

Cat Report 2018

"Morris Animal Foundation has been an early advocate of emerging problems in feline medicine, such as the recognition that cats are not small dogs and have different and specific challenges when it comes to such health concerns as pain management."

*Dr. B. Duncan X. Lascelles, North Carolina State University
Morris Animal Foundation-funded Researcher*

NEWLY FUNDED STUDIES:

Gastrointestinal Disease

University of Sydney, Australia

Investigate if multiple parvovirus strains or other viruses are contributing to the re-emergence of panleukopenia, a severe gastrointestinal infection and major cause of death in shelter-housed cats.

Heart Disease

University of California, Davis

Investigate if genetic mutations in cats with heart disease are directly linked to their variable therapeutic response to clopidogrel, a drug used to prevent life-threatening blood clot complications.

Feline Infectious Peritonitis

Colorado State University

Explore novel ways to diagnose and predict the likelihood a cat will develop feline infectious peritonitis, a fatal viral disease with no known cure.

Chronic Kidney Disease

University of Tennessee

Determine effectiveness of omeprazole, a gastric acid suppressant commonly prescribed to treat gastrointestinal symptoms in cats with chronic kidney disease.

Herpesvirus-related Infections

Michigan State University

Explore genetics behind the lack of effective immunity against feline herpesvirus, a major cause of upper respiratory infections in cats and a significant problem for shelters, with the aim of developing a more effective vaccine.

Morris Animal Foundation is committed to solving the challenging health problems that prevent cats from fully living all their nine lives. From early research that seeded the development of the first feline leukemia vaccine – protecting millions of cats from related deadly diseases – to pioneering studies in fatal feline infectious peritonitis, we continually champion groundbreaking research that moves veterinary medicine forward.

Through our funded studies, we are advancing diagnostic tools, refining preventive medicine, and developing new treatments for heart disease, cancer, kidney disease and other health threats so cats everywhere can have longer, happier lives.



BY THE NUMBERS

ADVANCING VETERINARY MEDICINE



151 scientific publications
1,593 citations by other investigators

AVERAGE COST OF FELINE HEALTH STUDY IN 1950



\$1,000

AVERAGE COST OF FELINE HEALTH STUDY TODAY



\$83,890



FUNDING

SINCE 1950:
\$15.8 million invested
368 studies funded
60 institutions supported

ABOUT MORRIS ANIMAL FOUNDATION

Morris Animal Foundation's mission is to bridge science and resources to advance the health of animals. Founded by a veterinarian in 1948, we fund and conduct critical health studies for the benefit of all animals.

Learn more at morrisanimalfoundation.org.

Contact us at mailbox@morrisanimalfoundation.org,
800.243.2345 or 720 S. Colorado Blvd., Suite 174A,
Denver, CO 80246.

Dog Report 2018

“For many years, Morris Animal Foundation has been the leader in funding research for the sake of animal health. Without the Foundation, we wouldn’t be where we are today in companion animal medicine.”

*Dr. Kate Meurs, North Carolina State University
Morris Animal Foundation-funded Investigator*

NEWLY FUNDED STUDIES:

Hemangiosarcoma

University of Minnesota

Investigate how hemangiosarcoma cells use cholesterol and lipids to fuel tumor growth and find ways to interrupt these pathways in tumor cells.

Inflammatory Bowel Disease

The University of Melbourne

Understand changes in gut bacteria that occur in dogs with inflammatory bowel disease to help identify novel ways to diagnose and treat this condition.

New Cancer Drug

University of Minnesota

Explore a promising new drug used to treat hemangiosarcoma and how it would benefit dogs with other incurable cancers.

Environmental Chemicals and Cancer

University of Wisconsin

Examine how specific enzymes in dogs break down and neutralize common environmental chemicals that have been linked to cancers in humans.

Stem Cell-Based Therapies

The University of Queensland

Determine potential of a novel type of stem cell to treat inflammatory and immune-mediated diseases, including inflammatory bowel disease and atopic dermatitis.

Blood Transfusions

Washington State University

Research effects of additive solutions to improve blood platelet efficacy, storage and availability for life-saving transfusions.

