

DAFTAR PUSTAKA

- Abdullahi, A., Amini-Nik, S., Jeschke, M.G., 2014, Animal models in burn research, *Cellular and Molecular Life Sciences*, 71(17): 3241-55.
- Ahmed, A., Boateng, J., 2018, Calcium alginate-based antimicrobial film dressings for potential healing of infected foot ulcers, *Therapeutic Delivery*, 9(3): 185-204.
- Aitcheson, S.M., Frentiu, F.D., Hurn, S.E., Edwards, K., Murray, R.Z., 2021, Skin Wound Healing: Normal Macrophage Function and Macrophage Dysfunction in Diabetic Wounds, *Molecules*, 26: 4917-28.
- Al-Hijazi, A.Y., Al-Mahammadawy, A.K.A.A., 2014, Role of Topical Application of Growth Factors on Periodontal Repair, *Natural Science*, 6: 351-61.
- Anjum, A., Sim, C.H., Ng, S.F., 2018, Hydrogels Containing Antibiofilm and Antimicrobial Agents Beneficial for Biofilm-Associated Wound Infection: Formulation Characterization and In vitro Study, *American Association of Pharmaceutical Scientists PharmSciTech*, 19(3): 1219-30.
- Anjum, S., Arora, A., Alam, M.S., Gupta, B., 2016, Development of Antimicrobial and Scar Preventive Chitosan Hydrogel Wound Dressing, *International Journal of Pharmaceutics*, 508(1-2): 92-101.
- Ansell, D.M., Kloepper, J.E., Thomason, H.A., Paus, R., Hardman, M.J., 2011, Exploring the "Hair Growth-Wound Healing Connection": Anagen Phase Promotes Wound Re-Epithelialization, *Journal of Investigative Dermatology*, 131(2): 518-28.
- Arifin, W.N., Zahiruddin, W.M., 2017, Sample Size Calculation in Animal Studies using Resource Equation Approach, *Malaysian Journal of Medical Sciences*, 24(5): 101-5.
- Aumeeruddy-Elalfi, Z., Gurib-Fakim, A., Mahomoodally, F., 2016, Chemical composition, antimicrobial and antibiotic potentiating activity of essential oils from 10 tropical medicinal plants from Mauritius, *Journal of Herbal Medicine*, 6(2): 88-95.

- Aumeeruddy-Elalfi, Z., Mahomoodally, F., 2016, *Extraction Techniques and Pharmacological Potential of Essential Oils from Medicinal and Aromatic Plants of Mauritius*. dalam Peters, M., 2016, *Essential Oils: Historical Significance, Chemical Composition and Medicinal Uses and Benefits*, Nova Publisher: Hauppauge, New York, 51-80.
- Bae, O.N., Noh, M., Chun, Y.J., Jeong, T.C., 2015, Keratinocytic vascular endothelial growth factor as a novel biomarker for pathological skin condition, *Biomolecules and Therapeutics* (Seoul), 23(1): 12-8.
- Balaji, S.M., Balaji, P.P., 2018, *Textbook of Oral and Maxillofacial Surgery*, 3rd Ed., Elsevier, India.
- Bao, P., Kodra, A., Tomic-Canic, M., Golinko, M.S., Ehrlich, H.P., Brem, H., 2009, The Role of Vascular Endothelial Growth Factor in Wound Healing, *Journal of Surgical Research*, 153(2): 347-58.
- Bates, D.O., Pritchard Jones, R.O., 2003, The Role of Vascular Endothelial Growth Factor in Wound Healing, *Lower Extremity Wounds*, 2(2): 107-20.
- Bauer, S.M., Bauer, R.J., Velazquez, O.C., 2005, Angiogenesis, Vasculogenesis, and Induction of Healing in Chronic Wounds, *Vascular and Endovascular Surgery*, 39(4): 293-306.
- Birn, H., 1972, Fibrinolytic activity of alveolar bone in “dry socket”, *Acta Odontologica Scandinavica*, 30(1): 23-32.
- Birn, H., 1973, Etiology and pathogenesis of fibrinolytic alveolitis (“dry socket”), *International Journal of Oral Surgery*, 2(5): 211-63.
- Blossman-Myer, B., Burggren, W.W., 2010, The silk cocoon of the silkworm, *Bombyx mori*: Macro structure and its influence on transmural diffusion of oxygen and water vapor, *Comparative Biochemistry and Physiology. Molecular and Integrative Physiology*, 155(2): 259-63.
- Boocock, C.A., Charnock-Jones, D.S., Sharkey, A.M., McLaren, J., Barker, P.J., Wright, K.A., Twentyman, P.R., Smith, S.K., 1995, Expression of Vascular Endothelial Growth Factor and Its Receptors flt and KDR in Ovarian Carcinoma, *Journal of the National Cancer Institute*, 87(7): 506-16.

- Borle, R.M., 2014, *Textbook of Oral and Maxillofacial Surgery*, 1st ed., Jaypee Brothers, New Delhi.
- Bowler, P.G., Duerden, B.I., Armstrong, D.G., 2001, Wound Microbiology and Associated Approaches to Wound Management, *Clinical Microbiology Reviews*, 14(2): 244-69.
- Brancato, S.K., Albina, J.E., 2011, Wound Macrophages as Key Regulators of Repair. Origin, Phenotype, and Function, *The American Journal of Pathology*, 178(1): 19-25.
- Brauchle, M., Funk, J.O., Kind, P., Werner, S., 1996, Ultraviolet B and H₂O₂ Are Potent Inducers of Vascular Endothelial Growth Factor Expression in Cultured Keratinocytes, *The Journal of Biological Chemistry*, 271(36): 21793-7.
- Bryant, R.A., Nix, D.P., 2016, *Acute & Chronic Wounds: Current Management Concepts*, 5th ed., Elsevier, St. Louis.
- Brem, H., Kodra, A., Golinko, M.S., Entero, H., Stojadinovic, O., Wang, V.M., Sheahan, C.M., Weinberg, A.D., Woo, S.L.C., Ehrlich, H.P., Tomic-Canic, M., 2009, Mechanism of Sustained Release of Vascular Endothelial Growth Factor in Accelerating Experimental Diabetic Healing, *Journal of Investigative Dermatology*, 129(9): 2275-87.
- Brown, L.F., Yeo, K.T., Berse, B., Yeo, T.K., Senger, D.R., Dvorak, H.F., de Water, L.V., 1992, Expression of Vascular Permeability Factor (Vascular Endothelial Growth Factor) by Epidermal Keratinocytes during Wound Healing, *Journal of Experimental Medicine*, 176(5): 1375-9.
- Bryan, J., 2004, Moist wound healing: a concept that changed our practice, *Journal of Wound Care*, 13(6): 227-8.
- Byrne, A.M., Bouchier-Hayes, D.J., Harmey, J.H., 2005, Angiogenic and cell survival functions of Vascular Endothelial Growth Factor (VEGF), *Journal of Cellular and Molecular Medicine*, 9(4): 777-94.
- Cañedo-Dorantes, L., Cañedo-Ayala, M., 2019, Skin Acute Wound Healing: A Comprehensive Review, *International Journal of Inflammation*, 1-15.
- Capanema, N.S.V., Mansur, A.A.P., Carvalho, S.M., Mansur, L.L., Ramos, C.P., Lage, A.P., Mansur, H.S., 2018, Physicochemical properties and antimicrobial

activity of biocompatible carboxymethylcellulose-silver nanoparticles hybrids for wound dressing and epidermal repair, *Journal of Applied Polymer Science*, 135(6): 45812.

Cardona, A.F., Wilson, S.E., 2015, Skin and Soft-Tissue Infections: A Critical Review and the Role of Telavancin in Their Treatment, *Clinical Infectious Diseases*, 61(Suppl 2): S69-78.

Cardoso, C.L., Rodrigues, M.T.V., Júnior, O.F., Garlet, G.P., Carvalho, P.S.P., 2010, Clinical Concepts of Dry Socket, *Journal of Oral and Maxillofacial Surgery*, 68(8):1922-32.

Carmeliet, P., 2003, Angiogenesis in health and disease, *Nature Medicine*, 9(6): 653-60.

Carmeliet, P., de Almodovar C.R., 2013, VEGF ligands and receptors: implications in neurodevelopment and neurodegeneration, *Cellular and Molecular Life Sciences*, 70: 1763-78.

