

DR. NIHAN MARUN

DVM, PhD Microbiology

Scientific Expert Services | Veterinary Microbiology | Animal Health Product Disputes | Probiotics & Microbiome Science

nihan.marun@sigmabiovet.com · www.sigmabiovet.com/expert-witness

Florida, USA | Available Nationally & Internationally | ORCID on request

PROFESSIONAL SUMMARY

Dr. Nihan Marun is a Doctor of Veterinary Medicine and PhD microbiologist with more than 20 years of experience across veterinary microbiology, animal health, probiotics, biotics, microbiome science, product development, manufacturing, formulation, quality systems, labeling, and regulatory-context evaluation.

Her work bridges veterinary medicine, applied microbiology, product science, and animal health industry practice. She has commercialized 20+ probiotic and microbial products globally across companion animal, livestock, poultry, aquaculture, agriculture, food and beverage, and environmental sectors. Her hands-on experience includes strain selection, formulation development, manufacturing oversight, GMP/CGMP, QA/QC, stability and shelf-life evaluation, CFU and viability review, labeling and claims support, regulatory documentation, and scientific writing.

Dr. Marun provides independent scientific and regulatory-context assessments, scientific litigation consulting, and expert witness services for matters involving animal health products, pet food, animal feed, supplements, probiotics, microbiome products, microbial contamination, product safety, manufacturing or formulation failures, labeling and marketing claims, and scientific substantiation.

She is available for plaintiff, defense, insurer, and company-side matters when the scientific questions fall within her expertise and no conflict exists.

SCIENTIFIC EXPERTISE AREAS

Veterinary Medicine & Animal Health

- Companion animal, livestock, poultry, equine, aquaculture, and multi-species animal health
- Veterinary microbiology, infectious disease, zoonoses, public health, and animal product safety
- Product-related animal illness, adverse event, and biological plausibility review
- Species-specific product use, safety, exposure, dose, timing, and outcome evaluation

Microbiology, Infectious Disease & Product Contamination

- Pathogen-related disputes involving Salmonella, Listeria, E. coli, zoonotic and spoilage organisms
- Contamination pathways, adulteration, traceability, testing interpretation, and recall questions
- Antimicrobial resistance, antibiogram interpretation, microbial safety, and pathogen transmission
- Microbiological and toxicological review of product-related animal illness or death

Probiotics, Biotics & Microbiome Product Science

- Probiotics, prebiotics, postbiotics, synbiotics, microbial ingredients, and microbiome-based products
- CFU counts, strain identity, viability, stability, shelf-life, label representation, and efficacy support
- Gut health, microbiome, digestive, immune, skin, oral, and performance-related claims
- Product evidence, strain selection, formulation logic, and claims substantiation

Pet Food, Feed, Ingredients & Veterinary Nutrition Context

- Pet food, animal feed, feed additives, supplements, functional ingredients, and gut-health products
- Ingredient function, nutritional adequacy context, formulation rationale, and feeding directions

- Mycotoxins, aflatoxin, heavy metals, vitamin/mineral excess or deficiency, and improper mixing
- Product performance, palatability, digestibility, species relevance, and adverse response questions

Manufacturing, Formulation & Quality Systems

- Formulation errors, ingredient incompatibility, improper mixing, dosing concerns, and stability failures
- GMP/CGMP, HACCP, FSMA preventive controls, QA/QC, supplier quality, and batch records
- Shelf-life, packaging, bottling, storage, transport, live-culture viability, and product consistency
- Ingredient traceability, supplier qualification, and finished-product quality issues

Labeling, Claims & Regulatory-Context Review

- FDA-CVM, USDA, AAFCO, FTC, EU, APAC, and international regulatory context for animal health products
- Labeling, marketing, structure/function, gut-health, microbiome, natural, human-grade, and efficacy claims
- Scientific substantiation of claims for pet food, feed, supplements, probiotics, and microbiome products
- Scientific review of warning letters, enforcement context, classification, and product documentation

