

CURRICULUM VITAE

Name: Mahmoud Abd El-Megead Yassien
Date of Birth: 27 September, 1961
Place of Birth : Cairo, Egypt
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Present Title and Affiliation :

Professor
Department of Microbiology
Faculty of pharmacy,
King Abdul Aziz University, Jeddah, Saudi Arabia

Academic Background

Degree & Date	Field	Institution
- Ph. D. (1996) Microbiology Cairo, Egypt.	Pharmaceutical	Dept. of Microbiology and Immunology, Faculty of pharmacy, Cairo University,
- M. Sc. (1990) Microbiology Cairo, Egypt	Pharmaceutical	Dept. of Microbiology and Immunology, Faculty of pharmacy, Cairo University,
- B. Sc. (1984) Microbiology Cairo, Egypt	Pharmaceutical	Dept. of Microbiology and Immunology, Faculty of pharmacy, Cairo University,

Visiting other Universities to participate in research work

1. *Southern Illinois University, School of Medicine, Internal Medicine, Subdivision of Infectious Diseases, Springfield, IL, USA.*
 - Work with Dr. Nancy Khardori
 - a. September 1993- December 1995 (Researcher Assistant)
 - b. August, 1998 for one month (Visitor Professor)
2. *Georgia State University, Faculty of Science, Department of Biology, Atlanta, Georgia, USA.*
 - Work with Dr Ahmed Abdelal, Dr. Donald Ahearn, Dr. Phang Tai, Dr. Shongar Lu.
 - From July, 2000 to end of October, 2000

Academic and professional Appointments with dates

- 1984-1990 Demonstrator , Department of Microbiology , Faculty of Pharmacy, Cairo University, Cairo , Egypt.
- 1990-1996 Assistant Lecturer, Department of Microbiology, Faculty of Pharmacy, Cairo University, Cairo, Egypt.
- 1990-1992 Research Associate, Department of Pharm./Microbiology Faculty of Pharmacy , King Saud University, Riyadh, Saudi Arabia.
- 1993-1995 Ph.D. student in Department of Internal Medicine, Division of Infectious Diseases, Southern Illinois University, School of Medicine . Springfield, Illinois , USA.
- 1996-1997 Lecturer, Department of Microbiology and Immunology, Faculty of Pharmacy , Cairo University, Cairo , Egypt.
- 1997-2001 Lecturer, Department of Microbiology and Immunology, Faculty of Pharmacy , Ain-Shams University, Cairo , Egypt.
- 1998 Postdoctor visitor for one month in Department of Internal Medicine, Division of Infectious Diseases, Southern Illinois University, School of Medicine . Springfield, Illinois , USA.
- 2000 Postdoctor fellowship for 4 months in Department of Biology, Faculty of Arts and Science, Georgia State University, Atlanta, Georgia, USA
- July 2001-August 2002 Associate Professor and head of the department of Microbiology and Immunology, Faculty of Pharmacy, Ain-Shams University
- July 2002-June 2006 Associate Professor in the department of Microbiology, Faculty of Pharmacy, King AbdulAziz University
- July 2006-present Professor in the department of Microbiology, Faculty of Pharmacy, King AbdulAziz University

Teaching Experience

Participate in teaching the following courses:

- I. Courses taught at Department of Microbiology and Immunology, Faculty of Pharmacy, Ain-Shams University, Cairo, Egypt
- General microbiology
 - Immunology
 - Pharmaceutical Microbiology
 - Biotechnology and Genetic Engineering
 - Medical Microbiology (Bacteriology, virology and Mycology)
 - Public health
 - Diploma of Pharmaceutical Microbiology
 - Diploma of Biotechnology
- II. Courses taught at Department of Microbiology and Immunology, Faculty of Pharmacy, Cairo University, Cairo, Egypt
- Pharmaceutical Microbiology
 - Medical Microbiology, Parasitology, Hygiene, and Hematology
 - Diploma of Pharmaceutical Microbiology
 - Diploma of Industrial Microbiology
 - Diploma of Hospital Pharmacy
- III. Courses taught at Department of Pharmaceutics/ Microbiology, Faculty of Pharmacy, King Saud University, Riyadh, Saudi Arabia
- MIC. 411 Principles of pharmaceutical Microbiology.
 - MIC. 412 Pathogenic Micro-Organisms and public Health.
 - path. 413 Diagnostic pathology and Microbiology.

