# Genetics: Counseling

Croney Research Group

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# Genetic Testing

- Genetic diseases are a concern in domestic dogs
- Genetic testing is available for some diseases
- Use of these tests is critical for the welfare of puppies

**Learn More At-a-Glance:**
Genetics and Welfare

# Breed Specific Genetic Testing

- Recommendations for genetic testing vary by breed because specific breeds are more susceptible to certain diseases
- The Orthopedic Foundation for Animals (OFA) provides a recommended protocol for breed-specific health screenings through its CHIC (Canine Health Information Center) program, where each breed can be searched for its specific health concerns and genetic testing requirements

**Learn More At-a-Glance:** Genetic Heritability

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# Benefits of Consulting a Qualified Geneticist

- Trained geneticists are exceptional resources for guiding breeding practices
- They can help in the selection and interpretation of appropriate tests
- Some general practice veterinarians may not be comfortable with genetics, making breeding recommendations based on genetic testing, or helping to interpret genetic tests

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# Identifying a Qualified Geneticist

- The field of veterinary genetics is still new, and trained veterinary geneticists can be difficult to find
- The veterinary genetics field is, unfortunately, entirely unregulated
  - ➢ Be sure to track down reliable, trustworthy laboratories
- Good veterinary genetic testing laboratories should have trained veterinary geneticists on staff to help you

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# Recommended Genetic Tests and Screening

These will be breed specific:

- X-rays of hips, elbows for dysplasia assessment
- Eye exam by veterinary ophthalmologist for eye certification
- Cardiac evaluation by veterinary cardiologist
- Assessment of patellar luxation
- Thyroid blood tests
- DNA-based blood tests
  - Can run individual tests or panels (may reduce cost)

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# Genetic Counseling Can Help Improve Dog Welfare

- Guides breeders on how to improve genetic diversity
- Identifies diseases of concern
- Designs intervention strategies for genetic diseases
- Minimizes the rate of genetic disease and disease carriers
- Quantifies inbreeding
- Improves reproductive traits (e.g., litter size, cesarean section rate)
- Preserves the health of the breed as a whole

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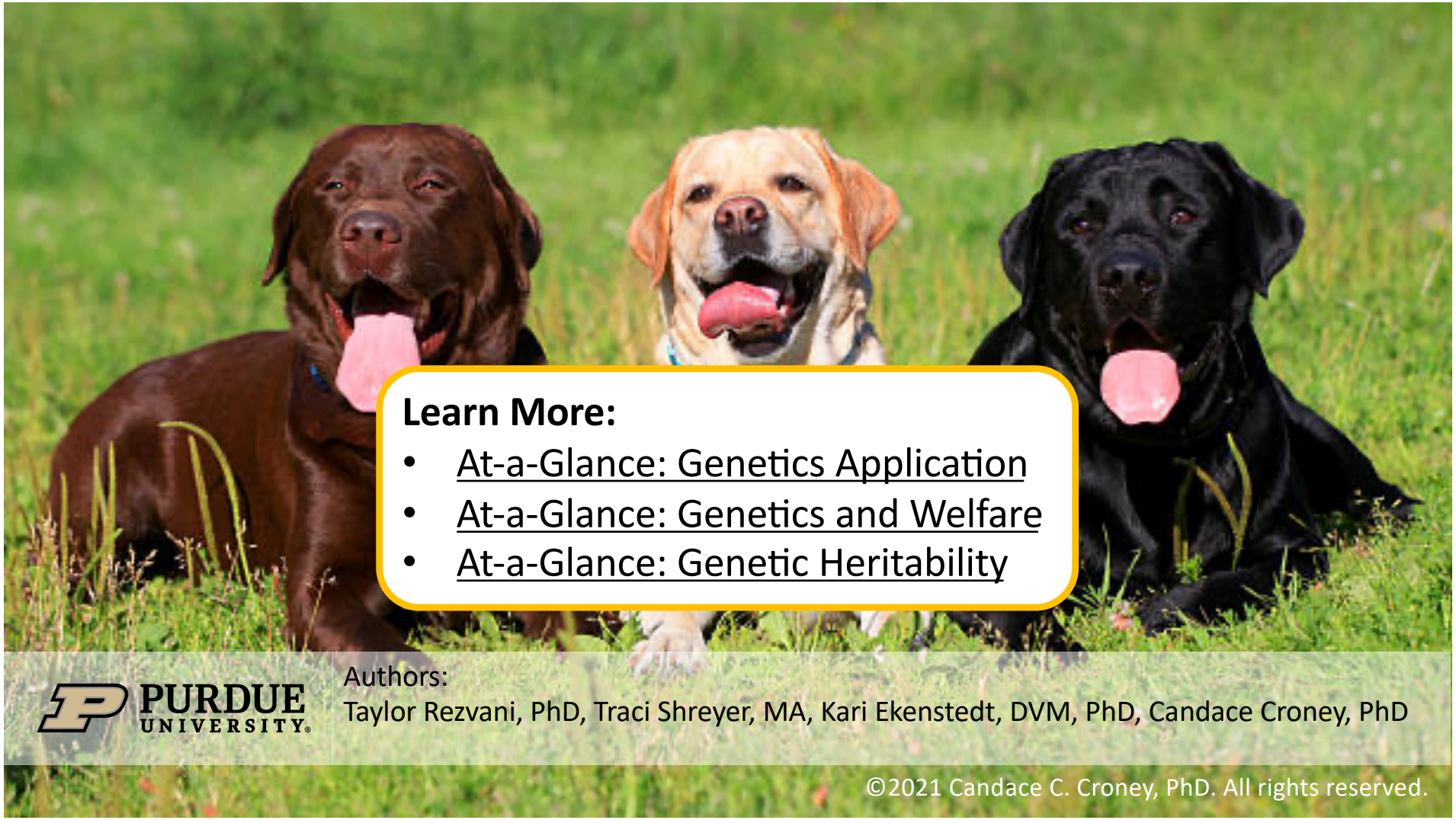

**Learn More:**

- At-a-Glance: Genetics Application
- At-a-Glance: Genetics and Welfare
- At-a-Glance: Genetic Heritability

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