

Hesham Ismail

Associate Professor of Food Hygiene and Safety

2020



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Education

- **B.V.Sc.**, Faculty of Veterinary Medicine, Assiut University, Egypt, 1994
- **M.V.Sc.**, Faculty of Veterinary Medicine, Assiut University, Egypt, 1998
- **Ph.D.**, Animal Science Department, Iowa State University, USA, 2007

Career

- **1995 – 1998:** Demonstrator of Meat Hygiene,
Food Hygiene Dept., Fac. Of Vet. Med., Assiut Univ., Egypt
- **1998 – 2007:** Assistant lecturer of Meat Hygiene,
Food Hygiene Dept., Fac. Of Vet. Med., Assiut Univ., Egypt
- **1999 – 2005:** Graduate student,
Meat Science major, Iowa State University, USA
- **2005 – 2007:** Research assistant,
Meat Science major, Iowa State University, USA
- **2007 – 2017:** Assistant Professor of Meat Hygiene,
Food Hygiene Dept., Fac. Of Vet. Med., Assiut Univ., Egypt
- **2013 – 2014:** Visiting Scholar,
Food Science and Human Nutrition Dept., Purdue Univ., USA
- **2017 – Now:** Associate Professor of Meat Hygiene,
Food Hygiene Dept., Fac. Of Vet. Med., Assiut Univ., Egypt
- **2019 – Now:** Assistant Professor of Food Hygiene and Safety,
Public Health Dept., College Of Vet. Med., King Faisal Univ., Saudi Arabia.

Awards and Honors

- Fully funded assistantship, Egyptian Ministry of Higher Education to pursue Ph.D. from USA 1999-2005.
- Assistantship, Iowa State University, USA, for Ph.D. studies 2005-2007
- Scholarship for tuition, Graduate College, Iowa State University, USA, 2005-2007.
- Visiting scholar, Purdue University, USA, 2013-2014.

Research area of interest

Treating meat and its various products with radiation as one of the modern methods of preserving meat and its products. Additionally, studying the extent of the effect of radiation on the natural properties of meat and its products such as color, taste and smell, as well as the extent to which microbes are affected and their ability to grow in meat treated with different doses of radiation. 14 research papers have been published discussing this topic in international journals (ISI) with a high impact factor (10 papers in Q1 journals and 4 papers in Q2 journals), in addition to presenting abstracts and posters in international conferences, seminars and meetings in the United States of America for 9 research on the same topic.

Scientific projects at King Faisal University, Saudi Arabia

- Masar Nasher 2020, Deanship of Scientific Research, King Faisal University - a research project entitled "Evaluation of the sanitary status of retailed camel meat-products with an improvement trial using *Nigella sativa* and *Capsicum annum* oils"
The internal number of the project (67), the duration of the project is five months (20/11/2020 - 19/4/2021) - **Co-investigator.**
- Deanship of Postgraduate Studies, King Faisal University 2021- A proposal for a master's degree research plan for a postgraduate student "Master of Food Hygiene Sciences", College of Veterinary Medicine, entitled "Evaluation of lipid oxidation and nutritive value of refrigerated imported beef during storage with an improvement trial using vitamin E in Al-Ahsa Governorate"-**Principal Supervisor.**

Membership of Supervision, Judging and Discussion Committees of Master Theses

I- Member of supervision committee of Master Theses

Title: Mycological evaluation of salted *Hydocynus forskalii* fish in Assiut Governorate

Student: Alaa Youssef

Date and Place: 2012, Assiut University, Egypt.

Title: Assessment of heavy metals in muscular tissues of *Tilapia Nilotica* in Sohag Governorate

Student: Abeara Mahmoud

Date and Place: 2013, Assiut University, Egypt.

Title: Effect of freezing preservation on nutritive value and shelf life of meat

Student: Nihal Samir

Date and Place: 2020, Assiut University, Egypt.

