

Amro Hanora

Professor of Microbiology and Immunology
Suez Canal University

Ismailia, Egypt

Tel.: +20 (64) 3113426 / +20 (10) 00323406

Fax: +20 (64) 3230741

E-mail: ahanora@yahoo.com, a.hanora@scuegypt.edu.eg

Personal

Name: Amro Mohamed Said AbdelLatif Hassan Hanora

Date of birth: 19 September, 1970 , Egypt

Gender: Male

Nationality: Egyptian

Marital Status: Married

Academic Qualifications

Ph.D.: Lund University, November 2005, Biotechnology Department.

B.SC.: Alexandria University, May 1992, Pharmaceutical science.

Work history

- Professor of Microbiology and Immunology, Faculty of pharmacy, Suez Canal University since 4-9-2016.
 - Working Head of Department of Microbiology and Immunology from October 2012 to October 2015
 - Associate professor in Microbiology and Immunology Department, Faculty of Pharmacy, Suez Canal University from 31/7/2011- 3/9/2016.
 - Lecturer in Microbiology and Immunology Department, Faculty of Pharmacy, Suez Canal University from 28/2/2006 – 30/7/2011.
 - Instructor in Microbiology and Immunology Department, Faculty of Pharmacy, Suez Canal University from 1994 to 2001.
-

Statement of teaching activities

List of courses taught

Undergraduates

A) Clinical Pharmacy program

- 1- **Cell biology (MD 102):** cell components, organelles, quorum sensing, protein, protein structure protein trafficking.
 - 2- **General Microbiology and Immunology (PM 401):** introduction, basic structure of bacteria cells, microbial metabolism, microbial genetics, Basic immunology.
 - 3- **Parasitology (MD 406):** Nematodes (common features, classification, characters, pathogenesis, diseases, treatment and
-

control of different members).

- 4- **Clinical Microbiology (PM 502):** different diseases caused by different classes of bacteria, viruses, fungi, lab diagnosis, treatment and control of different microbial infections.
- 5- **Pathophysiology (MD 507):** Introduction to pathophysiology, cell injury, inflammation and immune response, autonomic nervous system in health and disease, endocrine disorders, pancreatic disorders, fluid and electrolyte imbalance, vascular and haematological disorders, disease of urinary, pulmonary and digestive systems.
- 6- **Pathology (MD 608):** The study of the etiology, principle diagnostic features, and main characteristics of diseases of the cardiovascular system, respiratory tract, central nervous system and other important organ systems of the body.
- 7- **Pharmaceutical Microbiology (PM 704):** sterilization and different sterilization methods, Non antibiotics antimicrobial agents, evaluation of antibiotics and non antibiotics antimicrobial agents, microbiological quality control of pharmaceutical products, biological products (vaccines and sera), cosmetics and toiletries.
- 8- **Pharmaceutical Biotechnology (PM 703):** fermentation technology, major biotechnological products, biotransformation, bio insecticides, etc., recombinant DNA techniques, gene therapy, production of monoclonal antibodies, applications of genetic engineering in biotechnology.
- 9- **Public health (MD 710):** basic concepts of public health and epidemiology, communicable and non communicable diseases, occupational diseases, environmental health, mental and family health, nutrition, modeling in public health, disasters and public health.

B) Old Pharmacy program

- 1- **Pharmaceutical Microbiology:** introduction, basic structure of bacteria cells, microbial metabolism, microbial genetics, sterilization and different sterilization methods, Non antibiotics antimicrobial agents, evaluation of antibiotics and non antibiotics antimicrobial agents, microbiological quality control of pharmaceutical products, biological products (vaccines and sera), cosmetics and toiletries, fermentation technology, major biotechnological products.
 - 2- **Public Health:** Nematodes (common features, classification,
-

characters, pathogenesis, diseases, treatment and control of different members). Different diseases caused by different classes of bacteria, viruses, fungi, lab diagnosis, treatment and control of different microbial infections.

C) New Pharmacy program

- 1- **Cell biology (MD 101):** cell components, organelles, quorum sensing, protein, protein structure protein trafficking.
- 2- **General Microbiology and Immunology (PM 201):** introduction, basic structure of bacteria cells, microbial metabolism, microbial genetics, Basic immunology.

Postgraduates

A) Old program

- 1- Industrial Microbiology
- 2- Immunology
- 3- Virology
- 4- Elective topics

B) New program

- 1- Biotechnology
- 2- Sterilization

C) PharmD program

- Pharmaceutical Immunology
- Teaching Bioinformatics and Statistical genetics for undergraduate students, Faculty of computer and informatics, Suez Canal University.
- Teaching Bioinformatics course for graduate students, Faculty of Science, Suez Canal University.
- Teaching theoretical and supervising the practical courses of Microbiology and Immunology, Faculty of Pharmacy - Sinai University.

Examiner

- Microbiology and Immunology for under and postgraduate students, Faculty of Pharmacy, Suez Canal University, Ismailia, Egypt.
 - External oral examiner for undergraduate students Cairo University – Tanta University - Ain Shams University – Zagazig University – Helwan University- Azhar University- Future University – Nahda University - Sinai University.
-

**Statement of
research
interests**

Fields of research:

- Natural products biosynthetic gene clusters.
- Whole genome sequencing for drug discovery.
- Protein expression and purification.
- The effect of Quorum sensing (QS) and Quorum sensing inhibitors (QSI) derived from bacteria and eukaryotic organisms such as fungi and amoeba on secondary metabolite biosynthesis, biofilm formation and antibiotic resistance.
- Large-scale production and purification of biologically active compounds from cell cultures such as plasmid DNA vector for gene therapy applications and therapeutic proteins.
- Biodegradation of pharmaceutical compounds found in ground and underground waters.
- Occurrence of Pharmaceutical trace elements in environment. Microbial adherence to mammalian tissues: screening for non-antimicrobial antiadherent agents, mechanisms of antiadherent activity.
- Microbial resistance to different antimicrobial agents: Role of quorum system in resistance, mechanisms of multidrug resistance, phospholipases as virulence factors.
- Microbial virulence factors (detection, characterization, possible mechanisms of inhibition)

Hand on Experience:

- Strong hands-on skills including DNA, RNA and protein purification, electrophoresis analysis both PAGE, SDS-PAGE and agarose gel electrophoresis, PCR, RT-PCR, DGGE, DAPI staining, molecular
-

cloning, protein expression and DNA sequencing, different enzyme activity assays, and ELISA.

