroxybutyrate (PHB) from Agro-industrial wastes; fed-batch cultivation and statistical design optimization	J. Microbiol. Biotechnol. Food Sci. 5(6): 606-611., 2016.	
10	Mahmoud M. Berekaa	Nanotechnology in Wastewater Treatment; Influence of Nanomaterials on Microbial Systems	Inter. J. Curr. Microbiol. Appli. Sci., 5(1): 713-726., 2016.	
11	Khaled F. Salama and Mahmoud M. Berekaa	Assessment of air quality in Dammam slaughter houses	Inter. J. Med. Sci. Pub. Health, 5(2): 287-291., 2016.	
12	Mahmoud M. Berekaa & Khaled F. Salama	. Comprehensive Assessment of Microbiological and Bioaerosol Contaminants in Dammam Slaughterhouse, Saudi Arabia.	<u>J. Pure Appli. Microbiol.</u> , 9: 69-76. 2015	
13	Mahmoud M. Berekaa	Nanotechnology in Food Industry; Advances in Food processing, packaging and food safety	Inter. J. Curr. Microbiol. Appli. Sci., 4(5): 345-357., 2015.	
14	Mahmoud M. Berekaa	Improved exopolysaccharide production by <i>Bacillus licheniformis</i> strain-QS5 and application of statistical experimental design	Inter. J. Curr. Microbiol. Appli. Sci., 3(4): 876-886, 2014.	
15	Berekaa M.M.	Towards efficient crude oil degradation by <i>Pseudomonas</i> sp. strain-O2; Application of Plackett-Burman design for evaluation of cultivation conditions	. <u>African Journal of Microbiology</u> <u>Research</u> , 7(39): 4722-4929, 2013.	
16	Mahmoud M. Berekaa, Alaa mostafa and Abdel- Rahman Alaa	Bioremediation of crude oil contaminated soil by <i>Pseudomonas aeruginosa</i> strain-O2 and Micrococcus varians strain-X with different approaches	Biotechnology An Indian Journal BTAIJ 7(4): 131-136, 2013.	
17	Berekaa M.M. and M.S. Al-Otaibi	Enhanced Production of Poly glutamic acid (PGA) by <i>Bacillus megaterium</i> strain-SW1:2	<u>African J. Biotech.</u> , 12(5):481- 490, 2013.	



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		using statistical experimental design	
18	Berekaa M. Mahmoud	Genotypic Detection of Polyhydroxyalkanoate- producing Bacilli and Characterization of <i>pha</i> C Synthase of <i>Bacillus</i> sp. SW1-2	<u>Life Science Journal, 9(4): 518-527, 2012.</u>
19	Berekaa M. Mahmoud and Ali M. Al-Thawadi	Biosynthesis of polyhydroxybutyrate (PHB) biopolymer by <i>Bacillus megaterium</i> SW1-2: Application of Box-Behnken design for optimization of process parameters	African J. Microbiol Research, Vol 6(4): 838-845, 2012.
20	Sifor Mohamed., Hesham M. Saeed, Taha I. Zaghloul, Mahmoud M. Berekaa and Yasser R. Abdel-fattah	Enhanced production of lipase by the Thermophilic <i>Geobacillus stearothermophilus</i> strain-5 using ststistical experimental design	<u>New Biotechnology,</u> 27(4): 330- 336., 2010.
21	Sifor Mohamed., Hesham M. Saeed, Taha I. Zaghloul, Mahmoud M. Berekaa and Yasser R. Abdel-fattah	Purifiction and Properties of a Lipase from Thermophilic <i>Geobacillus stearothermophilus</i> strain-5	International J. Biological <u>Chemistry,</u> 4(4): 203-212, 2010.
22	Mostafa AR, Blumenberg M, Berekaa MM, Michaelis W, Alaa AR	Crude oil biodegradation efficiency of bacterial strains isolated from oil contaminated sediment from Western harbour of Alexandria, Egypt	Environ. Pollut. International conference, 2010.
23	Ghada A. Youssef, Samy A. El-Aassar, Mahmoud Berekaa, Mohamed El- Shaer and J. Stolz	Arsenate and Selenate Reduction by Some Facultative Bacteria in the Nile Delta.	American-Eurasian J. Agric. & Environ. Sci., 5 (6): 847-855, 2009
24	Sifor Mohamed., Hesham M. Saeed, Taha I. Zaghloul, Mahmoud M. Berekaa and Yasser R. Abdel-fattah	Isolation of Lipase Gene of the Thermophilic <i>Geobacillus stearothermophilus</i> strain-5.	<u>Biotechnology,</u> 9(1): 55-60, 2010.
25	Gahda A. Youssef and Mahmoud M. Berekaa	Improved Production of Endoglucanase Enzyme by <i>Aspergillus terreus</i> ; Application of Plackett Burman Design for Optimization of Process Parameters	<u>Biotechnology,</u> 8(2): 212-219., 2009.
26	Mahmoud M. Berekaa, Taha I. Zaghloul, Yasser R. Abdel-fattah, Hesham M. Saeed and Mohamed Sifour	Production of a Novel Glycerol-Inducible Lipase from Thermophilic <i>Geobacillus</i> <i>stearothermophilus</i> strain-5.	<u>World J. Microbiol. Biotechnol.</u> 25: 287-294, 2009.
27	Mahmoud M. Berekaa, Samy A. El Aassar, Samia M. El-Sayed and Aliaa M. EL Borai	Production of Poly-γ-Glutamate (PGA) Biopolymer by Batch and Semicontinuous Cultures of Immobilized <i>Bacillus licheniformis</i> strain-R.	<u>Brazilian J. Microbiol.</u> , Vol. 40 (4): 715-724, 2009.
28	Schulte C, Arenskötter M., Berekaa M. M.,	Possible involvement of an extracellular superoxide dismutase (SodA) as a radical	Appl. Environ. Microbiol. 74(24):7643-53, 2008.