II- Member of supervision committee and judging and discussion committee of Master Theses

Title: Nutritive value and public health importance of tripe of slaughtered cattle

Student: Ghada Ashraf

Date and Place: 2018, Assiut University, Egypt.

Title: Nutritive value and public health importance of rabbit's meat

Student: Mohammed Nabil

Date and Place: 2018, Assiut University, Egypt.

Title: Prevalence of tissue parasites in cattle and buffaloes slaughtered in El-Minia Governorate abattoirs

Student: Mina Boules

Date and Place: 2019, Assiut University, Egypt.

Title: Fish as a potential source of parasites of public health importance in El-Minia Governorate

Student: Mariana Gomma

Date and Place: 2019, Assiut University, Egypt.

Title: Imported frozen meat and livers as a potential source of some heavy metals

Student: Marina Ibrahim

Date and Place: 2020, Assiut University, Egypt.

III- Member of judging and discussion committee of Master Theses

Title: Detection of antibiotic residues in poultry meat marketed at Al-Ahsa

Student: Aqeel Mahdi Al-Ebrahim

Date and Place: 2020, King Faisal University, Saudi Arabia.

Membership of administrative and scientific committees, offices, centers, etc...

- 1- Coordinator of Public Health Department for graduate affairs, *College of Vet. Med., King Faisal University, Saudi Arabia, 2020.*
- 2- Coordinator of Community Partnership committee, *College of Vet. Med., King Faisal University, Saudi Arabia, 2019 and 2020.*
- 3- Member of Development and Quality Assurance committee, *College of Vet. Med., King Faisal University, Saudi Arabia, 2020.*
- 4- Member of Self-Study Preparation Committee, *College of Vet. Med., King Faisal University, Saudi Arabia, 2020.*
- 5- Member of the Annual Reports and Characterization of the Veterinary Medicine Program Committee, *College of Vet. Med., King Faisal University, Saudi Arabia, 2020.*
- 6- Member of Graduate Studies committee, *College of Vet. Med., King Faisal University, Saudi Arabia, 2020.*
- 7- Member of Libraries committee, *College of Vet. Med., King Faisal University, Saudi Arabia, 2019.*
- 8- Vice-Director of Center of Meat Quality and Safety, *College of Vet. Med., Assiut University, Egypt, 2018.*
- 9- Vice-Director of Meat Pilot Plant, *College of Vet. Med., Assiut University, Egypt, 2018.*
- 10- Member of Scientific devices and labs committee, *College of Vet. Med., Assiut University, Egypt, 2012.*
- 11- Director of Alumni office, *College of Vet. Med., Assiut University, Egypt, 2008.*
- 12- Member of Academic Standards committee, *College of Vet. Med., Assiut University, Egypt, 2008.*

