

## **CV ( Prof. Magdy GHANNAM )**

Forename: MAGDY - Middle name: Mohammed  
Surname: GHANNAM  
Sex: Male  
Date of birth: April 5, 1958  
Nationality: Egyptian  
Marital Status: Married  
Number of children: Three  
Address: KSU, College of Science, Physics & Astronomy Dept.  
POB 2455, Riyadh 11451, Kingdom Saudi Arabia  
Telephone: +966 1 467 6627 - Mobile: +966 50 940 2550  
E-mail: [mmghanam@ksu.edu.sa](mailto:mmghanam@ksu.edu.sa)  
[magdighannam@yahoo.com](mailto:magdighannam@yahoo.com)

### **Employment History (in Descending Order):**

- 1) - Professor, Department of physics & Astronomy, College of Science, King Saud University, Riyadh, Saudi Arabia. From 1429 - to present (2008 – )  
  
- Professor, Department of Biophysics, Faculty of Science, Cairo University, Giza, Egypt. From 1428- ( 2007 to present).
- 2) - Associate Professor, Department of physics & Astronomy, College of Science, King Saud University, Riyadh, Saudi Arabia. From 1420 - 1428 ( 1999 – 2007)  
  
- Associate Professor, Department of Biophysics, Faculty of Science, Cairo University, Giza, Egypt. From 1419 H to 1428 (1998 G – 2007).
- 3) -Assistant Professor, Department of Department of physics &Astronomy, College of Science, King Saud University, Riyadh, Saudi Arabia.  
From 1417 H to 1420 (1996 1999 G).  
  
- Assistant Professor, Department of Biophysics, Faculty of Science, Cairo University, Giza, Egypt. From 1413 H to 1419 (1993 to 1998 G)
- 4) Assistant Lecturer, Department of Biophysics, Faculty of Science, Cairo University, Giza, Egypt. From 1406 to 1413 H (1985 –1993 G).
- 5) Demonstrator, Department of Physics, Faculty of Science, Cairo University, Giza, Egypt. From 1401 to 1406 H (1981 –/1985 G).

### **Scholarships and Awards:**

Ph. D Scholarship Award, from. Egypt Government and Cairo Univ. to Univ. of Paris Sud. College of Pharmacy- France.

### **Research Interests**

The domain of my research interests could be classified in three topics.

The main topic concerns the lipid membrane system (Liposome) preparation, interactions and applications. The second topic is concerning about the beneficial uses of electric field, microwave and gamma irradiation in human health, animal and plant. The third topic is the physical and biophysical properties of some life – based biological materials.

In the 1<sup>st</sup> topic, the phase transition, the phase transition temperature, surface tension and pressure, electrical properties have been studied making use of many physical techniques such as light scattering, differential scanning calorimetric, membrane solubilization and electrical measurements.

In the 2<sup>nd</sup> topic, melanin structure, properties and function change before and after gamma irradiation, corn growth parameters and spectroscopic properties of chlorophyll before and after corn seeds gamma irradiation, chicken embryonic growth under the influence of electric field and effect of microwave low power have been investigated using of many physical techniques. These techniques include photometry, fluorescence, gel exclusion chromatography, dielectric, membrane solubilization and statistical methods.

In the 3<sup>rd</sup> topic, radioactivities in raw and treated water and characteristic of different chicken eggshell have been studied by means of many physical techniques including high resolution Ge – detector, spectrophotometric and electrical measurements.

### **Supervisory on Ph.D and MSc. Dissertations**

- 1- Supervisor on 8 M.Sc. and 5 Ph.D. students - Biophysics Dept. Faculty of Science - Cairo Univ. – Egypt.
- 2- Principal Supervisor on 10 M.Sc. and 1 PhD Saudi students - Department of Physics & Astronomy – College of Science- King Saud Univ.

### **Assessment and Examination Committees**

- 1- Assessment of Physics Bachelor program (3 Programs)- Umm Al Qura University - Mecca – Saudi Arabia.
- 2- Examiner for many doctoral dissertations and master's degrees.
- 3- Assessment for many of the scientific research of local and international.
- 4- Examiner for many upgrades Research Degrees.