Carmeliet, P., Ferreira, V., Breier, G., Pollefeyt, S., Kieckens, L., Gertsenstein, M., Fahrig, M., Vandenhoek, A., Harpal, K., Eberhardt, C., Declercq, C., Pawling, J., Moons, L., Collen, D., Risau, W., Nagy, A., 1996, Abnormal blood vessel development and lethality in embryos lacking a single VEGF allele, *Nature*, 380(6573): 435-9.

Cerchiara, T., Abruzzo, A., Nahui Palomino, R.A., De Rose, B.V.R., Chidichimo, G., Ceseracciu, L., Athanassiou, A., Saladini, B., Dalena, F., Bigucci, F., Luppi, B., 2017, Spanish Broom (*Spartium junceum* L.) fibers impregnated with vancomycin-loaded chitosan nanoparticles as new antibacterial wound dressing: Preparation, characterization and antibacterial activity, *European Journal of Pharmaceutical Sciences*, 99: 105-12.

Chandika, P., Ko, S.C., Jung, W.K., 2015, Marine-derived biological macromolecule-based biomaterials for wound healing and skin tissue regeneration, *International Journal of Biological Macromolecules*, 77: 24-35.

Chen, F.J., Porter, D., Vollrath, F., 2012, Morphology and structure of silkworm cocoons, *Materials Science & Engineering: C-Materials for Biological Applications*, 32(4): 772-8.

Chen, F.J., Porter, D., Vollrath, F., 2012, Structure and physical properties of silkworm cocoons, *Journal of the Royal Society Interface*, 9(74): 2299-308.

- Chen, L., Mirza, R., Kwon, Y., DiPietro, L.A., Koh, T.J., 2015, The murine excisional wound model: Contraction revisited, *Wound Repair and Regeneration*, 23(6): 874-7.
- Chintalgattu, V., Nair, D.M., Katwa, L.C., 2003, Cardiac myofibroblasts: A novel source of vascular endothelial growth factor (VEGF) and its receptors Flt-1 and KDR, *Journal of Molecular and Cellular Cardiology*, 35(3): 277-86.
- Christoforidis, J.B., Wang, J., Jiang, A., Willard, J., Pratt, C., Abdel-Rasoul, M., Roy, S., Powell, H., 2013, The effect of intravitreal bevacizumab and ranibizumab on cutaneous tensile strength during wound healing, *Clinical Ophthalmology*, 7(): 185-91.
- Cibelli, J., Emborg, M.E., Prockop, D.J., Roberts, M., Schatten, G., Rao, M., Harding, J., Mirochnitchenko, O., 2013, Strategies for improving animal models for regenerative medicine, *Cell Stem Cell*, 12(3): 271-4.
- Cohen, I.K., Moore, C.D., Diegelmann, R.F., 1979, Onset and Localization of Collagen Synthesis during Wound Healing in Open Rat Skin Wounds, *Proceedings of the Society for Experimental Biology and Medicine*, 160(4): 458-62.
- Collins, P.D., Connolly, D.T., Williams, T.J., 1993, Characterization of the increase in vascular permeability induced by vascular permeability factor in vivo, *British Journal of Pharmacology*, 109(1): 195-9.
- Corliss, B.A., Azimi, M.S., Munson, J.M., Peirce, S.M., Murfee, W.L., 2016, Macrophages: An Inflammatory Link Between Angiogenesis and Lymphangiogenesis, *Microcirculation*, 23(2): 95-121.
- Corral, C.J., Siddiqui, A., Wu, L., Farrell, C.L., Lyons, D., Mustoe, T.A., 1999, Vascular Endothelial Growth Factor Is More Important Than Basic Fibroblastic Growth Factor During Ischemic Wound Healing, *Archives of Surgery*, 134(2): 200-5.
- Dabiri, G., Damstetter, E., Phillips, T., 2016, Choosing a wound dressing based on common wound characteristics, *Advances in Wound Care*, 5(1): 32-41.
- Daley, J.M., Brancato, S.K., Thomay, A.A., Reichner, J.S., Albina, J.E., 2010, The phenotype of murine wound macrophages, *Journal of Leukocyte Biology*, 87(1): 59-67.
- Das, P., Horton, R., 2016, Antibiotics: Achieving the balance between access and excess, *The Lancet*, 387(10014): 102-4.

- Davies, L.C., Jenkins, S.J., Allen, J.E., Taylor, P.R., 2013, Tissue-resident macrophages, *Nature Immunology*, 14(10): 986-95.
- Deodato, B., Arsic, N., Zentilin, L., Galeano, M., Santoro, D., Torre, V., Altavilla, D., Valdembri, D., Bussolino, F., Squadrito, F., Giacca, M., 2002, Recombinant AAV vector encoding human VEGF₁₆₅ enhances wound healing, *Gene Therapy*, 9(12): 777-85.
- Detmar, M., Brown, L.F. Claffey, K.P., Yeo, K., Kocher, O., Jackman, R.W., Berse, B., Dvorak, H.F., 1994, Overexpression of Vascular Permeability Factor/Vascular Endothelial Growth Factor and its Receptors in Psoriasis, *Journal of Experimental Medicine*, 180(3): 1141-6.
- Detmar, M., Brown, L.F., Schon, M.P., Elicker, B.M., Velasco, P., Richard, L., Fukumura, D., Monsky, W., Claffey, K.P., Jain, R.K., 1998, Increased Microvascular Density and Enhanced Leukocyte Rolling and Adhesion in the Skin of VEGF Transgenic Mice, *The Journal of Investigative Dermatology*, 111(1): 1-6.
- Dhivya, S., Padma, V.V., Santhini, E., 2015, Wound dressings – A review, *Biomedicine*, 5(4): 24-8.
- Dorsett-Martin, W.A., 2004, Rat models of skin wound healing: A review, *Wound Repair and Regeneration*, 12(6): 591-9.
- Dorsett-Martin, W.A., Wysocki, A.B., 2008, *Sourcebook of Models for Biomedical Research*, PM Conn Ed., Humana Press Inc., New Jersey, 631-637.
- Dovi, J.V., He, L.K., DiPietro, L.A., 2003, Accelerated wound closure in neutrophil-depleted mice, *Journal of Leukocyte Biology*, 73(4): 448-55.
- Dutra, J.A.P., Carvalho, S.G., Zampiroli, A.C.D., Daltoé, R.D., Teixeira, R.M., Careta, F.P., Cotrim, M.A.P., Oréfice, R.L., Villanova, J.C.O., 2017, Papain wound dressings obtained from poly (vinyl alcohol)/calcium alginate blends as new pharmaceutical dosage form: Preparation and preliminary evaluation, *European Journal of Pharmaceutics and Biopharmaceutics*, 113: 11-23.
- Ehrlich, H.P., Krummel, T.M., 1996, Regulation of wound healing from a connective tissue perspective, *Wound Repair and Regeneration*, 4(2): 203-10.

- Elliot, S., Wikramanayake, T.C., Jozic, I., Tomic-Canic, M., 2018, A Modeling Conundrum: Murine Models for Cutaneous Wound Healing, *Journal of Investigative Dermatology*, 138(4):736-40.
- Elson, D.A., Ryan, H.E., Snow, J.W., Johnson, R., Arbeit, J.M., 2000, Coordinate Up-Regulation of Hypoxia Inducible Factor (HIF)-1 α And HIF-1 Target Genes during Multi-Stage Epidermal Carcinogenesis and Wound Healing, *Cancer Research*, 60(21): 6189-95.
- Eming, S.A., Krieg, T., Davidson, J.M., 2007, Inflammation in Wound Repair: Molecular and Cellular Mechanisms, *Journal of Investigative Dermatology*, 127(3): 514–25.
- Eming, S.A., Lauer, G., Cole, M., Jurk, S., Christ, H., Hornig, C., Krieg, T., Weich, H.A., 2004, Increased Levels of the Soluble Variant of the Vascular Endothelial Growth Factor Receptor VEGFR-1 Are Associated with a Poor Prognosis in Wound Healing, *Journal of Investigative Dermatology*, 123(4): 799-802.
- Eming, S.A., Martin, P., Tomic-Canic, M., 2014, Wound repair and regeneration: Mechanisms, signaling, and translation, *Science Translational Medicine*, 6(265): 265-6.
- Enoch, S., Leaper, D.J., 2008, Basic science of wound healing, *Surgery*, 26(2): 31-7.
- Epelman, S., Lavine, K.J., Randolph, G.J., 2014, Origin and Functions of Tissue Macrophages, *Immunity*, 41(1): 21-35.
- Fan, L., Yang, H., Yang, J., Peng, M., Hu, J., 2016, Preparation and characterization of chitosan/gelatin/PVA hydrogel for wound dressings, *Carbohydrate Polymers*, 146(): 427-34.
- Fang, R.C., Mustoe, T.A., 2008, Animal models of wound healing: utility in transgenic mice, *Journal of Biomaterials Science. Polymer Edition*, 19(8): 989-1005.
- Fenton, H., West, G.B., 1963, Studies on Wound Healing, *British Journal of Pharmacology*, 20: 505-15.
- Ferrara, N., Carver-Moore, K., Chen, H., Dowd, M., Lu, L., O'Shea, K.S., Powell-Braxton, L., Hillan, K.J., Moore, M.W., 1996, Heterozygous embryonic lethality induced by targeted inactivation of the VEGF gene, *Nature* 380: 439-42.
- Ferrara, N., Gerber, H.P., LeCouter, J., 2003, The biology of VEGF and its receptors. *Nature Medicine*, 9: 669-76.

