DAFTAR PUSTAKA

Abalos, E., Cuesta, C., Grosso, A. L., Chou, D., & Say, L. (2013). Global and regional estimates of preeclampsia and eclampsia: A systematic review. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, *170*(1), 1–7. https://doi.org/10.1016/j.ejogrb.2013.05.005

Abrahams, V. M. (2004). First trimester trophoblast cells secrete Fas ligand which induces immune cell apoptosis. *Molecular Human Reproduction*, *10*(1), 55–63. https://doi.org/10.1093/molehr/gah006

Agata, K.-B., Anita, S., Urszula, K.-K., Agnieszka, N.-K., & Grzegorz, B. (2009). Expression of caspase-3, Bax nad Bcl-2 in placentas from pregnancies complicated by treated and non-treated fetal growth restriction. *Ginekol Pol.*, 5.

Ahenkorah, B., Sakyi, S., Helegbe, G., Owiredu, E., Ofosu, W., Der, E., Ephraim, R., Amoani, B., Arthur, P., Apio, D., Cheetham, S., & Gyan, B. (2020). *Prevalence and Risk Factors Associated With Preeclampsia, Low Birth Weight and Postpartum Hemorrhage in Northern Ghana* [Preprint]. In Review. https://doi.org/10.21203/rs.3.rs-109200/v1

Alrafiah, A., & Alshali, R. (2019). The effect of prolonged formalin fixation. *Folia Morphol.*, *78*(2), 7.

Ananth, C. V., & Basso, O. (2010). Impact of Pregnancy-induced Hypertension on Stillbirth and Neonatal Mortality. *Epidemiology*, *21*(1), 118–123. https://doi.org/10.1097/EDE.0b013e3181c297af

Ariyana, M., Hadiati, D. R., Rachman, I. T., & Dewajani Purnomosari. (2021). Bax Expression of Throphoblast Cells did not Differ between Early and Late Onset Preeclampsia: Ekspresi Bax Sel Trofoblas tidak Berbeda antara Preeklamsia Awitan Dini dan Lanjut. *Indonesian Journal of Obstetrics and Gynecology*, 126–129. https://doi.org/10.32771/inajog.v9i3.1430

Arroyo, J. A., Li, C., Schlabritz-Loutsevitch, N., McDonald, T., Nathanielsz, P., & Galan, H. L. (2010). Increased placental XIAP and caspase 3 is associated with increased placental apoptosis in a baboon model of maternal nutrient reduction. *American Journal of Obstetrics and Gynecology*, *203*(4), 364.e13-364.e18. https://doi.org/10.1016/j.ajog.2010.05.021

Ashton, S. V., Whitley, G. St. J., Dash, P. R., Wareing, M., Crocker, I. P., Baker, P. N., & Cartwright, J. E. (2005). Uterine Spiral Artery Remodeling Involves Endothelial Apoptosis Induced by Extravillous Trophoblasts Through Fas/FasL Interactions. *Arteriosclerosis, Thrombosis, and Vascular Biology*, *25*(1), 102–108. https://doi.org/10.1161/01.ATV.0000148547.70187.89

Avagliano, L., Massa, V., & Bulfamante, G. P. (2016). *Histology of Human Placenta*. 15.

Bdolah, Y., Lam, C., Rajakumar, A., Shivalingappa, V., Mutter, W., Sachs, B. P., Lim, K. H., Bdolah-Abram, T., Epstein, F. H., & Karumanchi, S. A. (2008). Twin pregnancy and the risk of preeclampsia: Bigger placenta or relative

ischemia? *American Journal of Obstetrics and Gynecology*, *198*(4), 428.e1-428.e6. https://doi.org/10.1016/j.ajog.2007.10.783

Bezerra, P. C. F. M., Leão, M. D., Queiroz, J. W., Melo, E. M. D., Pereira, F. V. M., Nóbrega, M. H., Jeronimo, A. K., Ferreira, L. C., Jerônimo, S. M. B., & de Araújo, A. C. P. F. (2010). Family history of hypertension as an important risk factor for the development of severe preeclampsia. *Acta Obstetricia et Gynecologica Scandinavica*, *89*(5), 612–617. https://doi.org/10.3109/00016341003623720

Brown, M. C., Best, K. E., Pearce, M. S., Waugh, J., Robson, S. C., & Bell, R. (2013). Cardiovascular disease risk in women with pre-eclampsia: Systematic review and meta-analysis. *European Journal of Epidemiology*, *28*(1), 1–19. https://doi.org/10.1007/s10654-013-9762-6

Cali, U., Cavkaytar, S., Sirvan, L., & Danisman, N. (2013). Placental apoptosis in preeclampsia, intrauterine growth retardation, and HELLP syndrome: An immunohistochemical study with caspase-3 and bcl-2. *Clinical and Experimental Obstetrics & Gynecology*, *40*(1), 45–48.