### **Membership of Scientific Associations:**

- Member of the Egyptian Society of Biophysics and Applications.
- Member of the Egyptian Society of Physics.
- Member of the Egyptian Scientific Professions Syndicate.
- Member of the French Society of Biophysics.

### **Membership of committees that serve the university and the college:**

1. Chairman of the Alumni Affairs and Employment department and the college.
2. Chairman of sports activity, College of Science- KSU
3. Member of the "Academic Advisory" Committee at department of physics & Astronomy council — College of Science - KSU.
4. Member of the "Biophysics M.Sc. and Ph.D. Programs" Committee at department of physics & Astronomy council - College of Science- KSU.
5. Member of the Comprehensive Test Ph.D.
6. President of the "Phys. & Biophysics Courses Development" Committee at department of physics & Astronomy council — College of Science- KSU.

## **Participation in Conferences, Symposia and Other Activities:**

### **A) Conferences:**

1. 1<sup>st</sup> International Congress: From Drug Discovery to Drug Delivery – Greece, 13-15 Nov. 2014. Presented a paper entitled: Targeting Doxorubicin Encapsulated in Stealth Liposomes to Solid Tumors by Non -thermal Diode Laser.
2. 6<sup>th</sup> ILS Liposome Advances Conference - UCL School of Pharmacy, University of London, London - 14-17 December 2013. Presented a paper entitled: "Treatment Effect of Liposome's Loaded Gold Nanoparticles and Doxorubicin in Controlling Cancer Tumor Growth. in -Vivo Studies.
3. Congress on Gastroenterology & Urology (Gastroenterology- March 12-14; 2012, Omaha- USA) Presented a paper entitled " New diagnostic strategies in the detection and staging of bladder cancer patients".
4. International Conference on Radiation Medicine ( King Faisal hospital& Research Center- Feb 27-March 1; 2012 , Riyadh – Kingdom Saudi Arabia).
5. The 6<sup>th</sup> Saudi Conference on Medical Physics ( December 4-6; 2012, Riyadh – KSA).
6. 5<sup>th</sup> International Conference on Biological Physics. (August 22- 25, 2004, Göteborg Sweden). Presented a paper entitled "Effect of Gamma Irradiation on Germination, Growth and Physical Properties of Wheat".
7. 3<sup>rd</sup> International Biophysics Conference in Medicine & Biology. (October 2003, Cairo, Egypt). Presented a paper entitled "Effect of Eggshell Pigmentation and Egg Size on the Spectral Properties and Characteristics of Eggshell of Meat and Layer Breeder Eggs".
8. 4<sup>th</sup> International Conference on Biological Physics. (July 30-August 3, 2001, Kyoto, Japan). Presented a paper entitled "Role of Aluminium In The Pathogenesis of *Anaemia in Regular Dialyzed Patients*".

### **B) Symposia:**

- 1-Attended the 1<sup>ST</sup> workshop “Nano Research at Universities” 28-29/10/2007, King Saud Univ., Riyadh, KSA.
- 2- Attended and passed in the program of “ Time managing and working pressuers” 11/1/2005 –13/1/2005, Cairo University, Giza, Egypt.
- 3- Attended and passed in the program of “ Experience and representation for the data” 24/7/2005 –27/7/2005, Cairo University, Giza, Egypt.
- 4- Attended and passed in program of “ Electronic Learning” 30/7/2005 to 2/8/2005, Cairo University, Giza, Egypt.
- 5- Attended and passed in program of “ Experience and communications for the data” 6/8/2005 – 9/8/2005, Cairo University, Giza, Egypt.
- 6- Attended and passed the program of “Taking decision and solving problems” 13/8/2005 – 16/8/2005, Cairo University, Giza, Egypt.