- Familiar with the most popular tools in Bioinformatics like Sequence analysis, Sequence alignment, Sequence similarity searches, BLAST, and Phylogenetic analysis.
- Mass spectroscopy, LC-MS, ESI-MS, MALDI-MS.
- Downstream process (DSP) applications and fermentation.

**Supervised
Thesis**

Supervision of graduate students and theses defenses

Thesis Completed:

PhD Thesis:

- 1- **Nagwa Hassan Mohamed Kamel Elnwshy**, Faculty of Science, Suez Canal University “Bio-remediation of some Pharmaceutical Residues in Aquatic Ecosystem” The student was graduated in 2012.
 - 2- **Marwa Essam Abdel Hamid Aly**, Faculty of Pharmacy, Cairo University “The Evolution of Shiga Toxins of *Enterohemorrhagic Escherichia coli* (EHEC) and possible application in reverse vaccinology” The student was graduated in 2014.
 - 3- **Noha Mohamed Mohamed ElShaffy**, Faculty of Veterinary Medicine, Suez Canal University “The inhibitory effect of normal honey on chromosome and plasmid encoded genes of mlti-drug resistance *S. aureus* isolated from different sources including fishes” student was graduated in 2015
 - 4- **Hany Rashed Abdel Saber Hashem**, Faculty of Pharmacy, Suez Canal University “Carbapenem and Multidrug Resistance in *Pseudomonas aeruginosa*” The student was graduated in 2015.
 - 5- **Mahmoud Mohamed Bendary Mohamed**, Faculty of Pharmacy, Suez Canal University “Molecular typing and detection of *Staphylococcus aureus* virulence and antibiotics resistance genes” The student was graduated in 2016.
-

Master thesis:

- 1- **Mona Radwan Ahmed El Sayed**, Faculty of Pharmacy, Suez Canal University “Molecular Characterization of Manzamine –producing Sponges from Red Sea” The student was graduated in 2009.
 - 2- **Shaimaa Mohamed Ismail Ali**, Faculty of Faculty of Veterinary Medicine, Suez Canal University “ Molecular Characterization of Bacterial Species isolated from clinical and subclinical mastitis in cattle” The student was graduated in 2012.
 - 3- **Merhan Nabih El-Mansy**, Faculty of Dentistry, Suez Canal University “Expression of B-cell lymphoma-2 at late stages of hamster pouch-dimethylbenz(a)anthracene model” The student was graduated in 2012.
 - 4- **Marwa Mohamed Mahmud Resk**, Faculty of Science, Suez Canal University “Implanted Medical Devices and their Impact as a Reservoir for Recurrent Microbial Infection” The student was graduated in 2013.
 - 5- **Naira Mohamed Ahmed Lotfi**, Faculty of Science, Suez Canal University “Morphological and molecular responses of *Chironomus* species (Diptera, Chironomidae) to toxic compounds in Lake Manzala, Egypt” The student was graduated in 2014.
 - 6- **Ahmed Farouk**, Faculty of Faculty of Veterinary Medicine, Suez Canal University “”The student was graduated in 2015.
 - 7- **Mohammed Ramadan Gomaa Husdien**, Faculty of Pharmacy, Suez Canal University “Molecular Characterization of Human Skin Metagenome” The student was graduated in 2016.
 - 8- **Mohammed Salah Ali Attia**, Faculty of Pharmacy, Suez Canal University “Isolation and Molecular Characterization of Pathogen Causing Urinary Tract Infection and Their Susceptibility Testing for different Antibiotics” The student was graduated in 2016.
 - 9- **Hanaa Mohamoud Hasan Alam Eldin Ahmed**, Faculty of Computers
-

and Information, Helwan University “Mining of Hepatitis C virus Data for Egyptians in the newly developed Database (HCVDBegy) ”
The student was graduated in 2016.

(B) Theses in process

PhD Thesis:

- 1- **Amira Hashesh**, Faculty of Science, Suez Canal University
“Biotechnological production of chitosan from stone crab chitin impact of biological and genetic factors” PhD 2012
- 2- **Farag Mari**, Faculty of Pharmacy, Suez Canal University “Preparation and Characterization of Metal Nanoparticles Incorporated with Potential Anticancer Agents using Biotechnological and Gamma Irradiation Processes” PhD 2013
- 3- **Mohamed Abd ElBast Mourad**, Faculty of Agriculture, Suez Canal University “Potential Use of Nitrogen Fixers as Plant Growth Promoting Rhizobacteria” PhD 2013
- 4- **Eman Gouda**, Faculty of Advanced Science, Beni Suif University, Study new technique for vaccine development, Reverse Vaccinology, PhD 2014.
- 5- **Hala Salah Helal**, Faculty of Pharmacy, Cairo University “Mining Red Sea microbiota for bioactive compounds and their potential application in nanoparticles-based combinations” PhD 2015.
- 6- **Samar Moustafa Abd El Mawla El Adawy**, Faculty of Science, Suez University “Isolation and Molecular Characterization of Antimicrobial and Antitumor Producer Bacteria from Red Sea Nudibranch” PhD 2015.
- 7- **Rehab Emam Farhan Emam**, Faculty of Pharmacy, Suez Canal University “Molecular Epidemiology and Genotyping of *Pseudomonas aeruginosa* Strains Isolated From Burns and Wounds Infections” PhD 2015.

