

DAFTAR PUSTAKA

- Adhikari, D. & Liu, K. (2009), "Molecular mechanisms underlying the activation of mammalian primordial follicles", *Endocrine Reviews*, Vol. 30 No. 5, pp. 438–464.
- Bao, R. M., Taketsuru, H. and Miyano, T. (2011) 'Histological and biological assessment of vitrified ovarian follicles from large animals', *Reproductive Medicine and Biology*, 10(4), pp. 211–219. doi: 10.1007/s12522-011-0094-5.
- Blume-Jensen, P. & Hunter, T. (2001), "Oncogenic kinase signalling : Abstract : Nature", *Nature*, Vol. 411 No. 6835, pp. 355–365.
- Cantley, L.C. (2002), "The phosphoinositide 3-kinase pathway", *Science*, Vol. 296 No. 5573, pp. 1655–1657.
- Chao N, Liao I. 2001. Cryopreservation of finfish and shellfish gametes and embryos. *Aquaculture*, 197, pp. 161-189.
- Cushman RA, Wahl CM, Fortune JE. Bovine ovarian cortical pieces grafted to chick embryonic membranes: a model for studies on the activation of primordial follicles. *Hum Reprod*. 2002;17:48-54
- I. P., Kim, S. S., Donnez, J., Barri, P., Pellicer, A., Patrizio, P., Rosenwaks, Z., Nagy, P., Falcone, T., Andersen, C., Hovatta, O., Wallace, H., Meirow, D., Gook, D., Kim, S. H., Tzeng, C. R., Suzuki, S., Ishizuka, B., & Dolmans, M. M. (2012) 'Recommendations for fertility preservation in patients with lymphoma, leukemia, and breast cancer', *Journal of assisted reproduction and genetics*, 29(6), pp. 465–468. Available at: <https://doi.org/10.1007>.
- Del Campo, M., Piquer, B., Witherington, J., Sridhar, A., & Lara, H. E. (2019) 'Effect of superior ovarian nerve and plexus nerve sympathetic denervation on ovarian- derived infertility provoked by estradiol exposure to rats', *Frontiers in Physiology*, 10(APR), pp. 1–10. doi: 10.3389/fphys.2019.00349.
- Donnez, J. and Dolmans, M. M. (2015) 'Ovarian cortex transplantation: 60 reported live births brings the success and worldwide expansion of the technique towards routine clinical practice', *Journal of Assisted Reproduction and Genetics*, 32(8), pp. 1167–1170. doi: 10.1007/s10815-015-0544-9.
- Dupont, J. and Scaramuzzi, R. J. (2016) 'Insulin signalling and glucose transport in the ovary and ovarian function during the ovarian cycle', *Biochemical Journal*, 473(11), pp. 1483–1501. doi: 10.1042/BCJ20160124.
- Faustino, L, Santos, R, Silva, C, Pinto, L, Celestino, J, Campello, C, Figueiredo, J, Rodrigues, A. 2010. Goat and Sheep Ovarian Tissue Cryopreservation: Effects on the Morphology and Development of Primordial Follicles and Density of Stromal Cell. *Animal Reproduction Science*, 122, pp. 90-97.
- Feng, Y.M., Liang, G.J., Pan, B., Qin, X.S., Zhang, X.F., Chen, C.L., Li, L., *et al.* (2014), "Notch pathway regulates female germ cell meiosis progression and early oogenesis events in fetal mouse", *Cell Cycle*, Vol. 13 No. 5, pp. 782–791.

- Ferlay, J., ., Colombet, M., Soerjomataram, I., Parkin, D. M., Piñeros, M., Znaor, A., & Bray, F. (2021) Cancer statistics for the year 2020: An overview, International journal of cancer.
- Forabosco, A. & Sforza, C. (2007), “Establishment of ovarian reserve: a quantitative morphometric study of the developing human ovary”, Fertility and Sterility, Vol. 88 No. 3, pp. 675–683.
- Fowler, A. & Toner, M. (2006), “Cryo-injury and biopreservation.”, Annals of the New York Academy of Sciences, Vol. 1066, pp. 119–135.
- Fuller, B. J., Petrenko, A. Y., Rodriguez, J. V., Somov, A. Y., Balaban, C. L., & Gao D, C.J. (2000), “Mechanisms of *cryoinjury* in living cells. ILAR J 2000;41:187– 96”, Vol. 4 No. 4, pp. 187–96.
- Guibert, E. E. (2013) ‘Biopreservation of hepatocytes: current concepts on hypothermic preservation, cryopreservation, and vitrification’, Cryo letters, 34(4), pp. 432–452.
