Fanta Desissa Gutema

(DVM, MSc, BSc, MPH, PhD, CPH)

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Education

Postdoc, Environmental health, University of Iowa, USA since 2021-2024.
PhD, Veterinary public health and food safety, Ghent University, Belgium, 2021.
High Dip, Active teaching and learning, Addis Ababa University, Ethiopia, 2017.
MPH, Public health, Adama General Medical Hospital and College, Ethiopia, 2016.
MSc, Veterinary public health, Addis Ababa University, Ethiopia, 2010.
BSc, Public health officer, Kea-Med University College, Ethiopia, 2012.
Doctor of veterinary medicine, Addis Ababa University, Ethiopia, 2006.

Research interests

- **Antimicrobial resistance**: investigating antimicrobial usage, determinants and transmission pathways of antimicrobial resistance and identifying interventions across the **one health** spectrum.
- **Zoonoses and Food safety**: Understanding the epidemiology of zoonotic and foodborne diseases and identify effective community-based interventions at one health domain.
- **Exposure and risk assessment**: qualitative and quantitative microbial risk assessment of exposure to enteric and foodborne pathogens in population (farm-to-fork approach).
- **Interventions**: Investigating and identifying the role of hygiene practices and behaviours in preventing transmission of Zoonotic, enteric, and AMR pathogens among animals, the environment, and humans.
- **One health and holistic approach**: application of advanced diagnostic techniques (e.g., genomic sequencing), statistical methods and participatory epidemiology to generate evidence on One Health issues (zoonoses, food safety and antimicrobial resistance) and identify community-based interventions.

Biography

Dr. Fanta Gutema was born and grew up in Hababo Guduru Wollega (Kubsa Kidame) in the Oromia region of Ethiopia. He is currently an Assistant Professor of Research in the School of Public Health. Dr. Gutema was a Reckitt Global Hygiene Institute graduate fellow at the Department of Occupational and Environmental Health at the University of Iowa before he joined the School of Public Health at the University of Memphis. Dr. Gutema's educational background began with receiving his Doctor of Veterinary Medicine and his M.Sc. in Veterinary Public Health from Addis Ababa University in Ethiopia. He received his B.Sc. in Public Health from Kea-Med University College and his MPH from Adama General Medical Hospital and College in Ethiopia. He also received a High Diploma in Active Teaching and Learning from Addis Ababa University. Furthermore, he obtained his PhD in Veterinary Public Health and Food Safety from Ghent University in Belgium. He is a certified public health professional by the National Board of Public

Health Examiners (NBPHE). He has extensive funded research experiences and research interests in the epidemiology of infectious diseases, with a particular focus on foodborne diseases, zoonotic diseases, enteric infections, and antimicrobial-resistant infections at the intersections of animal, human, and environmental health and identifying effective intervention strategies toward improving public health using a One Health approach. He can teach public health courses such as introduction to public health, epidemiology, biostatistics, one health, environmental health, food contamination and food safety, Zoonoses and other courses in public health domains.

Teaching, Mentoring & Research experiences

Teaching

- >10 years of teaching undergraduate and post graduate students at higher education.
- Courses taught: Physiology, Veterinary Pharmacology and Therapeutics, Veterinary Public health I and II, Zoonoses, Food Quality and Safety (milk and meat), Food Safety Risk Assessment, Foodborne Infection and Intoxications, Detection methods of Food borne Pathogens, General and food microbiology and clinical skills and equine medicine.
- Guest lecture:

✓ Global Health: Introduction to Food systems and Food borne diseases, undergraduate students, University of Iowa, 2023.
✓ Global Health: Introduction to Food systems and Food borne diseases, undergraduate students, University of Iowa, 2022.
✓ Surveillance of environmental/water borne exposure to zoonoses, graduate student, University of Iowa, 2022.
✓ Food contamination and food borne diseases, undergraduate students, University of Memphis, 2024
✓ Introduction to concept, principles and applications of One health, undergraduate students, University of Memphis, 2024.