Master thesis:

- 1- **Amany**, Faculty of Science, Suez Canal University “Evaluation of the molecular toxicity of the Egyptian scorpion *Leiurus quinquestratus* venom” Master 2012.
 - 2- **Nada Mohamed Ezz El Deen**, Faculty of Pharmacy, Suez Canal University “Detection of Nanobacteria in Kidney stones” Master 2012.
 - 3- **Asmaa Mohamed Hesham**, Faculty of Pharmacy, Suez Canal University “Molecular Characterization and Genotyping of HBV in Patients with Chronic Hepatitis in Suez Canal Area” Master 2012.
 - 4- **Nahla Hasan Mohamed Mahmoud Tealap**, Faculty of Pharmacy, Suez Canal University “Resistance of *Enterobacteriaceae* for Aminoglycosides, Chloramphenicol, Macrolides and Tetracycline” Master 2013.
 - 5- **Tamer Mohamed Ali Moussa**, Faculty of Pharmacy, Suez Canal University “Molecular Resistance of *Staphylococcus aureus* for antibiotics” Master 2013.
 - 6- **Mariam Emil**, Faculty of Pharmacy, Suez Canal University “” Master 2013.
 - 7- **Manar El Samak**, Faculty of Pharmacy, Suez Canal University “Biosynthetic potential of bioactive producer from Family Actinomycetes” Master 2013.
 - 8- **Heba Samir Mohamed Khalil**, Faculty of Dentistry, Suez Canal University “Evaluation of the effect of Titanium Dioxide Nanoparticles addition in conventional glass Ionomer as a restorative material in Pediatric Dentistry” Master 2014.
 - 9- **Hossamuddin Hassan Mohammed El-Feky**, Faculty of Pharmacy, Suez Canal University “Biosynthetic potential of microbiota associated with the marine sponges in Red Sea” Master 2015.
 - 10- **Engy Mahmoud Ahmed**, Faculty of Pharmacy, Suez Canal
-

University “Antiviral activity of Nano-particle ribavirin against measles virus” Master 2015.

- 11- **Mahmud Mohammed Bakr Arabi**, Faculty of Pharmacy, Suez Canal University “The Use of Silver Nanoparticles to Control Biofilms Growth in Sterile Rooms” Master 2014.
 - 12- **Ahmed**, Faculty of Science, Port Said University “” Master 2015.
 - 13- **Ramadan Yahia**, Faculty of Pharmacy, Suez Canal University “Production of quorum sensing by marine derived bacteria” 2013.
 - 14- **Dalia Salah Mohamed Zidan**, Faculty of Science, Suez Canal University “Molecular Studies on secondary metabolites production by Actinomycetes isolated from groundwater in South Sinai” Master 2015.
 - 15- **Dalia Magdy Mahmoud Megahd**, Faculty of Pharmacy, Suez Canal University “The application of reverse vaccinology for the development of new vaccine candidates against *Staphylococcus aureus*” Master 2015.
 - 16- **Mohamed Abdelmoinem**, Faculty of Pharmacy, Suez Canal University “Testing the immunogenicity of the purified proteins selected by reverse vaccinology for the development of new vaccine candidates against *Staphylococcus aureus*” Master 2015.
 - 17- **Mohamed Reda**, Faculty of Pharmacy, Suez Canal University “The expression and purification of proteins selected by reverse vaccinology for the development of new vaccine candidates against *Staphylococcus aureus*” Master 2015.
 - 18- **Nagat Abdulrahim Mohamed Abdulrahim**, Fish Farming and Technology Institute, Suez Canal University “Screening For Quorum-Sensing Inhibitors and Quenchers from Marine Derived Bacteria” Master 2016.
-

Theses defenses

A member in the committees in charge for defense of the following theses:

Master Theses (Reviewer and committee defense member)

- 1- **Marwa Essam Abdel Hamid Aly**, Faculty of Pharmacy, Cairo University “ Detection of relevant virulence factor of *Escherichia coli* isolates by conventional and molecular methods” Graduated 2011.
 - 2- **Mariam Hassan Abdel Elmoneam Haikal**, Faculty of Pharmacy, Cairo University “A study on the production of relevant biosurfactant(s) by biodegrading Bacterial isolates” Graduated 2014.
 - 3- **Haidy Talaat Zaki**, Faculty of Veterinary Medicine, Zagazig University “Beta –lactamases plasmid genes in ampicillin resistant *Escherichia coli*” Graduated 2014.
 - 4- **Walaa Ahmed Eraqi**, Faculty of Pharmacy, Cairo University “Bio-engineering for microbial production of Rhamnolipid(s) biosurfactant” Graduated 2014.
 - 5- **Nashwa Harb Mohamed Abdel Maksoud**, Faculty of Science, Suez Canal University “Assessment of Epstein –Barr virus and Cytomegalovirus in Chronic Hepatitis C virus Patients” Graduated 2014.
 - 6- **Alaa Abdel-Rhman Abd Alla Mohammed**, Faculty of Veterinary Medicine, Zagazig University “Gene expression analysis of some cytokines in response to thymoquinone activity” Graduated 2014.
 - 7- **Rahma Maghawri Abdel Hamid Issa**, Faculty of Pharmacy, Suez Canal University “Assessment of Epstein-Barr (EBV) virus infection in relation to the response of chronic hepatitis C virus infected patients to interferon based therapy” Graduated 2015.
 - 8- **Aya Ahmed Ali Mousa**, Faculty of Pharmacy, Suez Canal University “Molecular Characterization of Fluconazole Resistance in Clinical Isolates of *Candida* species” Graduated 2015.
-

9- **Ola Mohamed Sherif Abd EL Tawab**, Faculty of Pharmacy, Cairo University “Phenotypic and molecular characterization of bacterial isolates causing perioperative infections following open-heart surgeries in Aswan Heart Centre” Graduated 2015.