- Ferrara, N., Houck, K., Jakeman, L., Leung, D.W., 1992, Molecular and Biological Properties of the Vascular Endothelial Growth Factor Family of Proteins, *Endocrine Reviews*, 13(1): 18-32.
- Fitria, L., Sarto, M., 2014, Profil Hematologi Tikus (*Rattus novergicus* Berkenhout, 1769) Galur Wistar Jantan dan Betina Umur 4, 6, dan 8 Minggu, *Biogenesis*, 2(2): 94-100.
- Frank, S., Hubner, G., Breier, G., Longaker, M.T., Greenhalgh, D.G., Werner, S., 1995, Regulation of Vascular Endothelial Growth Factor Expression in Cultured Keratinocytes. Implications for Normal and Impaired Wound Healing, *The Journal of Biological Chemistry*, 270(21): 12607-13.
- Gal, P., Toporcer, T., Vidinsky, B., Mokry, M., Novotny, M., Kilik, R., Smetana Jr, K., Gal, T., Sabo, J., 2006, Early Changes in the Tensile Strength and Morphology of Primary Sutured Skin Wounds in Rats, *Folia Biologica (Praha)*. 52: 109-15.
- Galeano, M., Deodato, B., Altavilla, D., Cucinotta, D., Arsic, N., Marini, H., Torre, V., Giacca, M., Squadrito, F., 2003, Adeno-associated viral vector-mediated human vascular endothelial growth factor gene transfer stimulates angiogenesis and wound healing in the genetically diabetic mouse, *Diabetologia*, 46(4): 546-55.
- Galiano, R.D., Tepper, O.M., Pelo, C.R., Bhatt, K.A., Callaghan, M., Bastidas, N., Bunting, S., Steinmetz, H.G., Gurtner, G.C., 2004, Topical Vascular Endothelial Growth Factor Accelerates Diabetic Wound Healing through Increased Angiogenesis and by Mobilizing and Recruiting Bone Marrow-Derived Cells, *The American Journal of Pathology*, 164(6): 1935-47.
- Gantwerker, E.A., Hom, D.B., 2011, Skin: Histology and Physiology of Wound Healing, *Facial Plastic Surgery Clinics of North America*, 19: 441-53.
- Gatesy, J., Hayashi, C., Motriuk, D., Woods, J., Lewis, R., 2001, Extreme Diversity, Conversation, and Convergence of Spider Silk Fibroin Sequences, *Science*, 291(5513): 2603-5.
- Gawaz, M., 2006, Platelets in the onset of atherosclerosis, *Blood Cells, Molecules, & Diseases*, 36(2): 206-10.
- Gerber, H.P., McMurtrey, A., Kowalski, J., 1998, Vascular Endothelial Growth Factor Regulates Endothelial Cell Survival through the Phosphatidylinositol 3'-Kinase/Akt Signal Transduction Pathway. Requirement for Flk-1/KDR Activation, *The Journal of Biological Chemistry*, 273(46): 30336-43.

- Gerber, H.P., Vu, T.H., Ryan, A.M., Kowalski, J., Werb, Z., Ferrara, N., 1999, VEGF couples hypertrophic cartilage remodeling, ossification and angiogenesis during endochondral bone formation, *Nature Medicine*, 5: 623-8.
- Gerber, P.A., Buhren, B.A., Schrupf, H., Homey, B., Zlotnik, A., Hevezi, P., 2014, The top skin-associated genes: a comparative analysis of human and mouse skin transcriptomes, *Biological Chemistry*, 395(6): 577-91.
- Ginhoux, F., Greter, M., Leboeuf, M., Nandi, S., See, P., Gokhan, S., Mehler, M.F., Conway, S.J., Ng, L.G., Stanley, E.R., Samokhvalov, I.M., Merad, M., 2010, Fate Mapping Analysis Reveals That Adult Microglia Derive from Primitive Macrophages, *Science*, 330(6005): 841-5.
- Gira, A.K., Brown, L.F., Washington, C.V., Cohen, C., Arbiser, J.L., 2004, Keloids demonstrate high-level epidermal expression of vascular endothelial growth factor, *Journal of the American Academy of Dermatology*, 50(6): 850-3.
- Giunta, R.E., Holzbach, T., Taskov, C., Holm, P.S., Konerding, M.A., Schams, D., Biemer, E., Gansbacher, B., 2005, Ad-VEGF165 gene transfer increases survival in overdimensioned skin flaps, *The Journal of Gene Medicine*, 7(3): 297-306.
- Golpon, H.A., Fadok, V.A., Taraseviciene-Stewart, L., Scerbavicius, R., Sauer, C., Welte, T., Henson, P.M., Voelkel, N.F., 2004, Life after corpse engulfment: phagocytosis of apoptotic cells leads to VEGF secretion and cell growth, *the Federation of American Societies for Experimental Biology Journal*, 18(14): 1716-18.
- Goren, I., Allmann, N., Yogev, N., Schurmann, C., Linke, A., Holdener, M., Waisman, A., Pfeilschifter, J., Frank, S., 2009, A Transgenic Mouse Model of Inducible Macrophage Depletion: Effects of Diphtheria Toxin-Driven Lysozyme M-Specific Cell Lineage Ablation on Wound Inflammatory, Angiogenic, and Contractive Processes, *The American Journal of Pathology*, 175(): 132-47.
- Grada, A., Mervis, J., Falanga, V., 2018, Research Techniques Made Simple: Animal Models of Wound Healing, *Journal of Investigative Dermatology*, 138(10): 2095-105.
- Guilliams, M., Ginhoux, F., Jakubzick, C., Naik, S.H., Onai, N., Schraml, B.U., Segura, E., Tussiwand, R., Yona, S., 2014, Dendritic cells, monocytes and macrophages: a unified nomenclature based on ontogeny, *Nature Reviews Immunology*, 14(8): 571-8.

- Gurtner, G.C., Werner, S., Barrandon, Y., Longaker, M.T., 2008, Wound repair and regeneration, *Nature*, 453(7193): 312-21.
- Guvva, S., Patil, M.B., Mehta, D.S., 2017, Rat as laboratory animal model in periodontology, *International Journal of Oral Health Science*, 7(2): 68-75.
- Hakvoort, T., Altun, V., van Zuijlen, P.P., de Boer, W.I., van Schadewij, W.A., van der Kwast, T.H., 2000, Transforming growth factor (TGF)- β 1, - β 2, - β 3, basic fibroblast growth factor and vascular endothelial growth factor expression in keratinocytes of burn scars, *European Cytokine Network*, 11(2): 233-9.
- Harper, D., Young, A., McNaught, C.E., 2014, The physiology of wound healing, *Basic Science Surgery*, 32(9): 46-50.
- Hashimoto, D., Chow, A., Noizat, C., Teo, P., Beasley, M.B., Leboeuf, M., Becker, C.D., See, P., Price, J., Lucas, D., Greter, M., Mortha, A., Boyer, S.W., Forsberg, E.C., Tanaka, M., van Rooijen, N., García-Sastre, A., Stanley, E.R., Ginhoux, F., Frenette, P.S., Merad, M., 2013, Tissue resident macrophages self-maintain locally throughout adult life with minimal contribution from circulating monocytes, *Immunity*, 38(4): 792-804.
- Helfman, T., Ovington, L., Falanga, V., 1994, Occlusive Dressings and Wound Healing, *Clinics in Dermatology*, 12(1): 121-7.
- Hoeffel, G., Wang, Y., Greter, M., See, P., Teo, P., Malleret, B., Leboeuf, M., Low, D., Oller, G., Almeida, F., Choy, S.H., Grisotto, M., Renia, L., Conway, S.J., Stanley, E.R., Chan, J.K., Ng, L.G., Samokhvalov, I.M., Merad, M., Ginhoux, F., 2012, Adult Langerhans cells derive predominantly from embryonic fetal liver monocytes with a minor contribution of yolk sac-derived macrophages, *The Journal of Experimental Medicine*, 209(6): 1167-81.
- Hong, H., Tian, X.Y., 2020, The Role of Macrophages in Vascular Repair and Regeneration after Ischemic Injury, *International Journal of Molecular Sciences*, 21(17): 6328.
- Hong, Y.K., Lange-Asschenfeldt, B., Velasco, P., Hirakawa, S., Kunstfeld, R., Brown, L.F., Bohlen, P., Senger, D.R., Detmar, M., 2004, VEGF-A promotes tissue repair-associated lymphatic vessel formation via VEGFR-2 and the α 1 β 1 and α 2 β 1 integrins, *The Federation of American Societies for Experimental Biology Journal*, 18(10): 1111-31.
- Hopf, H.W., Rollins, M.D., 2007, Wounds: An Overview of the Role of Oxygen, *Antioxidants & Redox Signaling*, 9(8): 1183-92.