REPRESENTATIVE MATTERS

- Pet food, animal feed, supplement, probiotic, and microbiome product disputes
- Product contamination, adulteration, traceability, recall-related, and microbial safety questions
- Product liability involving animal health products, supplements, pet food, feed additives, and microbial products
- Labeling, marketing, false advertising, efficacy, gut-health, microbiome, and product-performance claims
- Probiotic efficacy disputes involving CFU counts, strain identity, stability, shelf-life, viability, and label representation
- Manufacturing defects, formulation failures, improper mixing, GMP/CGMP failures, QA/QC issues, supplier quality, and batch records
- Ingredient disputes involving mycotoxins, aflatoxin, heavy metals, vitamin/mineral toxicity, feed additive efficacy, and product safety
- Antimicrobial resistance, antibiogram interpretation, microbial risk, zoonotic pathogens, and pet-to-human transmission questions
- FDA-CVM, USDA, AAFCO, FTC, EU/APAC, warning-letter, labeling, claims, and regulatory-context disputes
- Scientific review of opposing expert opinions, product evidence, technical records, literature, and regulatory documents

SCIENTIFIC EXPERT SERVICES

1. Independent Scientific & Regulatory-Context Assessments

Independent scientific review for pre-litigation, internal review, company-side disputes, insurer review, product complaints, recall-related questions, labeling and claims issues, contamination concerns, product-performance disputes, or scientific documentation review.

- product, label, claim, formulation, or ingredient review
- microbial contamination, safety, and traceability assessment
- CFU, strain identity, viability, stability, and shelf-life review
- scientific substantiation and evidence-strength review
- regulatory-context review of product documentation, warning letters, or correspondence
- assessment memo, evidence map, or scientific opinion letter

2. Scientific Litigation Consulting

Non-testifying scientific support for attorneys, legal teams, insurers, and companies working with counsel.

- scientific issue mapping
- evidence review and technical interpretation
- literature review and evidence tables
- review of opposing expert opinions
- technical questions for deposition preparation
- scientific strengths, weaknesses, gaps, and plausibility analysis

3. Expert Witness Services

Formal expert witness work when retained as a testifying expert and when the opinions fall within Dr. Marun's expertise.

- expert reports and rebuttal reports
- declarations or affidavits when appropriate
- deposition, arbitration, and trial testimony
- plaintiff, defense, insurer, or company-side matters

EDUCATION

PhD in Microbiology

Institute of Health Sciences, Ankara University, Ankara, Türkiye | 2006–2012

Completed through a 6-year TUBITAK Scientific and Technological Research Council full scholarship.

Doctor of Veterinary Medicine

Faculty of Veterinary Medicine, Ankara University, Ankara, Türkiye | 2001–2006

Five-year professional veterinary medical program. NAVLE-approved SpanTran evaluation completed for the United States.

Formal Academic Training Relevant to Expert Work

Dr. Marun's veterinary and doctoral training includes extensive coursework and research experience relevant to scientific assessment, litigation consulting, and expert witness work, including:

Microbiology I & II · Virology I & II · Immunology · Animal Nutrition · Feed Hygiene & Technology · Nutritional Diseases · Food Hygiene & Control · Meat Hygiene · Milk Hygiene · Toxicology · Pharmacology I & II · Medical Biochemistry · Pathology I, II & III · Forensic Medicine · Epidemiology · Biostatistics · Zoonoses · Public Health · Companion animal, poultry, ruminant, equine, aquaculture, and multi-species animal health

PROFESSIONAL EXPERIENCE

Founder & Principal Consultant

Sigma BioVet Sciences · Florida & Kansas | 2020–Present

- Founded an independent scientific consulting firm specializing in veterinary microbiology, animal health product science, probiotics, bionics, microbiome science, formulation, regulatory-context review, and documentation
- Completed 150+ consulting projects for companies across North America, Europe, Asia, and South America
- Authored and reviewed scientific, technical, product, regulatory, label, and study-related documents
- Provided scientific consulting in animal health product disputes, contamination questions, product evidence, labeling and claims, probiotic and microbiome products, and regulatory-context issues
- Developed The Responsible Bionics Framework™ for evaluating bionic and microbiome-based products from science to market
- Supported Fortune 500 companies, startups, mid-market animal health brands, and global product teams

