

Mohamed Elaish
Assistant Lecturer, Faculty of Veterinary medicine
Postdoctoral Research Associate, The Ohio State University
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EDUCATION

- **Ph.D. Comparative and Veterinary Medicine.** August 2016
The Ohio State University, Columbus, Ohio.
- **M.S. Veterinary Medicine. Major: Poultry and Rabbit diseases** May 2010
Cairo University, Egypt.
- **D.V.M (5 years' degree) Rank: very good.** May 2006
Cairo University, Egypt.

PROFESSIONAL EXPERIENCE

Research Experience

2013 – 2016: Ph.D. candidate at The Ohio State University, Food Animal Health Research Program, Wooster, Ohio.

Worked under the mentorship of Dr. Lee on developing broadly reactive influenza vaccine in poultry using Norovirus P particle as a vaccine platform expressing conserved proteins, extracellular domain of Matrix 2 protein (M2e).

2007-2010: M.S. candidate at the Department of Poultry and Rabbit Diseases, Faculty of Veterinary Medicine, Cairo University, Cairo, Egypt.

Worked under the mentorship of Dr. Dinaa Khlefa on viral immunosuppressive diseases in chickens. The research was conducted to monitor chicken anemia virus (CAV), which is the main viral infectious agent causing severe immunosuppression in Egyptian poultry flocks. The incidence and distribution of CAV were monitored in broiler chicken flocks. Clinical signs and Post-mortem lesions were assessed and confirmed by various molecular tools in different tissue samples (liver, spleen, thymus, bursa and bone marrow). CAV positive samples were sequenced and their pathogenicity was investigated in SPF chicks.

Teaching Experience

- **Assistant lecturer**, Cairo University, Egypt July 2010-March 2012
Course number 554 and 408 practical sessions
for senior undergraduate students (4th and 5th year)

- **Instructor**, Cairo University, Egypt
Course number 554 and 408 practical sessions
for senior undergraduate students (4th and 5th year) June 2006-June 2010

AWARDS

- American Society of Virology Postdoctoral Travel Award April 2017
- Dr. B.S. Pomeroy award for student achievement in Avian diseases research March 2014
- **Cairo University:** Graduate research award for performing PhD studies at Ohio state university. April 2012-August 2016

PUBLICATIONS

- 1- **Elaish, M.**, Ngunjiri, J.M., Ali, A., Xia, M., Ibrahim, M., Jang, H., Hiremath, J., Dakhal, S., Helmy, Y.A., Jiang, X., Renukaradhya, G.J., Lee, C.W., 2017. Supplementation of inactivated influenza vaccine with norovirus P particle-M2e chimeric vaccine enhances protection against heterologous virus challenge in chickens. **PLoS One**.
- 2- Jang, H., Jackson, Y.K., Daniels, J.B., Ali, A., Kang, K.I., **Elaish, M.**, Lee, C.W., 2016. Seroprevalence of three influenza A viruses (H1N1, H3N2, and H3N8) in pet dogs presented to veterinary hospital in Ohio. **J Vet Sci**.
- 3- Hiremath, J., Kang, K. I., Xia, M., **Elaish, M.**, Binjawadagi, B., Ouyang, K., Dhakal, S., Arcos, J., Torrelles, J. B., Jiang, X., Lee, C. W., & Renukaradhya, G. J. 2016. Entrapment of H1N1 Influenza Virus Derived Conserved Peptides in PLGA Nanoparticles Enhances T Cell Response and Vaccine Efficacy in Pigs. **PLoS One**.
- 4- **Elaish, M.**, Kang, K. I., Xia, M., Ali, A., Shany, S. A., Wang, L., Jiang, X., & Lee, C. W. 2015. Immunogenicity and protective efficacy of the norovirus P particle-M2e chimeric vaccine in chickens. **Vaccine**.
- 5- Awe, O. O., Kang, K. I., Ibrahim, M., Ali, A., **Elaish, M.**, Saif, Y. M., Lee, C. W. 2015. Age-Related Susceptibility of Turkeys to Enteric Viruses. **Avian Diseases**.
- 6- Awe, O. O., Ali, A., **Elaish, M.**, Ibrahim, M., Murgia, M., Pantin-Jackwood, M., Saif, Y. M., Lee, C. W. 2013. Effect of coronavirus infection on reproductive performance of turkey hens. **Avian Diseases**.