10- **Ahmed Abdel Fattah Abdel Moaty Saad Zayed**, Faculty of Pharmacy, Cairo University “Detection of antibiotic resistance gene(s) and sensitivity allele(s) in *E. coli*; a new approach of reversion of antibiotic-resistance by vector mediated delivery of the dominant sensitivity genes” Graduated 2015.

Scientific Production	<u>Thesis</u> <ul style="list-style-type: none">● Ph. D Thesis: Primary Recovery of Biologically Active Compounds Using Macroporous Monolithic Hydrogels.
Awards	<ol style="list-style-type: none">1- A long-term scholarship for PhD studies (Lund University) from Egyptian government.2- Visiting researcher to Professor Sidney Crow’s lab at the Department of Biology, Georgia State University, USA3- Post doctoral fellowship at Professor Margo Haygood’s lab at the Environmental and biomolecular systems department, Oregon Health and Science University (OHSU), Oregon, USA4- Post doctoral fellowship at Professor Sidney Crow’s lab at the Department of Biology, Georgia State University, USA, funded by Science and Technology Development Fund (STDF) (October 2009 to March 2010)
Conferences	<ol style="list-style-type: none">1- 25th International Symposium on Chromatography (ISC). October 4-8 Paris, France.2- 5th Swedish Bioinformatics workshop. November 26-27th, 2004 Lund, Sweden.3- 19th International Symposium on Microscale Bioseparation. MSB kobe. July 31-August 4, 2005 Kobe , Japan.1- CbioSep center days2- Invited speaker to workshop "Principle and Application on Biotechnology". Which hold at Biotechnology Research Center, Suez Canal University (SCU) from 5-9th of November 2006.3- Organization committee for “The First conference of the Egyptian Humboldtians, Science and technology without frontiers” Ismailia June

-
- 25-28, 2007. Oral presentation "Colors in Biotechnology"
- 4- Participation on "Teredinibacter turnerae Genome Annotation Jamboree" holds at Ocean Genome Legacy (OGL), Ipswich, USA 13-16 March 2008.
 - 5- Characterization of a modular polyketide synthase secondary metabolite biosynthetic gene cluster from *Teredinibacter turnerae*, a symbiont of shipworms (Teredinidae). Amaro Trindade-Silva, **Amro Hanora**, Vinicius Vizzone, Sherif Elshahawi, Joyce Yang, Dan Distel, Eric Schmidt, Carlos Soares, Margo Haygood. Poster at the 12th International Symposium on Microbial Ecology ISME12 August 17-22, 2008 Cairns, Australia.
 - 6- Prepared and presented the lectures and practical sessions in "Introduction to Bioinformatics" workshop held at Biotechnology Research Center (BRC) at Suez Canal university, Ismailia, Egypt between 17-19 February 2009
 - 7- Secondary metabolite biosynthetic gene clusters from *Teredinibacter turnerae*, a symbiont of shipworms (Teredinidae). **Amro Hanora**, Amaro Trindade-Silva, Vinicius Vizzone, Sherif Elshahawi, Joyce Yang, Dan Distel, Eric Schmidt, Carlos Soares, Margo Haygood. Poster at the 31th Egyptian Pharmacy Society Conference December 23-25, 2008 Cairo, Egypt.
 - 8- Analysis of Bacterial Communities of Two Red Sea Sponges. **Amro Hanora**, Mona Radwan, Dina M. Abo-Elmatty, Soad H. Abou-El-Ela, Russell T. Hill .Poster at The 16th Conference of The Egyptian Society For Medical Microbiology (ESMM) Cairo, Egypt between 20-21 March 2009.
 - 9- Identification of a Putative Catechol-Siderophore Biosynthetic Gene Cluster from the shipworm symbiont, *Teredinibacter turnerae*. Amaro Trindade-Silva, **Amro Hanora**, Brian Fishman, Yutaka Kato, Sherif Elshahawi, Carlos Soares, Margo Haygood. Poster at the Philippine Mollusk Symbiont ICBG Research Symposium May 11, 2009, Portland, Oregon.
 - 10- Characterization of a modular polyketide synthase secondary metabolite biosynthetic gene cluster from *Teredinibacter turnerae*, a symbiont of shipworms (Teredinidae). Amaro Trindade-Silva, **Amro Hanora**, Vinicius Vizzone, Sherif Elshahawi, Joyce Yang, Dan Distel, Eric Schmidt, Carlos Soares, Margo Haygood. Poster at the Philippine Mollusk Symbiont ICBG Research Symposium May 11, 2009, Portland, Oregon.
-

