

CURRICULUM VITAE

Name: Marilyn A. Menotti-Raymond, Ph.D.

Citizenship: United States

Education:

B.S. (Bacteriology), Syracuse University, Syracuse, New York
M.S. (Science Teaching), Syracuse University, Syracuse, New York
M.S. (Molecular Biology), Syracuse University, Syracuse, New York
Ph.D. (Molecular Biology), Syracuse University, Syracuse, New York

Brief Chronology of Employment:

1984-1988	Teaching Assistant, Introductory Biology/General Genetics, Syracuse University, Syracuse, NY
1988-1990	Research Assistant, Laboratory of Dr. David Sullivan, Syracuse University, Syracuse, NY
1990	Postdoctoral Fellow, Laboratory of Dr. David Sullivan, Syracuse University, Syracuse, NY
1990-1993	Postdoctoral Fellow, Laboratory of Viral Carcinogenesis, National Cancer Institute, National Institutes of Health, Frederick, MD
1993-1996	Intramural Research Training Award (IRTA) Fellow, Laboratory of Viral Carcinogenesis, National Cancer Institute, National Institutes of Health, Frederick, MD
1996-1998	Senior Staff Fellow, Laboratory of Viral Carcinogenesis, National Cancer Institute, National Institutes of Health, Frederick, MD
1998-2000	Research Fellow, Laboratory of Genomic Diversity, National Cancer Institute, National Institutes of Health, Frederick, MD
2000-present	Staff Scientist, Laboratory of Genomic Diversity, National Cancer Institute, National Institutes of Health, Frederick, MD

Honors and Other Special Scientific Recognition:

Cum laude, Syracuse University
National Institute of Justice, \$265,000 grant for the development of a forensic typing system in the domestic cat, 1999 – 2000
Expert Witness, Molecular Geneticist, Supreme Court, Prince Edward Island, Canada, 1996
Course Instructor, "Recent Advances in Conservation Genetics," Smithsonian Institution
NOAHS Center, NOAHS-Conservation and Research Center, Front Royal, VA, 1996, 1997, 1998, 2000, 2002, 2004
Co-Organizer: Advances in Canine and Feline Genomics/Comparative Genome Anatomy and Genetic Disease, St. Louis, MO, 2002

Co-Organizer: Advances in Canine and Feline Genomics/Comparative Genome Anatomy and Genetic Disease, Utrecht, The Netherlands, 2004

Co-Organizer: Advances in Canine and Feline Genomics/Comparative Genome Anatomy and Genetic Disease, UC Davis, CA, 2006

NIH Speakers Bureau, 2001-present

BIBLIOGRAPHY

Published

1. Menotti-Raymond, M., and Sullivan, D.T. Further characterization of L-b hydroxyacid dehydrogenase from drosophila. Biochemica et Biophysica Acta 841: 15-21, 1985.
2. Sullivan, D.T., Atkinson, P., Bayer, C., and Menotti-Raymond, M. The Evaluation of Adh Expression in the Repleta Group of Drosophila. In: The Ecological and Evolutionary Genetics of Drosophila, Starmer, W.T., Barker, J.S.F. and MacIntyre, R.J. (Eds.), Plenum Press, New York, 1990, pp. 407-418.
3. Menotti-Raymond, M., Starmer, W.T., and Sullivan, D.T. Characterization of the structure and evolution of the Adh region of D. hydei. Genetics 127: 355-366, 1991.
4. Menotti-Raymond, M., and O'Brien, S.J. Dating the genetic bottleneck of the African cheetah. Proc Natl Acad Sci USA 90: 3172-3176, 1993.
5. Lyons, L.A., Menotti-Raymond, M.A., and O'Brien, S.J. Comparative genomics: The next generation. Animal Biotechnology 5: 103-111, 1994.
6. Sullivan, D.T., Starmer, W.T., Curtiss, S.W., Menotti-Raymond, M., and Yum, J. Unusual molecular evolution of an Adh pseudogene in drosophila. Mol Biol Evol 11: 443-458, 1994.
7. Menotti-Raymond, M. and O'Brien, S.J. Hypervariable genomic variation to reconstruct the natural history of populations: Lessons from the big cats. Electrophoresis 16: 1771-1774, 1995.
8. Menotti-Raymond, M.A. and O'Brien, S.J. Evolutionary conservation of ten microsatellite loci in four species of felidae. J Hered 86: 319-321, 1995.
9. The First International Workshop on Comparative Genome Organization (complete list of authors too numerous to mention, at least 60 individuals) Comparative genome organization of vertebrates. Mammal Gen 7: 717-734, 1996.
10. Menotti-Raymond, M., David, V.A., and O'Brien, S.J. Pet cat hair implicates murder suspect. Nature 386: 774, 1997.
11. Menotti-Raymond, M., David, V.A., Stephens, J.C., Lyons, L.A., and O'Brien, S.J.