## **Publications List**

- 1 - Fadel M. Ali, M.M. Ghannam, F. EL-Refaei, R. EL-Gebaly, K. ABO-ELA A. Hussein, D. Surour and I. Mohammed.  
Effect of Nonionizing Fields on Biological Membrane.  
12<sup>th</sup> School on Biophysics of Membrane Trans., POLAND:61-93 (May 1994).
- 2- Yehia M. A. Marriz and Magdy M. Ghannam . A histo- Acoustical Study of the Human Ossicula Tiepin and Their Role in the Hearing Process.  
THE EGYPTIAN J. OF ANATOMY, 17(3): 223-241 (1994).
- 3- M.Paternostre, O. Meyer, C. G-Madelmont, S. Lesieur, M.M. Ghannam and M. Ollivon. Partition Coefficient of a Surfactant Between Aggregates and Solution: Application to the Micelle – Vesicle Transition of Egg Phosphatidylcholine and Octylglucopyranoside.  
BIOPHYSICAL JOURNAL, 69: 2476-2488 (1995).
- 4 - A.S. Monem, W.A. Khalil and M.M. Ghannam. Polarization Study of the Structural Behavior of EPC/OG System.  
EGYPTIAN J. OF BIOPHYSICS, 1: 35-39 (1995).
- 5- M. M. Ghannam. Effect Of Argon Laser On Sterically Stabilized Liposomes For Drug Delivery.  
EGYPTIAN J. OF BIOPHYSICS, 1: 15-22 (1996).
- 6- M.M. Ghannam, M.M. Mady , S.. Gaafar and F.M.Ali. Effect Of External Fields On The Drug Released From Liposomes.  
EGYPTIAN JOURNAL OF BIOPHYSICS, 2: 7- 14 (1996).
- 7 - M.Paternostre, M. Virad, O. Meyer, M. M. Ghannam, M.Ollivon and R. Blumenthal. Solubilization and Reconstitution of Stomatitis Virus Envelop Using Octylglucoside.  
BIOPHYSICAL JOURNAL, 72: 1683-1694 (1997).
- 8- M. M. Ghannam, M.S. El- Kady, M.H. Gaber, S.A. Gaafar and F. M. Ali. Physical Alteration Of DPPC MLV's Membrane Due To Its Interaction With Bovine Serum Albumin.  
4<sup>th</sup> National Conference on Biophysics (Dec. 1997, Cairo Univ. Egypt)
- 9- M. AL Naimi, M.M. Ghannam and F. M. Ali. Effect of 50 Hz Magnetic Field On Some Biophysical - Biochemical Properties of Rat Blood (in- vivo studies)  
4<sup>th</sup> National Conference on Biophysics (Dec. 1997, Cairo Univ. Egypt)
- 10- M.H. Gaber, M.M. Ghannam, S. A. Ali and W.A. Khalil. Interaction of Doxorubicin with Phospholipid Monolayer and Liposomes.  
BIOPHYSICAL CHEMISTRY, 70: 223-229 (1998).
- 11- M.M. Ghannam, M.M. Mady and W.A. Khalil Interaction of Type-I Collagen with Phospholipid Monolayer.  
BIOPHYSICAL CHEMISTRY, 80: 31-40 (1999).

