

Virology Department,
Faculty of Veterinary Medicine,
Cairo University,
Giza, 12211, Egypt.

Phone (W): 00202-35710-309.
Phone (H): 00202-33838-357.
Mobile (Egypt): 002011-567-588-35.
Fax: 00202-5725-240.
E-mail: ausama_yousif@yahoo.com
ausamay@hotmail.com
ausama_yousif@cu.edu.eg

Ausama Abd El-Raouf Abd El-Moneim Yousif Attia

Short biography

Professor Attia graduated at the Faculty of Veterinary Medicine, Cairo University. He was among the top 1% of his class. After isolating a camel pestivirus for the first time in the world, he was given the opportunity to study for a PhD in the US. He was awarded his PhD in 2002 at South Dakota State University. In the US, he did his research in the Animal Disease Research and Diagnostic Laboratory. As a career educator, he helped with formulating the Egyptian National Academic Reference Standards for the Veterinary Education. He also helped in the design and execution of several undergraduate and graduate level programs and courses. He published several papers on developing diagnostic reagents and vaccines for the control of emerging transboundary pathogens like lumpy skin disease and camelpox viruses. Professor Attia also worked with the industry on several aspects of research and development, production and, quality control of vaccines against several pathogens of veterinary and public health importance, including the design of an avian influenza production facility, and served on the board of one company. He helped establish the Central Biotechnology Laboratory of King Faisal University, and worked as an associate professor in Al-Baha University. Professor Attia is recognized as an expert on Rift Valley fever virus by the Arab Organization for Agricultural Development. He is also recognized as an expert in veterinary vaccines by the Egyptian General Organization of Veterinary Services. He is currently a professor of virology, and the dean's assistant for international cooperation in the Faculty of Veterinary Medicine, Cairo University. His work involving international cooperation allowed for the creation of the China – Egypt Joint Laboratory for Control and Prevention of Animal Diseases and, allowed for agreements that facilitated generation of money and support for international master's programs development. He is also a visiting professor in the Faculty of Veterinary Medicine of the City of Satat. His current research focus is on improving vaccines and vaccine-based control programs for Newcastle disease, Rift Valley fever, foot and mouth disease, and avian influenza viruses; including green vaccines produced in microalgae. In addition, his research group has recently unveiled the presence of Equine hepaciviruses in Egypt, a transboundary genotype of fish iridoviruses, and the viral cause of massive tilapia mortalities in Egyptian aquacultures. His work also uncovered the underlying cause behind the failure to control the 2018 outbreak of lumpy skin disease. Moreover, Prof. Attia has been entrusted with development of the conceptual and operational designs of the National Company for Animal Production's first and second biosafety level (BSL) 2 and 3 veterinary research and diagnostic facilities. He continues to work as a scientific advisor for this organization of the Egyptian Military.

Summary of employment history

- February 2019 - Present National Company for Animal Production, National Service Projects Organization, Egyptian Military, Egypt.
Advisor. Responsible for preparation of the conceptual and operational designs of the BSL2 and BSL3 veterinary research and diagnostic facilities.
- October 2018 - Present Faculty of Veterinary Medicine, Cairo University, Egypt.
Dean's Assistant for International Cooperation.
- January 2018 – December 2018 Cairo University, Egypt.
Cairo University Deputy Executive Director of the General Administration for International Agreements.
- October 2017 – October 2018 Faculty of Veterinary Medicine, Cairo University, Egypt.
Vice Dean Assistant for International Cooperation.
- May 2016 – October 2018 Faculty of Veterinary Medicine, Cairo University, Egypt.

International Relations Coordinator.

- May 20th, 2014- July 15th, 2017 Faculty of Veterinary Medicine, Cairo University.
Department head and, graduate studies board member.
- 1992 – 2002, Faculty of Veterinary Medicine, Cairo University.
Demonstrator, then assistant lecturer of virology.
- January 20th, 2014 –August 2014, VACSERA, Cairo, Egypt
EgyVet board of directors.
- January 2014 – Present, Faculty of Veterinary Medicine, Cairo University.
Professor of virology.
- Sept. 2010- Aug 2012, College of Science, Al-Baha University, KSA.
Associate professor, department of biology.
- April 2008- September 2010, College of Veterinary Medicine and Animal Resources, King Faisal University, KSA.
Acting director, the central biotechnology laboratory.
- October 2008 – December 2013, Faculty of Veterinary Medicine, Cairo University.
Associate professor of virology.
- 2003- November 2006, VACSERA, Cairo.
Consultant, then CEO assistant for Development in EgyTech and EgyVet, VACSERA.
- June 2002 – October 2008, Faculty of Veterinary Medicine, Cairo University.
Lecturer of virology.
- 1998 – May 2002, South Dakota State University, College of Agriculture and Biological Sciences. USA.
Teaching assistant and research assistant positions.