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	Arenskötter Q., Priefert H., Steinbüchel. A	scavenger in poly(cis-1,4-isoprene) degradation.	
29	Yasser R Abdel-Fattah, Nadia A. Soliman and Mahmoud M. Berekaa	Application of Box-Behnken design for optimization of polyglutamic acid production by <i>Bacillus licheniformis</i> SAB-26.	Research Journal of Microbiology, 2(9): 664-670, 2007.
30	Mahmoud M. Berekaa, Nadia. A. Soliman, Yasser R. Abdel-Fattah	Production, partial characterization and cloning of thermostable alpha-amylase gene of thermophile <i>Geobacillus thermoleovorans</i> strain-YN.	<u>Biotechnology</u> , 6 (2): 175-183, 2007.
31	Mahmoud M. Berekaa	Colonization and microbial degradation of polyisporene rubber by nocardioform actinomycete <i>Nocardia</i> sp. Strain MBR.	<u>Biotechnology</u> , 5(3): 234-239, 2006.
32	Mahmoud M. Berekaa, Yasser R. Abdel-Fattah, Samia M. El-Sayed, Aliaa M.El-Borai and Samy A. El Aassar	Optimization of culture conditions for production of polyamide biopolymer (Polyglutamate) by <i>Bacillus</i> sp. Strain-R.	J. Biological Sciences, 6(4): 687- 694, 2006.
33	Mahmoud M. Berekaa, Yasser R. Abdel-Fattah, Hany M. Hussein	Modeling of Chromium (VI) Accumulation in <i>Gordonia polyisoprenivorans</i> VH2 Using Response Surface Methodology.	Biotechnology, 5 (1): 5-11, 2006.
34	Nadia A. Soliman, Mahmoud M. Berekaa, and Yasser R. Abdel- Fattah	Poly glutamic acid (PGA) production by <i>Bacillus</i> sp. SAB-26: application of Plackett– Burman experimental design to evaluate culture requirements.	Applied Microbiology and Biotechnology, 69: 259-267, 2005
35	Mahmoud M. Berekaa and H. Hussein	Impact of phenotypic variation on rubber degradation and metal resistance in <i>Gordonia westfalica</i> variants.	<u>Egyptian Journal of</u> <u>Biotechnology</u> , 21: 433-446, 2005
	Mahmoud M. Berekaa, Amal Barakaat, and Samy A. El-Aassar	Degradation of Natural Rubber by <i>Achromobacter</i> sp. NRB and Evaluation of culture conditions.	Polish Journal of Microbiology, 54 (1): 55-62, 2005.
36	Hesham M. Saeed, Yasser R. Abdel-Fattah, Mahmoud M. Berekaa, Yousry M. Gohar and Mohamed El-Baz	Identification and Cloning of A Novel Gene Encoding <i>Pseudomonas aeruginosa</i> Ps-x Uricase	<u>Polish Journal of Microbiology,</u> 53 (4): 227-236, 2004.
37	Linos A., Berekaa M.M., Steinbuchel A., Kim K.K., Sproer C., Kroppenstedt R.M	<i>Gordonia westfalica</i> sp. nov., a novel rubber- degrading actinomycete.	Int J Syst Evol Microbiol. 52(4):1133-9, 2002.
38	Arenskotter M., Baumeister D., Berekaa M.M., Pootter G., Kroppenstedt RM, Linos A. and A. Steinbüchel	Taxonomic characterization of two rubber degrading bacteria belonging to the species <i>Gordonia polyisoprenivorans</i> and analysis of hyper variable regions of 16S rDNA sequences	<u>FEMS Microbiol Lett</u> ., 205(2):277- 82, 2001.
39	Mahmoud M. Berekaa and Alexander	Microbial degradation of the multiply- branched alkane 2,6,10,15,19,23-	Appl. Environ. Microbiol., 66: 4462-4467, 2000.