Spinal Cord Disease

Cornell University

Investigate advanced imaging technique to improve the diagnosis and monitoring of spinal cord lesions associated with canine degenerative myelopathy, a progressive spinal cord disease.

Osteosarcoma

Tufts University

Understand metabolic drivers of cancer growth and new therapy targets to guide development of more effective treatments for osteosarcoma, the most common type of bone cancer in dogs.

Novel Therapies

University of Minnesota

Investigate common heart medications as an effective adjunct therapy for dogs with hemangiosarcoma, an aggressive and deadly cancer.

Lymphocytic Leukemia

Colorado State University

Explore potential treatment and diagnostic targets for B-cell chronic lymphocytic leukemia, a type of blood and bone marrow cancer, and ways to identify high-risk patients.

Severe Bleeding Disorders

Iowa State University

Research how to measure canine thrombopoietin, a bone marrow growth factor, to improve the diagnosis and treatment of immune thrombocytopenia, a severe bleeding disorder.

Since 1950, Morris Animal Foundation has funded research to address the critical health needs of our canine companions. From supporting early research that led to the development of the first parvovirus vaccine, to today's health challenges, such as canine influenza and cancer, the Foundation is dedicated to unlocking new discoveries and bringing revolutionary treatments into practice to create longer, healthier lives for the dogs we love.



BY THE NUMBERS

ADVANCING VETERINARY MEDICINE



387 scientific publications
5,264 citations by other investigators

AVERAGE COST OF CANINE HEALTH STUDY IN 1950



\$1,000

AVERAGE COST OF CANINE HEALTH STUDY TODAY



\$90,660



FUNDING

SINCE 1950:
\$44.5 million invested
974 studies funded
93 institutions supported

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Horse & Alpaca Report 2018

"Morris Animal Foundation is unique among equine funding agencies because of its willingness to invest in much-needed bench research to solve complex diseases."

Dr. Molly McCue, University of Minnesota
Morris Animal Foundation-funded Researcher

NEWLY FUNDED EQUINE STUDIES:

Asthma

The University of Tennessee

Investigate differences in mast cell subtypes, key cells involved in acute and chronic asthma in horses, to help identify better diagnostic and treatment strategies.

Equine Metabolic Syndrome

Murdoch University, Australia

Investigate a new laboratory test to improve diagnosis of equine metabolic syndrome, a metabolic and hormonal disorder in horses.

Foal Pneumonia

Texas A&M University

Determine if vaccinating mares will protect their newborn foals against pneumonia caused by the bacterium *Rhodococcus equi*.

Parasites

University of Delaware

Identify parasite species that are resistant to common deworming drugs.

Antibiotic Resistance

The University of Georgia

Study the biological mechanisms involved in *R. equi* drug resistance and develop strategies to prevent the spread of resistant microorganisms.

Joint Infections

North Carolina State University

Investigate a new treatment for persistent joint infections in horses.

Laminitis

University of Minnesota

Learn more about how diet influences a horse's gut bacteria (microbiome) and metabolism (metabolome) and impacts insulin, key information to understanding how to feed horses at risk for laminitis.

Sepsis

Oklahoma State University

Establish optimal dosing for amikacin administration, an antibiotic used to treat life-threatening bacterial infections, such as sepsis, in foals.

Regenerative Therapies

North Carolina State University

Examine if a novel cell culture strategy can be used to prevent the immune system from destroying donor stem cells.

Microbiome

Utrecht University, Netherlands

Explore the potential relationship between the bacterial composition of the gut, known as the microbiome, and the development of equine metabolic syndrome in Shetland ponies.

NEWLY FUNDED ALPACA STUDY:

Genetics

Curtin University, Australia

Study the genetic causes of health problems in gray-colored alpacas, critical steps toward the development of a screening test to improve the overall health of these animals.

Morris Animal Foundation funds both equine and camelid (alpaca and llama) studies. From developing genetic screening tests for serious conditions such as combined immunodeficiency disease and equine type I polysaccharide storage myopathy to today's health challenges of foal pneumonia and equine metabolic syndrome, we're working toward a world where horses enjoy longer, healthier lives.