-
- 11- Secondary metabolome of *Teredinibacter turnerae*, a symbiont of shipworms (Teredinidae). Amaro Trindade-Silva, **Amro Hanora**, Brian Fishman, Vinicius Vizzone, Sherif Elshahawi, Joyce Yang, Dan Distel, Eric Schmidt, Carlos Soares, Margo Haygood. Poster at the Philippine Mollusk Symbiont ICBG Research Symposium May 11, 2009, Portland, Oregon.
 - 12- *Teredinibacter turnerae*, a multitasking symbiont of shipworms (Teredinidae). Margo Haygood, Joyce C. Yang, Nathan Ekborg, Yvette Luyten, Amaro Trindade-Silva, Carlos A.G. Soares, Sherif Elshahawi, **Amro Hanora**, Eric W. Schmidt, Naomi Ward, Jonathan Eisen, Jonathan Badger, and Daniel Distel. SIM Annual Meeting and Exhibition, Westin Harbour Castle- Toronto, ON Canada, July 26-30, 2009.
 - 13- Capacitive biosensor for quantification of plasmid DNA. Apon Numnuam, Martin Hedström, **Amro Hanora**, Proespichaya Kanatharana, Panote Thavarungkul, Bo Mattiasson. PACCON 2010, Pure and Applied International Conference. Challenges in chemistry for sustainable Development, January 21-23, 2010. Hold in Sunee Grand Hotel and Convention center, Ubonratchathani, Thailand.
 - 14- Exploring The Potential of Biosynthetic Gene Clusters in Sponge Associated Fungi From Red Sea, Egypt. **Amro Hanora** and Sidney Crow. Georgia State University Poster Day March 27, 2010. Atlanta, Georgia, USA
 - 15- The 1st international conference on advanced basic and applied sciences (ABAS) hold in Hurghada, Egypt between 6-9 November 2013.
 - 16- The 5th international conference on Natural Toxins hold in Cairo, Egypt between 17-19 December 2012.
 - 17- The 1st Young Researchers Conference at Suez Canal University, Ismailia, Egypt between 6-7 March 2013.
 - 18- Organized and lecturing the “Introduction to Bioinformatics Workshop” held at Biotechnology Research Center (BRC) at Suez Canal University, Ismailia, Egypt between 20-23 November 2013.
 - 19- The 10th Scientific Conference of Clinical Pathology hold in Ismailia, Egypt between 16-17 December 2013.
 - 20- Attend the workshop “Goals of information and communication technology project” hold at Faculty of pharmacy, Suez Canal University, Ismailia, Egypt in 23 December 2013.
 - 21- Organized and lecturing the “Principle of Biotechnology workshop” held at Biotechnology Research Center (BRC) at Suez Canal University, Ismailia, Egypt between 25-27 March 2014.
-

22- The 2nd international conference on advanced basic and applied sciences (ABAS) hold in Sokhna, Egypt between 2-4 April 2014.

23- The 6th international conference on Natural Toxins hold in Cairo, Egypt between 15-16 December 2014.

24- Organized and lecturing the “Molecular Biology techniques, Molecular Cloning (Bioinformatics) workshop” held Center of Excellence in Molecular and Cellular Medicine at Suez Canal University, Ismailia, Egypt in 8th of September 2015.

Workshop

1. Finding Funding and writing winning proposals:” An Overview of the Grants ARENA” held 9th June, 2009, University Council Meeting Hall, Suez Canal University.
 2. Education Enhancement of Pharmacy Courses, held 10th September, 2007, Suez Canal University- Faculty of Pharmacy.
 3. Clinical Pharmacy Seminars Series “ Georgia university – college of pharmacy – office of postgraduate continuing education& outreach” held 2nd November, 2009, Misr international university – faculty of pharmacy.
-

Funded Grants and Proposals:

Principle investigator

- 1- Fermentative Production of Antimicrobial Drug Leads from Red Sea Sponges-Associated Microbes (Project number 2009-6420, funded by SIDA, Sweden)

Co-principle investigator in the following research projects:

- 1- A Biotechnological Approach to the Development of Bioactive Compounds from Marine Fungi. (US-Egypt joint research grant) Grant number (BIO6-002-011)
 - 2- A Biotechnological Approach towards the Development of New Pharmaceuticals from Red Sea Sponge, *Latrunculia* species. (Egyptian Academy of Science and Technology).
 - 3- Isolation and Molecular Characterization of Manzamine-Producing Bacteria from Red Sea Sponges. (US-Egypt Joint research grant) Grant number (BIO8-002-011) Contract/Agreement Number: 229.
 - 4- Academic partner in Philippine Mollusk Symbiont International Cooperative Biodiversity Group (ICBG project) (website <http://www.pms-icbg.org/>).
 - 5- Development of *Staphylococcus aureus* Vaccine (Project 15001, Funded by STDF)
-

Membership In

- 1- Swedish center of Bioseparation (CbioSep).
 - 2- Biotechnology research center at Suez Canal University.
-

Professional Organizations:	3- Syndicate of Egyptian pharmacy. 4- Egyptian Society of Medical Microbiology. 5- Society of applied Microbiology. 6- Egyptian Society for Biotechnology.
Accreditation experience:	<ul style="list-style-type: none"> ● Technical expert for EGAC. ● Attend ISO/IEC 17025 Assessor Training course. ● Currently, technical assessor for EGAC. ● Attend ISO/IEC 17043 Assessor Training course. ● Attend ISO 13528 technical Aspect of PT course. ● Technical assessor to up to 50 testing laboratories in different variety of specialization including food, pharmaceutical, cosmetic and water analysis. ● Assessment of ISO microbiological standard methods including some of the followings: <ul style="list-style-type: none"> ○ Horizontal method for the enumeration of presumptive <i>Bacillus cereus</i> — Colony-count technique at 30 °C –ISO 7932:2004. ○ Horizontal method for the enumeration of Coliform — Colony-count technique–ISO 4832:2006. ○ Horizontal method for the enumeration of -glucuronidase-positive <i>Escherichia coli</i>- ISO 16649-2:2001. ○ Horizontal methods for the detection and enumeration of <i>Enterobacteriaceae</i>- ISO 21528-2:2004. ○ Horizontal method for the detection of <i>Salmonella</i> spp.- ISO 6579:2002. ○ Horizontal method for the enumeration of coagulase-positive <i>Staphylococci</i> (<i>Staphylococcus aureus</i> and other species) –ISO 6888-1:1999/Amd 2003 ○ Horizontal method for the detection and enumeration of presumptive <i>Escherichia coli</i>- 7251:2005. ○ Enumeration of presumptive <i>Escherichia coli</i>- ISO 118661:2005. ○ Detection and enumeration of <i>Legionella</i>-ISO 11731-2:2004. ○ Horizontal method for the enumeration of microorganisms- ISO 4833-1:2013. ○ Horizontal method for the enumeration of yeasts and moulds - ISO 21572-2:2008. ○ Qualitative and quantitative determination of HCV RNA.

