

Ahmed Abdel Wahab El Shahawy

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Position: Associate Professor, General Specialty Biochemistry, Specialization in Medical and Biological applications of Nanoscience and Nanotechnology.
Organization: Faculty of Post Graduates for Advanced Sciences, Beni-Suef University
Academic Career: Director of the Central Laboratory, Faculty of Post Graduates for Advanced Sciences, Beni-Suef University, 2020-present

ACADEMIC DEGREES

2021-September 2nd Pre-master Post graduate, Biochemistry, Department of, Cairo University Cairo, Egypt

2020 September 2nd Post graduate Diploma, Biochemistry, Department of Biochemistry, Ain-Shams University, Cairo, Egypt

2018 July Bachelor of Arts -Translations Program- English Language, Faculty of Arts- Cairo University

2014 November Post Doc Studies in Principles and Practice of Clinical Research-Main Component. Harvard Medical School-Continuing Medical Education HMS-CME, Boston, Massachusetts

2012 May PhD, Medical Applied Physics. Major: Cancer Nanotechnology and Physics of Magnetic Resonance Imaging (MRI), National Institute of Laser Enhanced Sciences (NILES), Department of Applied Photo Physics & Chemistry, Cairo University, Giza, Egypt

Thesis: "Laser and Magnetic Resonance as Hyperthermia treatment of Subcutaneous Ehrlich Carcinoma Model by using Metallic and Magnetic Nanoparticles"

External Evaluation: Faculty of Medical Science, Department of Applied Physics and Material Science, Johns Hopkins University, USA

External Evaluation: Faculty of Medical Science (Department of Applied Physics, Lab of Nanotechnology & Magnetism (NANOMAG) Research Technological Institute, University of Santiago de Compostela, Spain

The Thesis ranked the first position in Cairo University 2012

Technique in this research was considered a novel one in cancer treatment

2010 May Preliminary PhD Exams (Applied physics, Chemistry and Biology, Department of Applied Photo physics & Chemistry. National Institute of Laser Enhanced Sciences (NILES), Cairo University, Giza, Egypt

- 2007 May Masters, Medical Applied Physics.** Major: Laser and Magnetic Resonance Spectroscopy, Department of Biomedical and Biophysics Applications. National Institute of Laser Enhanced Sciences (NILES). Cairo University
Thesis: “Evaluation of Laser Spectroscopic Techniques for identifying Brain Tumors as compared with Magnetic Resonance Spectroscopy”
External Evaluation: Faculty of Medical Science, Department of Applied Physics & Chemistry. University of Salzburg, Austria
- 2003 May Preliminary Master Exams** (Chemistry, Physics, Biophysics, Biology & Medical Applications), Department of Biomedical and Biophysics Applications, National Institute of Laser Enhanced Sciences (NILES), Cairo University, Giza, Egypt
- 2001 Nov PG Diploma, Optical Physics, Photochemistry and Medical Applications of Laser,** Department of Biomedical and Biophysics Applications, National Institute of Laser Enhanced Sciences (NILES). Cairo University, Giza, Egypt
- 1996 May Bachelor Degree, General Physics, and Chemistry & Biology-** Cairo University, Egypt.

EMPLOYMENT AND ADMINISTRATIVE HISTORY

More twenty five years’ experience in the field of Biomedical Imaging, particularly in X-Ray, Magnetic Resonance, Computed Tomography, Nuclear Medicine and Optical Coherent Laser Imaging.

2007 May - present Application Specialist and Biomedical Physics Consultant, Conventional, Molecular & Functional Imaging (Training/Developing/Establishing Standard Protocols) in Children Cancer Hospital (CCHE 57357), Department of Radiology.

2007 Jan – 2015 Application Specialist and Biomedical Physics Consultant, Conventional, Molecular and Functional Imaging, Siemens Company, Department of Medical solutions Health Care, Middle East.

2012 Sep- 2016 Lecturer at Faculty of Applied Medical Science, Medical Imaging Department; Misr University for Science and Technology MUST

2014 February-2015 Associated Trainer (Licensed) of Basic Knowledge &Skills in Training and Human Resource Development, Foundation of International Board of Certified Trainers (IBCT) .Rotterdam-Kingdom of the Netherlands

2015 April -2018 Lecturer, Egyptian Fellowship Board (Radiology) /Basics and Advanced of Bio-Medical Imaging Physics
 Role of different Imaging Techniques of (MRI, CT, US and X- ray) Intra-operative

2016 May-present Lecturer of Material sciences and Nanotechnology, Nanotechnology Department, Post graduated of Advanced Sciences Faculty, Beni-Suef University

2018 February Lecturer at Faculty of Science, Physics Department; Helwan University-Egypt

2017 October-present Lecturer at Faculty of Applied Health Science Technology,
Physics Department; Beni Suef University -Egypt