Iacopetti, I., Perazzi, A., Ferrari, V., Busetto, R., 2012, Application of Platelet-Rich Gel to Enhance Wound Healing in the Horse: A Case Report, *Journal of Equine Veterinary Science*, 32(3): 123-8.

IACUC, 2014, *Weight loss in research animals*, The University of North Carolina at Chapel Hill, Amerika Serikat, 1-4.

Ihedioha, J.I., Ugwuja, J.I., Noel-Uneke, O.A., Udeani, I.J., Daniel-Igwe, G., 2012, Reference Values for the Haematology Profile of Conventional Grade Outbred Albino Mice (*Mus musculus*) in Nsukka, Eastern Nigeria, *Animal Research International*, 9(2):1601-12.

Iijima, K., Yoshikawa, N., Connolly, D.T., Nakamura, H., 1993, Human mesangial cells and peripheral blood mononuclear cells produce vascular permeability factor, *Kidney International*, 44(5): 959-66.

Inkinen, K., 2003, *Connective Tissue Formation in Wound Healing (An experimental study)*, Academia Dissertation, Department of Surgery and Department of Biosciences University of Helsinki, Finland, 18-29.

Ishida, Y., Gao, J.L., Murphy, P.M., 2008, Chemokine Receptor CX3CR1 Mediates Skin Wound Healing by Promoting Macrophage and Fibroblast Accumulation and Function, *The Journal of Immunology*, 180(1): 569-79.

Itakura, J., Ishiwata, T., Shen, B., 2000, Concomitant over-expression of vascular endothelial growth factor and its receptors in pancreatic cancer, *International Journal of Cancer*, 85: 27-34.

Jacobi, J., Tam, B.Y.Y., Sundram, U., von Degenfeld, G., Blau, H.M., Kuo, C.J., Cooke, J.P., 2004, Discordant effects of a soluble VEGF receptor on wound healing and angiogenesis, *Gene Therapy*, 11(3): 302-9.

Jahromi, M.A.M., Zangabad, P.S., Basri, S.M.M., Zangabad, K.S., Ghamarypour, A., Aref, A.R., Karimi, M., Hamblin, M.R., 2018, Nanomedicine and advanced technologies for burns: Preventing infection and facilitating wound healing, *Advanced Drug Delivery Reviews*, 123: 33-64.

Jayakumar, R., Prabakaran, M., Sudheesh Kumar, P.T., Nair, S.V., Tamura, H., 2011, Biomaterials based on chitin and chitosan in wound dressing applications, *Biotechnology Advances*, 29(3): 322-37.

Johnson, K.E., Wilgus, T.A., 2014, Vascular Endothelial Growth Factor and Angiogenesis in the Regulation of Cutaneous Wound Repair, *Advances in Wound Care*, 3(10):647-61.

Johnson, M., 2012, Laboratory Mice and Rats, *Materials and Methods*, 2: 113.

Jones, V., Grey, J.E., Harding, K.G., 2006, Wound dressings, *British Medical Journal*, 332(7544): 777-80.

Josko, J., Gwozdz, B., Jedrzejowska-Szypulka, H., Hendryk, S., 2000, Vascular endothelial growth factor (VEGF) and its effect on angiogenesis, *Medical Science Monitor Basic Research*, 6(5): 1047-52.

Ju, H.W., Lee, O.J., Lee, J.M., Moon, B.M., Park, H.J., Park, Y.R., Lee, M.C., Kim, S.H., Chao, J.R., Ki, C.S., Park, C.H., 2016, Wound healing effect of electrospun silk fibroin nanomatrix in burn-model, *International Journal of Biological Macromolecules*, 85: 29-39.

Kamalathevan, P., Ooi, P.S., Loo, Y.L., 2018, Silk-Based Biomaterials in Cutaneous Healing: A Systematic Review, *Advances in Skin & Wound Care*, 31(12): 565-73.

Karavasilis, V., Mitsi, V.M., Briasoulis, E., Tsanou, E., Kitsou, E., Kalofonos, H., Fountzilas, G., Fotsis, T., Pavlidis, N., 2005, Angiogenesis in cancer of unknown primary: clinicopathological study of CD34, VEGF and TSP-1, *BMC Cancer*, 5(25): 1-7.

Kasuya, A., Tokura, Y., 2014, Attempts to accelerate wound healing, *Journal of Dermatological Science*, 76(3): 169-72.

Keck, P.J., Hauser, S.D., Krivi, G., Sanzo, K., Warren, T., Feder, J., Connolly, D.T., 1989, Vascular Permeability Factor, an Endothelial Cell Mitogen Related to PDGF, *Science*, 246(4935): 1309-12.

Keles, G.C., Cetinkaya, B.O., Eroglu, C., Simsek, S.B., Kahraman, H., 2010, Vascular endothelial growth factor expression levels of gingiva in gingivitis and periodontitis patients with/without diabetes mellitus, *Inflammation Research*, (59): 543-9.

Kendall, R.L., Thomas, K.A., 1993, Inhibition of vascular endothelial cell growth factor activity by an endogenously encoded soluble receptor, *Proceedings of*

the National Academy of Sciences of the United States of America, 90: 10705-9.

Kim, H.N., Hong, Y., Kim, M.S., Kim, S.M., Suh, K.Y., 2012, Effect of orientation and density of nanotopography in dermal wound healing, *Biomaterials*, 33(34): 8782-92.

Kim, Y.W., Byzova, T.V., 2014, Oxidative stress in angiogenesis and vascular disease, *Blood*, 123(5): 625-31.

Kishimoto, J., Ehama, R., Ge, Y., Kobayashi, T., Nishiyama, T., Detmar, M., Burgeson, R.E., 2000, In vivo detection of human vascular endothelial growth factor promoter activity in transgenic mouse skin, *American Journal of Clinical Pathology*, 157(1): 103-10.

Kliche, S., Waltenberger, J., 2001, Critical Review: VEGF Receptor Signaling and Endothelial Function, *IUBMB Life* (52): 61-6.

Kloc, M., Ghobrial, R.M., Wosik, J., Lewicka, A., Lewicki, S., Kubiak, J.Z., 2019, Macrophage functions in wound healing, *Journal of Tissue Engineering and Regenerative Medicine*, 13(1): 99-109.

Koch, S., Claesson-Welsh, L., 2012, Signal Transduction by Vascular Endothelial Growth Factor Receptors, *Cold Spring Harbor Perspectives in Medicine*, 2(7): a006502-22.

Koehler, J., Brand, F.P., Goepferich, A.M., 2018, Hydrogel Wound Dressings for Bioactive Treatment of Acute and Chronic Wounds, *European Polymer Journal*, 100: 1-11.

Kondo, T., 2007, Timing of skin wounds, *Legal Medicine*, 9(2): 109-14.

Kopecki, Z., Cowin, A.J., 2017, Fighting chronic wound infection – One model at a time, *Wound Practice & Research: Journal of the Australian Wound Management Association*, 25(1): 6-13.

Kumar, V., Cotran, R.S., Robbins, S.L., 2014, Buku Ajar Patologi Robbins, Edisi 7 Volume 1, Penerbit Buku Kedokteran EGC, Jakarta.

Lai, Y.S., Wahyuningtyas, R., Aui, S.P., Chang, K.T., 2019, Autocrine VEGF signalling on M2 macrophages regulates PD-L1 expression for immunomodulation of T cells, *Journal of Cellular and Molecular Medicine*, 23(2): 1257-67.

