

DAFTAR PUSTAKA

- Agung, P.P., Said, S. and Sudiro, A., 2016. Myostatin gene analysis in the first generation of the Belgian Blue cattle in Indonesia. *Journal of the Indonesian Tropical Animal Agriculture*, 41(1), pp.13-20.
- Albakrie, M.W., T. Hartatik, Panjono. 2021. Identifikasi keragaman gen MC4R pada Persilangan Belgian Blue, Wagyu, dan Brahman Cross serta hubungannya terhadap berat dan ukuran tubuh saat lahir.
- Aminurrahman, A., Priyanto, R. and Jakaria, J., 2021. Evaluasi Ukuran-Ukuran Tubuh pada Sapi Belgian Blue, Peranakan Ongole dan Silangannya. *Jurnal Agripet*, 21(1).
- Badan Pusat Statistik. 2020. Berita Resmi Statistik No. 7/01/th.XXIV. BPS RI.
- Benoit S, Schwartz M, Baskin D, Woods SC, Seeley RJ. 2000. CNS melanocortin system involvement in the regulation of food intake. *Horm Behav*. 37:299-305.
- Blakely, J., & Bade, D. H. 1991. Ilmu Peternakan. Gadjah Mada University Press
- Cattle, O.B. and Beef, W., 2015. Studi histologi dan histomorfometri daging sapi Bali dan Wagyu. *Jurnal Veteriner September*, 16(3), pp.432-438.
- Du, X., C. Chen., Z. Yuan., L. Zhang., X. Chen., Y. Wang., X. Gao., L. Zhang., H. Gao., J. Li., dan S. Xu. 2013. Genetic Polymorphisms of MC4R and IGF2 Gene Association with Feed Conversion Efficiency Traits in Beef Cattle. *Pakistan Veterinary Journal*. 33(4) : 418-422.
- Falconer, D. S., and T. F. C Mackay. 1996. *Introduction Qualitative Genetics* Second Ed. Longman B Group Ltd. London.
- Farooqi IS, Keogh JM, Yeo GSH, Lank EJ, Cheetham T, O'rahilly S. 2003. Clinical spectrum of obesity and mutations in the melanocortin 4 receptor gene. *New England J Med*. 348:1085-1095.
- Fathoni, A., Sumadi, Hartatik, T, Khusnudin, M., Maharani, M., Ngadiyono, N., Widayati, D.T. dan Noviandi, C. T. 2016. Genetic Diversity of Ongole Crossbred Cattle in Kebumen based on MC4R Gene. *The 17th Asian-Australasian Association of Animal Production Societies Animal Science Congress*
- Febrianti, T., D. Febriyana., N. K. Susilarini., A. W. Sari., dan U. A. Nikmah. 2018. Polimorfisme Adrenergic Receptor Beta-3 (ADRB3) pada Derajat Obesitas Penderita Diabetes Melitus di Kecamatan Bogor Tengah, Kota Bogor. *Jurnal Biotek Medisiana Indonesia*. 7(1) : 1-8.
- Fiems, L.O, 2012. Double muscling in cattle: Genes, husbandry, carcasses and meat. *Anim. Sci*. 2: 472-506.

