

## DAFTAR PUSTAKA

- Alacs, E.A., A. Georges., N.N. FitzSimmons., and J. Robertson. 2010. DNA Detective: A Review of Molecular Approaches to Wildlife Forensics. *Forensic Science, Medicine and Pathology* 6: 180-194.
- Altschul, S.F., W. Gish., W. Miller., E.W. Myers., and D.J. Lipman. 1990. Basic local *alignment* search tool. *215(3)*: 403–410.
- Asrori, I., D.H. Tjong., D.I. Roesma., W. Novarino., Syaifullah., and Mansyurdin. 2022. DNA Sexing Sumatran tiger (*Panthera tigris sumatrae*) based on amelogenin gene. *World Journal of Andvanced Research and Review* 14(03): 190–194.
- Bailey, D.M.D., A. Nabeel ., Affara., and M.A. Smith. 1992. The X-Y Homologous Gene Amelogenin Maps to the Short Arms of Both the X and Y Chromosomes and Is Highly Conserved in Primates. *Genomics* 14: 203-205.
- Bansal, A.K., D. Charan Shetty., R. Bindal., and A. Pathak. 2012. Amelogenin: A novel protein with diverse applications in genetic and molecular profiling. *JOMFP* 16: 395-399.
- Borah P. 2011. Primer Designing for PCR. *Science Vision*. 11 (3): 134 -136.
- Brodin, J., M. Krishnamoorthy., G. Athreya., W. Fischer., P. Hraber., C. Gleasner., L. Green., B. Korber., and T. Leitner. 2013. A multiple-*alignment* based primer design algorithm for genetically highly variable DNA targets. *BMC Bioinformatics* 14:255-283.
- Brownie, J., S. Shawcross., J. Theaker., D. Whitcombe., R. Ferrie., C. Newton., and S. Little. 1998. Elimination of Primer-dimer accumulation in PCR. *J. Biochem* 10: 233–242.
- Cheng, S., C. Fockler., W. Barnes., and H. Russell. 1994. Effective amplification of long targets from clones inserts and human genomic DNA. *Proc. Natl. Acad. Sci. USA* 91: 5696-5699.
- Chuang, L.Y., Y.H. Cheng., and C.H. Yang. 2013. Specific Primer Design for the Polymerase Chain Reaction. *Biotechhnol Lett*.
- Clutton-Brock, T.H.. Sex Ratio Variation in Birds. 1985. *Ibis* 128: 317-329.

- Desjardins, P., and D. Conklin. 2011. NanoDrop Microvolume Quantitation of Nucleic Acids. *Journal of Visualized Experiments and Thermo Fisher Scientific* 45: 11-5.
- Dieffenbach, C.W., T.M.J. Lowe., and G.S. Dveksler. 1993. General concepts for PCR primer design. In: *PCR Methods and Applications*, Cold Spring Harbor Laboratory 3: S30-S37.
- Dinerstein, E., C. Loucks., A. Heydlauff., E. Wikramanayake., G. Bryja., J. Forrest., J. Ginsberg., S. Klenzendorf., P. Leimgruber., T. O'Brien., E. Sanderson., J. Seidensticker., and M. Songer. 2006. *Setting priorities for conservation and recovery of wild tigers: 2005–2015*. New York. WWF, WCS, Smithsonian, and NFWF-STF, Washington DC.
- Diss, T. 2003. *Molecular Biology in Cellular Pathology*. United Kingdom. Willey. 375 Hal.
- Ennis S, and TF Gallagher. 1994. A PCR based sex-determination assay in cattle based on the bovine amelogenin locus. *Anim. Genet* 25: 425-427.
- Erwanto, Y., A. Sugiyono., Rohman., M.Z. Abidin, dan D. Ariyani. 2012. Identifikasi Daging Babi Menggunakan Metode Pcr-Rflp Gen *Cytochrome B* dan Pcr Primer Spesifik Gen Amelogenin. *Agritech* 32(4): 370-377.
- Farahvash, T., R. Vaez Torshizi., A.A. Masoudi., H.R. Rezaei., and M. Tavallaei. 2016. AMELX and AMELY Structure and Application for Sex Determination of (*Cervus elaphus maral*). *Iranian Journal of Applied Animal Science* 6(4): 963-968.
- Fernando, P., and D.J. Melnick. 2001. Molecular sexing eutherian mammals. *Molecular Ecology Notes* 11(4): 350–353.
- Fontanesi, L., E. Scotti., and V. Russo. 2008. Differences of the Porcine Amelogenin X and Y Chromosome Genes (AMELX and AMELY) and Their Application for Sex Determination in Pigs. *Molecular Reproduction And Development* 75: 1662–1668.
- Frank, J.A, C.L. Reich, S. Sharma, J.S. Weisbaum, B.A. Wilson., and G.J. Olsen. 2008. Critical Evaluation of Two Primers Commonly Use for Amplification of Bacterial 16S rRNA Genes. *Applied and Enviromental Microbiology* 74: 2461–2470.
- Franklin, N., S. Bastoni., D. Siswomartono., Manansang, and R.J. Tilson. 1999. Last of The Indonesian Tiger: A Cause for Optimism. Di dalam: Nainggolan, N.