- Larcher, F., Murillas, R., Bolontrade, M., Conti, C.J., Jorcano, J.L., 1998, VEGF/VPF overexpression in skin of transgenic mice induces angiogenesis, vascular hyperpermeability and accelerated tumor development, *Oncogene*, 17(3): 303-11.
- Lauer, G., Sollberg, S., Cole, M., Flamme, I., Sturzebecher, J., Mann, K., Krieg, T., Eming, S.A., 2000, Expression and Proteolysis of Vascular Endothelial Growth Factor is Increased in Chronic Wounds, *Journal of Investigative Dermatology*, 115(1): 12-8.
- Leibovich, S.J., Ross, R., 1975, The role of the macrophage in wound repair. A study with hydrocortisone and antimacrophage serum, *The American Journal of Pathology*, 78(1): 71-100.
- Leung, D.W., Cachianes, G., Kuang, W.J., Goeddel, D.V., Ferrara, N., 1989, Vascular Endothelial Growth Factor is a Secreted Angiogenic Mitogen, *Science*, 246(4936): 1306-9.
- Li, J., Chen, J., Kirsner, J., 2007, Pathophysiology of acute wound healing, *Clinics in Dermatology*, 25(1): 9-18.
- Lindblad, W.J., 2008, Considerations for selecting the correct animal model for dermal wound-healing studies, *Journal of Biomaterials Science. Polymer Edition*, 19(8): 1087-96.
- Lindhe, J., Lang, N.P., Karring, T., 2008, *Clinical Periodontology and Implant Dentistry*, 5th Ed., Wiley Blackwell, USA.
- Liu, J., Lu, F., Chen H., Bao, R., Li, Z., Lu, B., Yu, K., Dai, F., Wu, D., Lan, G., 2017, Healing of skin wounds using a new cocoon scaffold loaded with platelet-rich or platelet-poor plasma, *The Royal Society of Chemistry Advances*, 7: 6474-85.
- Liu, P.Y., Tong, W., Liu, K., Han, S.H., Wang, X.T., Badiavas, E., Rieger-Christ, K., Summerhayes, I., 2004, Liposome-mediated transfer of vascular endothelial growth factor cDNA augments survival of random-pattern skin flaps in the rat, *Wound Repair and Regeneration*, 12(1): 80-5.
- Liu, Y., Chen, W., Wu, C., Minze, L.J., Kubiak, J.Z., Li, X.C., , Ghobrial, R.M., 2017, Macrophage/monocyte-specific deletion of RhoA down-regulates fractalkine receptor and inhibits chronic rejection of mouse cardiac allografts, *The Journal of Heart and Lung Transplantation*, 36(3): 340-54.

- Low, W.L., Kenward, K., Britland, S.T., Amin, M.C.I.M., Martin, C., 2016, Essential oils and metal ions as alternative antimicrobial agents: A focus on tea tree oil and silver, *International Wound Journal*, 14(2): 369-84.
- Lucas, T., Waisman, A., Ranjan, R., Roes, J., Krieg, T., Muller, W., Roers, A., Eming, S.A., 2010, Differential Roles of Macrophages in Diverse Phases of Skin Repair, *Journal of Immunology*, 184(7): 3964-77.
- Ma, Y., De Castro Bras, L.E., Toba, H., Iyer, R.P., Hall, M.E., Winniford, M.D., Lange, R.A., Tyagi, S.C., Lindsey, M.L., 2014, Myofibroblasts and the extracellular matrix network in post-myocardial infarction cardiac remodeling, *Pflügers Archiv: European Journal of Physiology*, 466(6): 1113-27.
- Mackman, N., Tilley, R.E., Key, N.S., 2007, Role of the Extrinsic Pathway of Blood Coagulation in Hemostasis And Thrombosis, *Arteriosclerosis, Thrombosis, and Vascular Biology*, 27(8): 1687-93.
- Madsen, D.H., Leonard, D., Masedunskas, A., Moyer, A., Jürgensen, H.J., Peters, D.E., Amornphimoltham, P., Selvaraj, A., Yamada, S.S., Brenner, D.A., Burgdorf, S., Engelholm, L.H., Behrendt, N., Holmbeck, K., Weigert, R., Bugge, T.H., 2013, M2-like macrophages are responsible for collagen degradation through a mannose receptor-mediated pathway, *Journal of Cell Biology*, 202(6): 951-66.
- Magatti, M., Vertua, E., De Munari, S., Caro, M., Caruso, M., Silini, A., Delgado, M., Parolini, O., 2017, Human amnion favours tissue repair by inducing the M1-to-M2 switch and enhancing M2 macrophage features, *Journal of Tissue Engineering and Regenerative Medicine*, 11(10): 2895-911.
- Maquart, F.X., Monboisse, J.C., 2014, Extracellular matrix and wound healing, *Pathologie-biologie*, 62(2): 91-5.
- Marti, H.H., 2013, Vascular Endothelial Growth Factor, *Landes Bioscience*, 1.
- Martin, P., 1997, Wound Healing -- Aiming for Perfect Skin Regeneration, *Science*, 276(5309): 75-81.
- Martin, P., Nunan, R., 2015, Cellular and molecular mechanisms of repair in acute and chronic wound healing, *The British Journal of Dermatology*, 173(2): 370-8.
- Merad, M., Ginhoux, F., Collin, M., 2008, Origin, homeostasis and function of Langerhans cells and other langerin-expressing dendritic cells, *Nature Reviews Immunology*, 8(12): 935-47.

- Minutti, C.M., Knipper, J.A., Allen, J.E., Zaiss, D.M.W., 2017, Tissue-specific contribution of macrophages to wound healing, *Seminars in Cell & Developmental Biology*, 61: 3-11.
- Mirza, R., DiPietro, L.A., Koh, T.J., 2009, Selective and Specific Macrophage Ablation Is Detrimental to Wound Healing in Mice, *The American Journal of Pathology*, 175(6): 2454–62.
- Moenadjat, Y., 2013, *Buku Pegangan Kursus Perioperatif dan Acute Care Surgery*, Kerjasama Kolegium Ilmu Bedah Indonesia dan Kolegium Anestesiologi Indonesia, Indonesia.
- Mogoşanu, G.D., Grumezescu, A.M., 2014, Natural and synthetic polymers for wounds and burns dressing, *International Journal of Pharmaceutics*, 463(2): 127-36.
- Mostow, E.N., Haraway, G.D., Dalsing, M., Hodde, J.P., King, D., 2005, Effectiveness of an extracellular matrix graft (OASIS Wound Matrix) in the treatment of chronic leg ulcers: a randomized clinical trial, *Journal of Vascular Surgery*, 41(5): 837-43.
- Muller, Y.A., Li, B., Christinger, H.W., Wells, J.A., Cunningham, B.C., de Vos, A.M., 1997, Vascular endothelial growth factor: Crystal structure and functional mapping of the kinase domain receptor binding site, *Proceedings of the National Academy of Sciences of the United States of America*, 94: 7192-7.
- Munder, M., Mollinedo, F., Calafat, J., Canchado, J., Gil-Lamagnere, C., Fuentes, J.M., Luckner, C., Doschko, G., Soler, G., Eichmann, K., Muller, F.M., Ho, A.D., Goerner, M., Modolell, M., 2005, Arginase I is constitutively expressed in human granulocytes and participates in fungicidal activity, *Blood*, 105(): 2549-56.
- Nahrendorf, M., Swirski, F.K., Aikawa, E., Stangenberg, L., Wurdinger, T., Figueiredo, J.L., Libby, P., Weissleder, R., Pittet, M.J., 2007, The healing myocardium sequentially mobilizes two monocyte subsets with divergent and complementary functions, *The Journal of Experimental Medicine*, 204(12): 3037-47.
- Nanci, A., Bosshardt, D.D., 2006, Structure of periodontal tissues in health and disease, *Periodontology 2000*, 40(1): 11-28.