- Genetic individualization of domestic cats using feline STR loci for forensic applications. Journal of Forensic Sciences 42: 1037-1050, 1997.
12. David, V.A., and Menotti-Raymond, M. Automated DNA Detection with Fluorescence-based Technologies. In: Molecular Genetic Analysis of Populations, A Practical Approach, Hoezel, R. (Ed.), Oxford University Press, England, 1998, pp. 337-370.
 13. Johnson, W.E., Slattery, J.P., Eizirik, E., Kim, J., Menotti-Raymond, M., Bonacic, C., Cambre, R., Crawshaw Jr., P.G., Nunes, A.V., Seuanez, H., Moreira, M.A, Seymour, K.L., Simon, F., Swanson, W., and O'Brien, S.J. Disparate phylogeographic patterns of molecular genetic variation in four closely related South American small cat species. Mol Ecol 8: S79-94, 1999.
 14. Menotti-Raymond, M., David, V.A., Lyons, L.A., Schäffer, A.A., Tomlin, J.F., and O'Brien, S.J. A genetic linkage map of microsatellites in the domestic cat (*Felis catus*). Genomics 57: 9-23, 1999.
 15. Murphy, W.J., Menotti-Raymond, M., Lyons, L.A., Thompson, M.E., and O'Brien, S.J. Development of a feline whole-genome radiation hybrid panel and comparative mapping of human chromosome 12 and 22 loci. Genomics 57: 1-8, 1999.
 16. O'Brien, S.J., Menotti-Raymond, M., Murphy, W.J., Nash, W.G., Lyons, L.A., Menninger, J.C., Stanyon, R., Wienberg, J., Copeland, N.G., Jenkins, N.A., Womack, J.E. and Marshall Graves, J.A. (Genomic maps), O'Brien, S.J., Eisenberg, J.F., Miyamoto, M., Hedges, B., Kumar, S., Wilson, D.E., and 60 additional authors (Phylogenetic tree): Genome maps 10. Comparative genomics. Mammalian Radiations. Wall chart. Science 286: 463-478, 1999.
 17. O'Brien, S.J., Menotti-Raymond, M., Murphy, W.J., Nash, W.G., Wienberg, J., Stanyon, R., Copeland, N.G., Jenkins, N.A., Womack, J.E., and Graves, J.A.M. The promise of comparative genomics in mammals. Science 286: 458-481, 1999.
 18. Johnson, W.E., Shinyashiku, F., Menotti-Raymond, M., Driscoll, C., Leh, C., Sunquist, M., Johnston, L., Bush, M., Wildt, D., Yuhki, N., and O'Brien, S.J. Molecular Genetic Characterization of two Insular Asian Cat Species, Bornean Bay Cat and Iriomote Cat. In: Evolutionary Theory and Processes: Modern Perspectives Wasser, S.P. (Ed.), Kluwer Academic Publishers, 1999, pp. 223-248.
 19. Wentzel, J., Stephens, J.C., Johnson, W.E., Menotti-Raymond, M., Slattery, P.J., Yuhki, N., Carrington, M., Quigley, H., Miquelle, D.G., Tilson, R., Manansang, J., Brady, G., Zhi, L., Wenshi, P., Shi-Quiang, H., Johnston, L., Sunquist, M., Karanth, K.U., and O'Brien, S.J. Subspecies of Tigers: Molecular Assessment using "Voucher Specimens" of Geographically Traceable Individuals. In: Riding the Tiger: Tiger Conservation in Human-Dominated Landscapes, Seidensticker, J., Christie, S. and Jackson, P. (Eds.), Cambridge University Press, 1999, pp. 40-49.