Training programs

- 1- Techniques for activating laboratory teaching, *Deanship of Development and Quality Assurance, King Faisal University, Saudi Arabia, 10/10/2020.*
- 2- Program specifications and report according to NCAAA-2020, *Deanship of Development and Quality Assurance, King Faisal University, Saudi Arabia, 4/10/2020.*
- 3- Important computer skills for research projects, *Deanship of Development and Quality Assurance, King Faisal University, Saudi Arabia, 19/8/2020.*
- 4- Preparing study plans: best practices and experiences, *Deanship of Development and Quality Assurance, King Faisal University, Saudi Arabia, 18/8/2020.*
- 5- Blackboard: tools and applications, *Deanship of Development and Quality Assurance, King Faisal University, Saudi Arabia, 11/3/2020.*
- 6- Reference coordination and management (EndNote), *Deanship of Development and Quality Assurance, King Faisal University, Saudi Arabia, 18-19/2/2020.*
- 7- SPSS as a tool to analyze quantitative researches, *Deanship of Development and Quality Assurance, King Faisal University, Saudi Arabia, 11-12/2/2020.*
- 8- How to write learning outcomes according to the Saudi qualifications framework, *Deanship of Development and Quality Assurance, King Faisal University, Saudi Arabia, 23/11/2019.*
- 9- Digital literacy based learning, *Deanship of Development and Quality Assurance, King Faisal University, Saudi Arabia, 9/11/2019.*
- 10- Ethics of scientific research, *Faculty and Leadership Development Center, Assiut university, 7-8/5/2017*
- 11- How to Design the E-Course, *Faculty and Leadership Development Center, Assiut university, 2-3/5/2017*
- 12- ELISA: Principles and applications, *Assiut University, Egypt, 30/11-1/12/2016.*
- 13- Strategic planning. *Faculty and Leadership Development Center, Assiut University, Egypt, 27-28/11/2016.*
- 14- Management of research team, *Faculty and Leadership Development Center, Assiut University, Egypt, 13-14/11/2016.*
- 15- Design of scientific research, *Faculty and Leadership Development Center, Assiut University, Egypt, 25-26/10/2016.*
- 16- Protein Electrophoreses & Immunoblotting (Western Blot), *Molecular Biology Research Unit, Assiut University, Egypt, 27-28/3/2011.*
- 17- E-learning, *Faculty and Leadership Development Center, Assiut University, Egypt, 6-8/6/2009.*

- 18- *Advanced research techniques in molecular biology field with practical applications, Assiut University, Egypt, 19-22/4/2009.*
- 19- *Credit hours, Faculty and Leadership Development Center, Assiut University, Egypt, 11-13/4/2009.*
- 20- *Biological diversity of food poisoning fungi with special reference to pathogenic and toxigenic fungi of human and animals, Mycological Center, Assiut University, Egypt, 7-11/3/2009.*
- 21- *Electron microscope: techniques and applications, Assiut University, Egypt, 22-27/3/2008.*
- 22- *How to write a competitive scientific research proposal, Faculty and Leadership Development Center, Assiut University, Egypt, 10-12/11/2007.*
- 23- *Scientific publishing, Faculty and Leadership Development Center, Assiut University, Egypt, 22-24/9/2007.*
- 24- *Job ethics, Faculty and Leadership Development Center, Assiut University, Egypt, 8-10/9/2007.*
- 25- *Examination system and student evaluation, Faculty and Leadership Development Center, Assiut University, Egypt, 18-20/8/2007.*
- 26- *Application of technology in teaching, Faculty and Leadership Development Center, Assiut University, Egypt, 18-20/8/2007.*
- 27- *Sausage, Iowa State University, USA, 7-9/11/2006.*
- 28- *Dry and semidry sausage, Iowa State University, USA, 11-15/4/2005*
- 29- *HACCP, Iowa State University, USA, 27-29/10/2000.*

LIST OF PUBLICATIONS

(Hesham Abdel-Moez Ahmed Ismail)