ACADEMIC EXPERIENCE

2009 Sep – 2012 Presented Lectures, NILES, Cairo University, Giza, Egypt

Molecular Photochemistry
Laser Induced Surface Chemistry
Laser Induced Fluorescence
Laser Induced Breakdown Spectroscopy (LIBS)
Laser Induced Thermal Imaging
Factors Affecting on Fluorescence

2007 May – Presented Lectures, CCHE- Medical Imaging Department:

Physics of Magnetic Resonance Imaging
Physics of Magnetic Resonance Spectroscopy
Physics of Diffusion and Perfusion imaging
Physics of Diffusion Tensor Imaging (DTI)
Physics of Neuro Functional Imaging (BOLD)
Physics of Cardiac Imaging
Iron Oxide Nanoparticles as contrast agent in MRI
Techniques of Contrast –Enhance (CE-MRI Angiography)
Technique and interpretation of CSF Flowmetry
Introduction to Nanotechnology

2014 March Presented Lectures/ Foundation of International Board of Certified Trainers (IBCT)

Basic Instructional Design &Didactic Methods
Basic Presentation Skills of Trainers
Training as a Career
Dealing with Difficult Behaviors
Management Training Environment
Training &Development: A Closer Look

2016 March Presented Lectures/ Faculty Post graduated of Advanced Sciences

Nano-Biotechnology Course
Biomedical Applications of Nanotechnology
Physics of Nanostructures
Scientific thinking and Writing
Characterizations of nanoparticles
Spectroscopic Techniques

ACADIMIC AND RESEARCH INTERESTS

Applied Physics, Material Science and Nano-Science
Synthesis and Characterization of Magnetic and Metallic Nanoparticles
Physics of Medical Imaging (MRI, CT, Nuclear Medicine, Ultra Sound and X ray)
Nanoscience
NanoTechnology

Nanomedicine (Neuro-Diabetes Mellitus-Microbiology)
Oncology Cancer Diagnosis and Treatment
Photo Dynamic Therapy in cancer Diagnosis and Treatment
Radiobiology

SCIENTIFIC MEMBERSHIP

Egypt Knowledge and Technology Alliance EG-KTAs [Academy of Scientific Research and Technology]
Scientists for Next Generation (SNG) [Academy of Scientific Research and Technology]

CURRENT PROJECTS

2016 April-Finished ***“Characterization of pediatric brain tumors using Perfusion Magnetic Resonance Imaging Technique”***, CCHE, Egypt .Researcher

2017 May ***“Treatment of Brain Tumors by Magnetic Resonance Hyperthermia through Surgically-Implanted Magnetic Nanoparticles”***, Beni-Suef University, Egypt, Principle Investigator PI, Funded

2016 August ***“Treatment of Brain Stem Glioma by Radiation therapy through Surgically-Implanted Gold and Carbon Nanotubes”***, Science and Technology Develop Fund (STDF), Egypt, Principle Investigator PI, Submitted

2018 February ***“ Nano synthesis and charchteriazation of Pregabalin (Lyrica) and Vitamin B12 in combination with Metformin in one formula for prevention and treatment the diabetic neuropathy in rats”*** Science and Technology Develop Fund (STDF), Egypt, CO-PI, Submitted

2018 June ***“Injectable Hydrogel Mediated Magnetic Induction Hyperthermia and Chemotherapy for Treating Brain Glioma”*** Academic of Scientific Research and Technology (ASRT) bilateral research proposals with the National Natural Science Foundation of China- CO-PI, Submitted

2018 June ***“Controlling delivery of Curcumin Natural Material using Cross-linked acrylic hydrogel for ovarian cancer Treatment”*** Scientific for Next Generation, Academic of Scientific Research and Technology (ASRT), Main Supervisor, Submitted

2019 January ***“Economic commercial production of nanomaterials for local market needs”*** Science and Technology Develop Fund (STDF), Egypt. Faculty of Post graduated Sciences for Advanced Sciences, Beni-Suef University –Member-Current

2019 May ***“Active targeting of antiepileptic Nano-drugs to treat and prevent malformations in female pregnant rats”*** Beni-Suef University, Principle Investigator PI, Current

PRACTICAL EXPERIENCE

MRI Conventional Imaging

- Magnetic Resonance Imaging of Urography and Cholangiography
- Whole Body Diffusion Imaging
- Musculo- Skeletal Diffusion Imaging
- Heart Imaging (Morphology and functional)
- MRI- Angio Techniques (TOF, Phase Contrast, VIBE, CE-Dynamic, Native Imaging and TWIST)
- Cerebral Spinal Flowmetry (CSF application)
- Breast Imaging
- Composing Imaging
- Dynamic and kinematic Imaging
- Elastography Imaging (Liver)

