

DAFTAR PUSTAKA

- Abdelwahab, M., Mohammed, M., Abdelwhab, H., Mohammed, M., and Bellal, M. (2019). Basic Pharmacology of NG -Nitro – L – Arginine Methyl Ester. *Journal of Advances in Medical and Pharmaceutical Sciences*, 1-5.
- Ahmad, I., Zimmerman, M., and Moore, T. (2019). Oxidative Stress in Early Pregnancy and the Risk of Preeclampsia. *Pregnancy Hypertens*, 99–102.
- Amanpour, P., Khodarahmi, P., & Salehipour, M. (2019). Protective effects of vitamin E on cadmium-induced apoptosis in rat testes. *Springer Nature* , 1-10.
- Amir, A., Yanwirasti, Asmarinah, and Oenzil, F. (2016). Alteration Expression of Bax, Bcl-2 and VDAC1 Genes in Oligozoospermic and Fertile Subjects. *Pakistan Journal of Biological Sciences*, 71-76.
- Aouache, R., Biquard, L., Vaiman, D., and Miralles, F. (2018). Oxidative Stress in Preeclampsia and Placental Diseases. *Molecular Science*, 1-29.
- Archana, N., and Sugiratama, W. (2009). Pengaruh Pemberian Minyak Buah Merah (*Pandanus Conoideus Lam*) Terhadap Kadar Vitamin E Plasma Hewan Model Preeklampsia. *Mediciana*, 27-31.
- Arianto, B., Rumekti, D., and Nurdiat, D. (2015). Perbandingan Rerata Ekspresi Bcl-2 Dan Bcl-Xl Pada Preeklampsia Berat Dan Kehamilan Normotensi. *Jurnal Kesehatan Reproduksi*, 77-84.
- Astawa, I. (2016). *Dasar- Dasar Patobiologi MOlekuler*. Denpasar: Swasta Nulus.
- Baktiyani, S. (2007). Pengaruh Pemberian Kombinasi Nac Dengan Vitamin C Dan E Terhadap Stres Oksidatif Pada Huvacs Dipapar Plasma Eklampsia. *Jurnal Kedokteran Brawijaya*, Vol. XXIII, No. 3, 144-150.
- Bio-Rad. (2020). *Apoptosis: Overview*. Retrieved 2 10, 2021, from Bio-Rad: <https://www.bio-rad-antibodies.com/apoptosis-overview.html>
- Boskovic, R., Gargaun, L., Oren, D., Djulus, J., and Koren, G. (2005). Pregnancy outcome following high doses of Vitamin E supplementation. *Elsevier*, 85-88.
- Burchakov, D. I. (2017). Omega-3 Long-Chain Polyunsaturated Fatty Acids and Preeclampsia: Trials Say “No,” but Is It the Final Word? *Nutrient*, 1-13.

- Cabo, J., Alonso, R., & Mata, P. (2012). Omega-3 fatty acids and blood pressure. *British Journal of Nutrition*; 107, 195–200.
- Cardoso, P., and Surve, S. (2016). The Effect of Vitamin E and Vitamin C on the Prevention of Preeclampsia and Newborn Outcome: A Case–Control Study. *The Journal of Obstetrics and Gynecology of India*, 271-278.
- University of Carolina, (2017). Basic Rat Handling and Technique. *UNC Chapel Hill*.
- Chaiworapongsa, T., Chaemsaihong, P., Yeo, L., & Romero, R. (2014). Preeclampsia part 1: current understanding of its pathophysiology. *Nat Rev Nephrol*, 466–480.
- Chen, D., and Wang, W. (2013). Human Placental MicroRNAs and Preeclampsia. *BIOLOGY OF REPRODUCTION*, 88-130.
- Chang, W., Ting, H., Chen, W., Chan, J., and Hsu, Y. (2018). Omega-3 and omega-6 fatty acid differentially impact cardiolipin remodeling in activated macrophage. *Lipids in Health and Disease*, 1-11.