I- Peer reviewed journals

- Ismail, H.**, Ahmed, H. and Youssef, A. **2020**. Effect of sodium chloride, nitrate/nitrite and refrigeration on mycological status of salted *Mugil cephalus* fish. International Journal for Research in Agricultural and Food Science, 6 (11): 19-33.
- Abd-Allah, S., **Ismail, H.** and Ahmed, M. **2019**. A comparative study of some nutritional aspects of camel and cattle meats and the effect of chilling and freezing storage on the meat lipid peroxidation. International Journal for Research in Agricultural and Food Science, 5 (7): 1-22.
- Dyab, A. K., **Ahmed, H. A.**, Hefnawy, Y. A., Abdel-Aziz, A. R. and Gomaa, M. M. **2019**. Prevalence of tissue parasites in cattle and buffaloes slaughtered in El-Minia Governorate abattoirs, Egypt. PSM Veterinary Research, 4(2): 49-58.
- Hefnawy, Y. A., **Ahmed, H. A.**, Dyab, A. K., Abdel-Aziz, A. R. and Boules, M. S. **2019**. Fish as a potential source of parasites of public health importance in El-Minia Governorate, Egypt. PSM Microbiology, 4(2): 44-52.
- Abd-Allah, Sh. M. S. and **H. A. A. Ismail.** **2018**. Lead and cadmium levels in musculature of wild and farmed Tilapia fish sold in Assiut city, Egypt. International Journal for Research in Agricultural and Food Science, 4 (7): 16-31.
- Abd-Allah, Sh. M. S. and **H. A. A. Ismail.** **2017**. Potential hazard levels of lead and cadmium in muscles of the River Nile Catfish (*Clarias gariepinus*) available in markets in Assiut city, Egypt. International Journal for Research in Agricultural and Food Science, 3 (10): 1-13.
- Abd-Allah, Sh. M. S. and **H. A. A. Ismail.** **2016**. Quality parameters and nutritive value of wild and cultured Nile Tilapia sold in Assiut city, Egypt. Assiut Vet Med. J., 62 (151): 90-100.
- Ismail, H. A.**, M. A. Ismail, H. Y. Ahmed and A. K. Youssef. **2015**. Mycological evaluation of salted *Hydocynus forskalii* fish in Assiut Governorate. Assiut Vet. Med. J., 61 (146): 187-195.
- Ismail, H. A.**, M. A. Ismail, H. Y. Ahmed and A. K. Youssef. **2015**. Effect of different treatment on mycological status of Egyptian salted fish. International Journal for Agro Veterinary and Medical Sciences, 9 (6): 260-276.
- Abd-Allah, Sh. M. S. and **H. A. A. Ismail.** **2012**. Quality profile of the semi-dry Egyptian salted meat (basterma) available in markets of Assiut city. Assiut Vet. Med. J. 58 (135): 79-87.
- Ali, Sohaila F. H., A. M. Abd El-Malek, **H. A. Ismail**, and R. S. Refaie **2010**. Occurrence of *Enterobacter sakazakii* in some meat products sold in Assiut governorate. Vet. Med. J., Giza, Vol. 58 (2): 151-162.

- Ismail, H. A.**, E. J. Lee, K. Y. Ko, and D. U. Ahn. **2009**. Fat content influences the color, lipid oxidation, and volatiles of irradiated ground beef. *Journal of Food Science*, Vol. 74 (6): C432- C440.
- Ismail, H. A.**, E. J. Lee, K. Y. Ko, H. D. Paik, and D. U. Ahn. **2009**. Effect of antioxidant application methods on the color, lipid oxidation, and volatiles of irradiated ground beef. *Journal of Food Science*, Vol. 74 (1): C25- C32.
- Zhu, M, J., A. Mendonca, **H. A. Ismail**, and D. U. Ahn. **2009**. Fate of *Listeria monocytogenes* in ready-to-eat turkey breast rolls formulated with antimicrobials following electron-beam irradiation. *Poultry Science* 88: 205–213.
- Ko, K. Y., A. F. Mendonca, **H. A. Ismail** and D. U. Ahn. **2009**. EDTA and lysozyme improves antibacterial activities of ovotransferrin against *Escherichia coli* O157: H7. *Poultry Science* 88 (2): 406-414
- Ismail, H. A.**, E. J. Lee, K. Y. Ko, D. U. Ahn. **2008**. Effects of aging time and natural antioxidants on the color, lipid oxidation and volatiles of irradiated ground beef. *Meat Science* 80: 582–591.
- Zhu, M, J., A. Mendonca, **H. A. Ismail**, and D. U. Ahn. **2008**. Effects of irradiation on the survival and growth of *Listeria monocytogenes* and natural microflora in vacuum-packaged turkey ham and breast roll. *Poultry Science* 87: 2140-2145.
- Nam, K. C., K. Y. Ko, B. R. Min, **H. Ismail**, E. J. Lee, J. Cordray, D. U. Ahn. **2007**. Effects of oleoresin–tocopherol combinations on lipid oxidation, off-odor, and color of irradiated raw and cooked pork patties. *Meat Science* 75: 61–70.
- Nam, K. C., K. Y. Ko, B. R. Min, **H. Ismail**, E. J. Lee, J. Cordray, and D. U. Ahn. **2006**. Influence of rosemary–tocopherol/packaging combination on meat quality and the survival of pathogens in restructured irradiated pork loins. *Meat Science* 74:380–387.
- Zhu, M, J., A. Mendonca, **H. A. Ismail**, M. Du, E. J. Lee, and D. U. Ahn. **2005**. Impact of antimicrobial ingredients and irradiation on the survival of *Listeria monocytogenes* and the quality of ready-to-eat turkey ham. *Poultry Science* 84:613–620.
- Zhu, M, J., A. Mendonca, B. Min, E. J. Lee, K. C. Nam, K. Park, M. Du, **H. A. Ismail**, and D. U. Ahn. **2004**. Effects of electron beam irradiation and antimicrobials on the volatiles, color, and texture of ready-to-eat turkey breast roll. *Journal of Food Science*, Vol. 69 (5): C382-387.
- Du, M., K. C. Nam, S. J. Hur, **H. Ismail**, Y. H. Kim, D. U. Ahn. **2003**. Quality characteristics of irradiated chicken breast rolls from broilers fed different levels of conjugated linoleic acid. *Meat Science* 63: 249–255.
- Du, M., K. C. Nam, S. J. Hur, **H. Ismail**, and D. U. Ahn. **2002**. Effect of dietary conjugated linoleic acid, irradiation, and packaging conditions on the quality characteristics of raw broiler breast fillets. *Meat Science* 60: 9–15.