For alpacas and llamas, we have developed safer anesthesia, advanced pain management and treatments, and improved dietary measures to reduce developmental diseases, such as rickets, in young animals. We also are continually improving the alpaca genome to identify genetic causes of diseases to ensure alpaca and llama herds are healthy and thriving.



BY THE NUMBERS

ADVANCING VETERINARY MEDICINE



277 scientific publications
3,856 citations by other investigators

AVERAGE COST OF EQUINE HEALTH STUDY IN 1959

\$4,000

AVERAGE COST OF EQUINE HEALTH STUDY TODAY

\$83,448

AVERAGE COST OF LLAMA/ALPACA HEALTH STUDY IN 1990

\$7,500

AVERAGE COST OF LLAMA/ALPACA HEALTH STUDY TODAY

\$104,539



FUNDING

SINCE 1959:
\$20+ million invested
549 studies funded
60 institutions supported

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Wildlife Report 2018

“ Morris Animal Foundation has played a significant role in advancing our understanding of reproductive biology of endangered species, knowledge that will promote the long-term survival of animals around the world.”

*Dr. Budhan Pukazhenth, Smithsonian Institution
Morris Animal Foundation-funded Researcher*

NEWLY FUNDED WILDLIFE STUDIES:

Frog Spindly Leg Syndrome

Smithsonian Institution

Understand causes of a developmental abnormality to improve survival in captive, conservation amphibians.

Black-Footed Ferret Infertility

Smithsonian Institution

Identify genetic features limiting reproductive function to help save this species.

Emerging Snake Virus

University of Rochester

Study a new reptarenavirus linked to inclusion body disease, an often fatal infection of boid snakes.

Bald Eagle Lead Poisoning

Cornell University

Analyze the impact of lead poisoning on the long-term health and recovery of bald eagles.

Tasmanian Devil Facial Cancer

University of Southampton, United Kingdom

Investigate a second contagious facial cancer threatening Tasmanian devils.

Bear-Bile Farming Impact

Washington State University

Investigate link between bile extraction practices and cardiovascular and kidney disease in rescued Asiatic black bears.

Amphibian & Reptile Diagnostic Tools

University of Florida

Establish tissue culture lines to minimize animal use in disease conservation projects.

Cape Buffalo Microbiome

Oregon State University

Learn how microbiome changes correlate with survival and disease susceptibility in calves.

Muskoxen Herd Health

University of Calgary, Canada

Measure stress hormone levels to inform conservation strategies.

Companion Bird Reproductive Diseases

Tufts University

Investigate a technique to suppress hormone production in birds with reproductive-related diseases.

Sea Birds & Antibiotic Resistance

University of São Paulo, Brazil

Trace contamination sources of antibiotic-resistant genes in seabirds to evaluate human impact on wildlife health.

Grauer's Gorilla & Parasites

University of California, Davis

Learn about disease spread from parasites and other agents that threaten wild great apes worldwide.

Avian Respiratory Fungal Infection

Tufts University

Evaluate a technique for earlier diagnosis of aspergillosis, a fungus that causes respiratory disease in wild and captive birds.

Bat White-Nose Syndrome

Lesley University

Investigate factors impacting the reproduction and recovery of little brown bats nearly wiped out by this fungal disease.

Frog Chytrid Fungus

James Cook University, Australia

Boost immunity against chytridiomycosis, a deadly fungal disease responsible for the worldwide decline of amphibians.

Wildlife Supportive Care

Utah Division of Wildlife Resources

Guide the use of drugs and supportive treatments during capture for health and wildlife management.

For more than half a century, Morris Animal Foundation has tackled emerging diseases, pinpointed how diseases spread and jump species, and helped inform disease management strategies and wildlife health policies. From sea turtles and elephants to gorillas and muskoxen, our continued investment in animal health research is a vital factor in determining the long-term survival of many threatened and endangered species.



BY THE NUMBERS

ADVANCING VETERINARY MEDICINE



434 scientific publications
6,796 citations by other investigators

AVERAGE COST OF WILDLIFE HEALTH STUDY IN 1967



\$3,000

AVERAGE COST OF WILDLIFE HEALTH STUDY TODAY



\$91,395



FUNDING

SINCE 1967:

\$25 million invested

654 studies funded

165 institutions supported

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