- Gunawan. 2017. Produktivitas ternak sapi bali pada sistem pengembalaan di kabupaten halmahera timur. *Jurnal Ilmu-Ilmu Pertanian*. 15(2) : 37-43.
- Hardjosubroto, W. 1994. Aplikasi Pemuliabiakan Ternak di Lapangan. PT Grasindo. Jakarta.
- Hartatik, T. 2019. Pendekatan Praktis : Deteksi Polimorfisme DNA Sapi Aceh. Gadjah Mada University Press. Yogyakarta.
- Hartatik, Tety, Fathoni, A., & Bintara, S. 2020. Short communication : The genotype of growth hormone gene that affects the birth weight and average daily gain in crossbred beef cattle. 21 (3): 941–945.
- Haskell-Luevano C, Monck EK. 2001. Agouti-related protein functions as an inverse agonist at a constitutively active brain melanocortin-4 receptor. *Regul Pept*.99:1-7.
- Horn F, Bettler E, Oliveira L, Campagne F, Cohen FE, Vriend G. 2003. GPCRDB informative system for G protein-coupled receptors. *Nucleic Acids Res*.31:294-297.
- Huang, M., X. Gao., J. Y. Li., H. Y. Ren., J. B. Chen., and S. Z. Xu. 2010. Polymorphisms in MC4R gene and correlations with economic traits in cattle. *Molecular Biology Reports*. 37(8) : 3941-3944.
- Huszar D, Lynch CA, Huntress FV, Dunmore JH, Fang Q, Berkemeier LR, Gu W, Kesterson RA, Boston BA, Cone RD, Smith FJ, Campfield LA, Burn P, Lee F. 1997. Targeted disruption of the melanocortin-4 receptor results in obesity in mice. *Cell*. 88:131-141.
- Irawan, B. 2010. Genetika Penjelasan Mekanisme Pewarisan Sifat. Airlangga University Press. Surabaya.
- Jakaria, J., Edwar, E., Ulum, M.F. and Priyanto, R., 2019. Evaluasi Kinerja Pertumbuhan Sapi Silangan Belgian Blue dan Peranakan Ongole. *Jurnal Agripet*, 19(2), pp.136-141.
- Kurniawati, S., and N. S. Hartati. 2018. Optimasi suhu annealing primer degenerate untuk mengamplifikasi fragmen gen arginine decarboxylase (ADC) genom ubi kayu lokal maluku tenggara optimization of the annealing temperature with degenerate primer for amplification of arginine decarboxylase . *Jurnal Ilmu Dasar* 19 (2): 135–142.
- Kuswati, K., Ravenska, R., Hapsari, N., Puspita Anugra Yekti, A., & Susilawati, T. 2016. Pengaruh kastrasi terhadap performan produksi Sapi Persilangan Wagyu berdasarkan umur yang berbeda. *Jurnal Ilmu-Ilmu Peternakan*. 26 (3): 53–58.
- Latifah, L., Maharani, D., Kustantinah, A. and Hartatik, T., 2018. Association of melanocortin 4 receptor gene polymorphism with growth traits in

- Bligon goat. *Journal of the Indonesian Tropical Animal Agriculture*, 43(4), pp.343-351.
- Lee, Y., S. Park., H. Kim., S. K. Lee., J. W. Kim., H. K. Lee., D. K. Jeong., and S. J. Lee. 2013. A C1069G SNP of the MC4R gene and its association with economic traits in Korean native cattle (brown, brindle, and black). *Electronic Journal of Biotechnology*. 16(5) : 1-5.
- Liu, G.Y., Raza, S. H. A., Zhou, L., Hassan, A., El-Aziz, A. , Sabek, A., Shoorei, A., Amjadi, M., dan Gui, L. 2019. The genetic polymorphisms of melanocortin-4 receptor gene are associated with carcass quality traits in a Chinese indigenous beef cattle breed. *Research in Veterinary Science*
- Lubrano-Berthelie C, Cavazos M, Duben B, Shapiro A, Stunff CL, Zhang S, Picart F, Govaerts C, Froguel P, Bougnères P, Clement K, Vaisse C. 2003. Molecular genetics of human obesity-associated MC4R mutations. *An NY Acad Sci*. 994:49-57.
- Machado, M. A., I. Schuster, M. L. Martinez, and A. L. Campas. 2003. Genetic diversity of four breed using microsatellite markers. *Rev Bras De Zool*. 32: 93-98.
- MacKenzie RG. 2006. Obesity-associated mutations in the human melanocortin-4 receptor gene. *Peptides*. 27:395-403.
- Maharani D, Sumadi, Hartatik T, Fathoni A and Khusnudin M 2016 Asosiasi gen MC4R terhadap ukuran-ukuran tubuh sapi PO Kebumen pada saat lahir dan sapih *Prosiding Simposium Nasional Penelitian dan Pengembangan Peternakan Tropik Tahun 2016* (Yogyakarta: Fakultas Peternakan Universitas Gadjah Mada) p 163.
- Maharani, D., A. Fathoni, Sumadi, T. Hartatik, and M. Khusnudin. 2018. Identification of MC4R gene and its association with body weight and body size in Kebumen Ongole Grade cattle. *J. Indonesian Trop. Anim. Agric*. 43(2):87-93.
- McPherron, A. C., & Lee, S. J. 1997. Double muscling in cattle due to mutations in the myostatin gene. *Proceedings of the National Academy of Sciences of the United States of America*. 94 (23): 12457–12461.
- Melnikova, E.E., N.V. Bardukov, M.S. Fornara, O.V. Kostyunina, A.A. Sermyagin1, A.M. Zaitsev, N.A. Zinovieva1. 2018. Effects of genotypes For IGF2, CCKAR and MC4R on the phenotypic estimations and breeding values for productive traits in pigs. *Agricultural Biology*. 54(4):723-734.
- Muslim, K.N., Nugroho, H. and Susilawati, T., 2013. Hubungan antara berat badan induk dan berat lahir pedet sapi Brahman Cross pada jenis kelamin yang berbeda. *Jurnal Ilmu-Ilmu Peternakan (Indonesian Journal of Animal Science)*, 23(1), pp.18-24.