Mentoring

>20 undergraduates, 10 MSC and 2 PhD (on-going) students, >10 research lab personnel.

Research experiences

- Whole genomic sequencing of *E. coli* O157 detected from cattle, beef, and diarrheic patients.
- Prevalence of enteric pathogens such as Salmonella, *Shigella, Campylobacter, pathogenic E. coli, L. monocytogens, enteric viruses and protozoa in animals, humans, and environments.*
- Contamination of infant foods and assessment of infant caregivers hygienic handling infant foods.
- Prevalence and risk factors of Bovine tuberculosis, rabies, taeniasis, and *S. aureus poisoning*
- Antimicrobial Resistance profiles of *Salmonella, pathogenic E. coli* and *S. aureus* isolates.
- Food quality and safety: Milk, beef, fish and thereof along supply chain.
- Hygienic assessment at along fish, milk, and meat supply chain.
- Risk assessment of *S. aureus* poisoning associated with consumption of raw milk and yogurt.

Laboratory techniques

- Basic knowledges and skills in working and managing research laboratory.
- Various sample collection and handling techniques.
- Basics of bacterial isolation and identification.
- MALDI-TOF Mass Spectrometry based identification of Bacteria.
- Antimicrobial susceptibility testing: Disk diffusion and Minimum inhibitory concentration.
- Molecular techniques: DNA and RNA extraction, conventional PCR, Multiplex PCR, ERIC-PCR, serotyping, quantitative PCR, Pulsed field gel electrophoresis (PFGE), Whole genomic bacterial sequencing.
- Basics bioinformatic analyses of molecular data from quantitative PCR (TaqMan Card Assay and 96 well plate) and metagenomic sequencing.

Epidemiological and statistical tools

- Study designs
- Risk assessment
- Multi-criteria decision analysis
- Machine learning
- Use of statistical software (STATA, SAS,
- SPSS, R, @risk, iRisk, Python, SQL etc.
- Systematic review and meta-analysis
- Data analysis
- Health belief model

Positions & Employment history

- 01/2023-present: Post doc and RGHI graduate fellowship, University of Iowa, Department of Occupational and Environmental Health, Iowa, USA.
- 2021-2022: Postdoc, University of Iowa, Department of Occupational and Environmental Health, Iowa, USA.
- 2016-2021: PhD student, Faculty of Veterinary Medicine, Gent University, Belgium.
  Associate professor, College of Veterinary Medicine (CVMA), Addis Ababa University (AAU).
- 2016-2017: Assistant Professor, CVMA, Addis Ababa University, Ethiopia.
- 2012-2016: Clinical skill trainer, CVMA, Addis Ababa University, Ethiopia.
- 2010-2012: Assistant Professor, College of Veterinary Medicine, Wollega University, Ethiopia.
- 2006 -2010: Lecturer, College of Veterinary Medicine, Wollega University, Ethiopia.

Honors/Fellowship Awards

- 2022 RGHI fellowship award, RGHI, UK
- 2021 Postdoctoral research, University of Iowa, USA
- 2019 USDA 2019 Faculty Exchange Program award, Michigan state University, USA
- 2016 Research and academic excellence award, Adama General Hospital and Medical college, Ethiopia.
- 2016 Guest scientist award by German Federal Risk assessment (BfR), German.
- 2010 Best academic performance award among the MSC peer students, AAU, Ethiopia.