Carr, D. B., Epplein, M., Johnson, C. O., Easterling, T. R., & Critchlow, C. W. (2005). A sister's risk: Family history as a predictor of preeclampsia. *American Journal of Obstetrics and Gynecology*, *193*(3), 965–972. https://doi.org/10.1016/j.ajog.2005.06.034

Cartwright, J. E., Kenny, L. C., Dash, P. R., Crocker, I. P., Aplin, J. D., Baker, P. N., & Whitley, G. S. J. (2002). Trophoblast Invasion of Spiral Arteries: A Novel In Vitro Model. *Placenta*, *23*(2–3), 232–235. https://doi.org/10.1053/plac.2001.0760

Catov, J. M., Ness, R. B., Kip, K. E., & Olsen, J. (2007). Risk of early or severe preeclampsia related to pre-existing conditions. *International Journal of Epidemiology*, *36*(2), 412–419. https://doi.org/10.1093/ije/dyl271

Cobanoglu, B., Ceyran, A. B., Simsek, M., & Şenol, S. (2015). *Immunohistochemical analysis of Bax and AIF in colorectal tumors*. 6.

Cobellis, L., Falco, M. D., Torella, M., Trabucco, E., Caprio, F., Federico, E., Manente, L., Coppola, G., Laforgia, V., Cassandro, R., Colacurci, N., & Luca, A. D. (2007). Modulation of Bax Expression in Physiological and Pathological Human Placentas Throughout Pregnancy. *In Vivo*, 7.

Crocker, I. P., Cooper, S., Ong, S. C., & Baker, P. N. (2003). Differences in Apoptotic Susceptibility of Cytotrophoblasts and Syncytiotrophoblasts in Normal Pregnancy to Those Complicated with Preeclampsia and Intrauterine Growth Restriction. *The American Journal of Pathology*, *162*(2), 637–643. https://doi.org/10.1016/S0002-9440(10)63857-6

Donnelly, L., & Campling, G. (2014). Functions of the placenta. *Anaesthesia & Intensive Care Medicine*, *15*(3), 136–139. https://doi.org/10.1016/j.mpaic.2014.01.004

Duckitt, K., & Harrington, D. (2005). Risk factors for pre-eclampsia at antenatal booking: Systematic review of controlled studies. *BMJ*, *330*(7491), 565. https://doi.org/10.1136/bmj.38380.674340.E0

Egeland, G. M., Klungsøyr, K., Øyen, N., Tell, G. S., Næss, Ø., & Skjærven, R. (2016). Preconception Cardiovascular Risk Factor Differences Between Gestational Hypertension and Preeclampsia: Cohort Norway Study. *Hypertension*, *67*(6), 1173–1180. https://doi.org/10.1161/HYPERTENSIONAHA.116.07099

Elmore, S. (2007). Apoptosis: A Review of Programmed Cell Death. *Toxicologic Pathology*, *35*(4), 495–516. https://doi.org/10.1080/01926230701320337

Ezeigwe, C. O., Okafor, C. I., Eleje, G. U., Udigwe, G. O., & Anyiam, D. C. (2018). Placental Peripartum Pathologies in Women with Preeclampsia and Eclampsia. *Obstetrics and Gynecology International*, *2018*, 1–8. https://doi.org/10.1155/2018/9462938

Faas, M. M., & de Vos, P. (2017). Uterine NK cells and macrophages in pregnancy. *Placenta*, *56*, 44–52. https://doi.org/10.1016/j.placenta.2017.03.001

Fischer, U., Jänicke, R. U., & Schulze-Osthoff, K. (2003). Many cuts to ruin: A comprehensive update of caspase substrates. *Cell Death & Differentiation*, *10*(1), 76–100. https://doi.org/10.1038/sj.cdd.4401160