IV. Courses taught at Department of Microbiology and Immunology, Faculty of Pharmacy, Al-Canal University, Ismaelia, Egypt

- Medical Microbiology, parasitology, Hygiene, and Hematology

V. Courses taught at Department of Microbiology and Immunology, Faculty of Pharmacy, 6th October University, 6 October city, Egypt

- General and Pharmaceutical Microbiology

- Public health

VI. Courses taught at Faculty of Pharmacy, King Abdul Aziz University, Jeddah, Saudi Arabia.

- Pharmaceutical Microbiology, PPM 301

- Quality control,

- Pharmaceutical Biotechnology, PNP 421

VI. Courses taught at Faculty of Dentistry, King Abdul Aziz University, Jeddah, Saudi Arabia. For graduate students

- Sterilization and disinfection

- Chemotherapeutic agents

Laboratory and Research Experience

A. protozoology

- Isolation, cultivation, purification, and stock maintenance of
Trichomonas vaginalis

- Studying the antitrichomonal activity of drugs using a developed cup-plate diffusion technique

B. Bacteriology

- Bacterial growth, identification, and biochemical characterization

- In-vitro susceptibility testing

- In-vitro bactericidal activity of antimicrobial agent

- Therapeutic efficacy of antimicrobial agent (in-vivo studies)

- Effects of antimicrobial combinations

- Mechanism of resistance of the multi-resistance organisms to

- Quinolones and other unrelated antimicrobial agents

C. Immunology

- Effect of drugs on the normal immune capabilities

- Serological techniques including radial immune diffusion, complement fixation, and ELISA techniques

- Cell separation and viability determination

- Hemolytic plague assay

- Studying the anti-inflammatory effect of drugs

D. Molecular Biology, Genetic engineering, and biotechnology

- Isolation of plasmid DNA

- Resolution of DNA plasmid (by electrophoresis)

- Transformation of competent *E. Coli*

- Preparation of outer membrane proteins and their analysis by polyacrylamide gel electrophoresis

- Studying the microbial permeability by uptake technique

- Isolation of DNA gyrase and determination of its susceptibility to quinolones by DNA gyrase assay

- Preparation of clone cells

- Isolation and molecular characterization of chromosomal multidrug resistance gene.

- Microbial production of biological products.

- Environmental control of microbial growth and production of metabolites.
- Improvement of microbial production.

E. Bacterial adherence

- Qualitative and Semiquantitative measurement of glycocalyx production and bacterial adherence
- Establishment of in-vitro mode of catheter colonization
- Studying the effect of drugs on glycocalyx production and bacterial adherence to plastic surfaces and catheters
- Establishment of in-vivo model for studying the therapeutic efficacy of drugs in the treatment of biofilms associated infection
 - Establishment of in-vitro model of microbial adherence to human endothelial cells for studying the antiadherent activity of drugs
- Establishment of in-vitro model of microbial counting by rapid ATP assay. This technique was used as rapid technique for counting the adherent cell to catheters