Selected Training & Certification

- Certified Public health professional, National Board of Public Health Examiners (NBPHE),2024.
- Advanced leadership training, RGHI, UK, 2023.
- Audited a graduate Grant writing course offered by University of Iowa (course audit).
- Completed six months online Google Data analytics professional certificate training from Coursera supported by American Dream Academy.
- MinION whole genome sequencing of bacterial genomes (University of Medical center Nebraska).
- Whole genome sequencing of bacterial genomes - tools and applications offered by Technical University of Denmark (DTU).
- Fundamentals of RT-qPCR Course: BIO-RAD academy.
- NIAMRRE One Health Interprofessional AMR Education.
- Basics of infectious diseases modelling - Illinois University.
- Management and leadership training, Ethiopia
- Clinical and non-clinical veterinary continuous professional development training, Ethiopia.
- Continuous professional development training, Ethiopia,
- Sanitary and Phyto-Sanitory and Risk Analysis training, Tuskegee University.
- Audited One health I and One health II courses, Michigan state university.
- Machine learning boot camp: Analysing biomedical and health data, Colombia university.

Webinar/conferences/Workshops

- UNC water and health conference, North Carolina, USA, 2023.
- Global hygiene summit, Singapore, 2023.
- NIAMRRE One Health Interprofessional AMR Education, Nebersaka, May 16-18,2022.
- Three Overlooked Strengths of Structural Equation Modelling. The Analysis Factor Free Webinar Series. August 23, 2022.
- Principal Component Analysis-Karen at The Analysis Factor.
- TaqMan assay webinar- thermo Fischer scientific.
- Python for Data Analysis: Python Fundamentals-University of Iowa.
- One Health and Public Health in Africa-AAP Public Dialogue Series, March 30, 2022.
- Global Research on Antimicrobial Resistance (GRAM) project results virtual launch event, on February 4,2022.
- Grant writing workshop- organized by University of Iowa, College of Nursing, June 9-16, 2022.
- The Pathway: Steps for Staying Out of the Weeds in any Data Analysis. The craft of statistical analysis., Jul 26, 2022.
- Teaching with writing organized by the writing centre of the UI, January 10 &12, 2023.
- Foodborne viruses: Detection, risk assessment and control options in food processing, international association for food protection, webinar,2019.
- Attend/Participated on 2019 United States Animal Health (USAHA) and American Association of Veterinary Laboratory Diagnosticians (AAVLD) Annual Meeting Rhode Island Convention Center, USA October 24 - 30, 2019. https://www.usaha.org/2019-annual-meeting**.**

Current projects

1. **Reckitt Global Hygiene Institute Fellowship (PI) 01/23-12/25, $500,000**.
   Title: Genomic Fingerprinting of Enteric and Antimicrobial Resistant Bacteria at the Hygiene and One Health Interface for Tracking Disease Transmission in Urban and Peri Urban Bishoftu town, Ethiopia.
   Major Goal: The goal of the project is to reduce zoonotic enteric and AMR bacterial infections in children by identifying the dominant environmental hygiene conditions that lead to transmission of enteric bacterial pathogens between animals and infants. The project aims are to 1)assess animal management practices, environmental hygiene conditions, infant care givers hygienic practices and self-reported infant and animal health history, 2) estimate prevalence of pathogenic *E. coli, Salmonella* and *L. monocytogens* in animals, environment, foods, infant caregiver's hands, and infants, 3) quantify genetic relationships among the strains and examine the mediating role of contaminated soil, water, food, and caregivers in transmission of the pathogens from animals to infants 4) determine the genotypic antimicrobial resistance profiles of genetically related strains and identify the transmission pathways of AMR bacteria from animals to infants.

2. **University of Iowa Pilot grant, 2023-2024 (Co-PI), $15,000**.
   Title: Partnership Development and Feasibility Study for Investigating Impact of drought on Food Security and Child Health, and Community Resilience in Ethiopia.
   Goal: the primary aim of establishing long term collaboration in research and education between the University of Iowa, USA and Addis Ababa University, Ethiopia. Our team has received a small grant from University of Iowa to establish the partnership and conduct a one-year pilot project to generate base line data to be used for future application of a big project to funding agencies (e.g., NIH).