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Alexandros Linos, Mahmoud M. Berekaa, Rudolf Reichelt, Ulrike Keller, Jürgen Schmitt,	Biodegradation of <i>cis</i> -1,4-polyisoprene rubbers by distinct actenomycetes: Microbial	
Hans-curt Flemming, Reiner M. Kroppenstedt and Alexander Steinbüchel	strategies and detailed surface analysis	<u>Appl. Environ. Microbiol.</u> , 66: 1639-1645, 2000.
Mahmoud M. Berekaa, Alexandros Linos, Rudolf Reichelt, Ulrike Keller and Alexander Steinbüchel	Effect of pretreatment of rubber material on its biodegradability by various rubber degrading bacteria	<u>FEMS Microbiol. Lett.</u> , 184: 199- 206, 2000.
Samy A. El-Aassar and Mahmoud E. Berekaa	Purification and some properties of an alkaline protease from <i>Bacillus macerans</i> cells	. <u>Bull Fac. Sci. Alex. Univ.</u> 36: 353- 365, 1996.
Samy A. El-Aassar and Mahmoud E. Berekaa	Nutritional factors controlling alkaline protease production by immobilized <i>Bacillus macerans</i> cells	Bull Fac. Sci. Alex. Univ. 36: 367- 379, 1996.
Samy A. El-Aassar and Mahmoud E. Berekaa	Production of alkaline protease by <i>Bacillus</i> <i>macerans</i> cells entrapped in different gel matrices	<u>Bull Fac. Sci. Alex. Univ.</u> 36: 381- 392, 1996.
	Reiner M. Kroppenstedt and Alexander Steinbüchel Mahmoud M. Berekaa, Alexandros Linos, Rudolf Reichelt, Ulrike Keller and Alexander Steinbüchel Samy A. El-Aassar and Mahmoud E. Berekaa Samy A. El-Aassar and Mahmoud E. Berekaa	Reiner M. Kroppenstedt and AlexanderEffect of pretreatment of rubber material on its biodegradability by various rubber degrading bacteriaMahmoud M. Berekaa, Alexandros Linos, Rudolf Reichelt, Ulrike Keller and AlexanderEffect of pretreatment of rubber material on its biodegradability by various rubber degrading bacteriaSamy A. El-Aassar and Mahmoud E. BerekaaPurification and some properties of an alkaline protease from Bacillus macerans cellsSamy A. El-Aassar and Mahmoud E. BerekaaNutritional factors controlling alkaline protease production by immobilized Bacillus macerans cellsSamy A. El-Aassar and Mahmoud E. BerekaaProduction of alkaline protease by Bacillus macerans cells entrapped in different gel

# Refereed Scientific Research Papers Accepted for Publication

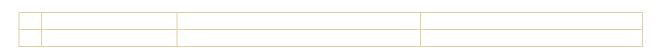
#	Name of Investigator(s)	Research Title	Journal	Acceptance Date
1	Saad Dahlawi, Saif Ullah, Abdulaziz A AlMulla, Mahmoud M. Berekaa, Asif Naeem, Khalid Mehmood, Hassan Saho, Ali AlOkhwan, Mustafa AlHassan, Abdullah AlQahtani	Human Exposure to Toxic Metals and Microbiological Pollution via AC-filter Dust from	Preprint	2021
2	Saad M. Dahlawi, Mahmoud M. Berekaa and Khalid F. Salama and Ossama A. Labib	Industrial, Residential and Agricultural Areas: Assessment of Health Risks.	Accepted for publication	2021

# Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of	Research Title	Conference and Publication Date
	Investigator(s)		



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# Patents

Number	Date and Description
Patent	Method for producing polyhydroxyalkanoate by fed-batch culture of bacillus bacteria in a medium
Grant	containing date syrup. Patent previous information; Patent Application number: 15259674,
Number:	Publication Number: US-2018-0066291 A1, title: Method of Producing Polyhydroxyalkanoate from
10358665.	Bacillus spp. Inventor: Mahmoud m. BEREKAA; Applicant: University of Dammam (2016-2019).
Patent	Titled: Method for preparation of DNA ladder using PCR and its optimization by numerical
application	modelling thereof. Patent Cooperation Treaty (PCT), World Intellectual Organization (International
number:	Bureau), International Publication number: WO 2007/016929 A1
359.8.2005	
Patent	Titled: Diagnostic kit for plasmid isolation from bacteria. Mubarak City for Scientific Research and
application	Application. Egyptian Patent Office, 2004.
number:	
371.8.2004	



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# **Completed Research Projects**