Fox, R., Kitt, J., Leeson, P., Aye, C. Y. L., & Lewandowski, A. J. (2019). Preeclampsia: Risk Factors, Diagnosis, Management, and the Cardiovascular Impact on the Offspring. *Journal of Clinical Medicine*, *8*(10), 1625. https://doi.org/10.3390/jcm8101625

Galaviz-Hernandez, C., Sosa-Macias, M., Teran, E., Garcia-Ortiz, J. E., & Lazalde-Ramos, B. P. (2019). Paternal Determinants in Preeclampsia. *Frontiers in Physiology*, *9*, 1870. https://doi.org/10.3389/fphys.2018.01870

Garovic, V. D., & August, P. (2013). Preeclampsia and the Future Risk of Hypertension: The Pregnant Evidence. *Current Hypertension Reports*, *15*(2), 114–121. https://doi.org/10.1007/s11906-013-0329-4

Gokalp-Ozkorkmaz, E., Asir, F., Basaran, S. O., Agacayak, E., Sahin, F., Kaya, S., Erdogan, G., & Deveci, E. (2018). Examination of Bcl-2 and Bax Protein Levels for Determining the Apoptotic Changes in Placentas with Gestational Diabetes and Preeclampsia. *Proceedings*, *2*(25), 1548. https://doi.org/10.3390/proceedings2251548

Goulopoulou, S., & Davidge, S. T. (2015). Molecular mechanisms of maternal vascular dysfunction in preeclampsia. *Trends in Molecular Medicine*, *21*(2), 88–97. https://doi.org/10.1016/j.molmed.2014.11.009

Gude, N. M., Roberts, C. T., Kalionis, B., & King, R. G. (2004). Growth and function of the normal human placenta. *Thrombosis Research*, *114*(5–6), 397–407. https://doi.org/10.1016/j.thromres.2004.06.038

Heazell, A., Harris, L., Forbes, K., & Crocker, I. (2006). Placental cell turnover in health and disease. *Reviews in Gynaecological and Perinatal Practice*, *6*(1–2), 80–86. https://doi.org/10.1016/j.rigapp.2005.12.003

Hernández-Valencia, M., Saldaña Quezada, L., Alvarez Muñoz, M., & Valdez Martínez, E. (2000). [Barrier family planning methods as risk factor which

predisposes to preeclampsia]. *Ginecologia Y Obstetricia De Mexico*, *68*, 333–338.

Hsu, C.-D., Polavarapu, S., & Parton, L. (2012). PP128. Placental Caspase-3 gene polymorphisms is associated with preeclampsia. *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health*, *2*(3), 308. https://doi.org/10.1016/j.preghy.2012.04.239

Hung, T.-H., Chen, S.-F., Liou, J.-D., Hsu, J.-J., Li, M.-J., Yeh, Y.-L., & Hsieh, T.-T. (2008). Bax, Bak and Mitochondrial Oxidants are Involved in Hypoxia-reoxygenation-induced Apoptosis in Human Placenta. *Placenta*, *29*(7), 565–583. https://doi.org/10.1016/j.placenta.2008.03.005

Hung, T.-H., Skepper, J. N., Charnock-Jones, D. S., & Burton, G. J. (2002). Hypoxia-Reoxygenation: A Potent Inducer of Apoptotic Changes in the Human Placenta and Possible Etiological Factor in Preeclampsia. *Circulation Research*, *90*(12), 1274–1281. https://doi.org/10.1161/01.RES.0000024411.22110.AA

Huppertz, B. (2008). The anatomy of the normal placenta. *Journal of Clinical Pathology*, *61*(12), 1296–1302. https://doi.org/10.1136/jcp.2008.055277

Ishihara, N., Matsuo, H., Murakoshi, H., Laoag-Fernandez, J. B., Samoto, T., & Maruo, T. (2002). Increased apoptosis in the syncytiotrophoblast in human term placentas complicated by either preeclampsia or intrauterine growth retardation. *American Journal of Obstetrics and Gynecology*, *186*(1), 158–166. https://doi.org/10.1067/mob.2002.119176

James, J. L., Carter, A. M., & Chamley, L. W. (2012). Human placentation from nidation to 5 weeks of gestation. Part I: What do we know about formative placental development following implantation? *Placenta*, *33*(5), 327–334. https://doi.org/10.1016/j.placenta.2012.01.020

Kanellopoulos-Langevin, C., Caucheteux, S. M., Verbeke, P., & Ojcius, D. M. (2003). Tolerance of the fetus by the maternal immune system: Role of inflammatory mediators at the feto-maternal interface. *Reproductive Biology and Endocrinology*, 6.