- Chen, D., and Wang, W. (2013). Human Placental MicroRNAs and Preeclampsia. *BIOLOGY OF REPRODUCTION*, 88-130.
- Cunningham, F., Gant, N., Leveno, K., Gilstrap, L., Hauth, J., and Wenstrom, K. (2014). *Obstetri Williams*. Jakarta: EGC.
- Cunningham, F., Roberts, M., and Taylor, R. (2015). The Clinical Spectrum of Preeclampsia. In *The fourth edition of Chesley's Hypertensive Disorders of Pregnancy* (pp. 25-36). London: Elsevier Inc.
- Czabotar, P., Lessene, G., Strasser, A., and Adams, J. (2014). Control of apoptosis by the BCL-2 protein family: implications for physiology and therapy. *NATURE REVIEWS; MOLECULAR CELL BIOLOGY* vol.15, 49-63.
- Damayanti, S., Sulistyowati, S., and Probandari, A. (2019). Maternal Characteristics and the Effects of Early and Late-onset Types of Preeclampsia on Maternal and Perinatal Complications. *Indonesian Journal of Medicine*, 329-338.
- Duttaroy, A., and Basak, S. (2020). Maternal dietary fatty acids and their roles in human placental development. *Elsevier: Prostaglandins, Leukotrienes and Essential Fatty Acids*, 1-8.

- Emami, M., Safabakhsh, M., Alizadeh, S., Asbaghi, O., and Khosroshahi, M. (2019). Effect of vitamin E supplementation on blood pressure: a systematic review and meta-analysis. *Journal of Human Hypertension*, 1-9.
- Eyvazi, M., Tayef, H., Abedelahi, A., Salimnejad, R., & Majdi, A. (2019). Effect of Vitamin E and Sodium Selenite on the Expression of Bax and Bcl2 Genes and Renal Histopathology in the Electromagnetic Field-Exposed Mice. *Crescent Journal of Medical and Biological Science*, 523–528.
- Frianto, F., Fajriaty, I., and Riza, H. (2015). Evaluasi Faktor Yang Mempengaruhi Jumlah Perkawinan Tikus Putih (*Rattus Norvegicus*) Secara Kualitatif . *FK Universitas Tanjung pura*, 1-4.
- Fu, Z., Ma, Z., Liu, G., Wang, L., and Guo, Y. (2018). Vitamins supplementation affects the onset of preeclampsia. *Science Direct*, 6e13.
- Gharehbagh, A., Jahantigh, D., Eskandari, M., Sadegh, M., Nematollahi, M., Rasouli, M., et al. (2019). Genetic and epigenetic analysis of the BAX and BCL2 in the placenta of pregnant women complicated by preeclampsia. *Springer Science+Business Media*, 1-12.
- Gokalp-Ozkorkmaz, E., Asir, F., Basaran, S., Agacayak, E., Sahin, F., Kaya, S., et al. (2018). Examination of Bcl-2 and Bax Protein Levels for Determining the Apoptotic Changes in Placentas with Gestational Diabetes and Preeclampsia . *MDPI*, 1-4.
- National Institute of Health (2020). *National institute of Health*. Retrieved May 3, 2021, from US Department of Health & Human Services: <https://ods.od.nih.gov/factsheets/Omega3FattyAcids-HealthProfessional/#en177>
- Holland, O., Nitert, J. C., Callaway, L., Cheung, K., Radenkovic, F., and Perkins, A. (2018). Placental mitochondrial adaptations in preeclampsia associated with progression to term delivery. *Cell Death & Disease*, 1-13.
- Huppertz, B. (2020). Traditional and New Routes of Trophoblast Invasion and Their Implications for Pregnancy Diseases. *Molecular Science*, 1-12.
- Hussein, S., Elazem, M., & Mostafa, H. (2019). The potential anti-inflammatory effect of Omega-3 polyunsaturated fatty acids on experimentally induced ulcerative colitis in rats . *Benha Veterinary Medical Journal* 37 , 237-244 .
- Irianti, E. (2019). *Pemanfaatan EVOO untuk pencegahan Pre Eklampsia pada Tikus putih Bunting*. Ponorogo: Forum Ilmiah Kesehatan.