2019. Harimau sumatra (*Panthera tigris sumatrae*). Balitbang LHK Aek Nuli. Sialungun. Tersedia dari: <http://aeknuli.org/harimau-sumatra-panthera-tigris-sumatrae>.
- Gibbon, V., M. Paximadis., G. Strkalj., P. Ruff., and C. Penny. 2009. Novel methods of molecular sex identification from skeletal tissue using the amelogenin gene. *Forensic Science International Genetics* 3: 74–79.
- Gibson, C.W., E.E. Golub., W.R. Abrams., G. Shen., W. Ding., and J. Rosenbloom. 1992. Bovine Amelogenin Message Heterogeneity: Alternative Splicing And Y-Chromosome Gene Transcription. *Biochemistry* 31: 8384-8388.
- Graham, E.A.M. 2006. Sex Determinating. *Forensic Science, Medicine, and Pathology* 2(4): 283-286.
- Hall, T.A. 1999. BioEdit: a user-friendly biological sequence alignment editor and analysis program for Window 95/98/NT. *Nucleic Acids Symp Ser* 41:95-98.
- Helm, A., T. Oja., L. Saar., K. Takkis., T. Talve., and M. Pärtel. 2009. Human influence lowers plant genetic diversity in communities with extinction debt. *J. Ecol.* 97: 1329–1336.
- Hung, T., K. Mak., and K. Fon. 1990. A specificity enhancer for PCR, *Nucleic Acids Res* 18: 4953-4959.
- Imansyah, M.J., N.R. Sari., R.R. Ayu, dan A. Rahmadetiassan. 2015. Strategi Konservasi Jenis Terancam Punah Sumatra 2015-2020. *Prosiding Lokakarya: 29 Januari 2015*. Jakarta. Yayasan Keanekaragaman Hayati Indonesia. 49 Hal.
- Iwase, M., Satta, Y., Hirai, Y., Hirai, H., Imai, H. and Takahata, N. 2003. The amelogenin loci span an ancient pseudoautosomal boundary in diverse mammalian species. *Proceedings of the National Academy of Sciences of the United States of America* 100: 5258–5263.
- [IUCN] International Union for Conservation of Nature and Natural Resources. 2008. *Panthera tigris ssp. sumatrae*. IUCN Red List. Tersedia di: <http://www.redlist.org>. [diakses 15 Desember 2021].
- Kamarcharya, D., A.M. Sherchan., S. Dulal., P. Manandhar., S. Manandhar., J. Joshi, S. Bhattarai., T.R. Bhatta., N. Awasthi., A.N. Sharma., M. Bista., N.R. Silwal., P. Pokharel., R.R. Lamichhane., N. Sharma., B. Llewellyn., C. Wultsch., M.J. Kelly., D. Gour., L. Waits., J.M. Hero., and J. Hughes. 2018. Species, sex and

