REFERENCES

American Diabetes Association (2007). Nutrition Recommendations and Interventions for Diabetes: A position statement of the American Diabetes Association. *Diabetes Care*, 31(Supplement 1), pp.61-78.

American Diabetes Association (2013). Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care*, 37(Supplement_1), pp.81-90.

American Diabetes Association (2018). *Standards of Medical Care in Diabetes - 2018*. [online] Available at: http://care.diabetesjournals.org/content/diacare/41/Supplement_1/S1.full.pdf [Accessed 5 Feb. 2018]

Bajada, S., Mazakova, I., Richardson, J. and Ashammakhi, N. (2008). Updates on stem cells and their applications in regenerative medicine. *Journal of Tissue Engineering and Regenerative Medicine*, 2(4), pp.169-183.

Branitamahisi, B. (2017). *Effect Of Mesenchymal Stem Cell-Conditioned Medium To Phosphorylated Tyrosine Expression Of Insulin Receptor Substrate 1 (Irs-1tyr612) In Type 2 Diabetic Rat Models*. Graduate thesis. Gadjah Mada University.

Chandra, V., G, S., Phadnis, S., Nair, P. and Bhonde, R. (2009). Generation of Pancreatic Hormone-Expressing Islet-Like Cell Aggregates from Murine Adipose Tissue-Derived Stem Cells. *Stem Cells*, 27(8), pp.1941-1953.

Choi, S., Tucker, D., Gross, D., Easton, R., DiPilato, L., Dean, A., Monks, B. & Birnbaum, M. (2010). Insulin Regulates Adipocyte Lipolysis via an Akt-Independent Signaling Pathway. *Molecular and Cellular Biology*, 30(21), pp.5009-5020.

Davey, G., Patil, S., O'Loughlin, A. & O'Brien, T. (2014). Mesenchymal Stem Cell-Based Treatment for Microvascular and Secondary Complications of Diabetes Mellitus. *Frontiers in Endocrinology*, 5.

Diabetes.co.uk (2018). *Unexplained Weight Loss - Reasons, Symptoms & Causes*. [online] Available at: https://www.diabetes.co.uk/symptoms/unexplained-weight-loss.html [Accessed 5 Feb. 2018].

Easton, V. & McColl, J. (2018). Statistics Glossary - sampling. [online] Stats.gla.ac.uk. Available at: http://www.stats.gla.ac.uk/steps/glossary/sampling.html [Accessed 20 May 2018].

Etuk, E.U. (2010). Animals Models for Studying Diabetes Mellitus, *Agric. Biol. J. N. Am*., 1(2):130-134.

Flint, A. and Arslanian, S. (2011). Treatment of Type 2 Diabetes in Youth. *Diabetes Care*, 34(Supplement_2), pp.177-183.

Fowler, M. (2007). Diabetes Treatment, Part 2: Oral Agents for Glycemic Management. Clinical Diabetes, 25(4), pp.131-134.

Fowler, M. (2011). Microvascular and Macrovascular Complications of Diabetes. *Clinical Diabetes*, 29(3), pp.116-122.

Fong, D., Aiello, L., Ferris, F. & Klein, R. (2004). Diabetic Retinopathy. *Diabetes Care*, 27(10), pp.2540-2553.

Ghasemi, A., Khalifi, S., Jedi, S. (2014). Streptozotocin-Nicotinamide-Induced Rat Model of Type 2 Diabetes (Review). *Acta Physiol Hung*, 101(4), pp.408–420.

Inayati, N.S. (2017). *The Effect Of Mesenchymal Stem Cell-Conditioned Medium On Glucose Transporter 4 (GLUT 4) In Type 2 Diabetic Rat Models*. Graduate Thesis: Gadjah Mada University.

International Diabetes Federation (2017). IDF Diabetes Atlas, 8th edn. Brussels, Belgium: International Diabetes Federation. Available at http://www.diabetesatlas.org [Accessed 29 Jan. 2018].

Jiang, R., Han, Z., Zhuo, G., Qu, X., Li, X., Wang, X., Shao, Y., Yang, S. & Han, Z. (2011). Transplantation of placenta-derived mesenchymal stem cells in type 2 diabetes: a pilot study. *Frontiers of Medicine*, 5(1), pp.94-100.