MRI Molecular Imaging

- Neuro -Diffusion Imaging
- Neuro -Perfusion (T2*, DSC perfusion& DCE perfusion T1 Tissue 4D Techniques)
- Neuro-Spectroscopy (Single Voxel and Multi Voxel)
- Neuro-Tractography (Diffusion Tensor Imaging DTI)
- Neuro Functional Imaging (Blood Oxygen Level Detection BOLD)
- Prostate Spectroscopy
- Breast Spectroscopy
- Liver Perfusion T1 Tissue 4D Technique
- MR Liver Elastography

Computed Tomography Imaging

Conventional Imaging

Vascular Imaging (Angiography) Peripheral and Coronaries (Cardiac)

- CT Brain perfusion
- CT Lung perfusion
- CT Liver Triphasic

Practical Work Station Post-Processing (Syngo, MMWP, VE23B, Siemens, Germany)

- Volume Rendering Technique
- Surface Shaded Display
- 3D Reconstructions& In-space processing
- Lung care and Volumetric Analysis
- Osteo processing
- Fly through (Virtual processing)
- Flow Measurements (CSF & Blood)
- Dynamic Perfusion Measurements
- Neuro 3D Tractography & BOLD
- Tissue 4D Perfusion measurements &Color coded maps
- Good dealing with different Medical Imaging software (General Electric, Philips & Siemens).

Training Programs: I supervised on the practical training of the technologists in the Egyptian Public Health Ministry on Siemens MRI software (Low & High Magnetic Fields) and CT (Multi Slice Detectors).

CONFERENCES ATTENDANCE AND TRAINING

International Conference on Nano-medicine in Cancer Faculty of Medicine – Alexandria University In collaboration with Georgia Institute for Technology, USA 28-30 December 2010

Attended and passed an advanced training practical course in Spatial and Temporal Resolution of Magnetic Resonance Imaging, Visualization and Molecular Targeting at High Magnetic Fields (3Tesla Skyra, Syngo MRVD11D soft ware, Siemens, Erlangen, Germany), 23-27 May 2011

International Forum Emerging Trends in Higher Education, Montreal, Quebec, Canada 6-7 October 2011

The 3rd Chongqing International Clinical Neuroscience Forum & Neuro Drug Conference, Chongqing, China 21 -23 October 2011

International Conference of EPS Anticancer drugs, Stockholm, Sweden 26-27 October 2011

Preparation course of Graduated Recalled Education (GRE): Analytical writing, Verbal Reasoning and Mathematics Conventions for the Quantitative Reasoning Measurements, Jan – May 2012.

Workshop on "Applications of Nanotechnology in Field of Diagnosis and Diseases Control" hold in Animal Health Research Institute Egypt In collaboration with Laser Dynamic Center. Georgia Institute for Technology USA.22 September 2013

Reviewer in Projects Evaluation Unite, High Education Ministry, Particularly projects related to Applied Physics and Nanotechnology

I've been an honorary event within the Fifth Conference of the arbitrator Research Thesis, University of Jordan, which was held during the period from 16-17/4/2014

3rd International Conference of Photodynamic and Nanomedicine for Health Science ICPN.2nd -7th of January, 2015.German University in Cairo GUC, Egypt

6th Conference of Military Radiology Council, Military Medical Academy 8th of January, 2015.Maadi Armed Forces Medical Compound, Egypt

The Annual Scientific Conference of Radiology Department "Women's Imaging and Interventional Radiology; Current and Evolving Challenges", 24th Sunday May 2015

Workshop "Application of Nanotechnology in Water Desalination and Treatment and Evaluation the Safety of used Nano- materials", Egyptian Academy for Science Research and Technology, 2016

Application of the Mat-lab Course (40 hours), Statistical Researches Institute, Cairo University

Workshop "From Bench to Bedside; Achieving Cure Through Research" Children Cancer Hospital (CCHE 57357), 24th August 2016

The 7th International Conference on Optical Sepectroscopy, Laser and their Application 2016.18-20 October.NCR, Cairo, Egypt

Symposium "Sun Spectroscopy and Astrobiology" 2016-01 –November.NCR, Cairo, Egypt

Workshop "Competitive Projects Proposal Writing" 2016-03-November-Beni-Deutscher Akademischer Austausch Dienst DAAD at the premises of Beni-Suef University

Workshop "Nanomaterials and Micro materials in Radiation Diagnosis and Treatment" 2016-6-11-November /Middle Eastern Regional Radioisotope Center for the Arab Countries

4th International Conference of Photodynamic and Nanomedicine for Health Science ICPN.3rd -5th of December, 2016.German University in Cairo GUC, Egypt

Attended and passed an advanced training practical course in Zetasizer Nano Training Course 22nd -23rd February 2017, Malvern Instrument Limited, Worcestershire, United Kingdom