- Nissen, N.N., Polverini, P.J., Gamelli, R.L., DiPietro, L.A., 1996, Basic fibroblast growth factor mediates angiogenic activity in early surgical wounds, *Surgery*, 119(4): 457-65.
- Olivier, G., Wael, N.H., Gamal, B., 2017, Wound healing: time to look for intelligent, 'natural' immunological approaches? *BMC Immunology*, 18(Suppl. 1) 23: 39-46.
- Oliveira Barud, H.G., Barud Hda, S., Cavicchioli, M., do Amaral, T.S., de Oliveira Junior, O.B., Santos, D.M., Petersen, A.L., Celes, F., Borges, V.M., de Oliveira, C.I., de Oliveira, P.F., Furtado, R.A., Tavares, D.C., Ribeiro, S.J., 2015, Preparation and characterization of a bacterial cellulose/silk fibroin sponge scaffold for tissue regeneration, *Carbohydrate Polymers*, 128: 41-51.
- Olsson, A.K., Dimberg, A., Kreuger, J., Claesson-Welsh, L., 2006, VEGF receptor signalling - in control of vascular function, *Nature Reviews Molecular Cell Biology*, 7(5): 359-71.
- Orkin, S.H., Zon, L.I., 2008, Hematopoiesis: An Evolving Paradigm for Stem Cell Biology, *Cell*, 132(4): 631-44.
- Ostvar, O., Shadvar, S., Yahaghi, E., Azma, K., Fayyaz, A.F., Ahmadi, K., Nowrouzian, I., 2015, Effect of platelet-rich plasma on the healing of cutaneous defects exposed to acute to chronic wounds: a clinico-histopathologic study in rabbits, *Diagnostic Pathology*, 10(85): 1-6.
- Ousey, K., Cutting, K.F., Rogers, A.A., Rippon, M.G., 2016, The importance of hydration in wound healing: Reinvigorating the clinical perspective, *Journal of Wound Care*, 25(3): 122-30.
- Park, J.E., Keller, G.A., Ferrara, N., 1993, The Vascular Endothelial Growth Factor (VEGF) Isoforms: Differential Deposition into the Subepithelial Extracellular Matrix and Bioactivity of Extracellular Matrix-Bound VEGF, *Molecular Biology of the Cell*, 4: 1317-26.
- Perdiguerro, E.G., Klapproth, K., Schulz, C., Busch, K., Azzoni, E., Crozet, L., Garner, H., Trouillet, C., de Bruijn, M.F., Geissmann, F., Rodewald, H.R., 2015, Tissue-resident macrophages originate from yolk-sac-derived erythro-myeloid progenitors, *Nature*, 518(7540): 547-51.
- Peters, T., Sindrilaru, A., Hinz, B., Hinrichs, R., Menke, A., Al-Azzeh, E.A.D., Holzwarth, K., Oreshkova, T., Wang, H., Kess, D., Walzog, B., Sulyok, S., Sunderkotter, C., Friedrich, W., Wlaschek, M., Krieg, T., Scharffetter-

- Kochanek, K., 2005, Wound-healing defect of CD18^{-/-} mice due to a decrease in TGF- β_1 and myofibroblast differentiation, *European Molecular Biology Organization Journal*, 24(19): 3400-10.
- Porter, D., Vollrath, F., 2009, Silk as a Biomimetic Ideal for Structural Polymers, *Advanced Materials*, 21(4): 487-92.
- Qin, Y., 2006, The Characterization of Alginate Wound Dressings with Different Fiber and Textile Structures, *Journal of Applied Polymer Science*, 100(3): 2516-20.
- Qiu, Y., Qiu, L., Cui, J., Wei, Q., 2016, Bacterial cellulose and bacterial cellulose-vaccarin membranes for wound healing, *Materials Science and Engineering: C-Materials for Biological Applications*, 59: 303-9.
- Rădulescu, M., Holban, A.M., Mogoantă, L., Bălșeanu, T., Mogosanu, G.D., Savu, D., Popescu, R.C., Fufă, O., Grumezescu, A.M., Bezirtzoglou, E., Lazar, V., Chifiriuc, M.C., 2016, Fabrication, Characterization, and Evaluation of Bionanocomposites Based on Natural Polymers and Antibiotics for Wound Healing Applications, *Molecules*, 21(761): 1-14.
- Radziwon-Balicka, A., Rosa, C.M., Jurasz, P., 2012, Platelet-associated angiogenesis regulating factors: a pharmacological perspective, *Canadian Journal of Physiology and Pharmacology*, 90(6):679-88.
- Raes, G., Van den Bergh, R., De Baetselier, P., Ghassebeh, G.H., Scotton, C., Locati, M., Mantovani, A., Sozzani, S., 2005, Arginase-1 and Ym1 Are Markers for Murine, but Not Human, Alternatively Activated Myeloid Cells, *The Journal of Immunology*, 174(11): 6561-62.
- Ramasubbu, D.A., Smith, V., Hayden, F., Cronin, P., 2017, Systemic antibiotics for treating malignant wounds, *Cochrane Database of Systematic Reviews*, 8: 1-28.
- Razyieva, K., Kim, Y., Zharkinbekov, Z., Kassymbek, K., Jimi, S., Saparov, A., 2021, Immunology of Acute and Chronic Wound Healing, *Biomolecules*, 11: 700.
- Reichardt, L.F., Tomaselli, K.J., 1991, Extracellular Matrix Molecules and Their Receptors: Functions in Neural Development. *Annual Review of Neuroscience*, 14: 531-70.

- Reinke, J.M., Sorg, H., 2012, Wound Repair and Regeneration, *European Surgical Research*, 49(1): 35-43.
- Rittie, L., 2016, Cellular mechanisms of skin repair in humans and other mammals, *Journal of Cell Communication and Signaling*, 2016, 10(2): 103-20.
- Rodero, M.P., Hodgson, S.S., Hollier, B., Combadiere, C., Khosrotehrani, K., 2013, Reduced Il17a expression distinguishes a Ly6c(lo)MHCII(hi) macrophage population promoting wound healing, *Journal of Investigative Dermatology*, 133: 783-92.
- Rodero, M.P., Licata, F., Poupel, L., Hamon, P., Khosrotehrani, K., Combadiere, C., Boissonnas, A., 2014, In Vivo Imaging Reveals a Pioneer Wave of Monocyte Recruitment into Mouse Skin Wounds, *Public Library of Science One*, 9(10): e108212-20.
- Rohani, M.G., McMahan, R.S., Razumova, M.V., Hertz, A.L., Cieslewicz, M., Pun, S.H., Regnier, M., Wang, Y., Birkland, T.P., Parks, W.C., 2015, MMP-10 Regulates Collagenolytic Activity of Alternatively Activated Resident Macrophages, *Journal of Investigative Dermatology*, 135(10): 2377-84.
- Romano Di Peppe, S., Mangoni, A., Zambruno, G., Spinetti, G., Melillo, G., Napolitano, M., Capogrossi, M.C., 2002, Adenovirus-mediated VEGF₁₆₅ gene transfer enhances wound healing by promoting angiogenesis in CD1 diabetic mice, *Gene Therapy*, 9(19): 1271-7.
- Rossiter, H., Barresi, C., Pammer, J., 2004, Loss of Vascular Endothelial Growth Factor A Activity in Murine Epidermal Keratinocytes Delays Wound Healing and Inhibits Tumor Formation, *Cancer Research*, 64(10): 3508-16.
- Sabiston, D.C., 1995, *Sabiston Buku Ajar Bedah*, Penerbit Buku Kedokteran EGC, Jakarta, 364-84.
- Salem, A., Assaf, M., Helmy, A., Nofal, A., Ibrahim, S., Eldeeb, F., Youssef, C., 2009, Role of vascular endothelial growth factor in keloids: a clinicopathologic study, *International Journal of Dermatology*, 48(10): 1071-7.
- Samokhvalov, I.M., 2014, Deconvoluting the ontogeny of hematopoietic stem cells, *Cellular and Molecular Life Sciences*, 71(6): 957-78.
- Saporito, F., Sandri, G., Bonferoni, M.C., Rossi, S., Boselli, C., Cornaglia, A.I., Mannucci, B., Grisoli, P., Vigani, B., Ferrari, F., 2017, Essential oil-loaded lipid

nanoparticles for wound healing, *International Journal of Nanomedicine*, 13: 175-86.

Sasikala, L., Dhurai, B., 2018, Preparation and Analysis of Chitosan-Honey Films for Wound Dressing Application, *World Academy of Science, Engineering and Technology International Journal of Materials and Textile Engineering*, 12(2): 54.

Scagnelli, A.M., 2016, Therapeutic review: Manuka honey, *Journal of Exotic Pet Medicine*, 25(2): 168-71.

Schultz, G.S., Wysocki, A., 2009, Interactions between extracellular matrix and growth factors in wound healing, *Wound Repair and Regeneration*, 17(2): 153-62.

