Nunzio Sarnino, DVM, Dipl. ECVPH

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Education

Residency in Veterinary Public Health, subspecialty Population Medicine – European College of Veterinary Public Health (ECVPH) | 12/2025

Master's degree in Veterinary Medicine - Università degli Studi di Napoli Federico II, Italy | 03/2018

PhD in Biomedical Sciences - Freie Universität Berlin, Germany | Expected Q1 2026

Erasmus+/Erasmus Traineeship - University of Lisbon, Portugal | 2016-2018

Work Experience

Researcher and PhD candidate | **Freie Universität Berlin, Institute for Veterinary Epidemiology and Biostatistics**, Berlin (Germany)
11/2022 - Present

- Coordinated the coding stream and data specifications for Work Package within the EU project ENVIRE; provided project support and defined partner data templates, ran the GitHub workflow, and drafted annual report; managed ENVIRE website
- Developed a Quantitative Microbial Risk Assessment (QMRA) model to quantify human exposure and DALYs from antibiotic-resistant *E. coli* from broiler production across several environmental pathways
- Conducted a targeted review of manure-to-environment *E. coli* transfer; co-authored a systematic review on resistant *Enterobacteriaceae* in broilers
- Analyzed a large real-world dataset on antibiotic use in companion animals, developing custom R scripts to clean, match, and process more than 700,000 veterinary records
- Provided statistical analysis support to junior researchers

Research Assistant (Part-Time) | **German Federal Institute for Risk Assessment (BfR), Study Centre for Supply Chain Modeling and Artificial Intelligence,** Berlin (Germany)
07/2024 – 12/2025

- Supported the transformation of complex risk assessment models into FAIR-compliant digital formats for regulatory and scientific reuse
- Explored the integration of Large Language Models (LLMs) to support risk assessment models development
- Authored and reviewed digital learning content (tutorials, guidance documents) for e-learning platform

Doctoral Researcher | **Stiftung Tierärztliche Hochschule Hannover**, Hannover (Germany)
04/2022 - 09/2022

- Collaborated in the investigation of host-pathogen interaction of low pathogenic avian influenza, using chicken embryos as alternatives to adult animals in research models

Resident in Veterinary Public Health | **Ghent University, Veterinary Epidemiology unit**, Ghent (Belgium)
09/2020 - 03/2022

- Developed a quantitative stochastic model evaluating the economic implications of banning partial depopulation in commercial broiler production
- Conducted environmental sampling for *Campylobacter* in poultry slaughterhouses
- Analyzed survey on antimicrobial stewardship and resistance education among veterinary students
- Supervised and corrected exams

Official Veterinarian | **Netherlands Food and Consumer Product Safety Authority**, Utrecht (the Netherlands)
09/2018 - 08/2020

- Supervised animal welfare and health compliance in red meat slaughterhouses
- Led a team of assistant meat inspectors and trained new veterinary officers
- Conducted hygiene inspections in slaughterhouses and verified animal passports

Skills

Technical & Analytical Skills

Epidemiological methods, Statistical analysis, Literature review & evidence synthesis, Risk assessment modeling, Study design, Artificial intelligence, Machine learning

Tools & Programming

R (Advanced), @RISK (Advanced), KNIME (Intermediate), Git (GitHub/GitLab), Microsoft 365 (Teams, SharePoint, Excel, PowerPoint), LLMs, Zotero

Project & Collaboration

Scientific writing, Scientific communication, Stakeholder engagement, Interdisciplinary teamwork, Project management, Events organization

Personal Attributes

Clear and collaborative communicator, detail-oriented, curious, motivated, and impact-driven, adaptable in interdisciplinary and international environments, proactive and well-organized

Languages

Italian (native), English (C1), Portuguese (B2), Dutch (B1), German (A1)

Organization

Second ENVIRE Project webinar, Berlin, Germany (6 November 2024)

ECVPH conference 2023, Berlin, Germany, (20 - 22 September 2023)

ECVPH workshop on MOOS and Risk modeling, Berlin, Germany (19 - 23 June 2023)

Professional Service & Committees

Treasurer, ECVPH Residents' Committee| Jan 2024-Sep 2025 | Contributed to residents' representation, communications, and event coordination

Una Europa NextVet Summer School, mentor and lecturer | June 2023 | Mentored 20 veterinary medicine students and delivered lecture on basic epidemiology and diagnostic tests

Publications

- Recreational Water Risk from Extended-Spectrum Beta-Lactamase-Producing *E. coli* of Broiler Origin: A Quantitative Microbial Risk Assessment, *Environments,* 2025, doi.org/10.3390/environments12110403
- Quantitative microbial risk assessment of ESBL-producing *E. coli* transfer from broiler litter to lettuce, *medRxiv*, 2025, doi.org/10.1101/2025.06.28.25330457
- Quantification of the risk of ESBL-producing *E. coli* colonization in humans through occupational exposure in broiler production, Microbial Risk Analysis, 2025, doi.org/10.1016/j.mran.2025.100349
- Pathways of Escherichia coli transfer from animal manure: risks and mitigation in agriculture, *Frontiers in Public Health*, 2025, doi.org/10.3389/fpubh.2025.1568621
- Use of Antibiotics in Companion Animals from 133 German Practices from 2018 to 2023, *Antibiotics*, 2025, doi.org/10.3390/antibiotics14010058
- Antibiotic Use in Horses: Analysis of 57 German Veterinary Practices (2018-2023). *Antibiotics*, 2025, doi.org/10.3390/antibiotics14090953
- Microbial risk analysis from a food industry perspective-insights from an international survey, *Microbial Risk Analysis*, 2024, doi.org/10.1016/j.mran.2024.100340
- Evaluation by Veterinary Medicine students of the education in antimicrobial stewardship and resistance at two Veterinary Medicine faculties in Belgium, *Vlaams Diergeneeskundig Tijdschrift*, 2022, doi.org/10.21825/vdt.85302
- Estimation of the Production Economic Consequences of Stopping Partial Depopulation in Broiler Production, *Animals*, 2022, doi.org/10.3390/ani12121521