- geo-location identification of seized tiger (*Panthera tigris tigris*) parts in Nepal—A molecular forensic approach Plos One: 1-16.
- Kampke, T., K. Markus., and M. Michael. Efficient primer design algorithms. *Bioinformatics* 17(3): 214-225.
- Karp. A., Peter G. Isaac and David S. Ingram. 1998. *Molecular Tools for Screening Biodiversity*. Pub. Chapman & Hall, London. 112-113.
- Kitpipit T, Tobe SS, Kitchener AC, Gill P and Linacre A. 2012. The Development and validation of a singel SnaPshot Mutiplex for Tiger Species and Subspecies identification implication for Forensic Purpose. *Forensic Science International: Genetics*. 250–257.
- Lau, E.C., J.P. Simmer., P.Jr. Bringas., D.D. Hsu., C.C. Hu., M. Zeichner-David., F. Thiemann., M.L. Snead., H.C. Slavkin., and G. Fincham. 1992. Alternative splicing of the mouse amelogenin primary RNA transcript contributes to amelogenin heterogeneity. *Biochem Biophys Res Commun* 188(3): 1253–1260.
- Lau, E.C., T.K. Mohandas., L.J. Shapiro., H.C. Slavkin., and M. Snead. 1989. Human and mouse amelogenin gene loci are on the sex chromosomes. *Genomics* 4: 162-168.
- Linkie, M., D.J. Martyr., J. Holden., A. Yanuar., A.T. Hartana., J. Sugardjito., and N.L. Williams. 2003. Habitat destruction and poaching threaten the Sumatran tiger in Kerinci Seblat National Park, Sumatra. *Oryx* 37(1): 41–48.
- Luo, S.J., J.H. Kim., W.E. Johnson., J.V.D. Walt., J. Martenson., N. Yuhki., D.G. Miquelle., O. Uphyrkina, J.M. Goodrich., H.B. Quigley., R. Tilson., G. Brady., P. Martelli., V. Subramaniam., C. McDougal., S. Hean., S.Q. Huang., W. Pan., U.K. Karanth., M. Sunquist., J.L.D. Smith., and S.J. O'Brien. 2004. Phylogeography and Genetic Ancestry of Tigers (*Panthera tigris*). *PloS Biology* 2: 2275–2293.
- Manucci, A., K.M. Sullivan., P.L. Ivanov., and P. Gill. 1994. Forensic application of a rapid and quantitative DNA sex test by amplification of the X-Y homologous gene amelogenin. *International Journal of Legal Medicine* 106 : 190-193.
- Mazak, V. 1981. *Panthera tigris*. *Mammalian Species* 152: 1-8.
- McEwing, R., K. Ryan., F. Wulansari., T. Sitam., and R. Ogden., 2011. Molecular sexing of tigers, *Panthera tigris*. *Conservation Genet Resour* 4: 299–301.