-
- Qualitative and quantitative determination of HBV DNA.
 - Qualitative determination of Avian flu.
 - Qualitative determination of Swine flu.
 - Enumeration of yeasts & molds- BAM 2001 (Bacteriological Analytical Manual).
 - Aerobic plate count- BAM 2001 (Bacteriological Analytical Manual).
 - Enumeration of Fecal Streptococcus- Compendium of methods for the microbiological examination of foods (4th edition NMKL No.68 5th edition 2011)
 - Enumeration of thermotolerant fecal coliform- NMKL 125:1996.
 - Determination of bacterial endotoxin - EP: 2014 Method 2.6.14 (Method A) -BP:2014 Appendix XIVC (Method A).
 - Determination of Tetanus & Diphtheria Toxoids using flocculation method- EP: 2014 Monograph 0445 EP: 2014 Method 2.7.27.
 - Determination of Hepatitis B Surface Antibodies using ELISA Method- EP:2014 Monograph 0722.
 - Identification and determination of hemagglutinin content SRID assay- EP:2014 Monograph 0869 EP:2014 Monograph 0158.
 - Determination of Total Aerobic Microbial Count (TAMC)- USP ; 38 <61>.
 - Enumeration of Clostridium perfringens- ISO 7937: 2004.
 - Detection of Listeria monocytogenes- ISO 11290-1:1999 AMD 2004.
 - Detection of Shigella spp.- ISO 21567: 2004.
 - Detection of Campylobacter spp.- ISO 10272-1: 2006.
 - Enumeration of culturable micro-organisms- ISO 6222:1999
 - Detection and enumeration of intestinal enterococci- ISO 7899-2:2000
 - Detection and enumeration of Escherichia coli and coliform bacteria- ISO 9308-1:2000.
 - Detection and enumeration of Pseudomonas aeruginosa - ISO 16266:2006
 - Detection and enumeration of Salmonella- ISO 19250:2010
 - Detection and enumeration of Legionella- ISO 19250:2010.
 - Enumeration of yeasts & moulds colony - count technique in
-

products with water activity ≤ 0.95 - ISO 21527-2/2008.

- Sterility Testing- USP 35
- Test for Pyrogen (LAL), Total bacterial count, total fungal count, antibiotic assay- USP 32.
- Microbiological examination of non-sterile products: microbial enumeration tests- USP 38 part (61) (2015) & EP 8th edition.
- Microbiological examination of non-sterile products: microbial enumeration test: Detection of E.coli- USP 38 part (61) (2015) & EP 8th edition.

Reviewer

- Reviewer For Scientific proposal and projects
- Reviewer For Research Articles for publication, Reviewer for African Journal of Biotechnology (AJB), International Journal for Biotechnology and Molecular Biology Research (IJBMBR) and Research in Pharmaceutical Biotechnology (RPB)
- Reviewer For Research Articles for awards

Activities

- An active member of the implementation team of Higher Education Enhancement of Pharmacy Courses Project (HEEPF), Faculty of Pharmacy, Suez Canal University, Ismailia- Egypt.
- An active member of the implementation team of Quality Assurance and Accreditation Project (QAAP), Faculty of Pharmacy, Suez Canal University, Ismailia- Egypt.
- Member of executive Committee of Quality Assurance Unit - Faculty of Pharmacy, Suez Canal University, Ismailia- Egypt.
- Academic advisor for second year student (clinical Pharmacy Program).
- Clinical Pharmacy Coordinator from September 2011 to September 2015.
- PharmD program Coordinator from October 2015 to now.
- Technical expert for EGAC since 2011 to 2016.
- Technical Assessor for EGAC since January 2016 to now.
- Member of Department council.
- Member of Faculty council from 2011 to 2015.
- Member of graduate student community since 2011 to now.