PUBLISHED ABSTRACTS

- 1- **Elaish, M.**, Ngunjiri, J.M., Ghorbani, A., Jang, H., Mahesh, KC, Abuundo, M.C., Pantin-Jackwood, M., Bowman, A. S., Torchetti, M. K., Lee, C.W. 2017. Transmission of influenza viruses to turkeys. Presented at Centers of Excellence for Influenza Research and Surveillance, Atlanta, Georgia.
- 2- **Elaish, M.**, Ngunjiri, J.M., Jang, H., Ghorbani, A., Mahesh, KC, Lee, C.W. 2017. Potential mechanism of protection by M2e-based vaccine in chickens. Presented at the 36th annual meeting of the American society of virology, Madison, Wisconsin.
- 3- **Elaish, M.**, Ngunjiri, J.M., Jang, H., Lee, C.W. 2016. Evaluation of in vitro biological role of ectodomain of the influenza virus matrix protein 2 (M2e) specific antibodies in chickens. Presented at 97th Conference of Research Workers in Animal Diseases Meeting, Chicago, IL.
- 4- Ngunjiri, J.M, Waliullah, S., Jang, H., **Elaish, M.**, Ghorbani, A., Abundo, M.C., Mahesh, KC, Lee, C.W. 2016. Specific pathogen-free (SPF) turkey model for emerging reoviral arthritis. Presented at 97th Conference of Research Workers in Animal Diseases Meeting, Chicago, IL.
- 5- Ghorbani, A., Ngunjiri, J.M, Jang, H., **Elaish, M.**, Lee, C.W. 2016. Protective efficacy of live attenuated influenza vaccine combined with or without subunit vaccine against heterologous and heterosubtypic challenges. Presented at 97th Conference of Research Workers in Animal Diseases Meeting, Chicago, IL.
- 6- Lee, C.W., **Elaish, M.**, Kang, K.I., Ngunjiri, J.M., Jang, H., Ali, A., Xia, M., Jiang, X. 2015. Efficacy of M2e-based vaccine in chickens in comparison to murine model. Presented at 9th International Symposium on Avian Influenza, Athens, GA.
- 7- Kang, K.I., Xia, M., **Elaish, M.**, Ibrahim, M., Ali, A., Ngunjiri, J.M., Jang, H., Jiang, X., Lee, C.W. 2015. Immunogenicity and Protective Efficacy of Combined Vaccination with Recombinant M2e and Inactivated Influenza Vaccines in Pigs. Presented at the 3rd International Symposium on Neglected Influenza Viruses, Athens, GA.
- 8- Renukaradhya, G.J., Hiremath, J.M., **Elaish, M.**, Kang, K.I., Binjawadagi, B., Ouyang, K., Dhakal, S., Lee, C.W. 2015. PLGA nanoparticle entrapped conserved H1N1 influenza virus peptides vaccine induces peptide specific T cell response in pigs. Keystone Symposia: Immunity to Veterinary Pathogens: Informing Vaccine Development. Keystone Resort, CO.