- Jamilian, M., Dizaji, S., Bahmani, F., Taghizadeh, M., Memarzadeh, M., Karamali, M., et al. (2016). A Randomized Controlled Clinical Trial Investigating the Effects of Omega-3 Fatty Acids and Vitamin E Co-Supplementation on Biomarkers of Oxidative Stress, Inflammation and Pregnancy Biomarkers of Oxidative Stress, Inflammation and Pregnancy. *Canadian Journal of Diabetes*, 1-7.
- Jia, Y., Jiang, D., Ren, Y., Liang, Z., Zhao, Z., and Wang, Y. (2017). Inhibitory effects of vitamin E on osteocyte apoptosis and DNA oxidative damage in bone marrow hemopoietic cells at early stage of steroid-induced femoral head necrosis. *MOLECULAR MEDICINE REPORTS* 15, 1585-1592.
- Jiang, Q. (2014). Natural forms of vitamin E: metabolism, antioxidant and anti-inflammatory activities and the role in disease prevention and therapy. *Free Radic Biol Med*, 76-90.
- Jones, M., Mark, P., and Waddell, B. (2014). Maternal Dietary Omega-3 Fatty Acid on Placental Growth and Function . *Reproduction*, 143–152.
- Kasture, V., Kale, A., Randhir, K., Sundrani, D., and Joshi, S. (2019). Effect of maternal omega-3 fatty acids and vitamin E supplementation on placental apoptotic markers in rat model of early and late onset preeclampsia. *Elsevier*, 1-26.
- Kasture, V., Sundrani, D., and Joshi, S. (2018). Maternal one carbon metabolism through increased oxidative stress and disturbed angiogenesis can influence placental apoptosis in preeclampsia. *Life Sciences*, 1-29.
- Kemse, N., Kale, A., and Joshi, S. (2014). A Combined Supplementation of Omega-3 Fatty Acids and Micronutrients (Folic Acid, Vitamin B12) Reduces Oxidative Stress Markers in a Rat Model of Pregnancy Induced Hypertension. *PLOS ONE*, 1-13.
- Kemse, N., Kale, A., and Joshi, S. (2016). Supplementation of maternal omega-3 fatty acids to pregnancy induced hypertension Wistar rats improves IL10 and VEGF levels. *Elsevier*, 25-32.
- Kemse, N., Sundrani, D., Kale, A., and Joshi, S. (2017). Maternal Micronutrients, Omega-3 Fatty Acids and Gene Expression of Angiogenic and Inflammatory Markers in Pregnancy Induced Hypertension Rats. *Elsevier*, 1-9.
- King, T., Bucker, M., Osbornde, K., and Jevitt, n. (2019). *Varneys midwifery 6th edition*. Burlington: World Headquarters Jones & Bartlett Learning.

- Knöfer, M., HaiderL, S., Pollheimer, J., Gamage, T., and James, J. (2019). Human placenta and trophoblast development: key molecular mechanisms and model systems. *Cellular and Molecular Life Sciences*, 3479-3497.
- Kos, M., and Matkovich, E. (2014). Bcl-2 and Bax immunoreactivity in placentas from pregnancies complicated with intrauterine growth restriction and hypertension. *PERIODICUM BIOLOGORUM* , 167–172.
- Kovacs, P., Joo, J., Tamas, V., and Molnar, Z. (2020). The role of apoptosis in the complex pathogenesis of the most common obstetrics and gynaecology diseases. *Physiology International* 107, 106–119.
- Kukner, A., Oner, J., Oner, H., and Ozan, E. (2010). Effect of the Vitamin E on Expression of Apoptosis-Related Proteins in Immobilized Rat Testes. *Journal of Animal and Veterinary Advances - J ANIM VET ADV.* 9. 180-185.
- Leonard, S., & Traber, M. (2019). Methods for assessment of Vitamin E. In D. Harrington, *Laboratory Assessment of Vitamin Status* (p. 81). Elsevier.