3. **NIH, R01 TW011795 08/2020 – 05/2025((Baker / Sewell, PI, Fanta-Co-I).**
   Title: Statistical and agent-based modeling of complex microbial systems: a means for understanding enteric disease transmission among children in urban neighborhoods of Kenya.
   Role: Co-Investigator as a postdoctoral researcher scholar.
   Major Goal: Our proposal aims to (1) develop spatiotemporal and trajectory statistical models to understand the complex exposure risks for infants from the enteric pathome; (2) collect environmental, behavioral, spatial, economic, and microbial data to characterize the enteric pathome along pathways for disease diffusion and the intersection of humans and animals with these pathways; and (3) develop and validate agent-based models (ABMs) for predicting which social and environmental urban developmental interventions (e.g. animal penning, building latrines or drains, concrete floors) best prevent multi- pathogen transmission to infants in high disease burden countries using established Kenyan study sites as a model.

Completed research projects

1. 2020/21-PI. Community Awareness on "Self-responsible Dog Ownership" to Prevent and Control Zoonotic Diseases in Bishoftu Town: A Case of Rabies and Hydatidosis Control (PI). Fund source-Community service program of Addis Ababa University, ETB 100,000.
2. 2016-2021-PI. PhD research project grant- Investigating the association of cattle in the development of human diarrhea in Ethiopia caused by bacterial zoonoses. Fund source: Ghent University and Addis Ababa University, Euro14,000 for research cost + $2000 Euro/month for 20 months Stipend.

3. 2018-2020-PI. Development and Evaluation of integrated supportive decision tools for prevention and control of Bovine TB in Ethiopia: A key pathway toward control. Fund source: Ethiopian Institute of Agricultural Research, ETB 1.2mil.
4. 2017-2019-PI. Development of small-scale milk pasteurizer apparatus and evaluation of lacto-peroxidase system for control of milk-borne diseases in Ethiopia. Fund source: Ethiopian Biotechnology institute, Ministry of Science and Technology, ETB 2,826,285.
5. 2017-PI. Development and evaluation of multi-nutrient blocks technology for improving productivity of small holder dairy cattle toward improving the livelihood of smallholder dairy farmers. Fund source- Adaptive research program of Addis Ababa University, ETB 100,000.
6. 2017-2019-co-PI. Improving the health and productivity of market-oriented livestock and public health risk through investigating and mitigating major and economically important diseases, economic impact analysis, and devising interventional strategies in central, southeast and west Oromia. Fund source- Thematic research program of Addis Ababa University, ETB 1.5mil.
7. 2017-2019-co-PI. Improving surveillance of antimicrobial resistance of selected foodborne zoonotic bacteria in central and western Ethiopia: Risk factors, molecular epidemiology and ecology and interventions Approach. Fund source-Thematic Research Program of Addis Ababa University, ETB 1.5mil.
8. 2017-2019-co-PI. Integrated assessments of the handling practices and microbiological safety of red meat and innovative ways of identification and minimization of aflatoxin risk in food of animal origin and animal feed in central Ethiopia in towards designing strategies for improving public health and food security. Fund source -Thematic research program of Addis Ababa University, ETB 1.5mil.

Major contributions to science

1. **Evaluation of Human Diarrhea Development Arising from Consumption of Beef Contaminated by Zoonotic Bacteria and the Impact of Antimicrobial Resistance.**

   In this effort, we worked to gather data on the prevalence of *Salmonella* and *E. coli* O157 infections arising from the consumption of contaminated beef. This involved examining occurrence and drug susceptibility in cattle, beef/carcasses, hides, and diarrheic patients as well as evaluating hygienic practices in slaughterhouses and retailers. This work yielded valuable information on the prevalence of disease-causing bacteria, its transferability to humans, and levels of antimicrobial resistance in Ethiopia.