9th International Conference on Nano-Technology in Construction-Sharm El-Sheik, Egypt 17-21 March, 2017

Workshop" Basic Radiology, Radiation Protection and Safety and Clinical Imaging Guidelines CIG, 5th April, 2017, MUST University, Egypt

Workshop "Education Programs and Courses Specifications and Evaluation of Learning Outcomes for High Education .Institutes" National Authority for Quality Assurance and Accreditation of Education, 2-4-5-2017.Egypt

Scientific Course entitled "Introduction to Proteomics and Protein Biology: Strategies and Tools to probe Proteins. Collaboration between Zewail City of Science and Technology and Health Sciences Academy (57357) during the period from September 18th –October 10th, 2017

International Conference: Current Advances in Pediatric Neurosurgery and Diagnosis" Children Cancer Hospital 57357, Cairo, Egypt 22nd -24th, February, 2018

Workshop "Personalized Medicine: From Discovery Science to the Patient". Zewail City, Center of Genomic, March 29th, 2018

Genetic course “Foundational Concepts in Genetics” October 9, 2018- December, 14, 2018, HARVARD Medical School, USA

Immunology course "Foundational Concepts in Immunology" January 1, 2019- April, 20, 2019, HARVARD Medical School, USA

Estimation of Uncertainty of measurement results and Quality Control charts, 03—4 October 2021

General Requirements’ for the competence of Testing and Calibration Laboratories (ISO/IEC 17025; 2017), 26-27 September 2021

Internal Audit on ISO 17025:2017, 05-October 2021

Passing the themes of Time Management, Negotiation, Problem Solving, Decision-Making, Crisis and Disaster Management, Effective Leadership, and effective communication, Business and Statistical Researches Center, Faculty of Ain Shams University in collaboration with The Arab Center for Administrative Development and Strategic Studies, Leadership Development Program, 12 August 2022 to 10 September 2022

ORAL CONFERENCES PRESENTATIONS

Laser and Radiofrequency-induced Hyperthermia Treatment via Gold-coated Magnetic Nanocomposites: International Conference of Laser Application "ICLA", National Institute of Laser Enhanced Science NILES. Cairo University, Egypt 1-5 May 2011.

Applications of Nanotechnology in Cancer Diagnosis, Treatment and Prevention: Conference of Bioinformatics & Biotechnology. Faculty of Pharmacy, Cairo University, Egypt 2-3 July 2012.

Magnetic Nanoparticles induced Hyperthermia treatment under MRI: International Conference on Radiology & Imaging, Chicago USA. August 14-16, 2013

SPIO Nanoparticle-induced Hyperthermia Cancer Treatment under Magnetic Resonance Imaging. 11th Annual Congress of Medical Sciences, Medical Research Division; National Research Centre; Egypt. December 16-18, 2013

New Trends in Cancer Nanotechnology Therapy: Biofans Biotechnology Conference, Cairo University, 1-2 February 2014

Effect of SPIO Nanoparticles Concentrations' on Temperature Changes for Hyperthermia via MRI. The Fifth Conference of the arbitrator Research Thesis, University of Jordan, April 16-18, 2014

Difference between Conventional and Molecular Magnetic Resonance Imaging Techniques in Brain Tumors Diagnosis: 4th Biofans Conference of Bioinformatics & Biotechnology. Faculty of Medicine, Cairo University, Egypt 1-2 February 2015.

Peer-Reviewed of Abstracts submitted to the conference: 4th Biofans Conference of Bioinformatics & Biotechnology. Faculty of Medicine, Cairo University, Egypt 1-2 February 2015.

Role of Magnetic Resonance Tractography in pre-surgical planning of Children Brain tumors: 3rd Conference of Cancer, Hepatitis and Hepatoma. Faculty of Medicine, Azhar Assiut University, Egypt 5-6 April 2015

Intra-operative MR Imaging: workshop at the National Center for clinical and Environmental Toxicology, 16th August 2016

Correlation between Infra-red Spectroscopy and Magnetic Resonance Spectroscopy in Brain Tumor Diagnosis: Seminar at Spectroscopy Department @ National Center of Researches NCR, Cairo, Egypt, 09/November, 2016

Era of NANO and Biomedical Imaging: The 4th International Conference of Advanced Sciences (ICAS4), 7 -10 November 2017, Hurghada, Egypt

Biological Properties of Iron Oxide Nanoparticles for Cellular and Molecular Magnetic Resonance Imaging 1st National Conference of Biomedical Physics, Faculty of Science, Helwan University 11-13 March, Egypt.