- McPherson, M.J., B.D. Hames., and G.R. Taylor. 1995. PCR 2: a practical approach. Oxford University Press, New York. Hal 25.
- Nakahori, Y., K. Hamano., M. Iwaya., and Y. Nakagome. 1991. Sex identification by polymerase chain reaction using X-Y homologous primer. *Am J Med Genet* 39: 472-473.
- [NCBI] National Centre for Biotechnology Information. 2021. *GenBank*. Tersedia di [https://www.ncbi.nlm.nih.gov/nucleotide/NC\\_056697.1/](https://www.ncbi.nlm.nih.gov/nucleotide/NC_056697.1/) [diakses 17 Desember 2021].
- Ng J, and Nemora. Tiger Trade Revisited In Sumatra, Indonesia. Malaysia. Petaling Jaya, Traffic Southeast Asia; 2007. 22 Hal.
- Pandhee, S., J. Phavaphutanon., K. Sirinarumitr., S. Laopiem., and T. Sirinarumitr., . 2016. Evaluation of Amelogenin and Zinc-finger Loci for Sex Identification in Captive Felids. *Thai J Vet Med* 146(1): 41-47.
- Parks, C.L., L.S. Chang., and T. Shenk. 1991. A polymerase chain reaction mediated by a single primer: cloning of genomic sequences adjacent to a serotonin receptor protein coding regio. *Nucleic Acids Research* 19(25): 7155-7160.
- PermenLHK. 2018. *Peraturan Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia Nomor P.20/Menlhk/Setjen/Kum.1/6/2018 Tentang Jenis Tumbuhan dan Satwa Yang Dilindungi*. Jakarta.
- Pfeiffer, I., and B. Brenig. 2005. X- and Y-chromosome specific variants of the amelogenin gene allow sex determination in sheep (*Ovis aries*) and European red deer (*Cervus elaphus*). *BMC Genet* 6:16
- Pilgrim, K.L., K.S. Mckelvey., A.E. Riddle., and M.K. Schwartz. 2005. Felid sex identification based on noninvasive genetic samples. *Molecular Ecology Notes* 5(1): 60–61.
- Rahat, M.A., A. Ahmad., M. Israr., A. Wahab., Subhanuddin., A. Rasool., F. Akbar., and M. Shah. 2021. Sex Identification in Cattle, based on Amelogenin Gene. *BioRxiv* 3: 5-17.
- Rosel, P.E. 2003. PCR-based sex determination in Odontocete cetaceans. *Conserv Genetics* 4:647–649.
- Rozen, S., and H. Skaletsky. 2000. Primer3 on the WWW for general users and for biologist programmers. *Methods Mol Biol* 132(3):365–386.

- Rychlik, W. 1995. Selection of Primers for Polymerase Chain Reaction. *Molecular Biotechnology* 3: 129-134.
- Rychlik, W., W.J. Spencer., and R.E. Rhoads. 1990. Optimization of the *annealing* temperature for DNA amplification in vitro. *Nucleic Acids Research* 18(21): 6409-6412.
- Sambrook, J., and Russel. 2001. *Molecular Cloning-A Laboratory Manual*. New York: Cold Spring Harbor Laboratory Press.
- Santiapillai, C., and W.S. Ramono. 1985. On the status of the tiger (*Panthera tigris sumatrae* Pocock 1829) in Sumatra. *Tiger paper* 12: 23–29.
- Santos. 1998. Reliability of DNA-based sex tests. *Nature Genetics* (18):103.
- Seidensticker, J., S. Christie, and P. Jackson. 1999. *Introducing the tiger*. Halaman: 1- 3 dalam: J. Seidensticker, S. Christie and P. Jackson. *Riding The Tiger: Tiger Conservation in Human Dominated Landscape*. University Press Cambridge. UK.
- Semiadi, G., and R.T.P. Nugraha. 2006. Profil Reproduksi Harimau Sumatra (*Panthera tigris sumatrae*) pada Tingkat Penangkaran. *Biodiversitas* (7) 4: 368-371
- Shimokawa, H., and S. Sasaki. 1995. The Amelogenin Gene. *The International Journal of Developmental Biology* 9: 127-133.
- Simmer, J., and J. Hu. 2001. Dental enamel formation and its impact on clinical dentistry. *J Dent Educ* 65:896-905.
- Singh, V.K., and A. Kumar. 2001. PCR Primer Design. *Molecular Biology Today* 2(2): 27-32.
- Smith, O., J. Wang., and C. Carbone. 2018. Evaluating the effect of forest loss and agricultural expansion on Sumatran tigers from scat surveys. *Biological Conservation* 221: 270–278.
- Soehartono, T., T. Hariyo., Wibisono, D. Sunarto., H. Martyr., D. Susilo., T. Maddox., dan D. Priatna. Strategi dan Rencana Aksi Konservasi Harimau sumatra (*Panthera tigris sumatrae*). 2007. Departemen Kehutanan. Jakarta. 23 Hal.

