PERSONAL INFORMATION

Mahran Mohamed Abd El-Emam

16 El-hanawy st., Zagazig, Sharkia, Egypt
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Sex male |Date of birth 24/03/1992|Nationality Egyptian

Job Title

Lecturer Of Biochemistry and Molecular Biology/ Faculty of Veterinary Medicine /Zagazig University /Egypt

WORK EXPERIENCE

During my master's research, I applied nanoparticles (NPs) conjugates composed of zinc oxide and curcumin for preventing and treating testicular damage induced as an aside effect of commonly applied anticancer drugs, cyclophosphamide. I published one scientific paper during my master's studies. In my PhD thesis work, I prepared doxorubicin NPs and applied my skills to develop a new technique called iontophoresis for NPs delivery and enhancing cancer therapy. The finding revealed that iontophoresis treatment triggered Ca^{2+} signalling, which in turn activated protein kinase C and dissociated gap and tight junctions in the tumour microenvironment for enhanced EPR effects of doxorubicin NPs in melanoma-bearing mice. In addition, I found a new pathway involved in heat stress-induced male infertility. I found that heat treatment suppressed Ca^{+2} signalling in the testis and inhibited the activity of the CatSper channel,which is responsible for sperm motility, and this may be a mechanism involved in heat stress-induced impairment of spermatogenesis. I published two international scientific papers during my PhD studies. Now, I work on preparations for liposomal formulation and their application in treating diseases especially liver damage and diabetes, and I have published one scientific international paper in this area.

Methodological Experiences

- RNA extraction, Real time PCR and Agar gel electrophoresis.
- Biochemical measurement of antioxidant enzyme activities
- Sperm analysis
- Western blotting analysis
- Immunohistochemical analysis

- Histopathological examination
- Tunnel assay
- Preparation of liposomal drug delivery
- Confocal laser scanning microscope

ACADEMIC CAREER

November 2014- March 2019; Teaching assistant of Biochemistry and Molecular Biology/ Department of Biochemistry and Molecular Biology/ Faculty of Veterinary Medicine/ Zagazig University /Egypt

March 2019- October 2019; visiting researcher at faculty of Pharmaceutical Sciences, Department of Pharmaceutical Health Chemistry,Tokushima University,Japan.

October 2019- September 2022; PhD student at faculty of Pharmaceutical Sciences, Tokushima University, Japan.

October 2022- now; Lecturer of Biochemistry and Molecular Biology at Department of Biochemistry and Molecular Biology/ Faculty of Veterinary Medicine/ Zagazig University/ Egypt

EDUCATION ANDTRAINING

#EDUCATIONAL SKILL:

University Education:

Bachelor's degree of Veterinary Medical Sciences (Faculty of Veterinary medicine, Zagazig University, Egypt)

Graduation date: May 2014

Grade: Excellent with honors (GPA= 4).

- Master's degree of Biochemistry (Faculty of Veterinary medicine, Zagazig University, Egypt), June 2017.
- PhD degree of Pharmaceutical Sciences (Pharmaceutical Health Chemistry), Tokushima University, Japan, September 2022.

#COURSES TAUGHT:

*Post graduate Courses:

1- Basic biochemistry. 2- Clinical biochemistry. 3- Molecular Biology.
4- Microbial biochemistry. 5- Blood physiology. 6- Bioassay of drugs.
7- Viral poultry diseases. 8- Applied Research of Pharmaceutical Sciences

LANGUAGE SKILLS

- **English: (IELTS, score 6.5)**

Publications

1- **Abd El-Emam, M.M.;** Mostafa, M.; Farag, A.A.; Youssef, H.S.; El-Demerdash, A.S.; Bayoumi, H.; Gebba, M.A.; El-Halawani, S.M.; Saleh, A.M.; Badr, A.M. The Potential Effects of Quercetin-Loaded Nanoliposomes on Amoxicillin/Clavulanate-Induced Hepatic Damage: Targeting the SIRT1/Nrf2/NF-κB Signaling Pathway and Microbiota Modulation. Antioxidants, 2023, 12 (8), 1487.

2- Khatun, A., Hasan, M., **Abd El-Emam, M. M**., Fukuta, T., Mimura, M., Tashima, R., and Kogure, K. Effective anticancer therapy by combination of nanoparticles encapsulating chemotherapeutic agents and weak electric current. Biological and Pharmaceutical Bulletin, 2022; 45(2), 194-199.

3- Ahmad, Khalifa E., Abd El-Aziz, M. Reda, **Abd El-Emam, and M. Mahran**. Ameliorative Effects of Curcumin-Zinc Oxide Nanoparticles Conjugate on Cyclophosphamide-Induced Infertility in Male Rats. Zagazig Veterinary Journal, 2017; 45 (Supplementary 1),126-32.

4- **Abd El-Emam, M. M.**, Ray, M. N., Ozono, M. and Kogure, K. Heat stress disrupts spermatogenesis via modulation of sperm-specific calcium channels in rats. Journal of Thermal Biology, (2023); 112, 103465.

5- Mohamed, A. A. R., Khater, S. I., Metwally, M. M., Emran, T. B., Nassan, M. A., **Abd El-Emam, M. M.,** and El-Shetry, E. S. TGF-β1, NAG-1, and antioxidant enzymes expression alterations in Cisplatin-induced nephrotoxicity in a rat model: Comparative modulating role of Melatonin, Vit. E and Ozone. Gene, 2022; 820, 146293.

6- Ayman Ahmed Shehata, **Abd El-Emam, M. M.**, Heba Gouda, Basma Mustafa El-Said, Eman Beshry Abd-Elfatah. Molecular characterization of Cryptosporidium parvum infections and analysis of hemological and biochemical changes in diarrheic pre-weaned calves in Egypt. Pakistan Veterinary Journal, 2023.

7- **Mahran Mohamed Abd El-Emam**, Azza S El-Demerdash, Samar Ahmed Abdo, Eman Beshry Abd-Elfatah, Marwa M El-Sayed, Milad Reda Qelliny, Zienab E. Eldin, Ayman Ahmed Shehata. The ameliorative role of Aloe vera-loaded chitosan nanoparticles on *Staphylococcus Aureus* induced acute lung injury: targeting TLR/ NF-κB signaling pathways. Open veterinary journal (in press).

8- Shehata AA, Abd-Elfatah EB, Elsheikh HEM, Eldin AlAZ, Salman MB, Shehta A, Khater SI and, **El-Emam MMA**, 2023. Epidemiological features, biochemical indices, antibiogram susceptibility profile, and biofilm factor genes of Klebsiella pneumoniae isolated from bovine clinical mastitis cases. Pak Vet J. (in press)