- 12- M.H. Gaber, Y.A. Mahmoud, M.M. Ghannam, F.M. Ali. Phase Behaviour and Packing Properties of Dipalmitoyl-Phosphatidylcholin Bilayer Incorporated Polyethylene Glycol-PE. Egyptian J Biophysics, 6: 25-38, (2000).
- 13- M.M. Ghannam, R. H. Al-Gebaly, M.H. Gaber and F.M. Ali. Inhibition of Ehrlich Tumor Growth in Mice by Electric Interference Therapy (In- Vivo Studies) Electromagnetic Biology and Medicine, 21(3): 267-280 (2002).
- 14- F.F. Ibrahim, M.M. Ghannam and F.M. Ali. Effect of Dialysis on Erythrocyte Membrane of Chronically Hemodialyzed Patients. Renal Failure, 24(6): 779-790 (2002).
- 15- M.M. Ghannam, M.S. Al-Talhan, M.A. Azeer and M.S. Al-Ayed. Study of the Physical Properties of Laser Exposed Liposomes. Egyptian J. Biophysics, 9(1):9-29 (2003).
- 16- Maha .F. Ali, Reem H. Al-Gebaly and M. M. Ghannam. Repairing Role of Melanin to Injuries Induced by 50 Hz  $\mu$ T Magnetic Field in Red Blood Cells of Guinea Pigs: Pharmacokinetics and Biophysical Studies ( In-Vivo) Bull. Fac. Pharm., Cairo Univ., 41(3): 251-259 (2003)
- 17- Mohamed S. AL-Ayed, Magdy M. Ghannam and EL-Sayed M. EL-Sayed. Effect of Low Power Microwave Irradiation on the Properties of Liposomes Arab Journal of Nuclear Sciences and Applications , 37(1), 137-185(2004).
- 18 - M. H. Al- Jaser, S. U. El- Kameesy, M. M. Ghannam, F. Al-Saleh, I. Zagloul, M. Radwan, M. Al- Garawi and M. Al- Ayed. Radioactivities of  $^{226}\text{Ra}$ ,  $^{228}\text{Ra}$  and  $^{40}\text{K}$  in the Groundwater Around Buraydah Treatment Plant in the Northwest of Riyadh, SA. Egypt J. Biophys., Egypt (2005), Vol. 11(1), pp. 45-53.
- 19- M.M. Ghannam. Effects of Gamma Irradiation on Some Biophysical Properties of Melanin. Egyptian J. Biophysics, 9(3):255-267 (2004).
- 20- M.S. Al-Salhi, M.M. Ghannam, M.S. Al-Ayed, S.U. El-Kameesy and S.Roshdy. Effect of  $\gamma$ -Irradiation On the Biophysical and Morphological Properties of Corn. Nahrung/ Food 48(2):95-98 (2004).
- 21- M.M. Mady, M.M. Ghannam, W.A. Khalil, R. Repp, M. Markus, W. Rascher, R. Muller and F. Alfred. Efficient Gene Delivery With Serum Into Human Cancer Cells Using Targeted Anionic Liposomes. Journal Drug Targeting, 12(1): 11-18 (2004).
- 22- Magdi M. Ghannam, M. S. Al- Ayed, Samir U. El- Kameesey. Effect of Gamma Irradiation on Germination, Growth and Physical Properties of Wheat. 5<sup>th</sup> International Conference on Biological Physics August: 22- 25, 2004, Sweden.