- Sullivan K.M., A. Mannucci., C.P. Kimpton., and P. Gill. 1993 A rapid and quantitative DNA sex test: fluorescence- based PCR analysis of X-Y homologous gene amelogenin. *BioTechniques* 15(4): 636-641.
- Suyadi, I.N.S., A. Jaya., Wijanarto., and H.T. Wibisono. 2012. Spatial Model of Sumatran Tiger (*Panthera tigris sumatrae*) Potential Habitat Suitability in Bukit Barisan Selatan National Park, Indonesia. *Berita Biologi* 11(1): 93-102.
- Swindell, S.R., Plasterer, T.N. 1997. SEQMAN. In: Swindell, S.R. (eds) *Sequence Data Analysis Guidebook. Methods In Molecular Medicine™*, vol 70. Springer, Totowa, NJ. <https://doi.org/10.1385/0-89603-358-9:75>.
- Takagi, S., K. Nomoto., and T. Takemoto. 1984. Physiological aspect of mugineic acid, a possible phytosiderophore of graminaceous plants. *J. Plant Nutr.* 7: 469–477.
- Trianom B, T Arwiyanto, and T Joko. Development of Novel Subspety67cies-Specific Primers Based on the Endoglucanase Gene for Detection of *Ralstonia syzygii* subsp. *Syzygii*. *Jurnal Perlindungan Tanaman Indonesia* 22(2): 124–131.
- Vallone, P.M., and J.M. Butler. 2004. AutoDimer: a screening tool for primer-dimer and hairpin structures. *Biotechniques* 37(2): 226–231.
- VanGuilder, H.D., K.E. Vrana, and W.M. Freeman. 2018. Twenty-five years of quantitative PCR for gene expression analysis. *Biotechniques* 44(5): 619–626.
- Wallace, R.B., J. Shaffer., R.F. Murphy., J. Bonner., T. Hirose., and K. Itakura .1979. Hybridization of synthetic oligodeoxyribonucleotides to phi chi 174 DNA: the effect of single base pair mismatch. *Nucleic Acids Res* 6: 3543-3557.
- Wang C. 2016. *Primer Design*. Centre for Medical Parasitology University of Copenhagen, Denmark. Health Science. 33 Hal.
- Wibisono, H.T., and Pusparini. 2010. Sumatran tiger (*Panthera tigris sumatrae*): A review of conservation status. *Integrative Zoology* 5: 313-323.
- Wilcove., S. David., Giam., Xingli., D.P. Edwards., F. Brendan., and K.L. Pin 2013. Navjot's nightmare revisited: logging, agriculture, and biodiversity in Southeast Asia. *Trends in Ecology & Evolution*, 28(9), 531–540.
- Williamson, J.E., R.M. Huebinger., J.A. Sommer., E.E. Louis Jr., and R.C. Barber. 2002 Development and cross-species amplification of 18 microsatellite

penandas in the Sumatran tiger (*Panthera tigris sumatrae*). *Molecular Ecology Notes* 2: 110–112.

Wu, J.S., C. Lee., C.C. Wu., and Y.L. Shiue. 2004. Primer design using genetic algorithm. *Bioinformatics* 20(11):1710–1.

[WWF] World Wide Fund For Nature Indonesia. Harimau Sumatra. 2021. Tersedia di: <https://www.wwf.id/spesies/harimau-sumatra>. [diakses 18 Desember 2021].

Ye, J., G. Coulouris., I. Zaretskaya., I. Cutcutache., S. Rozen., and T. L. Madden. 2012. Primer-BLAST: A tool to design target-specific primers for polymerase chain reaction. *BMC Bioinformatics* 13:134-144.