Du, M., S. J. Hur, K. C. Nam, **H. Ismail**, and D. U. Ahn. **2001**. Volatiles, color, and lipid oxidation of broiler breast fillets irradiated before and after cooking. *Poultry Science* 80:1748–1753.

Nam, K. C., S. J. Hur, **H. Ismail**, and D. U. Ahn. **2001**. Lipid oxidation, volatiles, and color changes in irradiated raw turkey breast during frozen storage. *Journal of Food Science*, Vol. 67 (6): 2061- 2066.

II- Published Abstracts/Posters/Conference Presentations

Ibraheim, T. A. M., H. Y. Ahmed, **H. A. Ahmed**, Abeara, Mahmoud. **2015**. Assessment of heavy metals in muscular tissues of *Tilapia Nilotica* in Sohag Governorate, Upper Egypt. *XVII International Congress on Animal Hygiene, June 7-11, 2015, Kosice, Slovakia*.

Ismail, H., T. Zhu and B. M. Applegate. **2014**. Effect of microbiological media and food matrix on phage infectivity. *114th general meeting, American Society for Microbiology, May 17-20, 2014, Boston, MA, USA*.

Ahmed, H., Ismail, M., **Ismail, H.** and Youssef, A. **2013**. Mycological status of Egyptian salted fish. *XVI International Congress on Animal Hygiene, May 5-9, 2013, Nanjing, China*.

Zhu, M. J., A. Mendonca, **H. A. Ismail**, and D. U. Ahn. **2005**. Fate of *Listeria monocytogenes* in ready-to-eat turkey breast rolls formulated with antimicrobials following electron-beam irradiation. *FSC annual meeting, October 2-4, 2005, Manhattan, KS. USA. p 169-177*.

Zhu, M. J., A. Mendonca, **H. A. Ismail**, M. Du, E. J. Lee, and D. U. Ahn. **2005**. Antimicrobials and irradiation on the survival and growth of *Listeria monocytogenes* and the quality of ready-to-eat turkey ham. *FSC annual meeting, October 2-4, 2005, Manhattan, KS. USA. p 169-177*.

Yan, H., K. C. Nam, E. L. Lee, B. R. Min, K. S. Park, **H. Ismail**, and D. U. Ahn. **2004**. Dietary supplementation of functional ingredients improves quality of irradiated raw turkey breast. *Poultry science conference, July 25-29, 2004, St. Louis, MO. USA*.

