

REFERENCES

- Al-Ahmad, B. E., Kashmoola, M. A., Jabbar, O. A., Mokhtar, K. I., Mohamad, N., Rahim, R. A., & Shaban, M. N. (2020). Histopathological changes of the flaxseed extract on skin wound healing in diabetic rabbits. *Open Access Macedonian Journal of Medical Sciences*, 8(A), 881–892.
- Ansel, J.-L., Lupo, E., Mijouin, L., Guillot, S., Butaud, J.-F., Ho, R., ... Pichon, C. (2016). Biological Activity of Polynesian Calophyllum inophyllum Oil Extract on Human Skin Cells. *Planta Medica*, 82(11/12), 961–966.
- Apelqvist, J., Willy, C., Fagerdahl, A. M., Fraccalvieri, M., Malmsjö, M., Piaggesi, A., et al. (2017). Negative pressure wound therapy - overview, challenges and perspectives. *J. Wound Care*. 26:3.
- Bakker, K., Apelqvist, J., Lipsky, B. A., Van Netten, J. J., Schaper, N. C., & International Working Group on the Diabetic Foot (IWGDF). (2016). The 2015 IWGDF guidance documents on prevention and management of foot problems in diabetes: development of an evidence-based global consensus. *Diabetes/metabolism research and reviews*, 32, 2-6.
- Balakrishnan, B., Mohanty, M., Umashankar, P. R., & Jayakrishnan, A. (2005). Evaluation of an in situ forming hydrogel wound dressing based on oxidized alginate and gelatin. *Biomaterials*, 26(32), 6335-6342.
- Baneux, P. J., Garner, D., McIntyre, H. B., & Holshuh, H. J. (1986). Euthanasia of rabbits by intravenous administration of ketamine. *Journal of the American Veterinary Medical Association*, 189(9), 1038–1039.
- Barman, P.K., Koh, T.J. (2020). Macrophage Dysregulation and Impaired Skin Wound Healing in Diabetes. *Front. Cell Dev. Biol.* 8, 1–9.
- Blanco Parte, F. G., Santoso, S. P., Chou, C.-C., Verma, V., Wang, H.-T., Ismadji, S., & Cheng, K.-C. (2020). Current progress on the production, modification, and applications of bacterial cellulose. *Critical Reviews in Biotechnology*, 1–18.

- Braun, L., Kim, P. J., Margolis, D., Peters, E. J., & Lavery, L. A. (2014). What's new in the literature: an update of new research since the original WHS diabetic foot ulcer guidelines in 2006. *Wound Repair and Regeneration*, 22(5), 594-604.
- Boraschi, D., & Italiani, P. (2016). Model validity in nanoimmunosafety: Advantages and disadvantages of in vivo vs in vitro models, and human vs animal models. *Current Bionanotechnology (Discontinued)*, 2(2), 71-76.
- Brumberg, V., Astrelina, T., Malivanova, T., & Samoilov, A. (2021). Modern wound dressings: hydrogel dressings. *Biomedicines*, 9(9), 1235.
- Burgess, J. L., Wyant, W. A., Abdo Abujamra, B., Kirsner, R. S., & Jozic, I. (2021). Diabetic wound-healing science. *Medicina*, 57(10), 1072.
- Cassien, M., Mercier, A., Thétiot-Laurent, S., Culcasi, M., Ricquebourg, E., Asteian, A., ... & Pietri, S. (2021). Improving the antioxidant properties of Calophyllum inophyllum seed oil from french polynesia: Development and biological applications of resinous ethanol-soluble extracts. *Antioxidants*, 10(2), 199.
- Campos, N. S., Ovares, N. S., & Arens, C. M. (2020). Diabetes mellitus tipo I: retos para alcanzar un óptimo control glicémico. *Revista Médica Sinergia*, 5(09), 1-13.
- Chang, M., & Nguyen, T. T. (2021). Strategy for Treatment of Infected Diabetic Foot Ulcers. *Accounts of Chemical Research*, 54(5), 1080–1093.
- Chen, X., Zhai, D., Wang, B., Hao, S., Song, J., & Peng, Z. (2020). Hair keratin promotes wound healing in rats with combined radiation-wound injury. *Journal of Materials Science: Materials in Medicine*, 31(3).
- Colby, L. A., Nowland, M. H., & Kennedy, L. H. (2019). Clinical laboratory animal medicine: an introduction. John Wiley & Sons.
- Dekker, A. den, Davis, F. M., Kunkel, S. L., & Gallagher, K. A. (2018). Targeting epigenetic mechanisms in diabetic wound healing. *Translational Research*.