- 9- Renukaradhya, G.J., Hiremath, J.M., **Elaish, M.**, Kang, K.I., Binjawadagi, B., Ouyang, K., Dhakal, S., Lee, C.W. 2015. PLGA nanoparticle entrapped conserved H1N1 influenza virus peptides vaccine induces peptide specific T cell response in pigs. European Veterinary Immunology Workshop. Vienna, Austria.
- 10- Lee, C. W., Kang, K.I., **Elaish, M.**, Ngunjiri, J.M., Jang, H., Ali, A., Hiremath, J., Dhakal, S., Xia, M., Jiang, X., Renukaradhya, G.J. 2014. Efficacy of M2e-based vaccine in murine, avian and swine models. Presented at 95th Conference of Research Workers in Animal Diseases Meeting. Chicago, IL.
- 11- **Elaish, M.**, Kang, K.I., Ali, A.; Awe, O., Ibrahim, M., Lee, C.W. 2014. Immunogenicity and Protective Efficacy of Combined Vaccination with Recombinant M2e and Inactivated Influenza Vaccines in Chickens and Pigs. Presented at the 33rd annual meeting of the American society of virology, Fort Collins, CO.
- 12- Kang, K.I., Ibrahim, M., Ali, A., **Elaish, M.**, Lee, C.W. 2014. Genetic and Antigenic Characterization of Swine Influenza Viruses from Commercial Pig Farms in Ohio between 2007-2013. Presented at the 33rd annual meeting of the American society of virology, Fort Collins, CO.
- 13- Kang, K.I., Awe, O., Ibrahim, M., **Elaish, M.**, Ali, A., Rauf, A., Saif, Y.M., Lee, C.W. 2014. Assessing Susceptibility to Turkey Astrovirus and Coronavirus in Various Aged Turkeys. Presented at the 33rd Annual meeting of the American society of virology, Fort Collins, CO.
- 14- Ibrahim, M., Sultan, H.A., Arafa, A.S., Kang, K.I., Abdel Razik, A.G.A., **Elaish, M.**, Lee, C.W. 2014. Development of Broadly Reactive H5N1 Vaccine against Antigenically Diverse Egyptian H5N1 Viruses by Targeted Mutation in the Hemagglutinin Protein. Presented at the 33rd Annual meeting of the American society of virology, Fort Collins, CO.
- 15- **Elaish, M.**, Kang, K.I., Ali, A., Awe, O., Ibrahim, M., Lee, C.W. 2014. Efficacy of combined vaccine approach using recombinant M2e and inactivated influenza vaccine in chickens. Presented at the North Central Avian Disease Conference, St. Paul, MN.

- 16- Hiremath, J., Kang, K.I., **Elaish, M.**, Binjawadagi, B., Ouyang, K., Dhakal, S., Lee, C.W., Gourapura R. PLGA-Nanoparticle entrapped swine influenza virus peptides vaccine induces epitope specific cell-mediated immune response in pigs. Presented at 95th Conference of Research Workers in Animal Diseases Meeting. Chicago, IL.
- 17- Ali, A., Rauf A., **Elaish, M.S.**, Saif, Y. M., Lee, C.W. 2013. Attachment of Avian and Mammalian Influenza Viruses to the Respiratory and Reproductive tracts of Layer Turkey Hens. Presented at AAAP/AVMA Annual Meeting, Chicago, IL.
- 18- Lee, C.W., Ali, A., **Elaish, M.**, Awe, O., Xia, M., Wang, L., Tan, M., Jiang, X. 2013. Development of universal flu vaccine using M2e-P particle in chicken. Presented at 150th AVMA Annual Convention. Chicago, IL.

INVITED TALKS

- **Evaluation of Norovirus P-particle based influenza vaccine in chicken.** October 2013
Graduate student seminar, Ohio State University.

PROFESSIONAL ORGANIZATIONS

- American Association of Avian Pathologists 2012-present
- American Society of virology 2017-presesnt

PROFESSIONAL SERVICE

Representative of FAHRP at the OARDC booth presented at September 2014
Wayne county fair, Wooster, Ohio

LANGUAGES

English: fluent in writing, speaking and reading (TOEFL IBT score 87)
Arabic: fluent in writing, speak and reading

REFERENCES

Chang Won-Lee, DVM, PhD

Professor

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Veterinary Preventive Medicine, CVM

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Yehia M. Saif, DVM, PhD

Professor and Head-Emeritus

Diplomate, ACVM, Ch. Diplomate, ACPV

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