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
1	Prof. Mahmoud Berekaa (DSR, IAU, Saudi Arabia-Project: covid 12020-017-CPH)	Insights into the COVID-19 pandemic: Origin, pathogenesis, diagnosis, and therapeutic interventions	2021
2	Prof. Mahmoud Berekaa (DSR, IAU, Saudi Arabia- Project: covid 19-2020-020-CPH)	Implementation of Best Practice Guidelines Regarding Preparedness of IAU Campus to Combat COVID-19 Pandemic	2021
3	Prof. Dr. Mahmoud M. Berekaa (DSR, IAU, Saudi Arabia, 2017- 2019).	Strategies for Optimization and Large Scale Production of PHB Biopolymer by Fed-Batch Fermentation Using Local Bacterial Isolates from Saudi Arabia	2021
4	Prof. Dr. Mahmoud M. Berekaa (Co-PI) (Deanship of Scientific Research, Dammam University)	Indoor Air Quality and Bioaerosol in Slaughter Houses in Eastern Province, Saudi Arabia	2016
5	Prof. Dr. Mahmoud M. Berekaa (Deanship of Scientific Research, Dammam University) (Project- 2014/2014045)	"Evaluation of Local Bioplastic Producing Bacteria Regarding Microbial Toxicity, Antibiotic and Heavy Metals Resistance Profiling	2015
6	Prof. Dr. Mahmoud M. Berekaa. (Co-PI) - Deanship of Scientific Research, Dammam University, Saudi Arabia (Project- 2011/2012052)	Establishment and Application of Plasma Disinfection Technology in Eastern Province, Saudi Arabia	2015
7	Associate Prof. Dr. Mahmoud M. Berekaa Deanship of Scientific Research, Dammam University, Saudi Arabia (2012-2013)	Strategies for Biotechnological Production of Plastics Biopolymer From Agro-industrial and Environmental Wastes	2014
8	Prof. Dr. Mahmoud M Berekaa (PI) - Deanship of Scientific Research, Dammam University (Project-2010/2011121).	Exploring the production of polyhydroxyalkanoate (PHAs) biodegradable plastics by Local Bacterial Isolates in Saudi Arabia	2013
9	Prof. Dr. Mahmoud M. Berekaa - Deanship of Scientific Research, King Faisal University-Continued under supervision of Dammam University (Project-2009/ 10003).	Biotechnological Production of polyglutamate (PGA) Biopolymer; with Industrial, Medical and Environmental Importance from Local Isolates in Saudi Arabia	2011
10	Dr. Samy El Aassar (PI) and Mahmoud Berekaa (Co-PI) - (US- Egypt collaboration Project- 2003/BIO7-004-003)	Microbial Arsenic and Selenium Transformation in the Nile Delta	2005
11	Yasser Abdelfattah and Mahmoud M Berekaa. (US-Egypt Project).	. Project: Bioprocess Development of high value immunosuppressant drug: Rapamycin - Affiliation with Mubarak City for Scientific Research and Technology	2005



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Applications. Bioprocess Develop. Department of	
Bioprocess Development	

# **Current Research**

#	Research Title	Name of Investigator(s)
1	Potential Impact of Great Lockdown on Students' knowledge, Attitude and Practices towards the COVID-19 Outbreak	Mahmoud M. Berekaa, Eltigani OM Omer, Munthir Almoslem, Khaled Alsahli, Mohammed T. Aljassim
2	Potential Impact of COVID-19 Infection on Attitudes and Behaviors of Eastern Province Community towards Precautionary Measures	Mahmoud M. Berekaa, Eltigani OM Omer, DrvArwa Al-Umran, Munthir Almoslem, Khaled Alsahli,

# Contribution to Scientific Conferences and Symposia

#	Conference Title		Place and Date of th Conference	ie	Extent of Contribution
	·	Cc	onferences		·
1	Environmental Symposium on "Towards Sustainable Industrial Environment, Eastern Province, Saudi Arabia"		eb., 2018, Eastern nce, Saudi Arabia	Assessment of Microbiologic Contaminant	ation: Comprehensive of Indoor Air Quality, cal Bioaerosol s in Dammam use, Saudi Arabia"
2	Environment and Sustainability	Comn	ne, Royal nission for Jubail 2015, Saudi Arabia.	"Sustainable	ation entitled production of bioplastics acterial isolates, Eastern
3	International conference on "Environment and Development in the Gulf Region"		Feb., 2014. nam, Saudi Arabia.	conference c	ation in International on "Environment and t in the Gulf Region
4			nam University, 30 <sup>th</sup> n, 2014.	workshop en	n organization of Ititled "Impact of velopment on ral Health"
5	29 <sup>th</sup> annual meeting of the Saudi Biological Society,		nam, Saudi Arabia, 7 <sup>th</sup> Feb., 2014".	for Productic Bacillus mega	ation: Title; "Strategies on of Bioplastics by <i>aterium</i> SW1-2 from ial Wastes in Eastern udi Arabia"
6	International Symposium entitled	Saudi	Aramco, Holiday	Participation	



