



Accelerating Cross-Species Comparisons: Opportunities and Challenges in Data Sources, Collection, Storage, Modeling and Sharing

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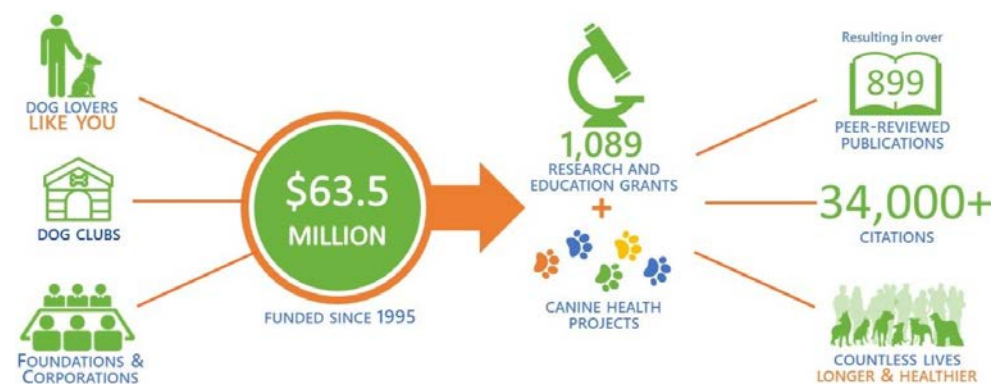
Agenda

- Data Sources
- Data & Resource Sharing
- New Opportunities
- Concerns





AMERICAN KENNEL CLUB
**CANINE HEALTH
FOUNDATION**[®]
PREVENT TREAT & CURE[®]





Darin Collins, DVM
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AKC Data Sources & Resources

≈18-23% of US Dogs

≈175,000 Active Breeders Annually

≈50,000 DNA Samples Annually

≈70,000 Mixed Breeds Enrolled Annually

≈600,000 DNA Samples Currently in Storage

≈720,000 Customer Contacts via AKC Call Center Annually

≈10MM Unique Monthly Visitors to AKC.org

≈5MM Social Followers

≈6MM 3rd Party Demographic Profiles for recent dog registrants

Data and Resource Collaborations

US Dog Population Consulting

- Various Academic Researchers via AKC CHF Referrals
- American Veterinary Medical Association
- US Food and Drug Administration

Breed Specific Population Data

US Dog Geospatial Mapping Data (10 Digit Zip & Geo Coordinates)

Clinical Survey and/or Clinical Trial Candidate Funnel

- Targeted Emails & Snail Mail
- Social Posts
- Web Content



Explore New Sharing Opportunities



- Genotypes
 - Transitioned from STR to SNP
 - Increasing to >100K annually
- Phenotypes
 - Working & Sporting Certifications
 - Breeder and Dog Owner Input
 - Health Testing
 - Health Outcomes/Cause of Death
 - Behavior – C-BARQ (Serpell-Penn Vet)
- Owner Data
 - De-identified HH Demographics
- Pedigrees and Familial Relationships

A small white dog with brown patches is peeking out from under a wooden table. The dog's head and front paws are visible, looking directly at the camera. The background is blurred, showing a carpeted floor and some furniture legs.

Worries

- Henrietta Lacks concerns...
 - Informed Consent
 - Privacy
 - Commercialization
- Sharing Infrastructure
- Data Health

Data Health

- Garbage In/Garbage Out
 - Selection Bias
 - Pet owner supplied breed and phenotype data
 - Pet owner supplied health outcomes
 - HH Demographics



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Thank You

We are looking forward to new collaborations that will drive advances in canine and human health.

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