- Ludwig, L., Nassin, M., Hadji, A., & LaBelle, J. (2016). Killing Two Cells with One Stone: Pharmacologic BCL-2 Family Targeting for Cancer Cell Death and immune Modulation. *Frontiers in Pediatrics*, 135-148.
- Lyall, F., Bulmer, J., Duffie, E., Cousins, F., Theriault, A., & Robson, S. (2001). Human Trophoblast Invasion and Spiral Artery. *American Journal of Pathology, Vol. 158*, 1713-1721.
- Marikawa, Y., and Alarcon, V. (2012). Creation of Trophectoderm, the First Epithelium, in Mouse Preimplantation Development. *NIH Public Access*, 165-184.
- Marpaung, J. (2020). pada plasenta dan dalam sirkulasi meningkat pada tikus dengan PE dibandingkan EKSPRESI TNF- α , IL-2, DAN sFlt-1 Pada Tikus Model Pre Eklampsia. Disertasi. Universitas Sumatera Utara.
- Matsubara, K., Higaki, T., Matsubara, Y., and ANawa. (2015). Nitric Oxide and Reactive Oxygen Species in the Pathogenesis of Preeclampsia. *Molecular Sciences* , 4600-4614.
- McCharty, F., & Kenny, L. (2015). Hypertension in pregnancy. *OBSTETRICS, GYNAECOLOGY AND REPRODUCTIVE MEDICINE*, 1-7.
- Miyazawa, T., Burdeos, G., Itaya, M., Nakagawa, K., & Miyazawa, T. (2019). Vitamin E: Regulatory Redox Interactions. *IUBMB LIFE*, 430–441.

- Montezano, A., Dulak-Lis, M., Tsiropoulou, S., Harvey, A., Briones, A., & Touyz, R. (2015). Oxidative stress and human hypertension: Vascular mechanisms, biomarkers and novel therapies. *Elsevier*, 1-40.
- Naini, A., Keyvandarian, N., Mortazavi, M., Taheri, S., & Hosseini, S. (2015). Effect of Omega-3 fatty acids on blood pressure and serum lipids in continuous ambulatory peritoneal dialysis patients. *Journal of Research in Pharmacy Practice*, 135-141.
- Narayanankutty, A., Kottekkat, A., Mathew, S., Illam, S., Suseela, I., & Raghavamenon, A. (2017). Vitamin E supplementation modulates the biological effects of Omega 3 fatty acids in naturally aged rats. *Toxicology Mechanisms and Methods* (27), 207-214.
- Naseri, M., Mahdavi, M., Davoodi, A., Tackallou, S., Goudarzvand, M., & Neishabouri, S. (2015). Up regulation of Bax and down regulation of Bcl2 during 3-NC mediated apoptosis in human cancer cells . *Cancer Cell International* , 1-9.
- Notoatmojo, S. (2010). *Metodologi Penelitian*. Jakarta: Rineka Cipta.
- Nugroho, S., Fauziah, K., Sajuthi, D., and Darusman, H. (2018). Profil Tekanan Darah Normal Tikus Putih (*Rattus norvegicus*) Galur Wistar dan Sprague-Dawley. *ACTA VETERINARIA INDONESIA*, 32-37.
- Ortíz-Maldonado, V., Mozas, P., & Delgado, J. (2016). The biology behind B-cell lymphoma 2 as a target in chronic lymphocytic leukemia. *Therapeutic Advances in Hematology*, 321-330.
- Ozkorkmaz, E., Asir, F., Basaran, S., Agacayak, E., Sahin, F., Kaya, S., et al. (2018). Examination of Bcl-2 and Bax Protein Levels for Determining the Apoptotic Changes in Placentas with Gestational Diabetes and Preeclampsia. *MDPI Proceedings*, 1-4.
- Owen, K., and Dewald, O. (2021). *Vitamin E Toxicity*. Retrieved from NCBI Bookshelf: <https://www.ncbi.nlm.nih.gov/books/NBK564373/>
- Pettersen, C. (2012). The Effect of Omega-3 Polyunsaturated Fatty Acids on Human Cancer Cells. *Thesis. Norwegian University of Science and Technology* , p. 8.