20. Murphy, W.J., Sun, S., Chen, Z., Yuhki, N., Hirschmann, D., Menotti-Raymond, M., and O'Brien, S.J. A feline radiation hybrid map and its implications for comparative mapping. Gen Res 10: 691-702, 2000.
21. Culver, M., Menotti-Raymond, M., and O'Brien, S.J. Patterns of size homoplasy at ten microsatellite loci in pumas (*Puma concolor*). Mol Biol Evol 18: 1151-1156, 2001.
22. Eizirik, E., Kim, J.H., Menotti-Raymond, M., Crawshaw, P.G., O'Brien, S.J., and Johnson, W.E. Phylogeography, population history and conservation genetics of jaguars (*Panthera onca*). Mol Ecol 10: 65-79, 2001.
23. Sun, S., Murphy, W.J., Menotti-Raymond, M., and O'Brien, S.J. Integration of the feline radiation hybrid and linkage maps. Mammal Gen 12: 436-441, 2001.
24. Lu, Z., Johnson, W.E., Menotti-Raymond, M., Yuhki, N., Martenson, J., Mainka, S., Shiqiang, H., Qingguo, Z., Zhihe, Z., Li, G., Pan, W., and O'Brien, S.J. Patterns of genetic variation in remaining giant panda (*Ailuropoda melanoleuca*) populations. Cons Biol 15: 1596-1607, 2001.
25. Butler, J.M., David, V.A., and Menotti-Raymond, M. The "MeowPlex:" A new DNA test using tetranucleotide STR markers for the domestic cat. Profiles in DNA 5(2): 7-10, 2002.
26. Driscoll, C.A., Menotti-Raymond, M., Nelson, G., Goldstein, D., and O'Brien, S.J. Genomic microsatellites as evolutionary chronometers: A test in wild cats. Gen Res 12: 414-423, 2002.
27. O'Brien, S.J., Menotti-Raymond, M., Murphy, W.J., and Yuhki, N. The feline genome project. Ann Rev Genet 36: 657-686, 2002.
28. Eizirik, E., Yuhki, N., Johnson, W.E., Menotti-Raymond, M., Hannah, S., and O'Brien, S.J. Direct molecular evidence for multiple origins of melanism in the cat family (Mammalia, Felidae). Curr Biol 13: 448-453, 2003.
29. Menotti-Raymond, M., David, V.A., Chen, Z.Q., Menotti, K.A., Sun, S., Schäffer, A.A., Tomlin, J.F., Agarwala, R., O'Brien, S.J., and Murphy, W.J. Second generation integrated genetic linkage /radiation hybrid maps of the domestic cat. J Hered 94(1): 95-106, 2003.
30. Menotti-Raymond, M., David, V., Wachter, L., Yuhki, N., and O'Brien, S. J. Quantitative polymerase chain reaction-based assay for estimating DNA yield extracted from domestic cat specimens. Croatian Medical Journal 44(3): 327-331, 2003.
31. Menotti-Raymond, M., David, V.A., Agarwala, R., Schäffer, A.A., Stephens, R., O'Brien, S. J., and Murphy, W. J. Radiation hybrid mapping of 304 novel microsatellites in the domestic cat genome. Cytogenet Gen Res 102: 272-276, 2003.

32. He, Q., Lowrie, C., Shelton, G.D., Menotti-Raymond, M., Murphy, W., Swanson, W.F., and Fyfe, J.C. Inherited motor neuron disease in domestic cats: A model of spinal muscular atrophy type III defines a new disease locus. *Pediatr Res* 57(3): 324-330, 2005.
33. Schmidt-Kunzel, A., Eizirik, E., O'Brien, S.J., and Menotti-Raymond, M. Tyrosinase and Tyrosinase related protein 1 genetic variants specify domestic cat coat color alleles of the albino and brown loci. *J Hered* 96(4): 289-301, 2005.
34. Menotti-Raymond, M., David, V.A., Wachter, L.L., Butler, J.M., and O'Brien, S.J. An STR forensic typing system for genetic individualization of domestic cat (*Felis catus*) samples. *J Forensic Sci* 50(5): 1061-1070, 2005.
35. Menotti-Raymond, M., Fyfe, J.C., David, V.A., Brichta, L., Schäffer A.A., Agarwala, R., Murphy, W.J., Wedemeyer, W.J., Drummond, M.C., Buzzell, B.G., Gregory, B.L., Wirth, B., and O'Brien, S.J. An ~140 kb deletion associated with feline muscular atrophy implies an essential *LIX1* function for motor neuron survival. *Gen Res* 16(9): 1084-1090, 2006.
36. Ishida, Y., David, V.A., Eizirik, E., Schäffer A.A., Neelam B.A., Roelke, M.E., Hannah, S.S., O'Brien, S.J., and Menotti-Raymond, M. A homozygous single-base deletion in *MLPH* causes the dilute Coat Color Phenotype in the Domestic Cat. *Genomics* 88(6): 698-705, 2006.