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	"Environmental Health Symposium 2013"	Inn Hotel, Al-Khobar, (6-7 May, 2013), Saudi Arabia.	
7	Workshop on "Environmental Impact Assessment; Challenges and Solutions".	Dammam University, (7 April 2013), Saudi Arabia.	Participation
8	Workshop on "Industrial Environment: Problems and Solutions"	Dammam University, (7 April 2013), Saudi Arabia	Participation
9	4 <sup>th</sup> International Saudi Conference in Science.	Taibah University, Madinah (21-24 March 2010), Saudi Arabia.	Oral Presentation, Dr. <u>Mahmoud M.</u> <u>Berekaa:</u> Microbial degradation of natural ubber by <i>Streptomyces</i> sp strain NRS4; Evaluation of culture condition, 2010. Authors: Mahmoud M. Berekaa, Amal Barakaat, Samy El- Aassar.
10	First International Conference in Biotechnology.	Center of Excellence in Biotechnology Research, King Saud University, Riyadh (16-18 Feb 2009), Saudi Arabia.	Oral Presentation, Dr. <u>Mahmoud M.</u> <u>Berekaa:</u> Molecular Investigation on Biopolymer Degradation, 2009. Authors: Mahmoud M. Berekaa, Schulte C., Arenskotter M., Arenskotter Q., Priefert H., and A. Steinbuchel.
11	Philadelphia Annual Meeting. The use of Molecular Techniques to Assess Microbial Community Structure and Function in Aquifer Systems.	(22-25 Oct. 2006), Philadelphia, USA.	Oral presentation by Prof. Dr. John F. Stolz : (Methods for detection of arsenic metabolizing bacteria), <u>Authors:</u> Stolz, John F., Fisher E., Polshnya G., <u>Berekaa M</u> ., Garcia A., Thangavelum M and Basu P.
12	10 <sup>th</sup> International Symposium on the Genetics of Industrial Microorganisms (GIM)	Prague Czech Republic, June 42-28, 2006.	Poster presentation
13	International conference on Environmental, Industrial and Applied Microbiology.	BioMicroWorld-2005, Badajoz (spain), March 15-18 <sup>th</sup> 2005.	Poster presentation
14	VAAM-Jahrestagung, 2004,	Braunschweig (28- 31/03/2004), Germany.	Two accepted posters
15	US-Egypt workshop on Genetic Engineering and Genomics.	3-5/12/2003 in Mubarak City for Scientific Research and Technology applications, Bourg Al Arab, Alexandria, Egypt.	Oral presentation
16	Workshop organized by Mubarak City for Scientific Research and Technology applications. Title: New Era of Biotechnology in Pharmaceutical Industries	(September 22-23-2003) in Bourg Al Arab, Alexandria, Egypt.	Participation



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17	DECHEMA - 19. Jahrestagung der Biotechnologen	(13-15. March 2001) in Leipzig, Germany.	Poster presentation
18	VAAM-Jahrestagung in Oldenburg,	(25.03-28.03.2001), Germany.	Two poster presentations
19	VAAM-Jahrestagung in München	(12-16.03.2000), Germany.	Three poster presentations
20	11 <sup>th</sup> International Biodegradation and Biodeterioration Symposium	(03.03-10.08.1999), Virginia, USA.	Oral presentation
21	VAAM-Jahrestagung.	(07.03-10.03.1999), Göttingen, Germany	Two poster representations
22	international symposium on " Biochemical principles and mechanisms of biosynthesis and biodegradation of polymers.	(03.06-06.06.1998), Münster, Germany	Poster presentation
23	15 <sup>th</sup> DECHEMA-Jahrestagung der Biotechnologen 1997,	(04.03-06.03.1997), Münster, Germany.	Participation

# Trainings and workshops

#	Contribution and title of workshop	Place/date	Date
1	Trainer: "Safety in Laboratories, Microbial contaminations, causes and protection, Food Safety, Biosafety, occupational health and safety"	Community Center and Continuous Education Center, 2015-2020, IAU University, Saudi Arabia.	2015-present
2	Organizer: "Molecular Identification & Validation of Novel Species of Bacteria"	Imam Abdulrahman Bin Faisal university, Saudi Arabia.	10 <sup>th</sup> April, 2017
3	Active contribution: "Student health and Safety"	Dammam University	16 <sup>th</sup> April, 2014
4	Participated as speaker: "Biological Safety in Hospitals"	Dammam University, Saudi Arabia.	April, 2013.
5	Organized training course on "Basics of Biosafety"	Faculty of Science, Alexandria University, Egypt.	29/7/2013
6	Organized training course on (Design of e-courses and application of WebCT learning Management System)	College of Education, Dammam University, Saudi Arabia.	2008, 2009.
7	Organized training courses on (Bioinformatics; Concepts and applications)	Faculty of science, Alexandria university,.	April-2004
8	Share in training courses on (Bioinformatics and DNA microarray Data Analysis)	Faculty of Science, Ain Shams University,	4-6/9/2004.
9	Participated as trainer in a series of training courses on "Polymerase Chain Reaction PCR; Basic concepts and application" organized by the Institute for Graduate Studies and research,	Institute for Graduate Studies and research, Alexandria University, Alexandria, Egypt	14- 18/10/2001, 14- 18/7/2002,