- Gibson, E. and Mahdy, H. (2021) Anatomy, Abdomen and Pelvis, Ovary, StatPearls Publishing.
- Hallas-Potts, A., Dawson, J. C. and Herrington, C. S. (2019) ‘Ovarian cancer cell lines derived from non-serous carcinomas migrate and invade more aggressively than those derived from high-grade serous carcinomas’, Scientific Reports, 9(1), pp. 1–10. doi: 10.1038/s41598-019-41941-4.
- Ali Hassan, P. Banchi, R. Chayaa, Pascottini, L. Maniscalco, S. Iussich, K. Smith, A. Van Soom. 2023. Feline Ovarian Tissue Vitrification : The effect of fragment size and base medium on follicular viability and morphology, Theriogenolgy Vol. 198, pp 12-18.
- Hu, Y., Yuan, D. Z., Wu, Y., Yu, L. L., Xu, L. Z., Yue, L. M., Liu, L.,. (2018) Bisphenol A Initiates Excessive Premature Activation of Primordial Follicles in Mouse Ovaries via the PTEN Signaling Pathway, Reproductive Sciences, 25(4), pp. 609–620. doi: 10.1177/1933719117734700.
- Jang, T. H., Park, S. C., Yang, J. H., Kim, J. Y., Seok, J. H., Park, U. S., Choi, C. W., Lee, S. R., & Han, J. (2017) ‘Cryopreservation and its clinical applications’, Integrative Medicine Research, 6(1), pp. 12–18. doi: 10.1016/j.imr.2016.12.001.
- Joanne E Fortune, Ming Y, Wanzirai. 2011. In vitro and in vivo regulation of follicular formation and activation in cattle. Reprod Fertil Dev. 2011; 23(1): 15-22
- Karlsson, J.O., Cravalho, E.G., Borel Rinkes, I.H., Tompkins, R.G., Yarmush, M.L. & Toner, M. (1993), “Nucleation and growth of ice crystals inside cultured hepatocytes during freezing in the presence of dimethyl sulfoxide”, Biophysical Journal, Elsevier, Vol. 65 No. 6, pp. 2524–2536.
- Kawamura, Yuan Cheng, Nao Suzuki, et al. 2013. Hippo signalling disruption and Akt stimulation of ovarian follicles for infertility treatment. Proc Natl Acad Science. 2013 110(43):17474-9
- Keros, V, Xella, S Hultenby, K, Pettersson, K, Sheikhi, M, Volpe, A Hreinsson, J Hovatta, O. 2009. Vitrification versus controlled-rate freezing in

- cryopreservation of human ovarian tissue. *Human Reproduction*, 24 (7), pp. 1670-1683.
- Kim, M, Kong, H, Youm, H, Jee, B. 2017. Effects of Supplementation with Antifreeze Proteins on the Follicular Integrity of Vitrified-warmed Mouse Ovaries: Comparison of Two Types of Antifreeze Proteins Alone and In Combination. *Clin Exp Reprod Med*, 44(1), pp. 8-14.
- Kim, S.S. (2010), "Time to re-think: Ovarian tissue transplantation versus whole ovary transplantation", *Reproductive BioMedicine Online*, Reproductive Healthcare Ltd., Vol. 20 No. 2, pp. 171–174.
- Kissel, H., Timokhina, I., Hardy, M.P., Rothschild, G., Tajima, Y., Soares, V., Angeles, M., *et al.* (2000), "Point mutation in Kit receptor tyrosine kinase reveals essential roles for Kit signaling in spermatogenesis and oogenesis without affecting other Kit responses", *EMBO Journal*, Vol. 19 No. 6, pp. 1312–1326
- Lee, J., Kong, H. S., Kim, E. J., Youm, H. W., Lee, J. R., Suh, C. S., & Kim, S. H. (2016) 'Ovarian injury during cryopreservation and transplantation in mice: A comparative study between *cryoinjury* and ischemic injury', *Human Reproduction*, 31(8), pp. 1827–1837. doi: 10.1093/humrep/dew144.
- Li, Y. Y., Guo, L., Li, H., Li, J., Dong, F., Yi, Z. Y., Ouyang, Y. C., Hou, Y., Wang, Z. B., Sun, Q. Y., Lu, S. S., & Han, Z. (2019) 'NEK5 regulates cell cycle progression during mouse oocyte maturation and preimplantation embryonic development', *Molecular reproduction and development*, 86(9), pp. 1189–1198.
