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Sex: Female | **Date of birth:** April 9, 1990 | **Nationality:** Egyptian | **Religion:** Muslim

OVERVIEW

1.Goals

A post graduate and lecturer of virology with strong communication and organizational skills gained in virology, now seeking to move into a new discovery in virology and molecular virology.

2. Technical expertise

Preparation of viral samples (tissue, serum, buffy coat, faeces, urine, swab)| cell culture| virus isolation| virus titration| virus purification| lab animal| SPF -EGG| preparation of primary cells (e.g.: chicken embryo fibroblast and rabbit kidney cells)| haemagglutination technique| haemagglutination inhibition technique| preparation of solutions| viral nucleic acid extraction| transfection| gene cloning| gene expression| RNA-SDS-PAGE| protein-SDS-PAGE| western blot| relative qPCR| absolute qPCR| Mass spectrometry| RNA sequencing| stem-loop qPCR| agar gel precipitation test| fluorescence antibody technique| ELISA

EDUCATION AND WORK EXPERIENCE

Lecturer of Virology (September 2022-Present)

Virology department, Faculty of Veterinary Medicine, Benha University, Egypt
(<http://www.fvtm.bu.edu.eg>).

PhD in Veterinary Virology (September 2018 – September 2022)

Ph.D. research work consisted of two main projects:

Ph.D. project 1: "**Detection, isolation and characterization of bovine rotavirus and its pathogenesis associated with the host miRNAs along with its pathogenicity**". (College of Veterinary Medicine, Animal Infectious Diseases and Veterinary Virology, Huazhong Agricultural University, Wuhan, P.R. China (hzau.edu.cn)).

This project aimed to:

1. Investigate the proportion of cases with bovine rotavirus infection in Chinese calves.
2. Isolate bovine rotavirus strains from faeces of Chinese calves with severe diarrhea and type the viral species and genotypes (published).

3. Explore the bovine rotavirus-MA-104 host cell interaction as well as some insights about the viral pathogenesis via host miRNAs (published).
4. Study the pathogenicity of bovine rotavirus in the laboratory animal host (the results available under request but not published).

Ph.D. project 2:

“Study the impact of immune related genes on the replication of Spring Viraemia of Carp Virus (SVCV)” (College of Fisheries, Huazhong Agricultural University, Wuhan, P.R. China).

This project aimed to:

1. Study the impact of (CC119a.2 (Zebrafish Gene) on the replication of Spring viraemia of carp virus (SVCV) (the results available under request but not published).
2. Explore the signaling pathways (IFN Φ 1, NF-kB p65, PKR) which implicated in SVCV pathogenesis (the results available under request but not published).

Lab Associate (September 2018 – September 2022)

College of Veterinary Medicine, Animal Infectious Diseases and Veterinary Virology, Huazhong Agricultural University, Wuhan, P.R. China (hzau.edu.cn).

- Major responsibilities: Technical training of junior students, lab equipment's maintenance, review students manuscripts and thesis.

Assistant lecturer of Virology (October 2016 – September 2022)

Virology Department, Faculty of Veterinary Medicine, Benha University, Egypt (<http://www.fvtm.bu.edu.eg>).

- I was teaching virology practical courses for bachelor and master students, for example, biological laboratory safety, viral sampling, isolation of virus (e.g.: LSDV, IBV, chicken retrovirus, BVDV) in SPF-ECE, cell culture (MDBK, Vero, MA-104) and laboratory animal (e.g.: mouse, rat, rabbit), purification and concentration of virus, transmission electron microscopy, haemagglutination technique, haemagglutination inhibition

technique, infectivity assay, serum neutralization assay, agar gel-precipitation assay, fluorescence antibody technique, Enzyme linked immunosorbent assay, Molecular techniques such as conventional PCR, sanger sequencing, relative qPCR, absolute qPCR, restriction fragment length polymorphism, alignment of the gene sequence via gene bank and the phylogenetic analysis by software (MEGA). In addition, preparation of solutions, in particular, of molecular techniques and calibration of pH meter.

Lab associate (September 2013- October 2016)

At CESR laboratory (Center of Excellence in Scientific Research),
Faculty of Veterinary Medicine, Benha University, Egypt (<http://www.fvtm.bu.edu.eg>).

1. Member at Molecular Biology unit.
2. Member at Microbiology unit.
3. Member at Biochemistry unit.
4. Member at Hematology unit.
5. I was employee “Deputy committee appliances and fixtures director”:
I was responsible for maintenance and the specifications of lab machines.

Master student and demonstrator of Veterinary Virology (January 2013-October 2016)

Virology Department, Faculty of Veterinary Medicine, Benha University, Egypt (<http://www.fvtm.bu.edu.eg>).