- de Amorim, J. D. P., da Silva Junior, C. J. G., de Medeiros, A. D. L. M., do Nascimento, H. A., Sarubbo, M., de Medeiros, T. P. M., ... & Sarubbo, L. A. (2022). Bacterial Cellulose as a Versatile Biomaterial for Wound Dressing Application. *Molecules*, 27(17), 5580.
- Donato, R. K., & Mija, A. (2019). Keratin associations with synthetic, biosynthetic and natural polymers: An extensive review. *Polymers*, 12(1), 32.
- Dwiyana, R. F., Yogyo, Y., Gondokaryono, S. P., Diana, I. A., Suwarsa, O., Ramali, L. M., ... Gunawan, H. (2019). Clinical efficacy of biocellulose, carboxymethyl cellulose and normal saline dressing in epidermolysis bullosa. *Journal of Wound Care*, 28(Sup10), S4–S9.
- Erdogan, S. S., Gur, T. F., Terzi, N. K., & Dogan, B. (2021). Evaluation of the cutaneous wound healing potential of tamanu oil in wounds induced in rats. *Journal of Wound Care*, 30(Sup9a), Vi-Vx.
- Everett, E., & Mathioudakis, N. (2018). Update on management of diabetic foot ulcers. *Annals of the New York Academy of Sciences*, 1411(1), 153–165.
- Fan, J., Chen, Y., Yan, H., Niimi, M., Wang, Y., & Liang, J. (2018). Principles and applications of rabbit models for atherosclerosis research. *Journal of atherosclerosis and thrombosis*, 25(3), 213-220.
- Fearing, B. V., & Van Dyke, M. E. (2014). In vitro response of macrophage polarization to a keratin biomaterial. *Acta Biomaterialia*, 10(7), 3136–3144.
- Feroz, S., Muhammad, N., Ratnayake, J., & Dias, G. (2020). Keratin-Based materials for biomedical applications. *Bioactive materials*, 5(3), 496-509.
- Furman, B. L. (2021). Streptozotocin-induced diabetic models in mice and rats. *Current Protocols*, 1(4), e78.
- Galicia-Garcia, U., Benito-Vicente, A., Jebari, S., Larrea-Sebal, A., Siddiqi, H., Uribe, K. B., ... & Martín, C. (2020). Pathophysiology of type 2 diabetes mellitus. *International journal of molecular sciences*, 21(17), 6275.
- Graham, M. L., Janecek, J. L., Kittredge, J. A., Hering, B. J., & Schuurman, H. J. (2011). The streptozotocin-induced diabetic nude mouse model: differences between animals from different sources. *Comparative medicine*, 61(4), 356-360.