Publications

1. Microbial degradation of aromatic substances by local bacterial
-

-
- isolates. Part IV - dynamics of incremental additions of para-nitrophenol by *Pseudomonas putida*. El-Tayeb, O. M.; Shabnaa, M. M.; Abdelrahman, A. A.; **Hanora, A. S.** Department of Microbiology, Faculty of Pharmacy, Cairo University, Egypt. Al-Azhar Journal of Microbiology (2001), 54, 58-68.
2. Study of Cryostructuration of Polymer Systems. XXIV. Poly (Vinyl Alcohol) Cryogels Filled with particles of strong anion-exchanger: Properties of the composite materials and potential. Irina N. Savina, **Amro Hanora**, Fatima M. Plieva, Igor Yu. Galaev and Bo Mattiasson, Vladimir I. Lozinsky. Journal of applied polymer science.95, 529-538 (2005).
 3. Screening of peptide Affinity Tags Using Immobilized Metal Affinity Chromatography (IMAC) in 96-Well Plate Format, **Amro Hanora**, Florent Bernaudat, Fatima M. Plieva, Maria B. Dainiak, Leif Bülow, Igor Yu.Galaev and Bo Mattiasson. Journal of Chromatography A, Volume 1087, Issues 1-2, 16 September 2005, Pages 38-44.
 4. Capture of Bacterial Endotoxins using a Supermacroporous Monolithic Matrix with Immobilized Polyethyleneimine, Lysozyme or Polymyxin. **Amro Hanora**, Martin Hedström, Fatima Plieva, Igor Galaev, Bo Mattiasson. Journal of Biotechnology, Volume 118, Issue 4, 10 September 2005, Pages 421-433.
 5. Direct capture of bacterial plasmid DNA from non-clarified cell lysate using monolith columns from macroporous gel grafted with polycations. **Amro Hanora**, Irina N. Savina, Fatima Plieva, Vladimir A. Izumrudov, Bo Mattiasson, Igor Galaev. Journal of Biotechnology, Volume 123 Issue 3, Pages 343-355.
 6. Microbial degradation of aromatic substances by local bacterial isolates: V- Supplemental enhancement and genetic characterization by *Pseudomonas putida*. O. M. El-Tayeb, A. A. Abdelrahman and **A. S. Hanora**. New Egyptian Journal of Microbiology May 2006 Vol 14, Pages 202-214.
 7. Corrigendum to "Stimulation of oleandrin production by combined *Agrobacterium tumefaciens* mediated transformation and fungal elicitation in *Nerium oleander* cell cultures. Amany K. Ibrahim, Sherief Khalifa, Ishrak Khafagi, Daa Youssef, **Amro Hanora**, Ikhlas Khan and Mostafa Mesbah. [Enzyme Microb. Technol. 41 (2007) 331–336] Enzyme and Microbial Technology Journal Volume 44, Issue 5, 2009, Page 358.
-

-
8. The complete genome of *Teredinibacter turnerae* T7901: an intracellular endosymbiont of marine wood-boring bivalves (family Teredinidae). Joyce C. Yang, A. Scott Durkin, Ramana Madupu, Nathan A. Ekborg, Bernard Henrissat, Sandra Schwartz, Joseph C. Mougous, Chandra S. Pedomallu, Lauren Fields, Amaro E. Trindade-Silva, Carlos A. G. Soares, Sherif Elshahawi, **Amro Hanora**, Margo G. Haygood, Janos Posfai, Jack Benner, Casey Swaim, John Nove, Brian Anton, Kshitiz Chaudhary, Jeremy Foster, Alex Holman, Sanjay Kumar, Philip A Lessard, Yvette A. Luyten, Barton Slatko, Nicole Wood, Bo Wu, John Zehr, Max Teplitski, Naomi Ward, Jonathan A. Eisen, Jonathan H. Badger, and Daniel L. Distel. PLoS ONE 4(7) 2009.
 9. Bacterial Community Analyses of Two Red Sea Sponges. Mona Radwan , **Amro Hanora** , Jindong Zan, Naglaa M. Mohamed, Dina M. Abo-Elmatty , Soad H. Abou-El-Ela, Russell T. Hill. Marine Biotechnology, 2010, 12 (3) 350-360.
 10. Diversity of Culturable Actinobacteria isolated from Two Red Sea Sponges. Mona Radwan, **Amro Hanora** , Dina M. Abo-Elmatty , Soad H. Abou-El-Ela. 2009. Suez Canal University Medical Journal, Vol. 12. No.1 Pages 41-46.
 11. Isolation, Phylogenetic Analysis and Anti-infective Activity Screening of Marine Sponge-Associated Actinomycetes. Usama Ramadan Abdelmohsen, Sheila M. Pimentel-Elardo, **Amro Hanora**, Mona Radwan, Soad H. Abou-El-Ela, Safwat Ahmed and Ute Hentschel. Marine Drugs 2010, 8(3), 399-412.
 12. Exploring the Potential of Biosynthetic Gene Clusters in Sponge Associated Fungi from Red Sea, Egypt. **Amro Hanora**, Sidney Crow. New Egyptian Journal of Microbiology January 2010 Vol 27, Pages 182-198.
 13. Quorum Sensing Inhibitory Activity of Sponge Derived Fungi from Red Sea, Egypt. **Amro Hanora**. New Egyptian Journal of Microbiology January 2011 Vol 28, Pages 1-12.
 14. Molecular and protein characterization of different species of Latrunculin- producing sponge *Negombata* from Red sea. Eman S. Eid, Dina M. Abo-Elmatty, **Amro Hanora**, Sherief I. Khalifa, Soad H. Abou-El-Ela. Journal of Pharmaceutical and Biomedical Analysis 2011 Volume 56 Issue 5, Pages 911-5.
 15. Antimicrobial Activities against Biofilm Formed by *Proteus mirabilis* Isolates from Wound and Urinary Tract Infections.
-