Schulz, C., Perdiguero, E.G., Chorro, L., Szabo-Rogers, H., Cagnard, N., Kierdorf, K., Prinz, M., Wu, B., Jacobsen, S.E., Pollard, J.W., Frampton, J., Liu, K.J., Geissmann, F., 2012, A Lineage of Myeloid Cells Independent of Myb and Hematopoietic Stem Cells, *Science*, 336(6077): 86-90.

Seaman, S., 2002, Dressing Selection in Chronic Wound Management, *Journal of the American Podiatric Medical Association*, 92(1): 24-33.

Seitz, O., Schurmann, C., Pfeilschifter, J., Frank, S., Sader, R., 2012, Identification of the Fra-1 transcription factor in healing skin flaps transplants: A potential role as a negative regulator of VEGF release from keratinocytes, *Journal of Cranio-Maxillo-facial Surgery*, 40(4): 379-86.

Seki, E., de Minicis, S., Inokuchi, S., Taura, K., Miyai, K., van Rooijen, N., Schwabe, R.F., Brenner, D.A., 2009, CCR2 promotes hepatic fibrosis in mice, *Hepatology*, 50(1): 185-97.

Sen, C.K., Khanna, S., Babior, B.M., Hunt, T.K., Ellison, E.C., Roy, S., 2002, Oxidant-induced Vascular Endothelial Growth Factor Expression in Human Keratinocytes and Cutaneous Wound Healing, *The Journal of Biological Chemistry*, 277(36): 33284-90.

Senger, D.R., Galli, S.J., Dvorak, A.M., Perruzzi, C.A., Harvey, V.S., Dvorak, H.F., 1983, Tumor Cells Secrete a Vascular Permeability Factor that Promotes Accumulation of Ascites Fluid, *Science*, 219: 983-5.

Shah, D.U., Vollrath, F., Porter, D., 2015, Silk cocoons as natural macro-balloon fillers in novel polyurethane-based syntactic foams, *Polymer*, 56: 93-101.

Shibuya, M., 2013, Vascular endothelial growth factor and its receptor system: physiological functions in angiogenesis and pathological roles in various diseases, *Journal of Biochemistry*, 153(1): 13-9.

Shiota, N., Nishikori, Y., Kakizoe, E., 2010, Pathophysiological Role of Skin Mast Cells in Wound Healing after Scald Injury: Study with Mast Cell-Deficient W/W^V Mice, *International Archives of Allergy and Immunology*, 151(1): 80-8.

Sindrilaru, A., Peters, T., Schymeinsky, J. Oreshkova, T., Wang, H., Gompf, A., Mannella, F., Wlaschek, M., Sunderkötter, C., Rudolph, K.L., Walzog, B., Bustelo, X.R., Fischer, K.D., Scharffetter-Kochanek, K., 2009, Wound healing defect of Vav3^{-/-} mice due to impaired β_2 -integrin-dependent macrophage phagocytosis of apoptotic neutrophils, *Blood*, 113(21): 5266-76.

Sirois, M., 2005, *Laboratory Animal Medicine: Principles and Procedures*, Mosby Inc., United States of America, 43-5.

Smith, J.B., Mangkoewidjojo, S., 1988, *Pemeliharaan, Pembiakan, dan Penggunaan Hewan Percobaan di Daerah Tropis*, Penerbit Universitas Indonesia (UI-Press), Jakarta, 37-57.

Soker, S., Miao, H.Q., Nomi, M., Takashima, S., Klagsbrun, M., 2002, VEGF₁₆₅ Mediates Formation of Complexes Containing VEGFR-2 and Neuropilin-1 That Enhance VEGF₁₆₅-Receptor Binding, *Journal of Cellular Biochemistry*, 85(2): 357-68.

Sorg, H., Tilkorn, D.J., Hager, S., Hauser, J., Mirastschijski, U., 2017, Skin Wound Healing: An Update on the Current Knowledge and Concepts, *European Surgical Research*, 58(1-2): 81-94.

Stallmeyer, B., Pfeilschifter, J., Frank, S., 2001, Systemically and topically supplemented leptin fails to reconstitute a normal angiogenic response during skin repair in diabetic ob/ob mice. *Diabetologia*, 44(4): 471-9.

Stockmann, C., Kirmse, S., Helfrich, I., Weidemann, A., Takeda, N., Doedens, A., Johnson, R.S., 2011, A Wound Size-dependent Effect of Myeloid Cell-derived Vascular Endothelial Growth Factor on Wound Healing, *Journal of Investigative Dermatology*, 131(3): 797-801.

- Suganya, S., Venugopal, J., Ramakrishna, S., Lakshmi, B.S., Dev, V.R., 2014, Naturally derived biofunctional nanofibrous scaffold for skin tissue regeneration, *International Journal of Biological Macromolecules*, 68: 135-43.
- Sunderkotter, C., Steinbrink, K., Goebeler, M., Bhardwaj, R., Sorg, C., 1994, Macrophages and angiogenesis, *Journal of Leukocyte Biology*, 55(3): 410-22.
- Sussman, C., Bates-Jensen, B., 2007, *Wound Care A Collaborative Practice Manual for Health Professional*, Lippincott Williams & Wilkins, Philadelphia, 293-6.
- Swenty, C.F., 2016, Principles to Guide Your Dressing Choice, *The Journal for Nurse Practitioners*, 12(3): 125-7.
- Taub, P.J., Marmur, J.D., Zhang, W.X., Senderoff, D., Nhat, P.D., Phelps, R., Urken, M.L., Silver, L., Weinberg, H., 1998, Locally Administered Vascular Endothelial Growth Factor cDNA Increases Survival of Ischemic Experimental Skin Flaps, *Plastic and Reconstructive Surgery*, 102(6): 2033-9.
- Terada, S., Sasaki, M., Yanagihara, K., Yamada, H., 2005, Preparation of silk protein sericin as mitogenic factor for better mammalian cell culture, *Journal of Bioscience and Bioengineering*, 100(6): 667-71.
- Traversa, B., Sussman, G., 2001, The role of growth factors, cytokines and proteases in wound management, *Primary Intention*, 9(4): 161-7.
- Van der Veer, W.M., Niessen, F.B., Ferreira, J.A., Zwiers, P.J., de Jong, E.H., Middelkoop, E., Molema, G., 2011, Time course of the angiogenic response during normotrophic and hypertrophic scar formation in humans, *Wound Repair and Regeneration*, 19(3): 292-301.
- Van Koppen, C.J., Hartman, R.W., 2015, Advances in the treatment of chronic wounds: a patent review, *Expert Opinion on Therapeutic Patents*, 25(8): 931-7.
- Verheul, H.M.W., Hoekman, K., Luykx-de Bakker, S.A., Eekman, C.A., Folman, C.C., Broxterman, H.J.G., Pinedo, H.M., 1997, Platelet: Transporter of Vascular Endothelial Growth Factor, *Clinical Cancer Research*, 3: 2187-90.
- Verheul, H.M.W., Jorna, A.S., Hoekman, K., Broxterman, H.J., Gebbink, M.F.B.G., Pinedo, H.M., 2000, Vascular endothelial growth factor-stimulated endothelial cells promote adhesion and activation of platelets, *Blood*, 96: 4216-21.
- Veves, A., Sheehan, P., Pham, H.T., 2002, A Randomized, Controlled Trial of Promogran (a Collagen/Oxidized Regenerated Cellulose Dressing) vs Standard

Treatment in the Management of Diabetic Foot Ulcers, *Archives of Surgery*, 137(7): 822-7.

Vidinsky, B., Gal, P., Toporcer, T., Longauer, F., Lenhardt, L., Bobrov, N., Sabo, J., 2006, Histological Study of the First Seven Days of Skin Wound Healing in Rats. *Acta Veterinaria Brno*, 75: 197-202.

Vollrath, F., Porter, D., 2009, Silks as ancient models for modern polymers, *Polymer*, 50(24): 5623-32.

Vranckx, J.J., Yao, F., Petrie, N., Augustinova, H., Hoeller, D., Visovatti, S., Slama, J., Eriksson, E., 2005, In vivo gene delivery of Ad-VEGF₁₂₁ to full-thickness wounds in aged pigs results in high levels of VEGF expression but not in accelerated healing, *Wound Repair and Regeneration*, 13(1): 51-60.

Vyas, K.S., Vasconez, H.C., 2014, Wound Healing: Biologics, Skin Substitutes, Biomembranes, and Scaffolds, *Healthcare*, 2(3): 356-400.