   a. **Gutema FD**, De Zutter L, Piérard D, Hinckel B, Imamura H, Rasschaert G, Abdi RD, Agga GE, Crombé F. Core Genome Sequencing Analysis of E. coli O157: H7 Unravelling Genetic Relatedness among Strains from Cattle, Beef, and Humans in Bishoftu, Ethiopia. Microbiology Research. 2023 Mar;14(1):148-60.
   b. **Gutema FD**, Abdi RD, Agga GE, Firew S, Rasschaert G, Mattheus W, Crombe F, Duchateau L, Gabriël S, De Zutter L. Assessment of beef carcass contamination with Salmonella and E. coli O 157 in slaughterhouses in Bishoftu, Ethiopia. International Journal of Food Contamination. 2021:8(1):1-9
   c. Gutema FD, Rasschaert G, Agga GE, Olana M, Addisu BD, Abdi RD, Duchateau L, Mattheus W, Gabriël S, De Zutter L. Prevalence, Molecular Characteristics and Antimicrobial Resistance of Salmonella in Cattle, Beef and Humans in Bishoftu town, Central Ethiopia. Foodborne Pathogens and Disease, 2021, 18: 283–289.

d. **Gutema FD**, Rasschaert G, Agga GE, Jufare A, Duguma AB, Abdi RD, Duchateau L, Crombe F, Gabriël S, De Zutter L. Occurrence, Molecular Characteristics, and Antimicrobial Resistance of Escherichia coli O157 in Cattle, Beef, and Humans in Bishoftu Town, Central Ethiopia. Foodborne Pathogens and Disease, 2021, 18, 1-7.
e. **Gutema FD**, Agga GE, Abdi RD, Jufare A, Duchateau L, De Zutter L, Gabriël S. Assessment of Hygienic Practices in Beef Cattle Slaughterhouses and Retail Shops in Bishoftu, Ethiopia: Implications for Public Health. International journal of environmental research and public health. 2021,18(5):2729.
f. **Fanta D Gutema**, Geathun Ejeta Agga, Lieven De Zutter, Reta D. Abdi, Sarah Gabriël, Luc Duchateau. Prevalence and diversity of Salmonella serotypes in cattle: systematic review and meta-analysis. Frontiers in Veterinary Science, 2019, 6:102.

2. **Food Safety Risk Assessment of Staphylococcal Poisoning from Consumption of Informally Marketed Raw Milk and Home-Made Yoghurt in Ethiopia.**

In this project, we carried out a food safety risk assessment concerning the threat of Staphylococcal poisoning from consuming milk and milk products. I particularly focused on the informal food market and the consumption of raw milk and home-made yoghurt. We collected milk samples from 170 farms and 5 milk collection centers, ran tests, and created a novel risk assessment model to predict risk of poisoning. The assessments determined that annual risk for Staphylococcal poisoning was 20.0 per 1,000 people, a figure that increased dramatically to 315.8 per 1,000 people when the traditional practice of milk fermentation was not used. This illustrated the utility of traditional methods to greatly improve safety. We also gathered valuable data on the influence of actors along the milk supply chain in risk and provided data on the importance of local values and culture in ensuring food safety. Overall, our research has far-reaching significance for identifying and reducing the risk of foodborne illness from milk.