Kahn, S., Cooper, M. and Del Prato, S. (2014). Pathophysiology and treatment of type 2 diabetes: perspectives on the past, present, and future. *Lancet 2014*, 383(9922), pp.1068–1083.

Kahn, S. (2003). The relative contributions of insulin resistance and beta-cell dysfunction to the pathophysiology of Type 2 diabetes. *Diabetologia*, 46(1), pp.3-19.

Kong, D., Zhuang, X., Wang, D., Qu, H., Jiang, Y., Li, X., Wu, W., Xiao, J., Liu, X., Liu, J., Li, A., Wang, J., Dou, A., Wang, Y., Sun, J., Lv, H., Zhang, G., Zhang, X., Chen, S., Ni, Y., & Zheng, C. (2014). Umbilical Cord Mesenchymal Stem Cell Transfusion Ameliorated Hyperglycemia In Patients With Type 2 Diabetes Mellitus. *Clin Lab*, 60(12), pp.1969-1976.

Kopelman, P. (2000). Obesity as a medical problem. *Nature*, 404(6778), pp.635-643.

Kusuma, I.A.P., (2017). *The Effect Of Mesenchymal Stem Cell-Conditioned Medium On Peroxisome Proliferator Activated Receptor- Γ (Ppar-Γ) Gene Expression In Type 2 Diabetic Rat Models*. Graduate Thesis: Gadjah Mada University.

Laqif, A. (2015). A study of *Mesenchymal Stem Cell-Conditioned Medium* Amniotic membrane in Premature Ovarian failure (Study on Sprague-Dawley rat models), Dissertation: Gadjah Mada University.

Lee, M., Choi, S., Ha, E., An, S., Kim, T., Han, S., Kim, H., Kim, D., Kang, Y. & Lee, K. (2012). Fibroblast growth factor-21 protects human skeletal muscle myotubes from palmitate-induced insulin resistance by inhibiting stress kinase and NF-κB. *Metabolism*, 61(8), pp.1142-1151.

Lee K O, Gan S U, Calne R Y (2012) Stem cell therapy for diabetes. *Indian Journal of Endocrinology and Metabolism*, 16(8), pp.227-229.

Mathebula, S. (2015). Polyol pathway: A possible mechanism of diabetes complications in the eye. *African Vision and Eye Health*, 74(1), pp.1-5.

Menon, R. & Sperling, M. (1996). Insulin As A Growth Factor. *Endocrinology and Metabolism Clinics of North America*, 25(3), pp.633-647.

Miralles, F., Battelino, T., Czernichow, P. & Scharfmann, R. (2018). TGF-β Plays a Key Role in Morphogenesis of the Pancreatic Islets of Langerhans by Controlling the Activity of the Matrix Metalloproteinase MMP-2. *The Journal of Cell Biology, 143(3),* pp. 827-836.

MSD Manual Professional Edition (2018). *Diabetes Mellitus (DM) - Endocrine and Metabolic Disorders - MSD Manual Professional Edition*. [online] Available at: https://www.msdmanuals.com/professional/endocrine-and-metabolic-disorders/diabetes-mellitus-and-disorders-of-carbohydrate-metabolism/diabetes-mellitus-dm [Accessed 19 Nov. 2018].

National Health Service UK (2018). *Type 2 Diabetes Mellitus Treatment*. [online] Available at: https://www.nhs.uk/conditions/type-2-diabetes/treatment/ [Accessed 29 Jan. 2018].

Pratley, R. (2013). The Early Treatment of Type 2 Diabetes. *The American Journal of Medicine*, 126(9), pp.2-9.

Perry, BD., Caldow, MK., Brennan-Speranza, TC., Sbaraglia, M., Jerums, G., Garnham, A., Wong, C., Levinger, Pazit, Asrar Ul Haq, M., Hare, DL., Price, SR & Levinger, I. (2016). Muscle atrophy in patients with Type 2 Diabetes Mellitus: roles of inflammatory pathways, physical activity and exercise. *Exercise immunology review*, 22, pp.94-109.

Poitout, V., Amyot, J., Semache, M., Zarrouki, B., Hagman, D. & Fontés, G. (2010). Glucolipotoxicity of the pancreatic beta cell. Biochimica et Biophysica Acta (BBA) - Molecular and Cell Biology of Lipids, 1801(3), pp.289-298.