Recent Avenues OF Cancer Diagnosis by Molecular Imaging and the role of NANO in this field 1st International Conference on Nanotechnology: Theory and Application, 10-13 December, 2018, Egypt

Nanomaterials affect the pharmacodynamic and pharmacokinetics of the Drugs. 1st Workshop on Nanomaterials for Environmental and Bio-Medical Applications. 1st Ain Shams University Faculty of Education 30-December, 2018

Characterization of Brain Tumors using Advanced MRI Techniques: Advanced Medical Imaging Physics: International Exchange between Egypt and Japan Helwan University, Cairo, Egypt (25th-28th March, 2019).

Role of Nanotechnology in Molecular Imaging: The Fifth International Conference on Advanced Sciences (ICAS5), November 9 – 12, 2019- Hurghada-Egypt

PUBLICATIONS (Google Scholar-Index 6/Citation 170)

Elsherbini AA, Saber M, Aggag M, El-Shahawy A, Shokier HA: ***Magnetic nanoparticles-induced hyperthermia treatment under magnetic resonance imaging***ⁱ, Magnetic Resonance Imaging (MRI) 29 (2011) 272–280. PMID: 21145190. DOI: 10.1016/j.mri.2010.08.010. IF: 1.991⁽ⁱ⁾

Elsherbini AA, Saber M, Aggag M, El-Shahawy A, Shokier HA: ***Laser and Radiofrequency Induced Hyperthermia Treatment via Gold-Coated Magnetic Nanocomposites.*** International Journal of Nnaomedicine, 6 (2011) 1-10. PMID: 22114479. DOI: 10.2147/IJN.S23952. IF: 3.130

Elsherbini AA and El-Shahawy A: ***Effect of SPIO Nanoparticles Concentrations' on Temperature Changes for Hyperthermia via MRI.*** Journal of Nanomaterials, 2013, Article Number: 467878; DOI: 10.1155/2013/467878. IF: 1.376

El-Sherbini AA and El-Shahawy A: ***Cancer Treatment by Thermotherapy.*** Egyptian Science Journal Volume 438 April, 2013, page 49

El-Shahawy A: ***Super paramagnetic iron oxide nanoparticles and hyperthermia treatment.*** Abstract in OMICS Journal of Radiology, August 2013, volume2 Issue 6, ISSN: 2167-7964, p 35

El-Shahawy A: ***¹ H- Magnetic Resonance Spectroscopy of Brain Tumors Qualitative and Quantitative in vivo Study.*** Medical Applied Physic Journal (Current Reviewing)

A.M. Shaker, El-Shahawy A, A.H. Zaki, Elham F. Abdel-Rahim, M.H. Khedr: ***Estimation the Median Lethal Dose and Inhibitory Concentration of Tio2, Sio2, ZnO and CuO Nanoparticles on Human Hepatoma HEPG2 Cells.*** International Journal of Pharmaceutical and Phytopharmacological Research (eIJPPR) | October 2017 | Volume 7 | Issue 6 | Page 18-23

Ahmed A. G. El-Shahawy, Riham .M.Salem' Hala.Taha and Alsayed A.M. Alsherbini: ***Evaluation of Infrared Spectroscopy as an effective probe for Pediatric Brain Tumors comparable to Magnetic Resonance Spectroscopy, BIOPHOTONIC Journal, (Under reviewing)***

Ahmed.A.G.El-Shahawy, Fatma I. Abo El-Ela, Nada A. Mohamed, Zienab E. Eldine, and Waleed.M.A.El Rouby: ***Synthesis and Evaluation of Layered Double Hydroxide/Doxycycline and Cobalt ferrite/Chitosan Nanohybrid Efficacy on Gram Positive and Gram Negative Bacteria, Material Sciences and Engineering C*** 91 (2018) 361–371

Ahmed.A.G.El-Shahawy, Gamal Elghnam and Alsayed A.M. Alsherbini: ***"Shaping and Cellular Uptake of Folic acid Coated Gold and Magnetite Nanoparticles"***, *Current Nanomedicine*, 2018, 8, 1-7. Doi: 10.2174/2468187308666180913113827

Ahmed.A.G.El-Shahawy ,S.A.Abdelmoaty, A.H. Zaki, Nada A. Mohamed, Yasser GadelHak, R.K. Mahmoud , and AA Farghali " ***Prostate Cancer Cellular Uptake of Ternary Titanate Nanotubes/CuFe₂O₄/Zn-Fe Mixed Metal Oxides Nanocomposite***, *International Journal of Nanomedicine* 2020:15 619–631

Ahmed.A.G.El-Shahawy: **Recent Avenues OF Cancer Diagnosis by Molecular Imaging and the role of NANO in this field**. Abstract 1st International Conference on Nanotechnology: Theory and Application, 10-13 December, 2018, Egypt