Senior Field Specialist & Technical Expert

DeLaval / Tetra Laval Group · Kansas City, Missouri | 2023–2024

- Led scientific and technical strategy for microbial-based animal health products in a global agriculture technology corporation
- Oversaw product manufacturing, formulation, GMP compliance, stability testing, shelf-life validation, QA/QC, and product performance
- Managed regulatory submissions and labeling documentation across multiple international markets
- Directed field and laboratory studies for microbial and animal health products in the dairy sector

Independent Microbiology & Bionics Consultant

International | 2012–2020

- Commercialized 20+ probiotic and microbial products globally for companion animal, livestock, poultry, aquaculture, agriculture, food/beverage, and water-treatment applications
- Provided end-to-end product lifecycle support: strain selection, formulation, manufacturing oversight, bottling, packaging, stability, regulatory documentation, and market launch
- Authored regulatory dossiers and technical documentation for FDA-CVM, USDA, AAFCO, EU, and international contexts

- Supported international product registration, technical disputes, product composition questions, and documentation
- Negotiated and supported commercial and technical agreements for microbial solutions across sectors

Research Scientist & University Instructor

Ankara University · Ankara, Türkiye | 2006–2012

- Conducted doctoral research in clinical and applied microbiology using conventional and molecular techniques
- Taught microbiology, immunology, epidemiology, zoonoses, and public health at the university level
- Designed and executed laboratory animal studies under institutional ethics committee oversight
- Published peer-reviewed research and presented at international scientific conferences

CERTIFICATIONS & SPECIALIZED TRAINING

- Quality & Verification at Clinical Microbiology Laboratory, Turkish Society of Clinical Microbiology, 2012
- Laboratory Animal Utilization Ethical Committee of Animal Experiments, Ankara University, 2011
- Corporate Governance Training, DeLaval / Tetra Laval Group, 2023
- Occupational Health & Safety, DeLaval / Tetra Laval Group, 2023
- Information Security Essentials, DeLaval / Tetra Laval Group, 2023
- Technology Entrepreneurship: Lab to Market, HarvardX, 2020

PUBLICATIONS & PROFESSIONAL ACTIVITIES

- Published author of peer-reviewed articles and science-based books
- Peer reviewer for scientific journals, including *Frontiers in Microbiology*
- Contributing author for veterinary associations and professional newsletters
- Speaker at scientific and industry conferences on probiotics, microbiome science, antimicrobial resistance, and animal health
- Lecturer and trainer in veterinary microbiology, probiotics, product development, and animal health science
- Active companion animal welfare experience through shelter fostering and health assessment

SELECTED QUALIFICATIONS

SCIENCE	PRODUCT & INDUSTRY	REGULATORY CONTEXT
› DVM + PhD Microbiology › Veterinary microbiology › Probiotics, biotics & microbiome science › Pathogen ID & microbial risk › Infectious disease, AMR, zoonoses › Nutrition, toxicology, multi-species context	› 20+ products commercialized globally › Formulation, stability & shelf-life › Manufacturing, GMP/CGMP, QA/QC › Ingredient sourcing & product launch › Pet, livestock, poultry, aquaculture › Agriculture & environmental sectors	› FDA-CVM, USDA, AAFCO, FTC › EU, APAC & international context › Labeling, claims & substantiation › Dossier writing & correspondence review › Warning-letter & classification review › Compliance-context documents

SCOPE BOUNDARIES

Dr. Marun provides independent scientific, microbiological, product-development, and regulatory-context analysis only. She does not provide legal advice, legal strategy, legal representation, legal claim evaluation, pleading preparation, deadline interpretation, damages calculations, or opinions on legal liability. Those matters must be handled by licensed counsel.

All matters require conflict check, scope review, and written engagement before document review or opinion work begins.

Full CV, transcript, publication list, and references are available upon request.