Kasture, V., Sundrani, Dr. D., Wagh, Dr. G., & Joshi, Dr. S. (2021). Placental Apoptotic Markers are Associated with Placental Morphometry. *Placenta*, *112*, e85–e86. https://doi.org/10.1016/j.placenta.2021.07.274

Kaufmann, P., Black, S., & Huppertz, B. (2003). Endovascular Trophoblast Invasion: Implications for the Pathogenesis of Intrauterine Growth Retardation and Preeclampsia. *Biology of Reproduction*, *69*(1), 1–7. https://doi.org/10.1095/biolreprod.102.014977

Kerr, J. F. R., Wyllie, A. H., & Currie, A. R. (1972). Apoptosis: A Basic Biological Phenomenon with Wideranging Implications in Tissue Kinetics. *British Journal of Cancer*, *26*(4), 239–257. https://doi.org/10.1038/bjc.1972.33

Kinay, T., Kucuk, C., Kayikcioglu, F., & Karakaya, J. (2015). Severe Preeclampsia versus HELLP Syndrome: Maternal and Perinatal Outcomes at <34 and ≥34 Weeks' Gestation. *Balkan Medical Journal*, *32*(4), 359–363. https://doi.org/10.5152/balkanmedj.2015.15777

Kos, M., & Matkovich, E. (2014). Bcl-2 and Bax immunoreactivity in placentas from pregnancies complicated with intrauterine growth restriction and hypertension. *Period Biol*, *116*(2), 6.

Kumar, & Abbas. (2015). Robbins and Cotran Pathologic Basis of Disease. In *The Female Genital Tract—Gestational and Placental Disorder* (9th ed., p. 1031). Elsevier Saunders.

Kumar, & Abbas. (2021). Pathologic Basis of Diseases. In *Cell Injury, Cell Death, and Adaptations* (10th ed.). Elsevier.

Kurjak, A., & Chervenak, F. A. (2006). *Textbook of Perinatal Medicine*. CRC Press.

Lamminpää, R., Vehviläinen-Julkunen, K., Gissler, M., & Heinonen, S. (2012). Preeclampsia complicated by advanced maternal age: A registry-based study on primiparous women in Finland 1997–2008. *BMC Pregnancy and Childbirth*, *12*(1), 47. https://doi.org/10.1186/1471-2393-12-47

Leffert, L. R., Clancy, C. R., Bateman, B. T., Bryant, A. S., & Kuklina, E. V. (2015). Hypertensive Disorders and Pregnancy-Related Stroke: Frequency, Trends, Risk Factors, and Outcomes. *Obstetrics & Gynecology*, *125*(1), 124–131. https://doi.org/10.1097/AOG.0000000000000590

Levy, R. (2005). *The Role of Apoptosis in Preeclampsia*. *7*, 4.

Levy, R., Smith, S. D., Chandler, K., Sadovsky, Y., & Nelson, D. M. (2000). Apoptosis in human cultured trophoblasts is enhanced by hypoxia and diminished by epidermal growth factor. *American Journal of Physiology-Cell Physiology*, *278*(5), C982–C988. https://doi.org/10.1152/ajpcell.2000.278.5.C982

Lie, R. T., Rasmussen, S., Brunborg, H., Gjessing, H. K., Lie-Nielsen, E., & Irgens, L. M. (1998). Fetal and maternal contributions to risk of pre-eclampsia: Population based study. *BMJ*, *316*(7141), 1343–1347. https://doi.org/10.1136/bmj.316.7141.1343

Lisonkova, S., Razaz, N., Sabr, Y., Muraca, G., Boutin, A., Mayer, C., Joseph, K., & Kramer, M. (2020). Maternal risk factors and adverse birth outcomes associated with HELLP syndrome: A population-based study. *BJOG: An International Journal of Obstetrics & Gynaecology*, *127*(10), 1189–1198. https://doi.org/10.1111/1471-0528.16225

Liu, P.-F., Hu, Y.-C., Kang, B.-H., Tseng, Y.-K., Wu, P.-C., Liang, C.-C., Hou, Y.-Y., Fu, T.-Y., Liou, H.-H., Hsieh, I.-C., Ger, L.-P., & Shu, C.-W. (2017). Expression levels of cleaved caspase-3 and caspase-3 in tumorigenesis and prognosis of oral tongue squamous cell carcinoma. *PLOS ONE*, *12*(7), e0180620. https://doi.org/10.1371/journal.pone.0180620

Londhe, P. S., & Mane, A. B. (2012). *Placental Morphometry in Relation to Birth Weight of Full Term Newborn Babies. 3*, 6.