Education

- 1998 - 2002 South Dakota State University, School of Agriculture and Biological Sciences, SD, USA.
Ph.D. Biological Sciences - Virology. GPA 3.922 (GPA was 4.0 for courses studied in the US).
- 1992 -1995 Faculty of Veterinary Medicine, Cairo University, Egypt.
Master's degree in veterinary virology. GPA not applicable.
- 1986 – 1992 Faculty of Veterinary Medicine, Cairo University, Egypt.
Bachelor of veterinary medicine. Top 1% of class (Grade: Very Good).

Language skills

- Arabic and English (TOEFL= 667; Test of Written English= 5 of a possible 6; Paper based, 1996).
- Competent Toastmaster. Toastmasters International, USA. 2000.

Technical experience

1. Design and operation of BSL2 veterinary diagnostic laboratories with BSL3 capabilities.
2. Design of production lines for biological products. This includes conceptual designs of production lines, material, waste and personnel flows, product details, quality control parameters and quality assurance.
3. Diagnosis of viral infections: Experience includes viruses belonging to the following families: *Flaviviridae*, *Herpesviridae*, *Poxviridae*, *Reoviridae*, *Orthomyxoviridae*, *Paramyxoviridae*, *Picornaviridae*, *Coronaviridae*, *Birnaviridae*, *Retroviridae*, *Circoviridae*, *Arteriviridae*, *Iridoviridae*, *Nodaviridae*, and *Phenuiviridae*.
4. Development of diagnostic tools: including antigens, antisera, monoclonal antibodies, and PCR assays.
5. Development of vaccines: including modified live, inactivated, and DNA vaccine design and manufacture.
6. Evaluation of veterinary vaccines.

Academic experience

[A] Teaching conventional and web-enabled courses.

[B] Courses which I helped design, coordinate, and teach include:

- Undergraduate courses: Laboratory Biosafety, Scientific Methodology and Communication, Health Education (in Arabic), Cytology, Virology and Viral Immunology, Molecular Biology and, Molecular Signals.
- Graduate courses: Advanced General Virology (VIR 1070), Vaccinology (Courses VIR 3178, and 217), Viruses of wild animals and birds (VIR 3177), General Virology (Course 74), General Virology for the Diploma of Microbiology and, General Virology for the Diploma of Public Hygiene (VIR 4175).

[C] Teaching techniques adopted in classes: lectures, group activities, problem-solving approaches, and one-on-one needs-oriented approaches.

[D] Teaching graduate and undergraduate students from the following countries: Egypt, the United States of America, Sudan, Somalia, Oman, Bahrain, Kuwait, the United Arab Emirates, Iraq, Palestine, Syria, Lebanon, Yemen, Mauritania, Saudi Arabia, Qatar, Libya, South Sudan, Bahrain and, Djibouti.

[E] Teaching talented students as a trainer in the National Research Center for Giftedness and Creativity of King Abdul-Aziz & his Companions Foundation for Giftedness & Creativity (MAWHIBA) during Al-Baha University program on Biotechnology, Kingdom of Saudi Arabia. 2011

[F] Mentorship: I helped supervise or, co-supervise over 17 Master's- and PhD-level students. I also helped mentor several undergraduate students while they prepared their graduation projects.

Current Research projects

STDF Innovation project # 256789: Algal expression of cross protective avian influenza and infectious bronchitis viral epitopes for mucosal immunization of avian species.

STDF Research Support project # 34949: Expression and characterization of Norovirus shell (S) protein in algae for development of immunoassays and vaccines.

Awards

1. Scientific Achievement Award. Faculty of Veterinary Medicine, Cairo University. 1987.
2. Egyptian Society of Histology Scientific Achievement Award. 1987.
3. Science and Faith Society Award for Scientific Achievement. Faculty of Veterinary Medicine, Cairo University. 1987-1988-1990-1991.
4. Valedictorian. Class of 1992, Faculty of Veterinary Medicine, Cairo University.
5. Scientific Achievement Award. Cairo University. 1992.
6. Scientific Achievement Award. Veterinary Medical Syndicate. Egypt. 1992.
7. Scientific Achievement Award. Cairo University Social Club. 1993.
8. American College of Veterinary Microbiologists: Graduate Student Award for Best Poster in Viral Pathogenesis. CRWAD 1998. J. Am. Vet. Med. Assoc. 1999, Vol 214(4): 474. USA.
9. Finalist of SDSU Chapter of the Society of Sigma Xi 1999 Research Proposal Award.
10. First Place Award. District 41 Table Topics contest. Pierre, SD. Toastmasters International. 1999.
11. Best Ph. D. Paper award from the Sigma Xi honor society, 2001. SDSU, USA.
12. International publication award. Cairo University. 2013.
13. International publication award. Cairo University. 2017.