a. Kohei, M, **Fanta, D,** Akafete, T, Girma,Z and Delia G. Risk assessment of staphylococcal poisoning due to consumption of informally-marketed milk and home-made yoghurt in Debre Zeit, Ethiopia. ***International Journal of Food Microbiology*, 2012,** 153: 135-141.
b. **Fanta, D,** Kohei,M, Akafete, T, and Delia G. Contamination of informally marketed bovine milk with *Staphylococcus aureus* in urban and peri urban areas of Debre-Zeit, Ethiopia. *African Journal of Microbiology Research*, 2012, 6(29): 5852-5856.
c. Makita, K., Kouamé Sina, S., Lindahl, J. and **Desissa, F**. 2019. Book chapter, In: Ferranti, P., Berry, and E.M. and Anderson, J.R. (eds). Computation of risk assessment modeling. *Encyclopedia of Food Security and Sustainability* 3: 371-380.
d. **Fanta et al.,** Book chapter**,** In**:** Is raw milk safe for human consumption? In: Delia G. and Kristina R.: Food safety and informal markets Animal products in sub-Saharan Africa, Routledge Taylor and Francis group Publisher, London and NewYork, 2015. Pp.135-139.
e. Kristina R., Delia G and **Fanta et al.,** Book chapter, In: Can participation Improve food safety In: Delia G. and Kristina R.: Food safety and informal markets Animal products in sub-Saharan Africa, Routledge Taylor and Francis group Publisher, London and NewYork, 2015. Pp.45-68.
f. Kristina R., Delia G, Haruya T., Cameline M. and **Fanta D**., Book chapter**,** In**:** Informal markets are not necessarily dangerous and formal markets are not necessarily safe. In: Delia G. and Kristina R.: Food safety and informal markets Animal products in sub-Saharan Africa, Routledge Taylor and Francis group Publisher, London and NewYork, 2015. Pp.24-30
g. Kristina R., Delia G **and Fanta et al.,** Book chapter: Farmers, Traders and Retailers are Risk managers. In: Delia G. and Kristina R.: Food safety and informal markets Animal products in

sub-Saharan Africa, Routledge Taylor and Francis group Publisher, London and NewYork, 2015. Pp.69-82.

h. Kristina R., Delia G and **Fanta et al.,** Book chapter: Understanding values and culture is crucial for food safety management. In: Delia G. and Kristina R.: Food safety and informal markets Animal products in sub-Saharan Africa, Routledge Taylor and Francis group Publisher, London, and New York, 2015. Pp.84-105.

Publications

Peer-reviewed articles

1. Mberu B, Simiyu S, **Gutema FD**, Sewell D, Busienei PJ, Tumwebaze IK, Baker KK. Landscape analysis of the Kenyan policy on the treatment and prevention of diarrheal disease among under-5 children. BMJ open. 2024;14(8): e081906.
2. Bedane TD, Megersa B, Abunna F, Waktole H, Woldemariyam FT, Tekle M, Shimelis E, **Gutema FD**. Occurrence, molecular characterization, and antimicrobial susceptibility of sorbitol non-fermenting Escherichia coli in lake water, fish and humans in central Oromia, Ethiopia. Scientific Reports. 2024;14(1):12461.
3. Baker KK, Simiyu S, Busienei P, **Gutema FD**, Okoth B, Agira J, Amondi CS, Ziraba A, Kapanka AG, Osinuga A, Ouma C. Protocol for the PATHOME study: a cohort study on urban societal development and the ecology of enteric disease transmission among infants, domestic animals and the environment. BMJ open. 2023 ;13(11): e076067.
4. **Gutema FD**, Cumming O, Mumma J, Simiyu S, Attitwa E, Okoth B, Denge J, Sewell D, Baker KK. Enterococcus contamination of infant foods and implications for exposure to food-borne pathogens in peri-urban neighborhoods of Kisumu, Kenya. **Epidemiology and Infection**, 2**024**.
5. Baker KK, Simiyu S, Busienei P, **Gutema FD**, Okoth B, Agira J, Amondi CS, Ziraba A, Kapanka AG, Osinuga A, Ouma C. Protocol: Protocol for the PATHOME study: a cohort study on urban societal development and the ecology of enteric disease transmission among infants, domestic animals and the environment. **BMJ Open**, **2023**;13(11).
6. **Gutema FD**, De Zutter L, Piérard D, Hinckel B, Imamura H, Rasschaert G, Abdi RD, Agga GE, Crombé F. Core Genome Sequencing Analysis of E. coli O157: H7 Unravelling Genetic Relatedness among Strains from Cattle, Beef, and Humans in Bishoftu, Ethiopia. **Microbiology Research**. **2023**, 14(1):148-60.
7. Tufa TB, Guta A, Tufa TB, Nigussie D, Beyi AF, **Gutema FD**, Regassa F. Efficacy of Penicillin–Streptomycin Brands against Staphylococcus aureus: Concordance between Veterinary Clinicians' Perception and the Realities. **Antibiotics**. **2023**;12(3):570.
8. Tsegaye D, Gutema FD, Terefe Y. Zoonotic diseases risk perceptions and protective behaviors of consumers associated with consumption of meat and milk in and around Bishoftu, Ethiopia. Heliyon. 2022.8(8):e10351. https://doi.org/10.1016/j.heliyon.2022.e10351.
9. Bedane TD, Agga GE, **Gutema FD**. Hygienic assessment of fish handling practices along production and supply chain and its public health implications in Central Oromia, Ethiopia. **Scientific Reports**. **2022**, 12:1-1. https://doi.org/10.1038/s41598-022-17671-5.
10. Abunna F, Adugna B, Tufa TB, Ayana D, **Gutema FD**, Waktole H, Regassa F, Abdi RD. Detection and Antimicrobial Resistance of Staphylococcus spp from Chicken, Litter and Humans in Addis Ababa, Ethiopia. Veterinary Medicine International **2022, 1-8**. https://doi.org/10.1155/2022/9084334.