Magee, L. A., Pels, A., Helewa, M., Rey, E., von Dadelszen, P., Magee, L. A., Audibert, F., Bujold, E., Côté, A.-M., Douglas, M. J., Eastabrook, G., Firoz, T., Gibson, P., Gruslin, A., Hutcheon, J., Koren, G., Lange, I., Leduc, L., Logan, A. G., … Sebbag, I. (2014). Diagnosis, Evaluation, and

Management of the Hypertensive Disorders of Pregnancy: Executive Summary. *Journal of Obstetrics and Gynaecology Canada*, *36*(5), 416–438. https://doi.org/10.1016/S1701-2163(15)30588-0

Magee, T. R., Ross, M. G., Wedekind, L., Desai, M., Kjos, S., & Belkacemi, L. (2014). Gestational diabetes mellitus alters apoptotic and inflammatory gene expression of trophobasts from human term placenta. *Journal of Diabetes and Its Complications*, *28*(4), 448–459. https://doi.org/10.1016/j.jdiacomp.2014.03.010

Makris, A., Thornton, C., Thompson, J., Thomson, S., Martin, R., Ogle, R., Waugh, R., McKenzie, P., Kirwan, P., & Hennessy, A. (2007). Uteroplacental ischemia results in proteinuric hypertension and elevated sFLT-1. *Kidney International*, *71*(10), 977–984. https://doi.org/10.1038/sj.ki.5002175

Matthiesen, L., Berg, G., Ernerudh, J., Ekerfelt, C., Jonsson, Y., & Sharma, S. (2005). *Immunology of Preeclampsia*. 13.

Mayhew, T. M. (2001). Villous trophoblast of human placenta: A coherent view of its turnover, repair and contributions to villous development and maturation. *Histology and Histopathology*, *16*(4), 1213–1224. https://doi.org/10.14670/HH-16.1213

Maynard, S. E., & Karumanchi, S. A. (2011). *Angiogenic Factors and Preeclampsia*. 18.

McIlwain, D. R., Berger, T., & Mak, T. W. (2013). Caspase Functions in Cell Death and Disease. *Cold Spring Harbor Perspectives in Biology*, *5*(4), a008656–a008656. https://doi.org/10.1101/cshperspect.a008656

Mendilcioglu, I., Karaveli, S., Erdogan, G., Simsek, M., Taskin, O., & Ozekinci, M. (2011). Apoptosis and expression of Bcl-2, Bax, p53, caspase-3, and Fas, Fas ligand in placentas complicated by preeclampsia. *Clinical and Experimental Obstetrics & Gynecology*, *38*(1), 38–42.

Moley, K. H. (2001). Hyperglycemia and apoptosis: Mechanisms for congenital malformations and pregnancy loss in diabetic women. *Trends in Endocrinology & Metabolism*, *12*(2), 78–82. https://doi.org/10.1016/S1043-2760(00)00341-6

Monson, T., Wright, T., Galan, H. L., Reynolds, P. R., & Arroyo, J. A. (2017). Caspase dependent and independent mechanisms of apoptosis across gestation in a sheep model of placental insufficiency and intrauterine growth restriction. *Apoptosis*, *22*(5), 710–718. https://doi.org/10.1007/s10495-017-1343-9

Mostello, D., Kallogjeri, D., Tungsiripat, R., & Leet, T. (2008). Recurrence of preeclampsia: Effects of gestational age at delivery of the first pregnancy, body mass index, paternity, and interval between births. *American Journal of Obstetrics and Gynecology*, *199*(1), 55.e1-55.e7. https://doi.org/10.1016/j.ajog.2007.11.058

Mu, J., Kanzaki, T., Si, X., Tomimatsu, T., Fukuda, H., Shioji, M., Murata, Y., Sugimoto, Y., & Ichikawa, A. (2003). Apoptosis and Related Proteins in Placenta of Intrauterine Fetal Death in Prostaglandin F Receptor-Deficient

Mice1. *Biology of Reproduction*, *68*(6), 1968–1974. https://doi.org/10.1095/biolreprod.102.008029