- Mustofa, Z. 2001. Analisis pemasaran sapi potong di kabupaten blora Jawa tengah. Prosiding Seminar. Fakultas Peternakan Institut Pertanian Bogor. Bogor.
- Nei, M. 1987. Molecular Evolutionary Genetics. Columbia University Press. New York
- Nei, M., & Kumar, S. 2000. Molecular Evolution and Genetics. Oxford University Press.
- Panda, S., G.K. Gaur, N.R. Sahoo, and B.L. Saini. 2019. Association of MC4R, RYR1 and PRKAG3 single nucleotide polymorphisms with body weight in Crossbred piglets. *Indian J. Anim. Sci.* 89(5):539-542.
- Panggabean, T.N., 2016. Analisis Tingkat Optimasi Algoritma Genetika Dalam Hukum Ketetapan Hardy-Weinberg pada Bin Packing Problem. *CESS (Journal of Computer Engineering, System and Science)*, 1(2), pp.12-18.
- Pezza, K. 2014. Backyard Farming: Raising cattle. Hatherleigh Press. New York.
- Prihandini, P. Wahyu dan D. Maharani. 2019. Gen Melanocortin-4 Receptor (MC4R) sebagai Gen Utama untuk Seleksi Pertumbuhan Cepat pada Sapi Potong. *WARTAZOA*. 29(2): 85-96.
- Prihandini, P.W. and Maharani, D., 2019. Gen Melanocortin-4 receptor (MC4R) sebagai Gen utama untuk Seleksi Pertumbuhan Cepat pada Sapi Potong.
- Prihandini, P.W., S. Sumadi, G. Suparta, and D. Maharani. 2019. Melanocortin-4 Receptor (MC4R) gene polymorphism and its effect on growth traits in Madura cattle. *J. Indonesian. Trop. Ani. Agri.* 44(1):38-46.
- Priyadi, D. A., Panjono, Bintara, S., & Hartatik, T. 2017. Genotype of Brahman and Brahman Cross cattle based on SNP in insulin-like growth factor binding protein-3 (IGFBP-3) gene sequences. *Biodiversitas*. 18 (2): 795–800.
- Purchas, R. W., Morris, S. T., & Grant, D. A. 1992. A comparison of characteristics of the carcasses from friesland, piedmontese x friesland, and belgian blue x friesland bulls. *New Zealand Journal of Agricultural Research*. 35 (4): 401–409.
- Purwantini, D., Ismoyowati, I. and Santosa, S.A., 2018, December. Potensi Genetik Terkait Dengan Karakteristik Produksi Pada Itik Lokal Di Indonesia. In Prosiding Seminar Teknologi Agribisnis Peternakan (STAP) Fakultas Peternakan Universitas Jenderal Soedirman (Vol. 6, pp. 64-73).
- Putra, W. P. B., Sumadi, S., & Hartatik, T. 2014. Korelasi Genetik Pada Sifat