11. Ahimed HM, Hiko A, Abdellah A, Muktar Y, **Gutema FD**. Isolation and multidrug drug resistance profile of Listeria species in selected Dairy Farm's Operational stages in Oromia Regional State, Ethiopia. Scientific African. **2022, 16:1-9.** https://doi.org/10.1016/j.sciaf.2022.e01167.
12. **Gutema FD**, Abdi RD, Agga GE, Firew S, Rasschaert G, Mattheus W, Crombe F, Duchateau L, Gabriël S, De Zutter L. Assessment of beef carcass contamination with Salmonella and E. coli O 157 in slaughterhouses in Bishoftu, Ethiopia. International Journal of Food Contamination. 2021:8(1):1-9. https://doi.org/10.1186/s40550-021-00082-1.
13. **Gutema FD**, Rasschaert G, Agga GE, Olana M, Addisu BD, Abdi RD, Duchateau L, Mattheus W, Gabriël S, De Zutter L. Prevalence, Molecular Characteristics and Antimicrobial Resistance of *Salmonella* in Cattle, Beef and Humans in Bishoftu town, Central Ethiopia. ***Foodborne Pathogens and Disease***, 2021, 18: 283–289. https://doi.org/10.1089/fpd.2020.2830.
14. **Gutema FD**, Rasschaert G, Agga GE, Jufare A, Duguma AB, Abdi RD, Duchateau L, Crombe F, Gabriël S, De Zutter L. Occurrence, Molecular Characteristics, and Antimicrobial Resistance of Escherichia coli O157 in Cattle, Beef, and Humans in Bishoftu Town, Central Ethiopia. ***Foodborne Pathogens and Disease***, 2021, 18, 1-7. https://doi.org/10.1089/fpd.2020.2830.
15. **Gutema FD**, Agga GE, Abdi RD, Jufare A, Duchateau L, De Zutter L, Gabriël S. Assessment of Hygienic Practices in Beef Cattle Slaughterhouses and Retail Shops in Bishoftu, Ethiopia: Implications for Public Health. International journal of environmental research and public health. 2021,18(5):2729. https://doi.org/10.3390/ijerph18052729.
16. **Fanta Desissa Gutema**, Geathun Ejeta Agga, Lieven De Zutter, Reta D. Abdi, Sarah Gabriël, Luc Duchateau. Prevalence and diversity of *Salmonella* serotypes in cattle: systematic review and meta-analysis. ***Frontiers in Veterinary Science***, 2019, 6:102. https://doi.org/10.3389/fvets.2019.00102
17. **Gutema FD**, Shiberu T, Agga GE, Abdi RD, Hiko A, Tufa TB, Hailu Y. Bovine cysticercosis and human taeniasis in a rural community in Ethiopia. ***Zoonoses and Public Health***, 2020, 67(5):525-533. https://doi.org/10.1111/zph.12716.
18. **Gutema, F.D**., Yohannes, G.W., Abdi, R.D., Abuna, F., Ayana, D., Waktole, H., Amenu, K., Hiko, A. and Agga, G.E., 2021. Dipylidium caninum Infection in Dogs and Humans in Bishoftu Town, Ethiopia. ***Diseases***, *9, 1-7.* https://doi.org/10.3390/diseases9010001.
19. **Fanta D. Gutema**, Getahun E. Agga, Kohei Makita, Rebecca L. Smith, Monique Mourits**,** Takele B. Tufa, Samson Leta, Tariku J. Beyene, Zerihun Asefa, Beksissa Urge, Gobena Ameni**.** Evaluation of options to control **bovine tuberculosis** in Ethiopia using multi-criteria decision analysis. ***Frontiers in Veterinary Science*** 7:586056. doi: 10.3389/fvets.2020.586056.
20. **Desissa, F**., Workineh, T., & Beyene, T. (2018). Risk factors for the occurrence of multidrug-resistant tuberculosis among patients undergoing ***multidrug-resistant tuberculosis*** treatment in East Shoa, Ethiopia. ***BMC Public Health***, *18*(1), 422. *https://cgspace.cgiar.org/handle/10568/96303*
21. Akililu,B., Gobena,Ameni, Teshale sori, **Fanta D.,** Akefete Teklu and Ketema Tafesse. Epidemiology and public health significance of **Bovine tuberculosis** in and around Sululta district, central Ethiopia. ***Journal of African Microbiology and Research,*** *2014, 8(24), 2352-2358. https://pdfs.semanticscholar.org/89f9/60228724c7847b0cd90b4b217beaa6b6640c.pdf*
22. Fekadu F, Beyene TJ, Beyi AF, Edao BM, Tufa TB, Woldemariyam FT and **Gutema FD** Risk perception and protective behaviour on ***Bovine Tuberculosis*** among abattoir and butcher workers in Central Ethiopia. ***Frontier in Veterinary Science***, 2018, 5:169. *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6066543/*
23. **Fanta Desissa Gutema**, Hani Solomon1, Fufa Dawo, Takele Beyene Tufa and Dinka Ayana. Assessment of the Effect of Activated Lactoperoxidase System on Keeping Quality of Raw Cow