Adel Abdel-Moneim, Ahmed El-Shahawy, Ahmed Ismail Yousef, Sanaa Mahmoud Abd El-Twab, Zienab Essam Elden, and Mohamed Taha: ***Novel polydatin-loaded chitosan nanoparticles for safe and efficient type 2 diabetes therapies: In silico, in vitro and in vivo approaches***. *International Journal of Biological Macromolecules* 154 (2020) 1496–1504

Ahmed.A.G.El-Shahawy, Esam M. Dief, Fatma I. Abo El-Elab, A A Farghali: ***Effectiveness of Nickel-Gallate Metal Organic Framework against Rhabdomyosarcoma and diverse Microbes: Bacteria and Fungi*** (Under reviewing)

Maha B.Abd Elhaleem, Ahmed A.Farghali, Rehab Khalid Mahmoud, Ahmed.A.G.El-Shahawy, Fatma I. Abo El-Ela, and Zienab E.Eldine: ***Chemisorption and sustained release of cefotaxime between a layered double hydroxide and polyvinyl alcohol nanofibers for enhanced efficacy against second degree burn wound infection***. *RSC Adv.*, 2020, 10, 13196, DOI: 10.1039/c9ra08355c

Nahla Kamal, AH Zaki, Ahmed AG El-Shahawy, Ossama M Sayed2 and SI El-Dek: ***Changing the morphology of one-dimensional titanate nanostructures affects its tissue distribution and toxicity***. *Toxicology and Industrial Health* 2020, Vol. 36(4) 272–286, DOI: 10.1177/0748233720921693

Esraa Khaled, Fatma I. Abo El-Ela, Khaled Ali El-Nesr, Mohamed I. Zanaty1, H. A. El-Banna, and Ahmed A. G. El-Shahawy: ***An Herbal Nanohybrid Formula of Epigallocatechin Gallate-Chitosan-Alginate Efficiently Restrict the Sexual Dysfunction Adverse Effect of , -Adrenergic Antagonist Drug: Propranolol***. *J. Biomed. Nanotechnology*. 2020, Vol. 16, No. 4 1550-7033/2020/16/505/015 doi:10.1166/jbn.2020.2915

Ahmed Abdel-Wahab El-Shahawy, Adel Abdel-Moneim , Zienab Esam Eldin, Ahmed Ismail Youssef, Zhraa Selem Gouda, Hanaa Ramadan, Eiman Amar, Esraa Ashraf Taha, Asmaa Mohamed Saied, Mohamed Zanaty: ***Characterization and Efficacy of A Novel Formula of Insulin Chitosan Layered Duple Hydroxide-Nanohybrid for Oral Administration***. *Nano Biomed. Eng.*, 2020, Vol. 12, Iss. 4

Ahmed I. Yousef, Hossam H. Shawki, Ahmed A. El-Shahawy, Sanaa M. Abd El-Twab, Adel Abdel-Moneim, and Hisashi Oishi: **Polydatin mitigates pancreatic β -cell damage through its antioxidant activity.** *Biomedicine & Pharmacotherapy* 133 (2021) 111027

N.G. Imam, Mennatallah Abou Hasswa, Giuliana Aquilanti, S.I. El Dek, N. Okasha, Ahmed A.G. Al Shahawy, **Influence of polyethylene glycol on the physical properties of $\text{Co}_{0.2}\text{Fe}_{2.8}\text{O}_4$ nanoparticles used as MRI contrast agent; synchrotron radiation Fe K-edge XAFS,** *Journal of Materials Research and Technology*, 2021

M. Abd El-Hameed, A. I. Yousef, S. M. Abd El-Twab, A. A. G. El-Shahawy, and A. Abdel-Moneim: **Hepatoprotective Effects of Polydatin-Loaded Chitosan Nanoparticles in Diabetic Rats: Modulation of Glucose Metabolism, Oxidative Stress, and Inflammation Biomarkers.** *Biochemistry (Moscow)*, Published on November 2, 2020 as Manuscript BM20-162

Ahmed.A.G.El-Shahawy, W. kamal, Ossama M Sayed, Waleed.M.A.El Rouby, H.Y. Zahran, I. S. Yahia, S.I.El-Dek and AA Farghali: **Preparation and characterization of Ketoprofen and Pentoxifylline agents based layered double hydroxides-Chitosan Nanohybride and its releasing control.** *Digest Journal of Nanomaterials and Bio structures*, Vol. 15, No. 2, April – June 2020

Ahmed. A. G. El-Shahawy, Yasser GadelHak, H. Y. Zahran, I. S. Yahia, and S. I. El-Dek: **Bimodal approach for the use of Co doped magnetite as MRI contrast agent and potential antitumor.** *Journal of Magnetism* 25(4), 540-546 (2020), <https://doi.org/10.4283/JMAG.2020.25.4.XX>