- Glover, K., Stratakos, A. C., Varadi, A., & Lamprou, D. A. (2021). 3D scaffolds in the treatment of diabetic foot ulcers: New trends vs conventional approaches. *International Journal of Pharmaceutics*, 599, 120423.
- Hinz, B. (2016). The role of myofibroblasts in wound healing. *Current research in translational medicine*, 64(4), 171-177.
- Hinz, B., & Lagares, D. (2020). Evasion of apoptosis by myofibroblasts: a hallmark of fibrotic diseases. *Nature Reviews Rheumatology*, 16(1), 11-31.
- Hinz, B., Phan, S. H., Thannickal, V. J., Prunotto, M., Desmoulière, A., Varga, J., ... & Gabbiani, G. (2012). Recent developments in myofibroblast biology: paradigms for connective tissue remodeling. *The American journal of pathology*, 180(4), 1340-1355.
- Hsu, C. Y., Lin, S. C., Wu, Y. H., Hu, C. Y., Chen, Y. T., & Chen, Y. C. (2022). The Antimicrobial Effects of Bacterial Cellulose Produced by *Komagataeibacter intermedius* in Promoting Wound Healing in Diabetic Mice. *International Journal of Molecular Sciences*, 23(10), 5456.
- Junker, J. P., Kamel, R. A., Caterson, E. J., & Eriksson, E. (2013). Clinical impact upon wound healing and inflammation in moist, wet, and dry environments. *Advances in wound care*, 2(7), 348-356.
- Konop, M., Rybka, M., & Drapała, A. (2021). Keratin biomaterials in skin wound healing, an old player in modern medicine: a mini review. *Pharmaceutics*, 13(12), 2029.
- Landén, N. X., Li, D., & Ståhle, M. (2016). Transition from inflammation to proliferation: a critical step during wound healing. *Cellular and Molecular Life Sciences*, 73, 3861-3885.
- Li, W., Gao, F., Kan, J., Deng, J., Wang, B., & Hao, S. (2019). Synthesis and fabrication of a keratin-conjugated insulin hydrogel for the enhancement of wound healing. *Colloids and Surfaces B: Biointerfaces*, 175, 436–444.
- Li, Y., Wang, Y., Zhou, L., Liu, M., Liang, G., Yan, R., ... & He, W. (2018). Vγ4 T cells inhibit the pro-healing functions of dendritic epidermal T cells to delay skin wound closure through IL-17A. *Frontiers in Immunology*, 9, 240.

- Lin, S.-P., Huang, Y.-H., Hsu, K.-D., Lai, Y.-J., Chen, Y.-K., & Cheng, K.-C. (2016). Isolation and identification of cellulose-producing strain *Komagataeibacter intermedius* from fermented fruit juice. *Carbohydrate Polymers*, 151, 827–833.
- Lipsky, B. A., Berendt, A. R., Cornia, P. B., Pile, J. C., Peters, E. J., Armstrong, D. G., ... & Senneville, E. (2012). 2012 Infectious Diseases Society of America clinical practice guideline for the diagnosis and treatment of diabetic foot infections. *Clinical infectious diseases*, 54(12), e132-e173.
- Maheswary, T., Nurul, A. A., & Fauzi, M. B. (2021). The insights of microbes' roles in wound healing: A comprehensive review. *Pharmaceutics*, 13(7), 981.
- Masson-Meyers, D. S., Andrade, T. A., Caetano, G. F., Guimaraes, F. R., Leite, M. N., Leite, S. N., & Frade, M. A. C. (2020). Experimental models and methods for cutaneous wound healing assessment. *International journal of experimental pathology*, 101(1-2), 21-37.
- Megallaa, M. H., Ismail, A. A., Zeitoun, M. H., & Khalifa, M. S. (2019). Association of diabetic foot ulcers with chronic vascular diabetic complications in patients with type 2 diabetes. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 13(2), 1287-1292.
- Metcalf, D. G., & Bowler, P. G. (2013). Biofilm delays wound healing: a review of the evidence. *Burns & Trauma*, 1(1), 2321-3868.
- Moniri, M., Boroumand Moghaddam, A., Azizi, S., Abdul Rahim, R., Bin Ariff, A., Zuhainis Saad, W., ... & Mohamad, R. (2017). Production and status of bacterial cellulose in biomedical engineering. *Nanomaterials*, 7(9), 257.
- Mouri, M., & Badireddy, M. (2021). Hyperglycemia. In StatPearls [Internet]. StatPearls Publishing.
- Ng, T. L., Rohac, R., Mitchell, A. J., Boal, A. K., & Balskus, E. P. (2019). An N-nitrosating metalloenzyme constructs the pharmacophore of streptozotocin. *Nature*, 566(7742), 94–99.
doi:10.1038/s41586-019-0894-z
- Nguyen, V. L., Truong, C. T., Nguyen, B. C. Q., Vo, T. N. V., Dao, T. T., Nguyen, V. D., ... & Bui, C. B. (2017). Anti-inflammatory and wound healing activities of calophyllolide isolated from *Calophyllum inophyllum* Linn. *PloS one*, 12(10), e0185674.