Abstracts and lectures that presented in Conferences

1. El-Tayeb, O.M., El-Kersh, T.A., Shoeb., H.A., and Yassien, M. A. (I) Screening for antitrichomonal activity (using a developed cup-plate technique). The pharmaceutical Society of Egypt, Conference of pharmaceutical Society, Cairo , Egypt., 23-26th Feb., 1988.
2. El-Tayeb, O.M., El-kersh, T.A., shoeb., H.A., and Yassien, M.A. (II) Factors affecting the antitrichomonal productivity of *Streptomyces violaceolatus* (S48). The pharmaceutical Society of Egypt, Conference of pharmaceutical Sciences, Cairo, Egypt., 25-28th Feb., 1990.
3. El-tayeb, O.M., El-kersh, T.A., shoeb., H.A., and Yassien, M. A. (III) A developed synthetic medium for antitrichomonal productivity of *Streptomyces violaceolatus* (S48).The pharmaceutical Society of Egypt, Conference of pharmaceutical Society, Cairo , Egypt., 25-28th Feb., 1990.
4. El-tayeb O.M., El-kersh, T.A., shoeb., H.A., and Yassien, M. A.(IV) Selection *Streptomycin violacteolatus* (S48), variants with enhanced antitrichomonal productivity Society, of Egypt., Conference of pharmaceutical Society, Cairo , Egypt., 25-28th Feb., 1990.
5. Yassien, M., Ahmedy, A., Rasmi, S., Khardori, N., and Toama, M . In vitro activity of quinolones against multi- resistant gram negative bacilli in combination with beta-lactams and aminoglycosides. Annual ASM (American Society for Microbiology) meeting, Las Vegas, Nevada, USA. May, 1994.
6. Yassien, M., M., khalifa, A., Toama, M., Garcia, R., and khardori, N. Modulation of the biofilms of *Pseudomonas aeruginosa* by quinolones in an in In vitro model of vascular catheter colonization. ICAAC, Orlando, Florida, USA. October, 1994.
7. Yassien, M., M., khalifa, A., Rabinovich, S., khardori, N. ., and Toama, M., In vitro Antimicrobial susceptibility patterns of the multi- resistant gram-negative isolates.7th European Congress of Clinical Microbiology and Infectious Diseases, Vienna, Austria, March, 1995.
8. Yassien, M., Toama, M., Watabe, k., Rabinovich, S., khardori, N. The role of outer membrane permeability and efflux pump of multi-resistant gram-negative clinical isolates in

their susceptibility to ciprofloxacin. 7th European Congress of Clinical Microbiology and Infectious Diseases, Vienna, Austria, March, 1995.

9. Yassien, M., Ahmedy, A., and Khardori, N. Effect of biofilm on the susceptibility *pseudomonas aeruginosa* to ciprofloxacin, amikacin, and ceftazidime alone and in combination with clarithromycin. Annual ASM Meeting, Washington, D.C.USA. May, 1995.

10. Yassien, M., Watabe, K., Toama, M., and Khardori, N. Outer membrane alterations in the multiresistant mutants of *Pseudomonas aeruginosa*, *klebsiella pneumoniae*, and *Enterobacter cloacae* selected by ciprofloxacin. Annual ASM Meeting, Washington, D.C. USA. May, 1995.

11. Yassien, M., Domst, J., Prasad, P., Soler, R., and khardori, N. The effect of antimicrobial combinations on in vitro activity of gentamicin against *Klebsiella pneumoniae*, *Enterobacter cloacae*, and *Pseudomonas aeruginosa*, isolates. Annual ASM Meeting New Orleans, Florida, USA. May, 1996.

12. Yassien, M., Toama, M., Patel, B., and Khardori, N. The in-vivo activity of ciprofloxacin alone and in combination with clarithromycin against vascular catheter infection due to *Pseudomonas aeruginosa*. 9th International Symposium on Infections in the Immunocompromised Host, Assisi, Italy. 23-26 Jun, 1996.

13. H. Ewis, C. Lu, M. A. Yassien, and A.T. Abdelal. Molecular cloning and characterization of a *Salmonella paratyphi B* rma gene that causes multiple-drug resistance in *Escherichia coli*. 41st ICAAC, Chicago, USA. 22-25 December, 2001

14. M. A.M. Yassien and S. M. Al-Ansari. Effect of N-acetylcysteine, ambroxol, and bromohexineon biofilm formation and bacterial adherence. 9th International Pharmaceutical Science Meeting and Exposition, Riyadh, Saudi Arabia. 17-21 December, 2005.

15. M. A.M. Yassien and S. M. Al-Ansari. Alteration of outer membrane proteins in multiple drug resistance mutants of different gram-negative isolates selected by ciprofloxacin. The 7th International Saudi Pharmaceutical Conference March 19th to 21st, 2007

16. M. A.M. Yassien. Genetic engineered vaccines. Continuing Pharmacy Education program. 13 March 2007.

17. M. A.M. Yassien. Genetic engineered vaccines. Clinical Microbiology Work Shops and Lecture. 19-20 May 2007.

Review published

Nancy khardori and Mahmoud A.M. Yassien (1995). Biofilms in Device-related infections . Journal of Industrial Microbiology . 15:141-147.