- Liu, K., Rajareddy, S., Liu, L., Jagarlamudi, K., Boman, K., Selstam, G. & Reddy, P. (2006), "Control of mammalian oocyte growth and early follicular development by the oocyte PI3 kinase pathway: New roles for an old timer", *Developmental Biology*, Vol. 299 No. 1, pp. 1–11.
- Maidarti, M., Anderson, R. A. and Telfer, E. E. (2020) 'Crosstalk between PTEN/PI3K/Akt Signalling and DNA Damage in the Oocyte: Implications for Primordial Follicle Activation, Oocyte Quality and Ageing', *Cells*, 9(1). doi: 10.3390/cells9010200.
- Makker, Madhu Mati Goel, Abbas Ali Mahdi. 2014. PI3K/PTEN/Akt and TSC/mTOR signalling pathways, ovarian dysfunction, and infertility: an update. *Journal of Molecular Endocrinology*, 53(3), R103-8
- Mandawala, A. A., Harvey, S. C., Roy, T. K., & Fowler, K. E. (2016) 'Cryopreservation of animal oocytes and embryos: Current progress and future prospects', *Theriogenology*, 86(7), pp. 1637–1644.
- Annu Makker, Madhu Mati, Abbas Ali. PI3K/PTEN/Akt and TSC/mTOR signaling pathways, ovarian dysfunction, and infertility: an update. *Journal of Molecular Endocrinology*. Vol 53 pp : 103-118.
- Mila Maidarti, Richard Anderson, Evelyn E.Telfer. Crosstalk between PTEN/PI3K/Akt Signalling and DNA Damage in the Oocyte: Implications for Primordial Follicle Activation, Oocyte Quality and Ageing. *Cells*. Vol 9. Issue 1. 10.3390/cells9010200

- Mazur, P. (1984), "Freezing of living cells: mechanisms and implications.", *The American Journal of Physiology*, Vol. 247 No. 3 Pt 1, pp. 0–4.
- Mazur, P. (1990), "Equilibrium, quasi-equilibrium, and nonequilibrium freezing of mammalian embryos", *Cell Biophysics*, Vol. 17 No. 1, pp. 53–92.
- Mazur, P. (2004), "Principles of cryobiology. In *Life in the Frozen State*", CRC Press, pp. 3–65.
- Mohamad, K, Djuwita, I, Boediono, A, Supriatna, I. 2005. Vitrifikasi Ovarium Mencit menggunakan Etilen Glikol dan DMSO sebagai Krioprotektan dan Viabilitasnya Pasca Auto Transplantasi Ginjal. *Media Kedokteran Hewan*, 21:23-27.
- Myers, S.P., Pitt, R.E., Lynch, D. V. & Steponkus, P.L. (1989), "Characterization of intracellular ice formation in *Drosophila melanogaster* embryos", *Cryobiology*, Vol. 26 No. 5, pp. 472–484.
- Nelson, Telfer EE, Anderson. The ageing ovary and uterus : new biological insights. *Hum Reprod Update*. 2013; 19(1):67-83
- Nishida, T. & Nishida, N. (2006), "Reinstatement of 'germinal epithelium' of the ovary", *Reproductive Biology and Endocrinology*, Vol. 4, pp. 1–2.
- Owens, L. A., Kristensen, S. G., Lerner, A., Christopoulos, G., Lavery, S., Hanyaloglu, A. C., Hardy, K., Yding Andersen, C., & Franks, S. (2019) 'Gene Expression in Granulosa Cells from Small Antral Follicles from Women with or without Polycystic Ovaries', *Journal of Clinical Endocrinology and Metabolism*, 104(12), pp. 6182– 6192. doi: 10.1210/jc.2019-00780.
- Ozegowska, K., Brązert, M., Ciesiółka, S., Nawrocki, M. J., Kranc, W., Celichowski, P., Jankowski, M., Bryja, A., Jeseta, M., Antosik, P., Bukowska, D., Skowroński, M. T., Bruska, M., Pawelczyk, L., Zabel, M., Nowicki, M., & Kempisty, B. (2019) 'Genes Involved in the Processes of Cell Proliferation, Migration, Adhesion, and Tissue Development as New Potential Markers of Porcine Granulosa Cellular Processes In Vitro: A Microarray Approach', *DNA and Cell Biology*, 38(6), pp. 549–560. doi: 10.1089/dna.2018.4467.
- Peckham, M., Knibbs, A. & Paxton, S. (2021), "The Ovary", *The Histology Guide*, available at: <https://www.histology.leeds.ac.uk/female/ovary.php>.
- Pegg, D. E. (2009) 'Principles of cryopreservation', *Preservation of Human Oocytes: From Cryobiology Science to Clinical Applications*, 368, pp. 12–24. doi: 10.3109/9780203092873.002.