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	during the periods		18- 22/5/2003, 12- 16/10/2003,
10	QIAGEN workshop in "Isolation of nucleic acids and PCR/RT-PCR"	College of medicine, Münster University, Munster, Germany.	28.03-30- 03.2000
11	Training course under the topic "Molecular Biological Characterization of a Protease Gene of <i>Fusarium graminearum</i> by Inverse PCR".	Botany Institute, Muenster University, Munster, Germany.	2001
12	Training course in "Development of microbial industries in Egypt",	National research center, Cairo, Egypt.	15.12.1991- 21.12.1991

# Membership of Scientific and Professional Societies and Organizations

#	Society name	Date
	Membership in the American Society for Microbiology (ASM)	2000 and
		2001
	Membership in Vereinigung fuer Allgemeine und Angewandte Mikrobiologie, Deutschland (VAAM) Society	2001-2009
	Membership in Saudi Society of Biotechnology	2008

# **Teaching Activities**

# Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	General Microbiology	MICRO 206	All course (Lectures and Lab)
2	Environmental Microbiology-I	ENVH 222	All course (Lectures and Lab)
3	Environmental Microbiology-II	ENVH 312	All course (Lectures and Lab)
4	Advanced Chemistry and	ENVH 421	Share lectures and labs with other staff



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	Microbiology		member
5	Environmental Biotechnology	ENVH 402	All course (Lectures and Lab)
6	Environmental Microbiology	ENVH 223	All course (Lectures and Lab)
7	Environmental Management-II	ENVH 316	All course (Lectures and Lab)
8	Wastewater Treatment	ENVH 314	Share lectures and labs with other staff member
9	Water resources and Quality	ENVH 209	Share lectures and labs with other staff member
10	Marine and coastal pollution	ENVH 351	Share lectures and labs with other staff member
11	Graduation project	ENVH 414	Share projects with other staff members
12	Biohazards in Workplace	OHS 315	All course (Lectures and Lab)
13	Principles of Epidemiology	EPID 212	All course

# Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)

1	General Microbiology: Basics of microbiology, microbial groups, nutrition, growth requirements, replication and gene transfer
2	Environmental Microbiology-I: Classification of microbial groups related to human health, role of microbes in environmental cycling of elements, food microbiology
3	Environmental Microbiology-II: wastewater treatment, activated sludge biofilms, RBCs, Lagoons and anaerobic digestion of waste, air microbiology
4	Advanced Chemistry and Microbiology: Bioremediation, microbial and phytoremediation, biosensors and biomarkers, biodegradation, PCR technique and gene amplification, agarose electrophoresis and gene analysis using BLAST
5	Environmental Biotechnology: Bioremediation, microbial and phytoremediation, biodegradation mechanisms, biosensors and biomarkers, Technology of industrial wastewater treatment, GMOs, PCR technique and gene amplification, agarose electrophoresis and gene analysis using BLAST
6	Environmental Microbiology: Microbial groups, growth requirement, bioaerosols, food microbiology, wastewater treatment, PCR technique and gene amplification, agarose electrophoresis and gene analysis using BLAST
7	Environmental Management-II: hazards and risk, risk assessment, control and management, communication
8	Wastewater Treatment: Aerobic and anaerobic treatment of wastewater, role of protozoa, conventional and advanced techniques in treatment of wastewater
9	Water resources and Quality: Aerobic and anaerobic treatment of wastewater, role of protozoa,



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	conventional and advanced techniques in treatment of wastewater
10	Marine and coastal pollution: Biodiversity, biomagnification, bioaccumulation, role of SRB in bioremediation of toxic metals
11	Graduation project: mentoring of students projects especially on topics related to environmental biotechnology and water microbiology and air microbiology
12	Biohazards in Workplace: role of infection control team, sterilization, disinfection, control of infection in hospital, protective equipment and community protection
13	Principles of Epidemiology: Basics of epidemiology, methods of epidemiological approaches, epidemiology in public health and in workplace, research designs (disease occurrence and risk factor associations)

#### Postgraduate

# **Course Coordination**

#	Course Title and Code	Coordination	Co- coordination	Undergrad.	Postgrad.	From	to
1	Environmental Health and Epidemiology	Main			PG	2021	prese nt
2	Hospitals Wastes Management System	Main			PG	2021	prese nt

# Training Courses on Teaching, Quality and Academic Accreditation

#	Contribution and title of workshop	Organizer/Place	Date
1	"Certificate of students Assessment in Higher education"	Deanship of Academic Affairs, IAU university, Saudi Arabia	Feb-Mar., 2021
2	"Academic Quality Practitioner"	Education & training Evaluation Commission, NCAAA, Saudi Arabia	31/11/20212021•03 /02/2021
3	Trainer: Quality Session "Assessment of CLOs and Analysis of OMR report of Exams"	College of Public Health, IAU University, Saudi Arabia.	5 <sup>th</sup> Feb., 2020
4	Workshop on "Boosting Innovation and Entrepreneurship in Higher Education"	Deanship of Academic development, IAU University, Saudi Arabia.	11-14- Nov, 2019
5	Workshop on "Integrating Leadership Skills in Academic Curriculum".	Deanship of Academic development, IAU University, Saudi Arabia.	23 <sup>rd</sup> Oct, 2019