Russell-Jones, D. & Khan, R. (2007). Insulin-associated weight gain in diabetes – causes, effects and coping strategies. Diabetes, Obesity and Metabolism, 9(6), pp.799-812.

Sinaiko, A., Donahue, R., Jacobs, D. & Prineas, R. (1999). Relation of Weight and Rate of Increase in Weight During Childhood and Adolescence to Body Size, Blood Pressure, Fasting Insulin, and Lipids in Young Adults. *Circulation*, 99(11), pp.1471-1476.

Soria B, Roche E, Berna G, Leon-Quinto T, Reig JA, Martin E. Insulin-secreting cell derived from embryonic stem cells normalize glycemia in streptozotocin-induced diabetic □mice. *Diabetes*, 49(2), pp.157-162. □

Suarez-Pinzon, W., Yan, Y., Power, R., Brand, S. & Rabinovitch, A. (2005). Combination Therapy With Epidermal Growth Factor and Gastrin Increases-Cell Mass and Reverses Hyperglycemia in Diabetic NOD Mice. *Diabetes*, 54(9), pp.2596-2601.

Szkudelski, T. (2012). Streptozotocin–nicotinamide-induced diabetes in the rat. Characteristics of the experimental model. *Experimental Biology and Medicine*, 237(5), pp.481-490.

Thomson, J. (1998). Embryonic Stem Cell Lines Derived from Human Blastocysts. *Science*, 282(5391), pp.1145-1147.

Tarr, J., Kaul, K., Chopra, M., Kohner, E. & Chibber, R. (2013). Pathophysiology of Diabetic Retinopathy. *ISRN Ophthalmology*, 2013, pp.1-13.

Van der Zijl, N., Goossens, G., Moors, C., van Raalte, D., Muskiet, M., Pouwels, P., Blaak, E. & Diamant, M. (2011). Ectopic Fat Storage in the Pancreas, Liver, and Abdominal Fat Depots: Impact on β-Cell Function in Individuals with Impaired Glucose Metabolism. *The Journal of Clinical Endocrinology & Metabolism*, 96(2), pp.459-467.

Velasquez-Mieyer, P., Cowan, P., Arheart, K., Buffington, C., Spencer, K., Connelly, B., Cowan, G. & Lustig, R. (2003). Suppression of insulin secretion is associated with weight loss and altered macronutrient intake and preference in a subset of obese adults. *International Journal of Obesity*, 27(2), pp.219-226.

Watada, H. (2010). Role of VEGF-A in Pancreatic Beta Cells. *Endocrine Journal*, 57(3), pp.185-191.

Widhiastuti, S.S. (2017). The Effect Of Mesenchymal Stem Cell-Conditioned Medium On Transcription Factor 7-Like 2 (Tcf7l2) Gene Expression In Type 2 Diabetic Rat Models. Graduate Thesis: Gadjah Mada University.

World Health Organization (2016). Diabetes Country Profile : Indonesia. (2016). [online]. Available at: http://www.who.int/diabetes/country-profiles/idn_en.pdf [Accessed 10 Mar. 2018].

World Health Organization (2018). *Diabetes mellitus*. [online] Available at: http://www.who.int/mediacentre/factsheets/fs138/en/ [Accessed 10 May 2018].

Zaccardi, F., Webb, D., Yates, T. Davies, M. (2015). Pathophysiology of type 1 and type 2 diabetes mellitus: a 90-year perspective. *Postgraduate Medical Journal*, 92(1084), pp.63-69.

Zang, L., Hao, H., Liu, J., Li, Y., Han, W. & Mu, Y. (2017). Mesenchymal stem cell therapy in type 2 diabetes mellitus. *Diabetology & Metabolic Syndrome*, 9(36).

Zhang, L., Keung, W., Samokhvalov, V., Wang, W. & Lopaschuk, G. (2010). Role of fatty acid uptake and fatty acid β-oxidation in mediating insulin resistance in heart and skeletal muscle. *Biochimica et Biophysica Acta (BBA) - Molecular and Cell Biology of Lipids*, 1801(1), pp.1-22.