- Oliver, T. I., & Mutluoglu, M. (2019). Diabetic foot ulcer.
- Pastar, I., Nusbaum, A. G., Gil, J., Patel, S. B., Chen, J., Valdes, J., ... & Davis, S. C. (2013). Interactions of methicillin resistant *Staphylococcus aureus* USA300 and *Pseudomonas aeruginosa* in polymicrobial wound infection. *PLoS one*, 8(2), e56846.
- Pechter, P. M., Gil, J., Valdes, J., Tomic-Canic, M., Pastar, I., Stojadinovic, O., ... Davis, S. C. (2012). Keratin dressings speed epithelialization of deep partial-thickness wounds. *Wound Repair and Regeneration*, 20(2), 236–242. doi:10.1111/j.1524-475x.2012.00768.x
- Perren, S., Gatt, A., Papanas, N., & Formosa, C. (2018). Hyperbaric oxygen therapy in ischaemic foot ulcers in type 2 diabetes: a clinical trial. *The open cardiovascular medicine journal*, 12, 80.
- Petkovic, M., Sørensen, A. E., Leal, E. C., Carvalho, E., & Dalgaard, L. T. (2020). Mechanistic actions of microRNAs in diabetic wound healing. *Cells*, 9(10), 2228.
- Pouget, C., Dunyach-Remy, C., Pantel, A., Boutet-Dubois, A., Schuldiner, S., Sotto, A., ... & Loubet, P. (2021). Alternative approaches for the management of diabetic foot ulcers. *Frontiers in Microbiology*, 2877.
- Portela, R., Leal, C. R., Almeida, P. L., & Sobral, R. G. (2019). Bacterial cellulose: a versatile biopolymer for wound dressing applications. *Microbial biotechnology*, 12(4), 586-610.
- Pribowo, A., Girish, J., Gustiananda, M., Nandhira, R. G., & Hartrianti, P. (2021). Potential of Tamanu (*Calophyllum inophyllum*) Oil for Atopic Dermatitis Treatment. *Evidence-Based Complementary and Alternative Medicine*, 2021.
- Qiu, K., & Netravali, A. N. (2014). A review of fabrication and applications of bacterial cellulose based nanocomposites. *Polymer Reviews*, 54(4), 598-626.
- Raharivelomanana, P., Ansel, J. L., Lupo, E., Mijouin, L., Guillot, S., Butaud, J. F., ... & Pichon, C. (2018). Tamanu oil and skin active properties: from traditional to modern cosmetic uses. *Oilseeds and Fats Crops and Lipids*, 25(5).
- Raziyeva, K., Kim, Y., Zharkinbekov, Z., Kassymbek, K., Jimi, S., & Saparov, A. (2021). Immunology of acute and chronic wound healing. *Biomolecules*, 11(5), 700.

Rezvani Ghomi, E., Khalili, S., Nouri Khorasani, S., Esmaeely Neisiany, R., & Ramakrishna, S. (2019).

Wound dressings: Current advances and future directions. *Journal of Applied Polymer Science*, 136(27), 47738.

Rousselle, P., Braye, F., & Dayan, G. (2018). Re-epithelialization of adult skin wounds: Cellular mechanisms and therapeutic strategies. *Advanced Drug Delivery Reviews*. doi:10.1016/j.addr.2018.06.019

Saberzadeh-Ardestani, B., Karamzadeh, R., Basiri, M., Hajizadeh-Saffar, E., Farhadi, A., Shapiro, A. J., ... & Baharvand, H. (2018). Type 1 diabetes mellitus: cellular and molecular pathophysiology at a glance. *Cell Journal (Yakhteh)*, 20(3), 294.

Saghahazrati, S., Ayatollahi, S. A., Kobarfard, F., & Zang, B. M. (2020). Attenuation of inflammation in streptozotocin-induced diabetic rabbits by Matricaria chamomilla oil: A focus on targeting NF- κ B and NLRP3 signaling pathways. *Chinese Herbal Medicines*, 12(1), 73-78. DOI: 10.1016/j.chmed.2019.12.003

Saleem Mir, M., Maqbool Darzi, M., Khalil Baba, O., Khan, H. M., Kamil, S. A., Sofi, A. H., & Wani, S. A. (2015). Streptozotocin Induced Acute Clinical Effects in Rabbits (*Oryctolagus cuniculus*). *Iranian journal of pathology*, 10(3), 206–213.