1. The master project topic: "**Studies on Lumpy Skin Disease Virus**".
The project aimed to isolation and characterization of lumpy skin disease virus strains circulated in Egypt.
2. I was teaching virology practical courses for bachelor students.

Bachelor student in Veterinary Virology (September 2007 – June 2012)

-Faculty of Veterinary Medicine, Benha University, Egypt

(<http://www.fvtm.bu.edu.eg>).

- I was studying English, physiology, histology, anatomy, genetics, animal Behaviour, microbiology, virology, biochemistry, parasitology, pharmacology, pathology, surgery, animal medicine, theriogenology, animal infectious diseases, zoonoses, forensic medicine, toxicology, specific pathology, clinical pathology, animal hygiene, poultry diseases, and fish diseases.

PUBLICATIONS

1. **Elkady G**, Chen Y, Hu C, Chen J, Chen X and Guo A (2022) MicroRNA Profile of MA104 Cell Line Associated With the Pathogenesis of Bovine Rotavirus Strain Circulated in Chinese Calves. *Front. Microbiol.* 13:854348. doi: 10.3389/fmicb.2022.854348
2. **Elkady G**, Zhu J, Peng Q, Chen M, Liu X, Chen Y, Hu C, Chen H, Guo A. Isolation and whole protein characterization of species A and B bovine rotaviruses from Chinese calves. *Infect Genet Evol.* 2021 Jan 9:104715. doi: 10.1016/j.meegid.2021.104715. Epub ahead of print. PMID: 33434703
3. Liu W, Chen B, Chen Li, Yao J, Liu J, Kuang M, Wang F, Wang Y, **Elkady G**, Lu Y, Zhang Y, Liu X. Identification of fish CMPK2 as an interferon stimulated gene against SVCV infection. *Fish Shellfish Immunol.* 2019 Sep;92:125-132. doi: 10.1016/j.fsi.2019.05.032. Epub 2019 May 21. PMID: 31125665. <https://doi.org/10.1016/j.fsi.2019.05.032>
4. **El-kady. G.HE.M**, G.F. El-Bagoury, E.M. El-Nahas and A.S. El-Habbaa. (2018). A Phylogeny of Envelope protein like gene of Lumpy skin disease virus, Egypt, 2014. *BENHA VETERINARY MEDICAL JOURNAL*, 4, 338-350. www.bvmj.bu.edu.eg
5. LSDV gene sequence on GenBank.
(DEFINITION: Lumpy skin disease virus isolate ELKADY_2014 envelope protein-like gene, partial sequence. ACCESSION: KU760905.

INTERDISCIPLINARY SKILLS

- Mother tongue(s): Arabic
- Other language(s): English, Chinese (Basic Short-term course)
- IELTS: Score 6
- Conversation course at alternative education centre at AUC
- ICDL5
- Mega software phylogenetic data analysis
- SPSS
- Microsoft Office Word, excel and PowerPoint
- Self-Evaluation and External Reviewing
- University Management
- International Publishing of Scientific Research
- Strategic Planning
- Other skills: Reading, play tennis

AWARDS AND ACHIEVEMENTS

- The best researcher in Ruminant Pathology Laboratory, 2021, from Huazhong Agricultural University.
- Reviewer in Frontiers in Genetics (Cancer Genetics and Oncogenomics).

CONFERENCES

- 2021 China-Australia bilateral Symposium, Huazhong Agricultural University, Wuhan, P.R. China.
- 2019 Annual Symposium for International Students, International College, Huazhong Agricultural University, Wuhan, P.R. China.
- Sixth International Conference of Virology, Egyptian Society of Virology, Cairo University, 2017.

- Sixth International Conference, Faculty of Veterinary Medicine, Benha university, 2017.

POSTERS

- Topic: Phylogeny of Envelope Protein Like Gene of Lumpy Skin Disease Virus, Egypt, 2014 (Sixth international conference, Faculty of Veterinary Medicine, Benha university, 2017).

SESSIONS AND EVENTS

- Newton Mosharafa PhD Programme info. session in British Council, Egypt.
- COSIMENA Health Cluster Expert session on Virology.
- German Science Day, DAAD, 2018.

REFERENCES

- *Prof. Aizhen Guo*
College of Veterinary Medicine, Preventive Veterinary Medicine, Animal Infectious Diseases, Huazhong Agricultural University, State key lab of Agricultural Microbiology, Wuhan 430070, China.
Tel: 0086-27-87286861
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- *Prof. Yingyu Chen*
College of Veterinary Medicine, Preventive Veterinary Medicine, Animal Infectious Diseases, Huazhong Agricultural University, State key lab of Agricultural Microbiology, Wuhan 430070, China.
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- *Prof. Changmin Hu*

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