- 23- M.M. Ghannam . Effect of Eggshell Region and its Pigment Intensity on the Physical, Optical and Electrical Properties of Chickens Eggshell.  
Egyptian J. Biophysics, Egypt (2004), Vol. 10(2): pp 159-172.
- 24- May H. AL-Jasser, Samir U. El- Kameesey and Magdi M. Ghannam N. Al-Essa, F. Al-Saleh, I. Zagloul, M. Radwan, H. Al-Mubbarak, H. Al-Zuhair, M. Al- Garawi and M. Al- Ayed. Radioactivity Concentration in Surface Soil Samples from Al-Muzahmia Area, south West of Riyadh, Kingdom Saudi Arabia..  
Istopes and Rad. Res., Egypt (2004), Vol. 36(4), pp 727-733.
- 25- T.M. Shafey, A.A. Al-Sobayel, T.H. Al- Mohsen, H. A. Al-Batshan, M.J. Al-Hassan, and M.M. Ghannam. Effects of Continuous White Fluorescent Light Incubation of Eggs Upon Thyriod Hormones and Other Blood Constituents at Hatching, Post-hatch Performance and Carcass Quality of Meet Chickens.  
J. KSU, Agric. Sci. (2004), Vol.17(1), pp 1-10.
- 26- T.M. Shafey, H. A. Al-Batshan, M.M. Ghannam and M.S. Al-Ayed. Effect of Intensity of Eggshell Pigment and Lighted incubation on Hatchability Performance of brown Eggs  
British Poultry Science, UK (2005), Vol. 46(2): pp 190-198.
- 27- T.M. Shafey, H. A. Al-Batshan, M.J. Al-Hassan, A.A. Al-Haidary, A. Al- Farag and M.M. Ghannam. Embryonic Growth of Chicks under the Influence of Electric Field.  
International J. of Poultry Science, 4(11): 872-878 (2005).
- 28- M.H. Al- Jaser, S. U. El- Kameesy, M.M. Ghannam, F. Al-Saleh, I. Zagloul, M. Radwan, M. Al- Garawi and M. Al- Ayed. Radioactivities of 226Ra, 228Ra and 40K in the Groundwater Around Buraydah Treatment Plant in the Northwest of Riyadh, SA.  
Egyptian J of Biophys., Egypt (2005), Vol. 11(1): pp 45-53.
- 29- T.M. Shafey, H.A. Al-Batshan, M.I. Shalaby and M.M. Ghannam. Incubation temperature and hemoglobin dielectric of chicken embryos incubated under the influence of electric field.  
Electromagnetic Biology and Medicine, USA (2006), Vol. 25(2): pp87-96.
- 30- Fakhry F. Ibrahim, Magda M. Sayed, El-garem HA and Magdi M. Ghannam. Blood telomerase activity and DNA dielectric properties in human hepatocellular carcinoma and chronic liver disease.  
Biotechnology, (2008), Vol. 1(1): pp66-72.
- 31- M. M. Mady, M.M. Ghannam, W.A. Khalil,R. Mu`ller, Alfred Fahr.  
Efficiency of cytoplasmic delivery by non-cationicliposomes to cells in vitro:  
A confocal laser scanning microscopy study.  
Physica Medica (2009) Vol. 25: 88-93.
- 32- Diab, H.M. and Ghannam, M.M. Development of annealing treatment as a new technique for retrospective luminescence dosimetry in barium borosilicate glass and natural borosilicate glass.  
ISOTOPE & RAD. RES (2010) 42(1):95-108.

- 33- Diab, H.M. and Ghannam, M.M. King saud university thermoluminescence protocol for precise performance testing of dosimetry services.  
ISOTOPE & RAD. RES (2010) 42(4):1105-1114.
- 34- M. Abdelaziz and Magdy M. Ghannam. Influence of titanium chloride addition on the optical and dielectric properties of PVA films  
Physica B 405 (2010) 958–964.
- 35- Mohamed A.K. Abdelhalim, Mohsen M. Mady, Magdy M. Ghannam. Rheological and dielectric properties of different gold nanoparticle sizes.  
Lipids in Health and Disease (2011), 10: 208
- 36- The effects of gold nanoparticles size and concentration on viscosity, flow activation energy, dielectric and optical properties.  
Mohamed A. K. Abdelhalim, Mohsen M. Mady, Magdy M. Ghannam, Mohammed S. Al-Ayed and A. S. Alhomida  
African J Biotechnology (2011), 10: 13121-13127.
37. Mohsen M. Mady and Magdy M. Ghannam. Stability of anionic liposomes in serum and plasma.  
African J Pharmacy and Pharmacology (2011), 5(16): 1898-1905.
- 38- Mohamed A.K. Abdelhalim, Mohsen M. Mady, Magdy M. Ghannam. Dielectric constant, electrical conductivity and relaxation time measurements of different gold nanoparticles sizes.  
International J Physical Sciences (2011), 6(23): 5487-5491.
- 39- T.M. Shafey, R.S. Aljumaah, S.A.Swillam, S.I. Al-mufarrej, A.A. Al-abdullatif, M.M. Ghannam. Effects of short term exposure of eggs to magnetic field before incubation on hatchability and post-hatch performance of meat chickens.  
Saudi Journal of Biological Science (2011), 18, 381-386.
- 40- T.M. Shafey, R.S. Aljumaah, M. A.K. Abdelhalim, M. M. Mady, M.M. Ghannam. Effect of Dietary Electrolyte Balance on the Performance of Broiler Chickens Fed High Calcium Diets.  
Journal of Animal and Veterinary Advanced (2011), 10(22):2902-2908.
- 41- Magdy M. Ghannam and Mohsen M. Mady. Effect of gamma irradiation on biophysical and protection properties of Melanin.  
International Journal of Physical Sciences (2012) , 7(23), 2952-2959.
- 42- Fakhry F. Ibrahim and Magdy M. Ghannam . The Diagnostic Potential of Dielectric Properties, Telomerase Activity and Cytokeratin 20 in Urine Cells of Bladder Cancer Patients  
J Cancer Science Therapy (2012), 4(8) 237-242.
- 43- Effects of short term exposure of layer-type breeder eggs to magnetic field on hatchability and hatching parameters  
Shafey T. M., M. A. Alodan, M. M. Ghannam, M. K. Abdelhalim and M. M. Mady  
Scientific Research and Essays (2012) 7(25) 2205-2212.