Sameer, A., Banday, M., & Nissar, S. (2020). Pathophysiology of diabetes: An overview. *Avicenna Journal of Medicine*, 10(4).

Sami, D. G., Heiba, H. H., & Abdellatif, A. (2018). Wound Healing Models; A Systematic Review of Animal and Non-Animal Models. *Wound Medicine*.

Santoso, S. P., Chou, C.-C., Lin, S.-P., Soetaredjo, F. E., Ismadji, S., Hsieh, C.-W., & Cheng, K. C. (2020). Enhanced production of bacterial cellulose by *Komactobacter intermedius* using statistical modeling. *Cellulose*.

Schultz, G. S., Chin, G. A., Moldawer, L., & Diegelmann, R. F. (2011). 23 principles of wound healing. *Mechanisms of vascular disease: a reference book for vascular specialists*, 423.

- Silva, J. M., Pereira, C. V., Mano, F., Silva, E., Castro, V. I., Sa-Nogueira, I., ... & Duarte, A. R. C. (2019). Therapeutic role of deep eutectic solvents based on menthol and saturated fatty acids on wound healing. *ACS Applied Bio Materials*, 2(10), 4346-4355.
- Su, C. Y., Liu, T. Y., Wang, H. V., & Yang, W. C. (2023). Histopathological Study on Collagen in Full-Thickness Wound Healing in Fraser's Dolphins (*Lagenodelphis hosei*). *Animals*, 13(10), 1681.
- Sultan, S., Siqueira, G., Zimmermann, T., & Mathew, A. P. (2017). 3D printing of nano-cellulosic biomaterials for medical applications. *Current Opinion in Biomedical Engineering*, 2, 29-34.
- Tomic-Canic, M., Burgess, J. L., O'Neill, K. E., Strbo, N., & Pastar, I. (2020). Skin microbiota and its interplay with wound healing. *American journal of clinical dermatology*, 21(Suppl 1), 36-43.
- Tran, C. D., Prosenc, F., Franko, M., & Benzi, G. (2016). Synthesis, structure and antimicrobial property of green composites from cellulose, wool, hair and chicken feather. *Carbohydrate Polymers*, 151, 1269-1276.
- Wallace, H. A., Basehore, B. M., & Zito, P. M. (2017). Wound healing phases.
- Wan, R., Weissman, J. P., Grundman, K., Lang, L., Grybowski, D. J., & Galiano, R. D. (2021). Diabetic wound healing: The impact of diabetes on myofibroblast activity and its potential therapeutic treatments. *Wound Repair and Regeneration*, 29(4), 573-581.
- Waters, M., Vandevord, P., & Van Dyke, M. (2018). Keratin biomaterials augment anti-inflammatory macrophage phenotype in vitro. *Acta Biomaterialia*, 66, 213–223.
- Wilkinson, H. N., & Hardman, M. J. (2020). Wound healing: Cellular mechanisms and pathological outcomes. *Open biology*, 10(9), 200223.
- Wu, Y., Fu, R., Lei, C., Deng, Y., Lou, W., Wang, L., ... & Gao, J. (2021). Estimates of Type 2 Diabetes Mellitus Burden Attributable to Particulate Matter Pollution and Its 30-Year Change Patterns: A Systematic Analysis of Data From the Global Burden of Disease Study 2019. *Frontiers in Endocrinology*, 12, 689079.

Zhao, G., Usui, M. L., Underwood, R. A., Singh, P. K., James, G. A., Stewart, P. S., ... & Olerud, J. E. (2012). Time course study of delayed wound healing in a biofilm-challenged diabetic mouse model. *Wound Repair and Regeneration*, 20(3), 342-352.

Zhu, B. T. (2022). Pathogenic Mechanism of Autoimmune Diabetes Mellitus in Humans: Potential Role of Streptozotocin-Induced Selective Autoimmunity against Human Islet β -Cells. *Cells*, 11(3), 492.