Milk under Different Climatic Zones of Ethiopia. *Dairy and Veterinary Science Journal*, 2019, 10(5). *https://juniperpublishers.com/jdvs/pdf/JDVS.MS.ID.555796.pdf*

24. Tufa TB, Gurmu F, Beyi AF, Hogeveen H, Beyene TJ, Ayana D, Woldemariyam FT, Hailemariam E, **Gutema FD**, Stegeman JA. 2018. Veterinary medicinal product usage among food animal producers and its health implications in Central Ethiopia. ***BMC Veterinary Research***, 2018, 14(1):409. *https://bmcvetres.biomedcentral.com/articles/10.1186/s12917-018-1737-0*
25. Ayele, Y., **Gutema, F. D**., Edao, B. M., Girma, R., Tufa, T. B., Beyene, T. J. & Beyi, A. F. Assessment of Staphylococcus aureus along milk value chain and its public health importance in Sebeta, central Oromia, Ethiopia. ***BMC Microbiology***, 2017, *17*(1), 141. *https://bmcmicrobiol.biomedcentral.com/articles/10.1186/s12866-017-1048-9*
26. Kohei, M, **Fanta, D,** Akafete, T, Girma,Z and Delia G. Risk assessment of staphylococcal poisoning due to consumption of informally-marketed milk and home-made yoghurt in Debre Zeit, Ethiopia. ***International Journal of Food Microbiology*, 2012,** 153: 135-141.
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Professional membership

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