Ahmed A. G. El-Shahawy: **A Highly Cellular Uptake Ternary Nanocomposite Titanate Nano-Tubes/ $\text{CuFe}_2\text{O}_4/\text{Zn-Fe}$ Could Induce Intrinsic Apoptosis of Prostate Cancer Cells: An Extended Study** :*Journal of Biomedical Nanotechnology*, Vol. 17, 303–311, 2021

Ahmed A. G. El-Shahawy, Noha Elnagar, Medhat Zohery, Maha Sabry Abd Elhafeez, and S. I. El-Dek: **Smart nanocarrier-based chitosan @silica coated carbon nanotubes composite for breast cancer treatment approach,** *INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS*, 2021 <https://doi.org/10.1080/00914037.2021.1925277>

Eman E. Mohamed, Adel Abdel-Moneim, Osama M. Ahmed, Khairy M.A. Zoheir, Zienab E. Eldin , Ahmed A.G. El-Shahawy: **Anticancer activity of a novel naringin–dextrin nanoformula: Preparation characterization, and in vitro induction of apoptosis in human hepatocellular carcinoma cells by inducing ROS generation, DNA fragmentation, and cell cycle arrest,** *Journal of Drug Delivery Science and Technology* 75 (2022) 103677, <https://doi.org/10.1016/j.jddst.2022.103677>

Hala B Elzahar, Mohamed S El-Okaily, Mohamed H Khedr, Mohamed Amgad Kaddah1, Ahmed AG El-Shahawy: **Novel Cold Cure Acrylic Denture Base with Recycled Zirconia Nano-Fillers That Were Functionalized by HEMA Agent Incorporation: Using the Sprinkle Approach,** *International Journal of Nanomedicine* 2022:17 4639–4658

Ahmed Hosni, Adel Abdel-Moneim, Mohammed Hussien, Mohamed I. Zanaty, Zienab E. Eldin, Ahmed A.G. El-Shahawy: **Therapeutic significance of thymoquinone-loaded chitosan nanoparticles on streptozotocin/nicotinamide-induced diabetic rats: In vitro and in vivo functional analysis,** *International Journal of Biological Macromolecules* 221 (2022) 1415–1427

Ahmed.A.G. El-Shahawy, Medhat Zohery, S.I. El-Dek: ***Theranostics platform of Abemaciclib using magnetite@silica@chitosan nanocomposite***, *International Journal of Biological Macromolecules* 221 (2022) 634–643

BOOK CHAPTERS

El-Sayed El-Sherbini and El-Shahawy A: ***Laser and Radiofrequency Induced Hyperthermia Treatment via Gold-Coated Magnetic Nanocomposites***, Hyperthermia, Dr. Nagraj Huilgol (Ed.), ISBN: 978-953-51-1129-0, InTech, DOI: 10.5772/52375, 2013

PATENTS (*Still Current*)

- 1- **Magnetic Nanoparticles-induced Hyperthermia Treatment under Magnetic Resonance Imaging**. Number 2012010020.Ministry of state for scientific Research, Academy of scientific Research and Technology, Egypt
- 2- **Laser and Radiofrequency-induced Hyperthermia Treatment via Gold-coated Magnetic Nanocomposites**. Number 201210019. Ministry of state for scientific Research, Academy of scientific Research and Technology, Egypt

Thesis supervision

- 1- ***"Evaluation of Mid Infra Red Spectroscopy as a probe for Identify Pediatric Brain Tumors"*** .National Institute of Laser Enhanced Science (NILES) .Cairo University. Master Degree, finalized
- 2- ***"Comparison between Magnetic Resonance Images of T2* Gradient and Diffusion-Weighted b0 in Diagnosis of Intracranial Haemorrhage"***. Institute of Medical Researches.Alex University,Egypt. *Master Degree, finalized*
- 3- ***"Treatment of Hypotensive Induced Male Infertility Using Nanoparticles of Natural Antioxidants "***. *Faculty of Postgraduates Studies for Advanced Sciences. Beni-Suef University. Egypt. (Ph.D).*
- 4- ***"Synthesis and Characterization of Hybrid nanomaterials for Biomedical Application"***. *Faculty of Postgraduates Studies for Advanced Sciences. Beni-Suef University Egypt. (Ph.D).*
- 5- ***Anti- hyperglycemic effect of sustained release Thymoquinone on streptozotocin induced diabetes mellitus in experimental animals. Beni-Suef University Egypt. (Master Degree).***
- 6- ***Sustained releasing of Anticancer Drug-loaded Nanomaterials for Enhanced Anticancer Treatment Efficacy. Beni-Suef University Egypt. (Master Degree).***
- 7- ***Development of new magnetic multifunctional nanoparticles for cancer theranostics. Beni-Suef University Egypt. (Master Degree).***

