



Leslie A. Lyons, PhD

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Dr. Leslie Lyons was trained in human genetics at the University of Pittsburgh and her postdoctoral fellowship focused on developing genetic resources for comparative gene mapping across mammalian species while at the National Cancer Institute. Her research is currently primarily focused on heritable diseases and traits and the population dynamics of the domestic cat. Specific diseases remain of high priority, including polycystic kidney disease (PKD), skin abnormalities, structural defects, and heritable blindness. Her early studies involved assisted reproduction to produce F1 and backcross cats between domestics and Asian leopard cats (*Prionailurus bengalensis*) and she continues to work with theriogenologists to preserve the biomedical model through gamete cryopreservation. Dr. Lyons has also supported the community by providing DNA studies for the first cloned domestic cat, wildcat, and Sand Cat, and the GFP transgenic cat. Her laboratory has identified nearly 50 mutations in over 20 genes including many diseases, several coat colors, several fur types, and cat AB / B blood type. Dr. Lyons recently launched the 99

Lives Cat Genome Sequencing Initiative – an effort to have deep coverage sequencing of cats with inherited diseases and as a SNP resource for the community. Dr. Lyons has 3 patents and over 175 peer-reviewed publications, including several in forensic journals. One recent work demonstrated Precision Medicine in domestic cats. Her work on cat population genetics was developed into a National Geographic Explorer episode “The Science of Cats” and she has worked with the BBC on several cat television productions.

Dr. Lyons has been a member of ISAG for over 25 years and supported the introduction of genomics and applied genetics for cats into the ISAG workshops. She has been a long-standing member and chair of Applied Genetics in Companion Animals workshop and now an honorary member. Currently she is a member of the Forensics workshop and is helping to develop a new workshop focused on the standardization of genetic testing in animals. She has strong interactions with commercial animal genetic testing laboratories as many of her tests are offered to the cat breeding community. She routinely publishes in the society journal, *Animal Genetics*, and looks forward to developing new ideas to improve and expand the journal and the overall animal genetics society.