Ojha, K., Rawal, S., & Jha, A. (2018). Placental Pathology in Severe Pre-eclampsia and Eclampsia. *Nepalese Medical Journal*, *1*(1), 32–35. https://doi.org/10.3126/nmj.v1i1.20397

Palei, A. C., Spradley, F. T., Warrington, J. P., George, E. M., & Granger, J. P. (2013). Pathophysiology of hypertension in pre-eclampsia: A lesson in integrative physiology. *Acta Physiologica*, *208*(3), 224–233. https://doi.org/10.1111/apha.12106

Phipps, E. A., Thadhani, R., Benzing, T., & Karumanchi, S. A. (2019). Pre-eclampsia: Pathogenesis, novel diagnostics and therapies. *Nature Reviews Nephrology*, *15*(5), 275–289. https://doi.org/10.1038/s41581-019-0119-6

Phipps, E., Prasanna, D., Brima, W., & Jim, B. (2016). Preeclampsia: Updates in Pathogenesis, Definitions, and Guidelines. *Clinical Journal of the American Society of Nephrology*, *11*(6), 1102–1113. https://doi.org/10.2215/CJN.12081115

Pijnenborg, R., Vercruysse, L., & Hanssens, M. (2006). The Uterine Spiral Arteries In Human Pregnancy: Facts and Controversies. *Placenta*, *27*(9–10), 939–958. https://doi.org/10.1016/j.placenta.2005.12.006

PNPK POGI. (2016). *Diagnosa dan Tatalaksana Pre-Eklamsia, Pedoman Nasional Pelayanan Kedokteran (PNPK)*.

Power, M. L., & Schulkin, J. (2012). *The Evolution of the Human Placenta*. JHU Press.

Premkumar, A., Dude, A. M., Haddad, L. B., & Yee, L. M. (2019). Combined antiretroviral therapy for HIV and the risk of hypertensive disorders of pregnancy: A systematic review. *Pregnancy Hypertension*, *17*, 178–190. https://doi.org/10.1016/j.preghy.2019.05.015

Raguema, N., Moustadraf, S., & Bertagnolli, M. (2020). Immune and Apoptosis Mechanisms Regulating Placental Development and Vascularization in Preeclampsia. *Frontiers in Physiology*, *11*, 98. https://doi.org/10.3389/fphys.2020.00098

Ramsay, J. E., Stewart, F., Greer, I. A., & Sattar, N. (n.d.). *Microvascular dysfunction: A link between pre-eclampsia and maternal coronary heart disease*. 3.

Rana, S., Lemoine, E., Granger, J. P., & Karumanchi, S. A. (2019). *Compendium on the Pathophysiology and Treatment of Hypertension Preeclampsia*. 19.

Ratts, V. S., Tao, X.-J., Webster, C. B., Swanson, P. E., Smith, S. D., Brownbill, P., Krajewski, S., Reed, J. C., Tilly, J. L., & Nelson, D. M. (2000). Expression of BCL-2, BAX and BAK in the Trophoblast Layer of the Term Human Placenta: A Unique Model of Apoptosis within a Syncytium. *Placenta*, *21*(4), 361–366. https://doi.org/10.1053/plac.1999.0486

Romero, R., & Chaiworapongsa, T. (2013). Preeclampsia: A link between trophoblast dysregulation and an antiangiogenic state. *Journal of Clinical Investigation*, *123*(7), 2775–2777. https://doi.org/10.1172/JCI70431

Sahay, B., Talukdar, L., Sahay, P., Datta, D., & Chaubey, R. (2016). Comparative study between histological changes in placenta from pre-eclampsia cases and normal pregnancy with special reference to cytotrophoblastic cell hyperplasia, villous stromal fibrosis and fibrinoid necrosis. *International Journal of Research in Medical Sciences*, 4884–4888. https://doi.org/10.18203/2320-6012.ijrms20163785

Salmani, D., Purushothaman, S., Somashekara, S., Gnanagurudasan, E., Sumangaladevi, K., Harikishan, R., & Venkateshwarareddy, M. (2014). Study of structural changes in placenta in pregnancy-induced hypertension. *Journal of Natural Science, Biology and Medicine*, *5*(2), 352. https://doi.org/10.4103/0976-9668.136182

Sari, V., & Siswishanto, R. (n.d.). *COMPARISON OF BaX PROTEIN EXPRESSION AND APOPTOSIS INDEX OF TROPHOBLAST CELL BETWEEN SEVERE PREECLAMPSIA/ECLAMPSIA AND NORMOTENSIVE PREGNANCY*. 7.