Educational review

1. Nancy Khardori and Mahmoud A. M. Yassien. (1998). Microcolonies of bacteria growing on a catheter segment. In American Society for Microbiology, Education.

2 Nancy khardori and Mahmoud A.M. Yassien 2002. Biofilm attributes: Beneficial and detrimental. In MicrobeLibrary.Org., An Education Program of American Society of Microbiology.

<http://www.microbelibrary.org/>

3. Nancy khardori and Mahmoud A.M. Yassien 2002. *Streptococcus pneumoniae* and *Staphylococci*. In Microbiology and Immunology ON-LINE, An Education Program of American Society of Microbiology.

<http://www.med.sc.edu:85/fox/strep-staph.htm>

Published Manuscripts

1. Yassien, M A., Ahmedy, A., and Khardori, N, and Toama, M. (1995). Modulation of biofilms of *Pseudomonas aeruginosa* by quinolones. Antimicrobial agents and Chemotherapy. 39(10): 2262-2268.

2. Nancy khardori and Mohmoud A.M. Yassien . (1995). Tolerance of *Staphylococcus epidermidis* grown from indwelling vascular catheters to antimicrobial agents. Journal of Industrial Microbiology. 15: 148-151.

3. M. A. Yassien. (1997). Effect of metal ions and pH on the activity of fluoroquinolones as eradicating agents against biofilm associated *Pseudomonas aeruginosa*. Egypt. J. Biotechnol. 2: 70-82

4. H.H. Radwan and M. A. Yassien. (1998). Characterization of dioxane and tetrahydrofuran degrading microorganisms and isolation of responsible plasmid from a locally isolated *Pseudomonas* sp. Az. J. Pharm. Sci., 22:72-81

5. M. H. Elafandy, M. M. El- Mahdy, M. M. Sherif, M.A. Yassien. (1999). Aerobic and anaerobic bacteria isolated from blood after immediate complete denture insertion. Ain-Shams Dental Journal 4:363-370

6. M. A. Yassien and N. Khardori (1999). Effects of Ciprofloxacin and Protamine Sulfate on the Adherence of *Pseudomonas aeruginosa* to Human Endothelial Cells. Egypt. J. Med. Microbiol. 8: 611-617

7. M. A. Yassien and H.H. Radwan. (2000). Outer membrane alterations in multidrug resistant mutant of *Providencia stuartii* selected by norfloxacin. Egypt. J. Biotechnol., 7;180-192

8. Yassien, M.A., Ahmedy, A., and Khardori, N. (2000). Effect of biofilm on the susceptibility *pseudomonas aeruginosa* to ciprofloxacin, amikacin, and ceftazidime alone and in combination with clarithromycin. Al-Azhar J. Pharm. Sci. 43:16-30

9. Yassien, M.A., Toama, M., patel, B., and Khardori, N. (2000). The in-vivo activity of ciprofloxacin alone and in combination with clarithromycin against vascular catheter infection due to *Pseudomonas aeruginosa*. Al-Azhar J. Pharm. Sci. 43:31-44