In Press

1. Murphy, W.J., Davis, B., David, V.A., Agarwala, R., Schäffer, A.A., Pearks-Wilkerson, A.J., Neelam, B., O'Brien, S.J., and Menotti-Raymond, M. A 1.5 megabase resolution radiation hybrid map of the cat genome and comparative analysis with the canine and human genomes. *Genomics*, 2007.
2. Menotti-Raymond, M., David, V., and O'Brien, S. J. STR Based Forensic Analysis of Felid Samples From Domestic and Exotic Cats. In: *Non-Human DNA Typing: Theory and Casework Applications*, Coyle, H. (Ed.), Marcel Dekker, Inc., New York, 2007.
3. Menotti-Raymond, M. and O'Brien, S.J. The Domestic Cat, *Felis catus*, as a Model of Hereditary and Infectious Disease. In: *Sourcebook of Models for Biomedical Research*, Conn, M. (Ed.), Humana Press, Inc., Totowa, New Jersey, 2007.

Invited Talks

1. Invited Speaker, NOAH's Days Workshop on Conservation and Biodiversity, Front Royal, VA, 1995.
2. Invited Speaker, Australian Gene Mapping Workshop and New Zealand Genetical Society, Dunedin, New Zealand, 1995.

3. Invited Speaker, HUGO Comparative Genome Organization Workshop, Frazer Island, Australia, 1995.
4. Invited Speaker, NOAH's Conservation and Research Center Annual Conference, Front Royal, VA, 1996.
5. Invited Speaker, Seventh International Symposium on Human Identification, Scottsdale, AZ, 1996.
6. Invited Speaker, NOAH's Conservation and Research Center Annual Conference, Front Royal, VA, 1996.
7. Invited Speaker, NOAH's Conservation and Research Center Annual Conference, Front Royal, VA, 1997.
8. Invited Speaker, NOAH's Days Workshop on Conservation and Biodiversity, Front Royal, VA, 1997.
9. Invited Speaker, First International Feline Genetic Disease Conference, Philadelphia, PA, 1998.
10. Invited Speaker, Fort Detrick/NCI-FCRDC Spring Research Festival, Frederick, MD, 1998.
11. Invited Speaker, Human Genome Meeting, Brisbane, Australia, 1999.
12. Invited Speaker, Eleventh International Symposium on Human Identification, Biloxi, MS, 2000.
13. Invited Speaker, 2nd European-American Intensive Course in Clinical and Forensic Genetics, Dubrovnik, Croatia, 2001.
14. Invited Speaker, National Institute of Justice Second Annual DNA Grantee's Workshop, Washington, DC, 2001.
15. Invited Speaker, Advances in Canine and Feline Genomics/Comparative Genome Anatomy and Genetic Disease, St. Louis, MO, 2002.
16. Invited Speaker, Cambridge Healthtech Institute's Fifth Annual DNA Forensics, Washington, DC, 2002.
17. Invited Speaker, National Institute of Justice Second Annual DNA Grantee's Workshop, Washington, DC, 2002.

18. Invited Speaker, Thirteenth International Symposium on Human Identification, Phoenix, AZ, 2002.
19. Invited Speaker, American Academy of Forensic Sciences, Chicago, IL, 2003.
20. Invited Speaker, 3rd European-American Intensive Course in Clinical and Forensic Genetics, Zagreb, Croatia, 2003.
21. Invited Speaker, Advances in Canine and Feline Genomics/Comparative Genome Anatomy and Genetic Disease, Utrecht, The Netherlands, 2004.
22. Invited Speaker, 4th European-American Intensive Course in Clinical and Forensic Genetics, Dubrovnik, Croatia, 2005.
23. Invited Speaker, Advances in Canine and Feline Genomics/Comparative Genome Anatomy and Genetic Disease, Davis, CA, 2006.