

journal of HEREDITY

An international journal of
genomic and evolutionary diversity

Volume 98 | Number 5

Special Issue 2007

Symposium Issue: Third International Conference—Advances in Canine and Feline Genomics School of Veterinary Medicine, University of California, Davis, CA, August 3–5, 2006. Conference and proceedings organized by Danika Bannasch, Francis Galibert, Urs Giger, Steven Hannah, Kerstin Lindblad-Toh, Marilyn Menotti-Raymond, William Murphy, Stephen O'Brien, Elaine A. Ostrander, Niels Pedersen, Bernard van Oost, and made possible by the generous support of Nestle Purina PetCare Company, St. Louis; also, supported by Canine Health and Winn Feline Foundations.

Guest editors: Urs Giger, Steven Hannah, and Elaine A. Ostrander

Letter from the Editors

Urs Giger, Steven Hannah, and Elaine A. Ostrander

Genome Annotation Resource Fields—GARFIELD: A Genome Browser for *Felis catus*

Joan U. Pontius and Stephen J. O'Brien

Comparative Genomic Structure of Human, Dog, and Cat MHC: *HLA*, *DLA*, and *FLA*

Naoya Yuhki, Thomas Beck, Robert Stephens, Beena Neelam, and Stephen J. O'Brien

Development of Y Chromosome Intraspecific Polymorphic Markers in the Felidae

Shu-Jin Luo, Warren E. Johnson, Victor A. David, Marilyn Menotti-Raymond, Roscoe Stanyon, Qing Xiu Cai, Thomas Beck, Naoya Yuhki, Jill Pecon-Slattey, James L. D. Smith, and Stephen J. O'Brien

Mitochondrial Introgressions into the Nuclear Genome of the Domestic Cat

Agostinho Antunes, Joan Pontius, Maria João Ramos, Stephen J. O'Brien, and Warren E. Johnson

Association of Germ-line Polymorphisms in the Feline *p53* Gene with Genetic Predisposition to Vaccine-Associated Feline Sarcoma

Nilanjana Banerji, Vivek Kapur, and Sagarika Kanjilal

Large-Scale SNP Genotyping with Canine Buccal Swab DNA

Melanie Lee Chang, Rebecca Lee Terrill, Maria M. Bautista, Elaine J. Carlson, Donna J. Dyer, Karen L. Overall, and Steven P. Hamilton

Linkage to CFA29 Detected in a Genome-Wide Linkage Screen of a Canine Pedigree Segregating Sry-Negative XX Sex Reversal

S. Pujar, K. S. D. Kothapalli, H. H. H. Göring, and V. N. Meyers-Wallen

Hardy–Weinberg Expectations in Canine Breeds: Implications for Genetic Studies

Andrea D. Short, Lorna J. Kennedy, Annette Barnes, Neale Fretwell, Chris Jones, Wendy Thomson, and William E. R. Ollier

Elevated Basal Slippage Mutation Rates among the Canidae

Jeffrey Laidlaw, Yevgeniy Gelfand, Kar-Wai Ng, Harold R. Garner, Rama Ranganathan, Gary Benson, and John W. Fondon III

Analysis of the Unassembled Part of the Dog Genome Sequence: Chromosomal Localization of 115 Genes Inferred from Multispecies Comparative Genomics

Thomas Derrien, Catherine André, Francis Galibert, and Christophe Hitte

A Noncoding Melanophilin Gene (*MLPH*) SNP at the Splice Donor of Exon 1 Represents a Candidate Causal Mutation for Coat Color Dilution in Dogs

Cord Drögemüller, Ute Philipp, Bianca Haase, Anne-Rose Günzel-Apel, and Tosso Leeb

A Cytogenetically Characterized, Genome-Anchored 10-Mb BAC Set and CGH Array for the Domestic Dog

Rachael Thomas, Shannon E. Duke, Stephanie K. Bloom, Tessa Breen, Andrea Young, Erika Feister, Eric Seiser, Pei-Chien Tsai, Cordelia F. Langford, Peter Ellis, Elinor K. Karlsson, Kerstin Lindblad-Toh, and Matthew Breen

474

Comparison of the Human and Canine Cytokines *IL-1* (α/β) and *TNF- α* to Orthologous Other Mammals

Jan T. Soller, Hugo Murua-Escobar, Saskia Willenbrock, Miriam Janssen, Nina Eberle, Jörn Bullerdiek, and Ingo Nolte

485

385 DLA-DRB1, DQAI, and DQBI Alleles and Haplotypes in North American Gray Wolves

Lorna J. Kennedy, John M. Angles, Annette Barnes, Lindsey E. Carmichael, Alan D. Radford, William E.R. Ollier, and George M. Happ

386

491

390 Functional Analysis of a Subset of Canine Olfactory Receptor Genes

Naima Benbernou, Sandrine Tacher, Stéphanie Robin, Michaëlle Rakotomanga, Fabrice Senger, and Francis Galibert

500

Evaluation of Tafazzin as Candidate for Dilated Cardiomyopathy in Irish Wolfhounds

Ute Philipp, Cornelia Brosch, Andrea Vollmar, and Ottmar Distl

506

400 Hereditary Evaluation of Multiple Developmental Abnormalities in the Havanese Dog Breed

Alison N. Starr, Thomas R. Famula, Nathan J. Markward, Joanne V. Baldwin, Karon D. Fowler, Diane E. Klumb, Nancy L. Simpson, and Keith E. Murphy

510

414 Analysis of Candidate Susceptibility Genes in Canine Diabetes

Andrea D. Short, Brian Catchpole, Lorna J. Kennedy, Annette Barnes, Neale Fretwell, Chris Jones, Wendy Thomson, and William E. R. Ollier

518

421 Independent Origin and Restricted Distribution of *RPGR* Deletions Causing XLPR

Barbara Zangerl, Jennifer L. Johnson, Gregory M. Acland, and Gustavo D. Aguirre

428

526

Mutation in *HSF4* Associated with Early but Not Late-Onset Hereditary Cataract in the Boston Terrier

Cathryn S. Mellersh, Kathryn T. Graves, Bryan McLaughlin, Rosalyn B. Ennis, Louise Pettitt, Mark Vaudin, and Keith C. Barnett

438

531

445 Mapping the Mutation Causing Lens Luxation in Several Terrier Breeds

David R. Sargan, David Withers, Louise Pettitt, Michael Squire, David J. Gould, and Cathryn S. Mellersh

534

452 Identification of a Mutation in the *CHAT* Gene of Old Danish Pointing Dogs Affected with Congenital Myasthenic Syndrome

Helle Friis Proschowsky, Annette Flagstad, Susanna Cirera, Claus B. Joergensen, and Merete Fredholm

539

The Genetics of Cream Coat Color in Dogs

Sheila M. Schmutz and Tom G. Berryere

544

461 Localization of White Spotting Locus in Boxer Dogs on CFA20 by Genome-Wide Linkage Analysis with 1500 SNPs

Peter A. Leegwater, Marjan A. van Hagen, and Bernard A. van Oost

549

468 Announcements

553