- Permadi, W. (2012), "Folikulogenesis", *IVF Nurse Training Workshop 1st Congress Indonesian Association for in Vitro Fertilization*, Bandung, pp. 1–14.
- Petraglia, F., Musacchio, C., Luisi, S., & De Leo, V. (2008) 'Hormone-dependent gynaecological disorders: a pathophysiological perspective for appropriate treatment', *Best Practice and Research in Clinical Obstetrics and Gynaecology*, 22(2), pp. 235– 249. doi: 10.1016/j.bpobgyn.2007.07.005.
- Rall, W.F., Mazur, P. & McGrath, J.J. (1983), "Depression of the ice-nucleation temperature of rapidly cooled mouse embryos by glycerol and dimethyl sulfoxide", *Biophysical Journal*, Elsevier, Vol. 41 No. 1, pp. 1–12.

- Reddy, P., Liu, L., Adhikari, D., Jagarlamudi, K., Rajareddy, S., Shen, Y., Du, C., *et al.* (2008), "Oocyte-specific deletion of pten causes premature activation of the primordial follicle pool", *Science*, Vol. 319 No. 5863, pp. 611–613.
- Rivas Leonel, E. C., Lucci, C. M. and Amorim, C. A. (2019) 'Cryopreservation of Human Ovarian Tissue: A Review', *Transfusion Medicine and Hemotherapy*, 46(3), pp. 173–181. doi: 10.1159/000499054.
- Rong Li, David F Albertini. 2013. The road to maturation: somatic cell interaction and self-organization of the mammalian oocyte. doi: 10.1038/nrm3531
- Sambu, S. (2015) 'A Bayesian approach to optimizing cryopreservation protocols', *PeerJ*, 2015(6). doi: 10.7717/peerj.1039.
- Sayuti, A, Hidayah, J, Akmal, M, Panjaitan, B. 2019. Gambaran Histologis Folikel Ovarium Sapi Aceh Pascavitrifikasi Menggunakan Etilen Glikol. *ARSHI Vet Lett*, 3(1), pp. 3-4.
- Silber, S. 2017. Chapter 13 Human Ovarian Tissue Vitrification. *Methods in Molecular Biology*. 1568:177-194. Doi: 10.1007/978-1-4939-6828-2_13
- Silva, E.G., Kim, G., Bakkar, R., Bozdog, Z., Shaye-Brown, A., Loghavi, S., Stolnicu, S., *et al.* (2020), "Histology of the normal ovary in premenopausal patients", *Annals of Diagnostic Pathology*, Elsevier, Vol. 46, p. 151475.
- Song, Y.C., Pegg, D.E. & Hunt, C.J. (1995), "Cryopreservation of the common carotid artery of the rabbit: Optimization of dimethyl sulfoxide concentration and cooling rate", *Cryobiology*.
- Sung, H., Ferlay, J., Siegel, R. L., Laversanne, M., Soerjomataram, I., Jemal, A., & Bray, F. (2021) 'Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries', *CA: a cancer journal for clinicians*, 71(3), pp. 209–249. doi: 10.3322/caac.21660.
- Syafruddin S, Siregar, T, Azrina, A, Armansyah, T, Panjaitan, B, Aliza, D, Sutriana A, Zuhrawati, Z, Rosmaidar, R, Roslizawaty, R. 2018. Histological Description of Aceh Cattle Ovary Cryopreserved by Various Cryoprotectants. *Indian Journal of Animal Research*, 52(8): 1223-1226.
- Tambunan I, Mariska I. 2003. Pemanfaatan Teknik Kriopreservasi dalam Penyimpanan Plasma, *Buletin Plasma Nutfah*, 9(2), pp. 10-18.
- Tanaka, Y., Tsuboyama, T., Yamamoto, K., Tera, Y., Ohmichi, M., & Narumi, Y. (2019) 'A case of torsion of a normal ovary in the third trimester of pregnancy: MRI findings with emphasis on asymmetry in the diameter of the ovarian veins', *Radiology Case Reports*, 14(3), pp. 324–327. doi: 10.1016/j.radcr.2018.11.021.
- Terren, C., Nisolle, M. and Munaut, C. (2021) 'Pharmacological inhibition of the PI3K/PTEN/Akt and mTOR signalling pathways limits follicle activation induced by ovarian cryopreservation and in vitro culture', *Journal of Ovarian Research*, 14(1), pp. 1–15. doi: 10.1186/s13048-021-00846-5.