- Phipps, E., Prasanna, D., Brima, W., and Jim, T. (2016). Preeclampsia: Updates in Pathogenesis, Definitions, and Guidelines. *American Society of Nephrology*, 1102–1113.

- POGI. (2016). *Diagnosis dan Tata Laksana Pre-Eklampsia*. Jakarta: Persatuan Obstetri Ginekologi Indonesia.
- Prawirohardjo, S. (2014). *Ilmu Kebidanan*. Jakarta: PT Bina Pustaka Sarwono.
- Rana, S., Lemoine, E., Granger, G., and Karumanchi, S. (2019). Preeclampsia Pathophysiology, Challenges, and Perspectives. *Preeclampsia and Vascular Disease*, 1094- 1111.
- Rani, A., Wadhvani, N., Gautam, P., and Joshi, S. (2016). Altered Development and Function of The Placental Region In Preeclampsia and It's Association With Long Chain Polyunsaturated Fatty Acids. *Research Gate*, 1-16.
- Redza-Dutordoir, M., & Averill-Bates, D. (2016). Activation of apoptosis signalling pathways by reactive oxygen species. *Elsevier; Biochimica et Biophysica Acta 1863* , 2977–2992.
- Rumbold, A., Ota, E., Hori, H., Miyazaki, C., & Crowther, C. (2016). Vitamin E supplementation in pregnancy (Review). *The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.*, 3.
- Sadler, T. (2014). *Embriologi kedokteran Langman Edisi 12*. Jakarta: EGC.
- Saifudin, A. (2009). *Ilmu Kebidanan*. Jakarta: PT. Bina Pustaka Sarwono Prawirohardjo.
- Sayuti, K., dan Yenrina, R. (2015). *Anti Oksidan Alami dan Sintetik*. Padang: Andalas University Press.
- Scorletti, E., and Byrne, C. (2013). Omega-3 Fatty Acids, Hepatic Lipid Metabolism, and Nonalcoholic Fatty Liver Disease. *Annual Review*, 231-248.
- Setiawan, B., dan Insani, D. (2004). Peroksidasi lipid dan Stress Oksidatif Pada Pre Eklampsia. *Mutiara Medika*, 97-103.
- Shu, W., Li, H., Gong, H., Zhang, M., Niu, X., Ma, Y., et al. (2018). Evaluation of blood vessel injury, oxidative stress and circulating inflammatory factors in an L-NAME-induced preeclampsia-like rat model. *JinZhou Medical University*, 585- 594.
- Sinha, R., Khare, P., Rai, A., Maurya, S., Pathak, A., Mohan, V., et al. (2009). Anti-apoptotic role of omega-3-fatty acids in developing brain: perinatal hypothyroid rat cerebellum as apoptotic model. *Elsevier*, 377–383.

- So, W., Liu, W., & Leung, K. (2015). Omega-3 Polyunsaturated Fatty Acids Trigger Cell Cycle Arrest and Induce Apoptosis in Human Neuroblastoma LA-N-1 Cells. *Nutrients*, 6956-6973.
- Subandrate, Faisal, M., and Anggraini, N. (2017). Peranan Stres Oksidatif pada Preeklampsia. *CDK-252/ vol. 44 no. 5*, 353-355.
- Sujatmiko, T., D. R., and Nurdiat, D. (2015). Perbandingan Rerata Ekspresi Protein BAX dan BAK Pada Pre Eklampsia Berat dan Kehamilan Normotensi. *Jurnal Kesehatan Reproduksi*, 146-152.
- Sung, J., Jo, Y., Kim, S., Ryu, J., Kim, M., JK, H., et al. (2013). Effect of Lutein on L-NAME-Induced Hypertensive Rats. *Korean J Physiol Pharmacol*, 339–345,.
- Suryanis, I., Nursyam, D., dan Marlin, D. (2020). Prediktor Ppreeklampsia Berat Ditinjau Dari Kadar Zink Rambut, Tekanan Darah, Protein Urin Dan Berat Badan. *JURNAL KEBIDANAN*, 121-131.