-
- Reham Wasfi, Ola A. Abd El-Rahman, Lamiaa E. Mansour, **Amro S. Hanora**, Abd El-Gawad M. Hashem, Mohamed S. Ashour. Indian Journal of Medical Microbiology 2012 Volume 30 Issue 1, Pages 76-80.
16. Manzamines: A potential for novel cures. Mona Radwan, **Amro Hanora**, Sherief Khalifa and Soad H. Abou-El-Ela. CellCycle 2012 Volume 11 Issue 9, Pages 1765 – 1772.
 17. Monitoring of 17 β -Estradiol Residues in the Suez Canal Region. Nagwa Elnwshy, **Amro Hanora**, Martin Hedström, Raafat Afifi, Bo Mattiasson, Helmy Omran. Egyptian Journal of Aquatic Biology and Fisheries 2012 Volume 16, No. 2: Pages 73 - 81.
 18. A Potential 17- β Estradiol degrader Bacterium Isolated from Sewage Water. Nagwa Elnwshy, **Amro Hanora**, Martin Hedström, Raafat Afifi, Helmy Omran, Bo Mattiasson. Egyptian Academic Journal of Biological Sciences- Microbiology. 2012 Volume 4, Issue No.1: Pages 27- 34.
 19. Diversity and Phylogenetic Analysis of *LuxS* and *RsbA* Genes in Biofilm Forming *Proteus mirabilis*. Reham Wasfi; **Amro Saed Hanora**; Lamiaa E. Mansour; Ola Aly Abd El-Rahaman; Abd El Gawad Moohamed Hashem; Mohamed Seif El-Din Ashour. New Egyptian Journal of Microbiology Vol. 30 (2011). Pages 347-365
 20. Boronated tartrolon antibiotic produced by symbiotic cellulose-degrading bacteria in shipworm gills. Sherif I. Elshahawi, Amaro E. Trindade-Silva, **Amro Hanora**, Andrew Han, Malem Flores, Vinicius Vizzoni, Carlos Schrago, Carlos Soares, Giselle Concepcion, Daniel L. Distel, Eric W. Schmidt, and Margo G. Haygood. PNAS 2013 110 (4) E295–E304.
 21. Expression of B-Cell Lymphoma-2 (Bcl-2) At Late Stages of Hamster Pouch- DMBA Carcinogenesis Model. Merhan Nabih ElMansy, Magda Mohamed Aly Hassan, **Amr Abdel Latif Hanora**, Ghada Abdel Aziz Abdel Latif. Egyptian Dental Journal 2014 Vol.60 April: Part IV Page 2317
 22. Genotypic Detection of Enterohaemorrhagic *E. coli* (EHEC) among Diarrhogenic Patients in Egypt. Marwa E.A. Aly, **Amro Hanora**, Tamer M. Essam and Magdy A. Amin. International Journal of Microbiology Research Vol. 5, Issue 1 (2014). Pages 61-64.
 23. Characterization of Methicillin Resistant *Staphylococcus aureus* isolated from human and animal samples in Egypt. Mahmoud M. Bendary, Samar M. Solyman, Marwa M. Azab, Nora F. Mahmoud
-

-
- and **Amro M. Hanora**. Cellular and Molecular Biology 2016, 62 (2): 94-100.
24. Synthesis and Characterization of Gold Nanoparticles and Their Anticancer Activity. **Amro Hanora**, Mamdouh Ghorab, Ahmed I. El-Batal and Farag M. Abo Mosalam. Journal of Chemical and Pharmaceutical Research 2016, 8(3):405-423.
 25. Expression and purification of recombinant Shiga toxin 2B from *Escherichia coli* O157:H7. Marwa E. A. Aly, **Amro S. Hanora**, Tamer M. Essam and Magdy A. Amin. African Journal of Biotechnology 15(21), pp. 940-947, 2016.
 26. Bibliometric analysis of Egyptian publications on Hepatitis C virus from PubMed using data mining of an in-house developed Database (HCVDBegy). Hanaa MH Alam El-Din, Ahmed Sharaf Eldin Ahmed, **Amro MSA Hanora**. Scientometrics, 108(1), pp. 1-21, 2016. DOI 10.1007/s11192-016-2007-1
 27. Isolating non-O1/non-O39 *Vibrio cholerae* from *Chironomus transvaalensis* larvae and exuviae collected from polluted areas in Lake Manzala, Egypt. Naira Mohamed Lotfi, Sahar Ahmed El-Shatoury, Amro Hanora, Rowaida Saleh Ahmed. Journal of Asia-Pacific Entomology 19 (2016) 545-549.
 28. Preliminary Characterization of Human Skin Microbiome in Healthy Egyptian Individuals. Mohamed Ramadan, Samar Solyman, Mohamed Taha and Amro Hanora. Cellular and Molecular Biology 2016, 62 (8): 21-27
 29. In situ morphological abnormalities in the mouthparts of *Chironomus transvaalensis* (nonbiting midges) stressing their role as bioindicators. Naira Mohamed Lotfi, Rowaida Saleh Ahmed, Sahar Ahmed El-Shatoury and **Amro Hanora**. Journal of Entomology and Zoology Studies 2016; 4(4): 1299-1305
 30. Genetic diversity of Multidrug Resistant *Staphylococcus aureus* isolated from clinical and non-clinical samples in Egypt. Mahmoud M. Bendary, Samar M. Solyman, Marwa M. Azab, Nora F. Mahmoud and **Amro M. Hanora**. Cellular and Molecular Biology 2016, 62 (10): 55-61.
 31. Incorporation of Silver Nanoparticles With Natural Polymers Using Biotechnological And Gamma Irradiation Processes. MM Ghorab, **Amro Hanora**, El-Batal A. I. and Farag M. Abo Mosalam. British Biotechnology Journal 56 (2016) 8(3):405-423.
 32. Carbapenem Susceptibility and Multidrug-Resistance in
-

Pseudomonas aeruginosa Isolates in Egypt. Hany Hashem, **Amro Hanora**, Salah Abdalla, Alaa Shawky, and Alaa Saad. Jundishapur Journal of Microbiology. 2016; 9(11):e30257.

33. Mutations in Beta-Lactamases Detected in Multidrug Resistant Gram Negative Bacteria Isolated from Community Acquired Urinary Tract Infections in Assiut, Egypt. Mohamed Salah, Marwa Azab, Hamada Halaby and **Amro Hanora**. African Journal of Microbial Research. 2016; Accepted
-