- 8- ***"Improvement of Pazopanib HCL Properties using Nano-Material" Beni-Suef University Egypt. (Master Degree).***
- 9- ***Pharmacological study of the possible protective effects of certain drugs in L-asparaginase-induced acute pancreatitis in rats. Beni-Suef University Egypt. (Ph.D).***
- 10- ***Magnetic Nanoparticles for Biodiesel Production. Beni-Suef University Egypt. (Master Degree).***
- 11- ***Evaluation of different Magnetic Nanoparticles Probes for Magnetic Resonance imaging enhancement Ain-Shams University Egypt. (Ph.D).***
- 12- ***A Study on Enhancement of Antimicrobial Activity and Stability of Lactoferrin Using Nanotechnological Approach. Beni-Suef University Egypt. (Master Degree).***
- 13- ***A Biochemical study on lipopolysaccharides induced- neuro inflammation in rats Beni-Suef University Egypt. (Ph.D).***
- 14- ***Evaluation of Efficacy of Lactoferrin Nan-formulated against Hepatotoxicity. Beni-Suef University Egypt. (Master Degree).***
- 15- ***Assessing the Efficacy of Natural Bioactive Compound against Diabetes Mellitus and its Complications in Experimental Rat Model. Beni-Suef University Egypt. (Ph.D. Degree).***
- 16- ***"Exploitation of Nanomaterial Arms for diverse Biomedical Implementations. Beni-Suef University Egypt. (Master Degree).***
- 17- ***Estimation The efficacy of Active Targeting delivery of Nano-formulated 6- shogool in induced Hepatic fibrosis in rats. Beni-Suef University Egypt. (Master Degree).***
- 18- ***Amelioration the activity of Hesperidin as Anti-diabetic drug by sustain Releasing form Layered double hydroxide Nanoparticles. Beni-Suef University Egypt. (Master Degree).***
- 19- ***Assessing the Efficacy of Natural Bioactive Compound against Diabetes Mellitus and its Complications in Experimental Rat Model. Beni-Suef University Egypt. (Ph.D. Degree).***
- 20- ***Enhanced Antitumoral activity of chemotherapeutic agent against lung cancer cells using biodegradable poly nanoparticles. Beni-Suef University Egypt. (Master Degree).***
- 21- ***Targeted delivery of Silymarin to liver cells by Galactosylated nanoparticles: in-vitro & in-vivo evaluation studies. Beni-Suef University Egypt. (Master Degree).***
- 22- ***Anticancer Vitality of Antineoplastic agent Nanoscale in Human Cancer in vitro study. Beni-Suef University Egypt. (Master Degree).***
- 23- ***Silver quantum dots down regulate beta-catenin pathway in breast cancer cell line. Beni-Suef University Egypt. (Master Degree).***

- 24- *The protective effect of Quercetin against doxorubicin induced cardio toxicity in rats (Master Degree).*
- 25- *Synthesis silver nanoparticles by laser ablation method and studying its impact on Functional cardiac Markers at the Molecular and Cellular levels, Beni-Suef University Egypt. (Master Degree).*
- 26- *Studying the exposure to Gold Nanoparticles that prepared by laser ablation and its relation with myocardial oxidative stress, apoptotic and necrotic markers alteration, experimental study. Beni-Suef University Egypt. (Master Degree).*
- 27- *Nano-formulated-Ceftriaxone- PAM-18Na polymer to enforce its efficiency versus cancer associated pneumonia: Streptococcus sp. and Klebsiella sp. Beni-Suef University Egypt. (Master Degree).*
- 28- *Potential of overcoming Drugs Resistance in MCF-7/Adr cells through down-regulating antiapoptotic protein BCL 2 using Nano Formula of Sorafenib incorporating Chitosan-Conjugated Folic acid. An Experimental Study. Beni-Suef University Egypt. (Master Degree).*
- 29- *Nanohybride Hesperidin- loaded LDH alleviate acute hepatotoxicity induced by acetaminophen- via annulment of oxidative stress, apoptosis and inflammation. Beni-Suef University Egypt. (Master Degree).*
- 30- *Evaluation the effects of Nanirgin and Nanirgin loaded- nanoemulsions on diethylnitrosamine/acetylamino fluorene-induced carcinogenecity in Wister rats. Beni-Suef University Egypt. (Ph.D. Degree).*
- 31- *Active Targeting and Enhancement the Bioavailability Efficiency of Thymoquinone as a Hepatoprotective agent by Nanotechnology Approach, In vivo study; Beni-Suef University Egypt. (Master Degree).*
- 32- *Treatment of Hypotensive Induced Male Infertility Using Nanoparticles of Natural Antioxidant, Beni-Suef University Egypt. (Ph.D. Degree).*
- 33- *Novel cold cure acrylic resin modified with Recycled Zirconia Nano-Fillers incorporation and 2-hydroxyethyl methacrylate ligand, Beni-Suef University Egypt. (Master Degree).*

LANGUAGES

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