Sgarbosa, F., Barbisan, L. F., Brasil, M. A. M., Costa, E., Calderon, I. M. P., Gonçalves, C. R., Bevilacqua, E., & Rudge, M. V. C. (2006). Changes in apoptosis and Bcl-2 expression in human hyperglycemic, term placental trophoblast. *Diabetes Research and Clinical Practice*, *73*(2), 143–149. https://doi.org/10.1016/j.diabres.2005.12.014

Sharp, A. N., Heazell, A. E. P., Crocker, I. P., & Mor, G. (2010). Placental Apoptosis in Health and Disease: PLACENTAL APOPTOSIS IN HEALTH AND DISEASE. *American Journal of Reproductive Immunology*, *64*(3), 159–169. https://doi.org/10.1111/j.1600-0897.2010.00837.x

Sharpe, J. C., Arnoult, D., & Youle, R. J. (2004). Control of mitochondrial permeability by Bcl-2 family members. *Biochimica et Biophysica Acta (BBA) - Molecular Cell Research*, *1644*(2–3), 107–113. https://doi.org/10.1016/j.bbamcr.2003.10.016

Simbolon, S. E. B. (2014). GAMBARAN HISTOPATOLOGI PLASENTA PADA KEHAMILAN DENGAN PREEKLAMPSIA. *Jurnal e-Biomedik*, *1*(2), Article 2. https://doi.org/10.35790/ebm.1.2.2013.3260

Sircar, M., Thadhani, R., & Karumanchi, S. A. (2015). Pathogenesis of preeclampsia. *Current Opinion in Nephrology and Hypertension*, *24*(2), 131–138. https://doi.org/10.1097/MNH.0000000000000105

Smith, S., Baker, P. N., & Symonds, E. M. (1997). Placental apoptosis in normal human pregnancy. *American Journal of Obstetrics and Gynecology*, *177*(1), 57–65. https://doi.org/10.1016/S0002-9378(97)70438-1

Sprick, M. R., & Walczak, H. (2004). The interplay between the Bcl-2 family and death receptor-mediated apoptosis. *Biochimica et Biophysica Acta (BBA) - Molecular Cell Research*, *1644*(2–3), 125–132. https://doi.org/10.1016/j.bbamcr.2003.11.002

Straszewski-Chavez, S. L., Abrahams, V. M., & Mor, G. (2005). The Role of Apoptosis in the Regulation of Trophoblast Survival and Differentiation during Pregnancy. *Endocrine Reviews*, *26*(7), 877–897. https://doi.org/10.1210/er.2005-0003

Sun, J.-Y., Wu, R., Xu, J., Xue, H.-Y., Lu, X.-J., & Ji, J. (2021). Placental Immune Tolerance and Organ Transplantation: Underlying Interconnections and Clinical Implications. *Frontiers in Immunology*, *12*, 705950. https://doi.org/10.3389/fimmu.2021.705950

Suzuki, Y., Imai, Y., Nakayama, H., Takahashi, K., Takio, K., & Takahashi, R. (2001). A Serine Protease, HtrA2, Is Released from the Mitochondria and Interacts with XIAP, Inducing Cell Death. *Molecular Cell*, *8*(3), 613–621. https://doi.org/10.1016/S1097-2765(01)00341-0

Teimoori, B., Yazdi, A., Rezaei, M., Mohammadpour-Gharehbagh, A., Jahantigh, D., & Salimi, S. (2018). The association of the placental CASPASE-3 gene polymorphisms and preeclampsia susceptibility and in-silico analysis. *Journal of Cellular Biochemistry*, *119*(8), 6756–6764. https://doi.org/10.1002/jcb.26869

Tessema, G. A., Tekeste, A., & Ayele, T. A. (2015). Preeclampsia and associated factors among pregnant women attending antenatal care in Dessie referral hospital, Northeast Ethiopia: A hospital-based study. *BMC Pregnancy and Childbirth*, *15*(1), 73. https://doi.org/10.1186/s12884-015-0502-7

Tong, M., & Abrahams, V. M. (2020). Immunology of the Placenta. *Obstetrics and Gynecology Clinics of North America*, *47*(1), 49–63. https://doi.org/10.1016/j.ogc.2019.10.006

Tsabitah, K., Wicaksono, B., & Handayani, S. (2020). Severe preeclampsia leads to higher prevalence of mortality and morbidity affecting maternal outcomes in single tertiary hospital. *Majalah Obstetri & Ginekologi*, *28*(3), 99. https://doi.org/10.20473/mog.V28I32020.99-103

Turco, M. Y., & Moffett, A. (2019). *Development of the human placenta*. 14.