- 44- Mohamed Anwar K Abdelhalim, Mohsen M. Mady and Magdy M. Ghannam  
Physical Properties of Different Gold Nanoparticles: Ultraviolet-Visible and  
Fluorescence Measurements  
J Nanomed Nanotechol (2012), 3(3)133-137.
- 45- M. Anwar K Abdelhalim, Sherif A.A. Moussa, Al-Ayed MS, and M. M. Ghannam.  
Rheological properties of blood serum of rats after irradiation with different gamma  
radiation doses in vivo.  
Wulfenia J (2014), 21(2): 78-88.
- 46- Magdy M. Ghannam, Mohamed A.K. Abdelhalim, Sherif A. Moussa, Yanallah H.AL-  
Mohy and Mohammed S. Al-Ayed (2015). Ultraviolet-Visible and Fluorescence  
Spectroscopy Techniques Are Important Diagnostic Tools during the Progression of  
Atherosclerosis: Diet Zinc Supplementation Retarded or Delayed  
Atherosclerosis. Atherosclerosis ; 241(1):121- . (IF: 3.99).
- 47- Mohamed A.K. Abdelhalim, Magdy M. Ghannam and Mohammed S. Al-Ayed (2015).  
The role of Zn-supplemented with high cholesterol diet on serum and whole blood  
rheological properties of rabbits fed a high cholesterol diet  
Atherosclerosis ; 241(1):194- (IF: 3.99).
- 48- Ghannam MM, Shafey TM, Aly AA, Abdelhalim MAK and Al-Ayed MS.  
Effect of incubating egg exposure to magnetic field on the biophysical blood properties  
of newly-hatched chicks.  
Pak. J. Pharm. Sci. (2015), 28 No. 5 (Suppl.):1865-1870.
- 49- Ghannam MM, Mady M M, Al Sabie A A, Aly AA and Al-Ayed MS.  
Gamma irradiation effects on the electrical properties of gold nanoparticles  
Pak. J. Pharm. Sci. (2015), 28 No. 6 (Suppl.): 2231-2235.
- 50- Mady MM, Fatima HA, Faridah FA, Amany AA, Mai A A and Ghannam MM.  
Enhanced Ehrlich tumor inhibition using DOX-NP and gold nanoparticles  
loaded Liposomes.  
Pak. J. Pharm. Sci. (2015), 28 No.6 (Suppl.): 2321-2325.
- 51- Magdy M. Ghannam, Reem El Gebaly and Maha Fadel (2016) Targeting doxorubicin  
encapsulated in stealth liposomes to solid tumors by non-thermal diode laser.  
Lipids in Health and Disease. (2016), 15 (68):2-8
- 52- Alanazi, Sitah F.; Alzimami, Khalid S.; Ghannam, Magdy M.; Aljammaz, Ibrahim J.;  
Alrumayan, Faisal; Sassi, Salem A. (2016) Quantitative imaging characteristics of  
zirconium-89 on Gemini Time-Of-Flight PET/CT.  
Nuclear Medicine Communication. (2016), 37(12): 1238-1245.

=====