- Tetkova, A., Susor, A., Kubelka, M., Nemcova, L., Jansova, D., Dvoran, M., Del Llano, E., Holubcova, Z., & Kalous, J. (2019) 'Follicle-stimulating hormone administration affects amino acid metabolism in mammalian oocytes', *Biology of Reproduction*, 101(4), pp. 719–732. doi: 10.1093/biolre/ioz117.

- Thomas, F.H. & Vanderhyden, B.C. (2006), "Oocyte-granulosa cell interactions during mouse follicular development: Regulation of kit ligand expression and its role in oocyte growth", *Reproductive Biology and Endocrinology*, Vol. 4, pp. 1–8.
- Toner, M., Cravalho, E.G. & Karel, M. (1990), "Thermodynamics and kinetics of intracellular ice formation during freezing of biological cells", *Journal of Applied Physics*, Vol. 67 No. 3, pp. 1582–1593.
- Trombly, D.J., Woodruff, T.K. & Mayo, K.E. (2009), "Suppression of notch signaling in the neonatal mouse ovary decreases primordial follicle formation", *Endocrinology*, Vol. 150 No. 2, pp. 1014–1024.
- U.S. Department of Health and Human Services. (2021), "Ovaries", National Cancer Institute, available at: <https://training.seer.cancer.gov/anatomy/reproductive/female/ovaries.html>.
- Vanorny, D.A., Prasasya, R.D., Chalpe, A.J., Kilen, S.M. & Mayo, K.E. (2014), "Notch signaling regulates ovarian follicle formation and coordinates follicular growth", *Molecular Endocrinology*, Vol. 28 No. 4, pp. 499–511.
- Wang, L.Q., Liu, J.C., Chen, C.L., Cheng, S.F., Sun, X.F., Zhao, Y., Yin, S., *et al.* (2016), "Regulation of primordial follicle recruitment by cross-talk between the Notch and phosphatase and tensin homologue (PTEN)/AKT pathways", *Reproduction, Fertility and Development*, Vol. 28 No. 6, pp. 700–712.
- Widad, S. Optimasi Ukuran Jaringan Korteks Ovarium yang Dilakukan Vitrifikasi dan Transplantasi: Pengaruh Jalur PTEN/Akt dan Hippo signaling Shofwal Widad, dr. R. Detty Siti Nurdianti Z, MPH., Ph.D., Sp. OG(K), dr. Agung Dewanto, Sp. OG(K), Ph.D. (2022).
- Weismann, L. Gotlieb, T. Colgan, A. Jurisicova, E.M. Greenblatt, R. F. Casper. 1999. Preliminary experience with subcutaneous human ovarian cortex transplantation in the NOD-SCID mouse. 60(6). doi: 10.1095/biolreprod60.6.1462.
- Ying, J., Feng, J., Hu, J., Wang, S., Han, P., Huang, Y., Zhao, W., & Qian, J. (2019) 'Can ovaries be preserved after an ovarian arteriovenous disconnection? One case report and a review of surgical treatment using da Vinci robots for aggressive ovarian fibromatosis', *Journal of Ovarian Research*, 12(1), pp. 10–15. doi: 10.1186/s13048-019-0528-y.
- Zelevnik, A.J. (2004), "The physiology of follicle selection", *Reproductive Biology and Endocrinology*, Vol. 2, pp. 1–7.
- Zhang, C.P., Yang, J.L., Zhang, J., Li, L., Huang, L., Ji, S.Y., Hu, Z.Y., *et al.* (2011), "Notch signaling is involved in ovarian follicle development by regulating granulosa cell proliferation", *Endocrinology*, Vol. 152 No. 6, pp. 2437–2447.
- Zheng, W., Nagaraju, G., Liu, Z. & Liu, K. (2012), "Functional roles of the phosphatidylinositol 3-kinases (PI3Ks) signaling in the mammalian ovary", *Molecular and Cellular Endocrinology*, Elsevier Ireland Ltd, Vol. 356 No. 1–2, pp. 24–30.

- Zhu, R. Y., Wong, Y. C. and Yong, E. L. (2016) 'Sonographic evaluation of polycystic ovaries', *Best Practice and Research: Clinical Obstetrics and Gynaecology*, 37, pp. 25–37. doi: 10.1016/j.bpobgyn.2016.02.005.
- Zık, B., Kurnaz, H., Güler, S., & Asmaz, E. D. (2019) 'Effect of tamoxifen on the Notch signaling pathway in ovarian follicles of mice', *Biotechnic and Histochemistry*, 94(6), pp. 410–419. doi: 10.1080/10520295.2019.1580387