Vakhtangadze, T., Gakhokidze, N., Khutsishvili, M., & Mosidze, S. (2019). The link between hypertension and preeclampsia/eclampsia-life-long cardiovascular risk for women. *Vessel Plus*, *2019*. https://doi.org/10.20517/2574-1209.2019.07

Vincent, N. T. F., Darmayasa, I. M., & Suardika, A. (2018). Risk factors of preeclampsia and eclampsia in Sanglah General Hospital from March 2016 to March 2017. *Intisari Sains Medis*, *9*(2). https://doi.org/10.15562/ism.v9i2.162

Wang, A., Rana, S., & Karumanchi, S. A. (2009). *Preeclampsia: The Role of Angiogenic Factors in Its Pathogenesis*. *24*, 12.

Wang, J. X., Knottnerus, A.-M., Schuit, G., Norman, R. J., Chan, A., & Dekker, G. A. (2002). Surgically obtained sperm, and risk of gestational hypertension and pre-eclampsia. *The Lancet*, *359*(9307), 673–674. https://doi.org/10.1016/S0140-6736(02)07804-2

Webster, J. D., Miller, M. A., DuSold, D., & Ramos-Vara, J. (2010). Effects of Prolonged Formalin Fixation on the Immunohistochemical Detection of Infectious Agents in Formalin-Fixed, Paraffin-Embedded Tissues. *Veterinary Pathology*, *47*(3), 529–535. https://doi.org/10.1177/0300985809359607

Wilson, B. J. (2003). Hypertensive diseases of pregnancy and risk of hypertension and stroke in later life: Results from cohort study. *BMJ*, *326*(7394), 845–845. https://doi.org/10.1136/bmj.326.7394.845

Witkin, J. W. (2005). *17. FORMATION AND ROLE OF PLACENTA*. 12.

Zakowski, M. I., & Geller, A. (2015). Anatomy, Physiology, and Transfer of Drugs. *The Placenta*, 16.

Misrawany et al (2015). Ekspresi Protein BAX Pada Kehamilan Preeklampsia Berat /Eklampsia Dengan Kehamilan Normotensi. USU.

Profil Kesehatan Indonesia Tahun 2020 (2021). Kementerian Kesehatan Indonesia.

Roberts, J., et al in Task Force on Hypertension on Pregnancy (2013). Hypertension on Pregnancy. *The American College of Obstetricians and Gynecologists.*

Redman, C., Staff, A., Roberts, J (2020). Syncytiotrophoblast stress in preeclampsia: the convergence point for multiple pathways. *American Journal of Obstetrics and Gynecology.*

Sivakumar, et al (2018). Apoptosis – Journey of a Cell in Life. *University Journal of Surgery and Surgical Specialities Vol.4 (3).*

LAMPIRAN

Lampiran 1 : Persetujuan Etik

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
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REKOMENDASI PERSETUJUAN ETIK

Nomor : 595/UN4.6.4.5.31/ PP36/ 2021

Tanggal: 14 September 2021

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH21090561	No Sponsor Protokol	
Peneliti Utama	**dr. Ika Magfira**	Sponsor	
Judul Peneliti	Ekspresi Bax dan Caspase-3 Sebagai Penanda Apoptosis pada Plasenta Preeklampsia		
No Versi Protokol	**1**	Tanggal Versi	**12 September 2021**
No Versi PSP		Tanggal Versi	
Tempat Penelitian	Laboratorium Patologi Anatomi RS UNHAS		
Jenis Review	[x] Exempted [ ] Expedited [ ] Fullboard Tanggal	Masa Berlaku **14 September 2021** sampai **14 September 2022**	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian Kesehatan FKUH RSUH dan RSWS	Nama **Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)**	Tanda tangan	
Sekretaris Komisi Etik Penelitian Kesehatan FKUH RSUH dan RSWS	Nama **dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)**	Tanda tangan	

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Lapor SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan