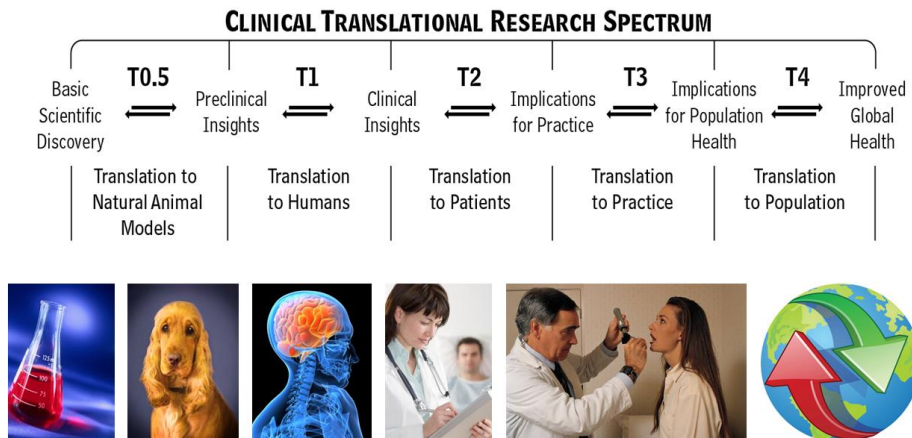# Natural Animal Models Core

Many domestic species suffer from the same illnesses as humans. Genetic, environmental, traumatic, and idiopathic diseases all occur in dogs, cats, horses, and other pets. Due to their complexity and shared characteristics and environment, natural animal models are frequently superior to rodents as models to study human disease. Additionally, work in natural animal models can also help the affected animal.

Interest in the impact of natural animal models on translational outcomes in research has increased in recent years as >80% of new drug therapies that show promise in pre-clinical trials fail in human clinical trials. Articles such as Jocelyn Rice's 2012 Nature publication "**Animal Models: Not close enough**" and Garet Lahvis's 2017 Nature publication "**Make animal models more meaningful**" are just two examples that describe limitations in induced disease models and their potential role in these failures.

Concurrently, interest in the potential of naturally occurring diseases in companion animals to help improve translational science and medicine has grown. Efforts such as the **Zoobiquity** book and associated conferences and the **Clinical and Translational Science Award (CTSA) One Health Alliance (COHA)** have worked to bring attention to the opportunities available in recognizing similarities and expertise provided by bringing professionals in the veterinary and human medical fields together to work on shared problems.

Through the CCTSI we have designated naturally occurring disease models as T0.5 on the Clinical Translational Research Spectrum.

Spectrum of Translational Research

Veterinarians at Colorado State University can provide invaluable expertise in naturally occurring diseases in animals to help research teams choose the most appropriate species, condition, study details, and patient assessment for preclinical trials that can help accelerate the translational process.

Please contact tracy.webb@colostate.edu with questions about natural animal models or to help identify potential collaborators.

Additional information including videos on One Health, stories of successful collaborations between veterinarians at CSU and other universities with human physicians and research scientists, examples of naturally occurring disease models in companion animals as well as other resources can also be found at https://ctsaonehealthalliance.org.