Zhu, M. J., **H. A. Ismail**, E. J. Lee, A. Mendonca and D. U. Ahn. **2003**. Effect of irradiation on the quality of turkey ham during storage. *IFT annual conference. July 12-16, 2003, Chicago, IL, USA. p 200*.

Zhu, M. J., **H. A. Ismail**, A. Mendonca and D. U. Ahn. **2003**. Influence of irradiation and storage on the quality of ready-to-eat turkey breast rolls. *Poultry science conference, July 6-9, 2003, Madison, WI. USA. p 85*.

Nam, K. C., **H. Ismail**, M. Du, S. J. Hur, Y. H. Kim and D. U. Ahn. **2001**. Mechanisms of pink color formation in irradiated precooked turkey breast. *Poultry science conference, July 24-28, 2001, Indianapolis, IN. USA. p 139*.

Du, M., K. C. Nam, S. J. Hur, **H. Ismail**, D.U. Ahn and J. L. Sell. **2001**. Effect of conjugated linoleic acid (CLA) on the growth and fat accumulation of broilers. *Poultry Science conference, July 24-28, 2001, Indianapolis, IN. USA. p 297*.

Kim, Y. H., K. C. Nam, S. J. Hur, M. Du, **H. Ismail**, and D. U. Ahn. **2001**. Color, oxidation-reduction potential, and gas production of irradiated meat from different animal species. *IFT conference, June 24-29, New Orleans, LA. USA.*

Kim, Y. H., K. C. Nam, **H. Ismail**, S. J. Hur, M. Du and D. U. Ahn. **2001**. Volatile profiles, lipid oxidation and sensory characteristics of irradiated meat from different animal species. *IFT conference, June 24-29, New Orleans, LA. USA.*

III- Published Reports

Ismail, H. A., E. J. Lee, H. D. Paik, and D. U. Ahn, **2009**. Effect of ascorbic acid and antioxidants on color, lipid oxidation and volatiles of irradiated ground beef using different application methods. *Animal Industry Report, Iowa State University, Ames, IA, USA.*

Ko, K. Y., D. U. Ahn, **H. A. Ismail**, and A. Mendonca, **2009**. Effect of Zn²⁺, sodium bicarbonate, and citric acid on the antibacterial activity of ovotransferrin against Escherichia coli O157:H7 and Listeria monocytogenes in model systems and hams. *Animal Industry Report, Iowa State University, Ames, IA, USA.*

Zhu, M. J., A. Mendonca, **H. A. Ismail**, Dong U. Ahn, **2008**. Fate of Listeria monocytogenes in Ready-to-eat Turkey Breast Rolls Formulated with Antimicrobials Following e-beam Irradiation. *Animal Industry Report, Iowa State University, Ames, IA, USA.*

Zhu, M. J., A. Mendonca, **H. A. Ismail**, D. U. Ahn, **2007**. Effects of irradiation on survival and growth of Listeria monocytogenes and natural microflora in vacuum-packaged turkey hams and breast rolls. *Animal Industry Report, Iowa State University, Ames, IA, USA.*

Zhu, M. J., A. Mendonca, **H. A. Ismail**, E. J. Lee, and D. U. Ahn, **2006**. Impact of Antimicrobial Ingredients and Irradiation on the Survival of Listeria monocytogenes and the Quality of Ready-to-Eat Turkey Ham. *Poultry Day Report, ISU, USA.*

Zhu, M.J., A. Mendonca, E.J. Lee, K.C. Nam, M. Du, H.A. **Ismail**, D.U. Ahn, **2005**. Effects of Electron Beam Irradiation and Antimicrobials on the Volatiles, Color and Texture of Ready-to-Eat Turkey Breast Roll. *Animal Industry Report, Iowa State University, Ames, IA, USA.*