Wang, J., Chen, H., Shankowsky, H.A., Scott, P.G., Tredget, E.E., 2008, Improved Scar in Postburn Patients Following Interferon- α 2b Treatment Is Associated with Decreased Angiogenesis Mediated by Vascular Endothelial Cell Growth Factor, *Journal of Interferon & Cytokine Research*, 28(7): 423-34.

Wang, M., Jin, H.J., Kaplan, D.L., Rutledge, G.C., 2004, Mechanical Properties of Electrospun Silk Fibers, *Macromolecules*, 37(18): 6856-64.

Wang, Q., Zhu, G., Cao, X., Dong, J., Song, F., Niu, Y., 2017, Blocking AGE-RAGE Signaling Improved Functional Disorders of Macrophages in Diabetic Wound, *Journal Diabetes Research*, 1428537-47.

Wang, X.T., Avanessian, B., Ma, Q., Durfee, H., Tang, Y.Q., Liu, P.Y., 2011, Enhancement of flap survival and changes in angiogenic gene expression after AAV2-mediated VEGF gene transfer to rat ischemic flaps, *Wound Repair and Regeneration*, 19(4): 498-504.

Webster, J., Scuffham, P., Stankiewicz, M., Chaboyer, W.P., 2015, Negative pressure wound therapy for skin grafts and surgical wounds healing by primary intention, *Cochrane Database of Systematic Reviews*, 4(10): 1-52.

Wilgus, T.A., Ferreira, A.M., Oberyshyn, T.M., Bergdall, V.K., DiPietro, L.A., 2008, Regulation of scar formation by vascular endothelial growth factor, *Laboratory Investigation*, 88(6): 579-90.

- Wilgus, T.A., Matthies, A.M., Radek, K.A., Dovi, J.V., Burns, A.L., Shankar, R., DiPietro, L.A., 2005, Novel Function for Vascular Endothelial Growth Factor Receptor-1 on Epidermal Keratinocytes, *The American Journal of Pathology*, 167(5): 1257-66.
- Wilgus, T.A., Roy, S., McDaniel, J.C., 2013, Neutrophils and Wound Repair: Positive Actions and Negative Reactions, *Advances in Wound Care*, 2, 379–388.
- Willenborg, S., Eming, S.A., 2014, Macrophages - sensors and effectors coordinating skin damage and repair, *Journal der Deutschen Dermatologischen Gesellschaft*, 12(3): 214-21.
- Willenborg, S., Lucas, T., van Loo, G., Knipper, J.A., Krieg, T., Haase, I., Brachvogel, B., Hammerschmidt, M., Nagy, A., Ferrara, N., Pasparakis, M., Eming, S.A., 2012, CCR2 recruits an inflammatory macrophage subpopulation critical for angiogenesis in tissue repair, *Blood*, 120(3): 613-25.
- Winter, G.D., 1962, Formation of the Scab and the Rate of Epithelization of Superficial Wounds in the Skin of the Young Domestic Pig, *Nature*, 193: 293-4.
- Wong, V.W., Sorkin, M., Glotzbach, J.P., Longaker, M.T., Gurtner, G.C., 2011, Surgical Approaches to Create Murine Models of Human Wound Healing, *Journal of Biomedicine & Biotechnology*, 2011: 1-8.
- Wu, C., Zhao, Y., Xiao, X., Fan, Y., Kloc, M., Liu, W., Ghobrial, R.M., Lan, P., He, X., Li, X.C., 2016, Graft-Infiltrating Macrophages Adopt an M2 Phenotype and Are Inhibited by Purinergic Reseptor P2x7 Antagonist in Chronic Rejection, *American Journal of Transplantation*, 16(9): 2563-73.
- Wu, W.S., Wang, F.S., Yang, K.D., Huang, C.C., Kuo, Y.R., 2006, Dexamethasone Induction of Keloid Regression through Effective Suppression of VEGF Expression and Keloid Fibroblast Proliferation, *Journal of Investigative Dermatology*, 126(6): 1264-71.
- Wu, Y., Zhang, Q., Ann, D.K., Akhondzadeh, A., Duong, H.S., Messadi, D.V., Le, A.D., 2004, Increased vascular endothelial growth factor may account for elevated level of plasminogen activator inhibitor-1 via activating ERK1/2 in keloid fibroblasts, *American Journal of Physiology. Cell physiology*, 286(4): C905-12.
- Wulff, B.C., Wilgus, T.A., 2013, Mast cell activity in the healing wound: more than meets the eye? *Experimental Dermatology*, 22(8): 507-10.

- Wynn, T.A., Vannella, K.M., 2016, Macrophages in tissue repair, regeneration, and fibrosis, *Immunity*, 44(3): 450-62.
- Xian, L.J., Chowdhury, S.R., Saim, A.B., Idrus, R.B.H., 2014, Concentration-dependent effect of platelet-rich plasma on keratinocyte and fibroblast wound healing, *Cytotherapy*, 17(3): 293-300.
- Xue, M., Jackson, C.J., 2015, Extracellular Matrix Reorganization During Wound Healing and Its Impact on Abnormal Scarring, *Advances in Wound Care (New Rochelle)*, 4(3): 119-36.
- Yamamoto, N., Kiyosawa, T., 2014, Histological effects of occlusive dressing on healing of incisional skin wounds. *International Wound Journal*, 11: 616-21.
- Yanez, D.A., Lacher, R.K., Vidyarthi, A., Colegio, O.R., 2017, The Role of Macrophages in Skin Homeostasis, *Pflugers Archiv: European Journal of Physiology*, 469(3-4): 455-63.
- Yano, K., Brown, L.F., Detmar, M., 2001, Control of hair growth and follicle size by VEGF-mediated angiogenesis, *The Journal of Clinical Investigation*, 107(4): 409-17.
- Yao, K., Bae, L., Yew, W.P., 2013, Post-operative wound management, *Australian Family Physician*, 42(12): 867-70.
- Yates, C.C., Whaley, D., Babu, R., Zhang, J., Krishna, P., Beckman, E., Pasculle, A.W., Wells, A., 2007, The effect of multifunctional polymer-based gels on wound healing in full thickness bacteria-contaminated mouse skin wound models, *Biomaterials*, 28(27): 3977-86.
- Ye, S., Jiang, L., Wu, J., Su, C., Huang, C., Liu, X., Shao, W., 2018, Flexible Amoxicillin Grafted Bacterial Cellulose Sponges for Wound Dressing: In Vitro and In Vivo Evaluation, *American Chemical Society Applied Materials & Interfaces*, 10(6): 5862-70.
- Yu, K., Lu, F., Li, Q., Chen, H.L., Lu, B.T., Liu, J.W., Li, Z.Q., Dai, F.Y., Wu, D.Y., Lan, G.Q., 2017, In situ assembly of Ag nanoparticles (AgNPs) on porous silkworm cocoon-based wound film: enhanced antimicrobial and wound healing activity, *Scientific Reports*, 7: 2107-19.
- Yu, K., Lu, F., Li, Q., Zou, Y.N., Xiao, Y., Lu, B.T., Liu, J.W., Dai, F.Y., Wu, D.Y., Lan, G.Q., 2017, Accelerated wound-healing capabilities of a dressing fabricated from silkworm cocoon, *International Journal of Biological Macromolecules*, 102: 901-13.

Yunadir, 2008, *Buku Panduan Laboratorium Histopatologi*, Laboratorium Patologi Anatomi FK UGM, Yogyakarta, 1-10.

Zhang, J., Kaur, J., Rajkhowa, R., Li, J.L., Liu, X.Y., Wang, X.G., 2013, Mechanical properties and structure of silkworm cocoons: A comparative study of *Bombyx mori*, *Antheraea assamensis*, *Antheraea pernyi* and *Antheraea mylitta* silkworm cocoons, *Materials Science & Engineering: C-Materials for Biological Applications*, 33(6): 3206-13.

Zhu, K.Q., Engrav, L.H., Armendariz, R., Muangman, P., Klein, M.B., Carrougner, G.J., Deubner, H., Gibran, N.S., 2005, Changes in VEGF and nitric oxide after deep dermal injury in the female, red Duroc pig - further similarities between female, Duroc scar and human hypertrophic scar, *Burns*, 31(1): 5-10.

Zhu, Z., Ding, J., Ma, Z., Iwashina, T., Tredget, E.E., 2016, Systemic depletion of macrophages in the subacute phase of wound healing reduces hypertrophic scar formation, *Wound Repair and Regeneration*, 24(4): 644-56.

Zomer, H.D., Trentin, A.G., 2018, Skin wound healing in humans and mice: Challenges in translational research, *Journal of Dermatological Science*, 90: 3-12.