10. W. Faisal, N.A. Hassouna, M. A. Yassien (2000). Effect of nicardipine, verapamil, and reserpine on the susceptibility of efflux mediated multidrug resistant *Salmonella paratyphi B* mutant selected by ciprofloxacin. Egypt. J. Biotechnol. 8:208-221.
11. M.A. Yassien, E. N. Ahanotu, D. G. Ahearn (2000). Evaluation of primary adhesion of *Pseudomonas aeruginosa*, *Staphylococcus epidermidis*, and *Serratia marcescens* to soft contact lenses by rapid ATP analysis. Egyptian Journal of Biomedical Science 6:288-298
12. M. A. Yassien, H. Ewis, C. Lu, and A.T. Abdelal (2001). Molecular characterization of a *Salmonella paratyphi B* gene (RoxA) which causes multiple-drug resistance in *Escherichia coli*. Egypt. J. Biotechnol.9:186-199
13. M. Yassien and N. Khardori. (2001). Interaction between biofilms formed by *Staphylococcus epidermidis* and quinolones. Diagnostic Microbiology and Infectious Diseases 40: 79-89.
14. M. A. Yassien, H. Ewis, Chung Dar Lu, and A.T. Abdelal. (2002). Molecular cloning and characterization of a *Salmonella paratyphi B* rma gene that causes multiple-drug resistance in *Escherichia coli*. Antimicrob. agents Chemother. 46:360-366
15. M. Hafez, N.A. Hassouna, M. A. Yassien. (2003). Antiadherent activity of *Streptomyces erythrogriseus* against glycocalyx producer *Pseudomonas aeruginosa*. Egypt. J. Biotechnol. 9:1-27.
16. K.M.A.Abo Shanab,N.A.Hassouna, **M.A.M. Yassien**, M.M.M.ABO EL-Wafa (2003). Protease production by *Streptomyces pseudoehinosporeus* and *Bacillus megaterium*. N.Egypt.J.Microbiol.**vol.6** (september):33-52.
17. K.M.A.Abo Shanab,N.A.Hassouna, **M.A.M. Yassien**, M.M.M.ABO EL-Wafa (2003). Characterization of crude protease enzyme produced by *Streptomyces pseudoehinosporeus* and *Bacillus megaterium*. N.Egypt.J.Microbiol.**vol.6** (september):71-84.
18. M. A. Yassien, H. Ewis, Chung Dar Lu, and A.T. Abdelal. (2002). Molecular Characterization of *Salmonella paratyphi B* gene (RecA) which confers fluoroquinolone resistance in *Escherichia coli* DH5 α . Egyptian Journal of Biotechnology. 12 : 413-431
19. Mahmoud A.M. Yassien (2003). Generation of Bioluminescent *Pseudomonas aeruginosa* and its usage in the determination of bacterial adhesion by bioluminescence assay. Egypt. J. Biotechnol 15: 84-100.
20. Soad M. Jaber and Mahmoud A.M. Yassien. (2004) . Seroprevalence of *Helicobacter pylori* infection in children in Jeddah, Saudi Arabia. N. Egypt. J. Microbiol 9:23-40
21. Mahmoud A.M. Yassien. (2004). Ambroxol induction of multiple drug in *Pseudomonas aeruginosa* and *Enterobacter cloacae*. Egypt. J. Biotechnol. 18:1-15.