- Pertumbuhan Sapi Aceh di Kecamatan Indrapuri Provinsi Aceh. *Jurnal Agripet*. 14 (1): 37–41.
- Rosmond R, Chagnon M, Bouchard C, Bjorntorp P. 2001. A missense mutation in the human melanocortin-4 receptor gene in relation to abdominal obesity and salivary cortisol. *Dabetologia*. 44:1335-1338.
- Sarassati, T. and Agustina, K.K., 2015. Kualitas Daging Sapi Wagyu dan Daging Sapi Bali yang Disimpan pada Suhu-19 oc. *Indonesia Medicus Veterinus*, 4(3), pp.178-185.
- Seeley RJ, Yagaloff KA, Fisher SL, Burn P, Thiele TE, van Dijk G, Baskin DG, Schwartz MW. 1997. WARTAZOA Vol. 29 No. 2 Th. 2019 Hlm. 085-09696 Melanocortin receptors in leptin effects. *Nature*. 390:349.
- Seong, J., Suh, D.S., Do Park, K., Lee, H.K. and Kong, H.S., 2012. Identification and analysis of MC4R polymorphisms and their association with economic traits of Korean cattle (Hanwoo). *Molecular biology reports*, 39(4), pp.3597-3601.
- Shishay, G., G. Liu, X. Jiang, Y. Yu, W. Teketay, D. Du, H. Jing, and C. Liu. 2019. Variation in the Promoter Region of the MC4R Gene Elucidates the Association of Body Measurement Traits in Hu Sheep. *Int. J. Mol. Sci*. 20(2): 1-18.
- Soeharsono, Saptati R. A. dan Diwyanto. K. 2010. Produktivitas sapi potong silangan hasil IB dengan ransum berbeda formula. Seminar nasional teknologi peternakan dan veteriner.
- Song, X. M., J. F. Jiang, G. Z. Zhang, F. X. Shiand, and Y. Q. Jiang. 2012. DNA polymorphisms of the Hu sheep melanocortin-4 receptor gene associated with birth weight and 45-day weaning weight. *J. Gen. Mol. Res.*, 11(4):4432- 4441.
- SuwitiNK, Suastika P, Swacita IBN, Piraksa W. 2013. Tingkat Kesukaan Wisatawan Asing di Bali terhadap Daging Sapi Bali dan Wagyu. *Proseding Seminar Nasional Pusat Kajian Sapi Bali-Unud*. Hal42-47 Tgl 24 September 2013.
- Turner H. G. 1977. The tropical adaptation of beef cattle. An Australian study. In: *animal breeding: Selected articles from the Word Anim. Rev.* FAO Animal Production and Health Paper 1:92-97
- Volkandari, S. D., T. Hartatik., dan Sumadi. 2013. Polimorfisme gen growth hormone (GH) pada sapi limura. *Buletin Peternakan*. 37(2) : 67-73.
- Wang, Y., C. Wang, J. Zhang, C. Meng, X. Zhang, Z. Wang, Y. Fang, D. Mao and S. Cao. 2015. Three novel MC4R SNPs associated with growth traits in Hu sheep and East Friesian x Hu Crossbreed sheep. *Small Rum. Res*. 125(1):26-33.

- Wang, Y., Yi, S., Xiaosong, J., Yiping, L., Xiaocheng, L., Zengrong, Z., Huarui, D., Qing, Z. 2009: Study on association of single nucleotide polymorphism of MC3R and MC4R genes with carcass and meat quality traits in chicken. *Journal Poultry Science*, 46: 180-187.
- Warwick, E. J., J. M. Astuti dan W. Hardjosubroto. 1994. *Pemuliaan Ternak*. Edisi V. Gadjah Mada University Press, Yogyakarta hal: 45-97.
- Weir, B. S. 1996. *Genetic Data Analysis : Method for Discrete Population Genetic Data* (2nd ed.). Sinauer Associates.
- Zhang, C. L., Y. H. Wang., H. Chen., X. Y. Lan., C. Z. Lei dan X. T. Fang. 2009. Association between variants in the 50-untranslated region of the bovine MC4R gene and two growth traits in Nanyang cattle. *Mol Biol Rep.* 36 : 1839–1843.