- Tenório, M., Ferreira, R., Moura, F., Bueno, N., de-Oliveira, A., and Goulart, M. (2019). Cross-Talk between Oxidative Stress and Inflammation in Preeclampsia. *Oxidative Medicine and Cellular Longevity*, 1-26.
- Tripathi, N., Singh, A., Pandey, K., Singh, N., and Arya, S. (2016). Role of anti-oxidants to reduce free radical induced injury in preeclamp. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 3795-3798.
- Tzifi, F., Economopoulou, C., Gourgiotis, D., Ardavanis, A., Papageorgiou, S., and Scorilas, A. (2012). The Role of BCL2 Family of Apoptosis Regulator Proteins in Acute and Chronic Leukemias. *Hindawi Publishing Corporation Advances in Hematology*, 1-15.
- Utami, C., Berawi, K., dan N, K. (2018). Hubungan Suplementasi Omega-3 Pada Ibu Hamil dengan Kejadian Pre-Eklampsia. *Majority*, 211-216.
- V Sari, R. S., & Rumekti, D. (2012). Perbandingan Ekspresi Protein Bax Dan Apoptosis Sel Trofoblas Plasenta Antara Preeklampsia Berat/Eklampsia Dengan Kehamilan Normotensi. *Perpustakaan Universitas Gadjah Mada*, 1-6.
- Varol, F., Uzunoğlu, R., Erbas, H., Süt, N., and Sayın, C. (2015). VEGFR-1, Bcl-2, and HO-1 Ratios in Pregnant Women With Hypertension. *Clinical and Applied Thrombosis/Hemostasis* 21, 285-288.

- Wang, Q., Zhang, L., Yuan, X., Ou, Y., Zhu, X., Zhang, Z., et al. (2016). The Relationship between the Bcl-2/Bax Proteins and the Mitochondria-Mediated Apoptosis Pathway in the Differentiation of Adipose-Derived Stromal Cells into Neurons. *PLOS ONE*, 1-16.
- Wietrak, E., Kamiński, K., Nska-Gorzelak, B., and Oleszczuk, J. (2015). Effect of Docosahexaenoic Acid on Apoptosis and Proliferation in the Placenta: Preliminary Report. *BioMed Research International*, 1-6.
- Wu, C., & Bratton, S. (2013). Regulation of the intrinsic apoptosis pathway by reactive oxygen species. *Antioxidants & Redox Signaling* Vol. 19, 546-558.
- Wu, F., Tian, F., and Lin, Y. (2015). Oxidative Stress in Placenta: Health and Diseases. *BioMed Research International*, 1-15.
- Zhang, S., Regnault, T., Barker, P., Botting, K., McMillen, I., McMillen, C., et al. (2015). Placental Adaptations in Growth Restriction. *Nutrients*, 360-389.
- Zhao, L., Ma, R., Zhang, L., Yuan, X., Wu, J., He, L., et al. (2019). Inhibition of HIF-1 α -mediated TLR4 activation decreases apoptosis and promotes angiogenesis of placental microvascular endothelial cells during severe pre-eclampsia pathogenesis. *Elsevier: Placenta*, 8-16.
- Zheng, J., GS Yang, W. W., Li, J., Li, K., and Guan, W. W. (2005). Overexpression of Bax induces apoptosis and enhances drug sensitivity of hepatocellular cancer-9204 cells. *World Journal of Gastroenterology*, 3498-3503.
- Zhu, H., Zhu, W., Hu, R., Wang, H., Ma, D., and Li, X. (2016). The effect of pre-eclampsia-like syndrome induced by L-NAME on learning and memory and hippocampal glucocorticoid receptor expression: A rat model. *Hypertension in Pregnancy*, 1-8.
- Zhu, J., Pang, Z., and Yu, Y. (2012). Regulation of Trophoblast Invasion: The Role of Matrix Metalloproteinases. *Reviews in Obstetrics & Gynecology*, 137-143.