22. Mahmoud Yassien and Nancy Khardori. (2004). Biofilms formation by *Staphylococcus epidermidis* : Modulation by fluoroquinolones. Egypt. J. Biomed. Sci. 16: 1-21.
23. Mahmoud Yassien and Soliman M. Al-Ansari. (2005). Effect on non-steroidal anti-inflammatory and mucolytic agents on the adherence of *Pseudomonas aeruginosa* and *Staphylococcus aureus*. Egypt. J. Biomed. Sci. 17: 1-23.
24. Ahmed Adel, Mohammed Mabrouk, Mahmoud Yassien, Nadia Hassouna. (2006). Production of Glucose Isomerase by *Streptomyces griseostramineus*. N. Egypt. J. Microbiol. 13: 84-104.
25. Ahmed Adel, Mohammed Mabrouk, Mahmoud Yassien, Nadia Hassouna. (2006). Improvement of glucose isomerase production by *Streptomyces griseostramineus*. N. Egypt. J. Microbiol. 13: 113-130.
26. Mahmoud Yassien and Soliman M. Al-Ansari. (2005). Bactericidal activity of levofloxacin alone and in combination with clindamycin and N-acetylcysteine against biofilm *Pseudomonas aeruginosa* and *Staphylococcus aureus* . Egypt. J. Biomed. Sci. 19:99-112.
27. Mohammed M. Hafez, Mohammad M. Aboulwafa, Mahmoud A.M. Yassien, Nadia A. Hassouna. (2005). The role of mammalian cell surface receptors on the adherence of *Staphylococcus aureus* and *Pseudomonas aeruginosa*. Egypt. J. Biomed. Sci. 19: 120-142
28. Mahmoud Yassien. (2006). Outer membrane proteins and virulence factors of *Pseudomonas aeruginosa* and *Escherichia coli* after postantibiotic effects induced by different antimicrobial agents". New Egypt. J. Microbiol. January 2006. 13: 1-16
29. Mahmoud Yassien. (2006). Alterations of outer membrane proteins in multiple-drug resistance mutants of *Proteus mirabilis* selected by levofloxacin". New Egypt. J. Microbiol. February, 2006, 22: 1 -15
30. Mahmoud Yassien and Soliman M. Al-Ansari. (2006). Effect of different antimicrobial agents on *Staphylococcus aureus* adhesiveness and biofilm formation". New Egypt. J. Microbiol. January 2006, 13: 29-51
31. Mohammed M. Hafez, Mohammed Abulwafa, Mahmoud Abdul Megead Yassien, and Nadia A. Hassouna (2008). Activity of some mucolytics against bacterial adherence to mammalian cells. Appl. Biochem. Biotechnol. (Accepted for publication)
32. Mohammed M. Hafez, Mohammed Abulwafa, Mahmoud Abdul Megead Yassien, and Nadia A. Hassouna (2008). Role of different classes of mammalian cell surface molecules in adherence of coagulase positive and coagulase negative staphylococci. J. Basic Microbiology 48:1-10.
33. Mahmoud A.M. Yassien, Soliman M. Al-Ansari, and Abdulrahman M. (2009) Alahdal. Mechanisms of Multiple-Drug Resistance in *Pseudomonas aeruginosa*. Arab Journal of Laboratory Medicine (Accepted for publication).

Research Projects

1. المشروع الأول :

- عنوانه " :دراسة تطور المقاومة المتعددة للأدوية عند الجراثيم سالبية الجرام "

"Development of multiple drug resistance in Gram negative bacteria"

مدة المشروع البحثي :من أكتوبر 2001 حتى سبتمبر 2003

المشروع البحثي مدعم من اتحاد الصيدلة العرب

2. المشروع الثاني :

- عنوانه " :دراسات لمنع التصاق البكتريا بخلايا الثدييات "

"Studies on the prevention of bacterial adherence to mammalian cells"

مدة المشروع البحثي :من 2001/2000 إلي 2002/2001

المشروع البحثي مدعم من لجنة شؤون المجتمع و البيئة بجامعة عين شمس

3. المشروع الثالث :

- عنوانه " :دراسات لمنع التصاق البكتريا ،التي لها القدرة علي تكوين غشاء حيوي، بأسطح خلايا الإنسان و الأدوات الطبية الموضوعه داخل الجسم . "

"Studies on the prevention of adherence of biofilm associated bacteria to human cells and implanted medical devices" .

بدأ العمل في هذا المشروع البحثي منذ عام 2003 وتم الانتهاء منه عام 2005

المشروع البحثي مدعم من قبل وكالة الجامعة للدراسات العليا والبحث العلمي بجامعة الملك عبد العزيز.

4. المشروع الرابع :

-عنوانه :“تطور صفة المقاومة المتعددة في الخلايا البكتيرية سالبية الجرام”

"Development of multiple-drug resistance in gram negative bacteria" .

بدأ العمل في هذا المشروع البحثي في يناير 2006 لمدة عام واحد

البحث مدعم من قبل معهد البحوث والاستشارات بجامعة الملك عبد العزيز .

5. المشروع الخامس :

-عنوانه :“تأثير أنواع مختلفة من مضادات الميكروبات ، بعد ازالتها من الوسط، علي عزلات إكلينيكية سالبية الجرام”

"Postantibiotic effects of different antimicrobial agents on gram-negative clinical isolates" .

بدأ العمل في هذا المشروع البحثي في يناير 2008 وجاري العمل في المشروع

البحث مدعم من قبل معهد البحوث والاستشارات بجامعة الملك عبد العزيز