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6	Workshop on "Promoting Deep Learning in your Classroom (SOLO Taxonomy"	Deanship of Academic development, IAU University, Saudi Arabia.	2 <sup>nd</sup> Oct, 2019
7	Workshop on "Analyzing and Reading Test's Results"	Deanship of Academic development, IAU University, Saudi Arabia.	13 <sup>th</sup> March, 2019.
8	Workshop on "Flipped Classroom "	Deanship of Academic development, IAU University, Saudi Arabia.	28 <sup>th</sup> Nov, 2018.
9	Workshop on "Implementing Project-based learning in Higher Education"	Deanship of Academic development, IAU University, Saudi Arabia.	12-13 <sup>th</sup> Nov, 2018
10	Workshop on "Development of Plan for Academic Program Assessment"	Deanship of Quality and Academic Accreditation, IAU University, Saudi Arabia.	2 <sup>nd</sup> Oct, 2018
11	Workshop on "Analyzing & Reading Test's Results"	Deanship of Education development, IAU University, Saudi Arabia.	21 <sup>th</sup> Feb, 2018
12	Workshop on "Activities to Promote Learning"	Deanship of E-learning & Distance learning, IAU, Saudi Arabia	6 <sup>th</sup> Nov., 2017
13	Workshop on "Program Self Study Report"	Deanship of Quality and Academic Accreditation, IAU University, Saudi Arabia.	15-16 <sup>th</sup> Oct., 2017
14	Workshop on "Assessment of Learning Outcomes"	Deanship of Quality and Academic Accreditation, IAU University, Saudi Arabia.	8-9 <sup>th</sup> Oct., 2017
15	Workshop on "Genomics & Proteomics of Boron- tolerant Bacteria: a Frontier in Extremophiles"	College of Public Health, IAU University, Saudi Arabia.	5 <sup>th</sup> March, 2017
16	Workshop on "Key performance Indicators & Benchmarking"	Deanship of Quality and Academic Accreditation, IAU University, Saudi Arabia.	22 <sup>nd</sup> Feb., 2017
17	Workshop on "How to Prepare for a Conference",.	Dean of Education Development, IAU & Thomson Reuters, IAU University, Saudi Arabia.	, 5 <sup>th</sup> October, 2016
18	Workshop on "1. Bibliographic search & publishing methodology 2. Bibliography Management"	UoD & Thomson Reuters, IAU University, Saudi Arabia.	5 <sup>th</sup> May, 2016
19	Workshop on "Developing Program and Courses Learning Outcomes according to NQF & ABET"	UoD & British Council, IAU University, Saudi Arabia.	8-10 <sup>th</sup> March, 2016
20	Workshop on "Learning Outcomes for Program and Courses"	UoD, DED, IAU University, Saudi Arabia.	24 <sup>th</sup> Feb, 2016
21	Workshop on "Teaching for Creativity and Innovation",	Dean of Education Development, Dammam	19 – 20 <sup>th</sup> Nov, 2014.



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		University, Dammam, Saudi Arabia	
22	Workshop on "Advanced Teaching Strategies in Higher Education", ,.	Dean of Education Development, Dammam University, Dammam, Saudi Arabia	30 <sup>th</sup> April-1 <sup>St</sup> May, 2014
23	workshop on "The training course for members of local committees of research ethics"	National Committee of BioEthics (NCBE) and Dammam University, Saudi Arabia	10 <sup>th</sup> April, 2014
24	Attend training program on "Research Skill Development in the Kingdom: From Idea to Outcome"	King Abdulaziz City for Science and technology, held at Dammam university, Saudi Arabia	Dec 12 <sup>th</sup> , 2013
25	"Higher Order Thinking Skills"	Deanship of University Development, University of Damma, Saudi Arabia.	20-21/11/2013
26	"Course Portfolio",	Deanship of Quality and Accreditation, University of Damma, Saudi Arabia.	14/5/2013
27	"Teaching Skills in 21 <sup>th</sup> Century" National Institute of Education, Nanyang Teaching University, Singapore and	Deanship of Education Development, Dammam University, Dammam, Saudi Arabia.	19-20/02/2013
28	"Programme and Course Specification",	Deanship of quality assurance and accreditation, Dammam University, Saudi Arabia	19-20/5/2012
29	"Analyzing data of quantitative researches using SPSS"	Faculty of Science, Dammam University, Saudi Arabia	3-2011.
30	"Planning For Effective University Teaching"	King Faisal University, Saudi Arabia.	2009
31	"How to Get Published Internationally"	Alexandria Faculty of Medicine, Alexandria University, Alexandria, Egypt.	11-12/8/2009
32	"Quality in E-learning"	King Saud University, Saudi Arabia	2009
33	E-learning courses; "Preparation of Exams and Quizzes Electronically by the use of WebCT System" and "Design and development of e- courses" and "Communication Skills".	King Faisal University, Saudi Arabia	2008
13	<u>Training courses</u> in "Faculty and leadership Development Project, FLDP", Effective Presentations – Effective Thinking – Recent Teaching Approaches – Teaching with Technologies – Career Ethics – Effective Meetings Managements – Courses Design.	", Alexandria University, Alexandria, Egypt.	2004-2006 and 2008-2012