Memberships (past and present)

1. Gamma Sigma Delta Agricultural honor society.
2. Sigma Xi honor society.
3. Egyptian Society for Virology (Board Member).
4. Canadian Society of Microbiologists.
5. Saudi Biological Society.
6. American Society of Microbiology.
7. Egyptian Association for Immunologists.
8. The Egyptian Association of Epidemiology.

Select publication list

- Yousif, A.A. et al., 1995. Production and preliminary characterization of monoclonal antibodies to lumpy skin disease virus. *Journal of the Egyptian Association of Immunology*. Vol 2(1): 147-154.
- Saber, M.S. et al., 2000. Preparation of an inactivated lumpy skin disease virus vaccine. *Vet. Med. J. Giza*. Vol. 48(4): 633-646.
- Metwally, M.A., et al., 2003. Direct detection of variant infectious bursal disease virus in vaccinated Egyptian broiler flocks using antigen-capture ELISA. *Vet. Med. J. Giza*. Vol. 51(1): 105-119.
- Yousif, A.A., et al., 2004. Cytopathic genotype 2 bovine viral diarrhea virus in dromedary camels. *Arab J Biotech*. 7(1): 123-140.
- Chase, C.L. et al., 2004. The Immune response to bovine viral diarrhea virus: A constantly changing picture. *Vet Clin North Am Food Anim Pract*. 2004; 20(1): 95-114.
- Metwally, A.M., et al., 2008. Re-emergence of Very Virulent IBDV in Egypt. *IJV*. 5(1): 1-17.
- Yousif, A.A. and Iman B. Shaheed, 2008. Evidence of long-term persistence of pestivirus genotype 3 DNA plasmids in mouse tissues using in-situ hybridization: Correlation to the cellular response following DNA vaccination. *Egyptian J. Virol*. 5(2):225-270.
- Yousif, A.A. et al., 2010. Rapid non-enzymatic extraction method for isolating PCR-quality camelpox virus DNA from skin. *J Virol Methods*. 169(1):138-42.
- Atwa, M.H. et al., 2011. ZH501-VSVRI: Is it still the best choice for vaccination against rift valley fever in Egypt? *J Vaccines Vaccin*. 2:121. doi:10.4172/2157-7560.1000121
- Shakal, M.A. et al., 2011. Use of VP60 RT-PCR to overcome the limitation of haemagglutination inhibition diagnosis of rabbit viral haemorrhagic disease. *World Rabbit Sci*. Vol. 19(1): 11-20.
- Yousif, A.A. and Al-Ali, A. M., 2012. A Case of Mistaken Identity? Vaccinia virus in a live camelpox vaccine. *Biologicals*. 40: 495-498.
- Yousif, A.A., and Al-Naeem, A.A., 2012. Recovery and molecular characterization of live camelpox virus from skin 12 months after onset of clinical signs reveals possible mechanism of virus persistence in herds. *Vet Microbiol*. 159: 320–326.
- El-Bagoury G. et al., 2014. Molecular identification of RHDV Egyptian strains based on the highly variable region of VP60 gene. *BVMJ*. 26(2): 84-100.
- Metwally, Ashraf; Yousif, Ausama. 2017. "Visualization of Alternative Functional Configurations of Influenza Virus Hemagglutinin Facilitates Rapid Selection of Complementing Vaccines in Emergency Situations." *Int. J. Mol. Sci*. 18, no. 4: 766.
- Abdulla NM, Mohran KA, Haroun M, Ausama AA, Shalaby MA. 2017. Identification of Foot and Mouth Disease Virus Strains Originating from Multispecies Susceptible Animals. *J Vet Sci Med Diagn* 6:1. doi: 10.4172/2325-9590.1000222.
- Ahmed BM, Amer HA, Kissenkoetter J, El Wahed AA, Bayoumi MM, Böhlken-Fascher S, Elgamal MA, Yehia N, Yousif AA, Shalaby MA. 2020. Evaluating two approaches for using positive control in standardizing the avian influenza H5 reverse transcription recombinase polymerase amplification assay. *Mol Cell Probes*. Apr;50:101511. doi: 10.1016/j.mcp.2020.101511. Epub 2020 Jan 15.