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#### Guest/Invited Lectures for Undergraduate Students

#	Activity/Course Title and Code	Subject	College and University or Program	Date

# Student Academic Supervision and Mentoring

#	Level	Number of Students	From	to
1	3-8	25	9/2013	4/2014
2	3-8	30	9/2014	4/2015

# Supervision of Master and/or PhD Thesis

#	Degree Type	Title	Institution	Date
1		Biotechnological production of extracellular	Faculty of Science, Alexandria	2004-
	PhD	fibrinolytic proteases by free and immobilized bacterial isolates	University	2009.
2	PhD	Studies on production of lipases from some	Institute of Higher Education, ,	2004-
	THE	thermophilic bacteria	Alexandria University	2008.
3	PhD	Biotechnological production of polyamide	Faculty of Science, Alexandria	2003-
	FIID	biopolymers by some local bacterial isolates	University	2007
4		Production of Plastic Biopolymer by Some	Imam Abdulrahman Bin Faisal	2015-
	MSc	Bacterial Isolates from Eastern Province,	University	2017
		Saudi Arabia		
5		Chemical and Microbiological assessment of	Faculty of Science, Alexandria	2005-
	MSc	groundwater in El Agamy Province, west	University	2010
		Alexandria		
6	MSc	Biodegradation of crude oil pollutants by	Faculty of Science, Alexandria	2005-
	IVISC	some local bacterial isolates	University	2008
7	MSc	Biotransformation of some toxic heavy	Faculty of Science, Alexandria	2004-
	MSc	metals by some local bacterial isolates	University	2007
8		Studies on Microbial degradation of natural	Faculty of Science, Alexandria	2002-
	MSc	and synthetic rubber by some local isolates	University	2006

# **Ongoing Research Supervision**

#	Degree Type	Title	Institution	Date



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Administrative Responsibilities, Committee and Community Service (Beginning with the most recent)

# Administrative Responsibilities

#	From	То	Position	Organization
1	2008	present	Head of Examination Quality Unit	College of Public Health, IAU university
2	2014	present	Quality coordinator	Environmental Health Department
3	2021	present	Coordinator, electronic diploma in "Food safety and Hygiene"	College of Public Health, IAU university

# **Committee Membership**

#	From	То	Position	Organization
1	2020	present	Member	CPH Quality committee
2	2021	present	Member	Reformation of programs to three semester system
3	2013	present	Member	Examination unit in environmental health department, CPH, IAU
4	2013	present	Member	Department committee, EH department, CPH, IAU
5	2016	2016	Member	CPH Strategic Plan Committee
6	2014	present	Member	Academic advisor
7	2021	present	Member	CPH and EH Gradates Attributes Committee

# Scientific Consultations

#	From	То	Institute	Full-time or Part-time
1	2020	present	Scientific consultant: House of Expertise for Environmental and Occupational Safety Consulting, IAU University	Full-time
2	2015	present	Trainer in several workshops related to Environmental Health and Safety "Safety in Laboratories, Microbial contaminations, causes and protection, Food Safety, Biosafety" in Community Center and Continuous Education Center, IAU University, Saudi Arabia.	Part-time
3	2002	2005	Scientific consultant: Sciences Affiliation with Mubarak City for Scientific Research and Application.	Part-time



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Bioprocess Develop. Department of Bioprocess	
Development for three years	

# Volunteer Work

#	From	То	Type of Volunteer	Organization
1	2020	2021	"Talented program" in Research	Ministry of Education
2	2010	2016	Scientific Advisor	IFS international funding organization
3	2010	present	International reviewer	Many international journal (See Publon)

# Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	Professional user, skills in the use of professional softwares, LMS, programs and applications in the field of bioinformatics and molecular biology, statistical experimental design.			
2	Experienced in molecular techniques and gene cloning			
3	Practitioner and well experienced in Quality and Accreditation			
4	Practitioner and well experienced in assessment quality in higher education			
5	Well experienced in teaching and learning methodologies and application of new techniques			
6	Researcher and trainer in the field of microbiology and microbial biotechnology			
7	Consultant in the field of microbiology, biotechnology and environmental health			

# Last Update

12-10-2021