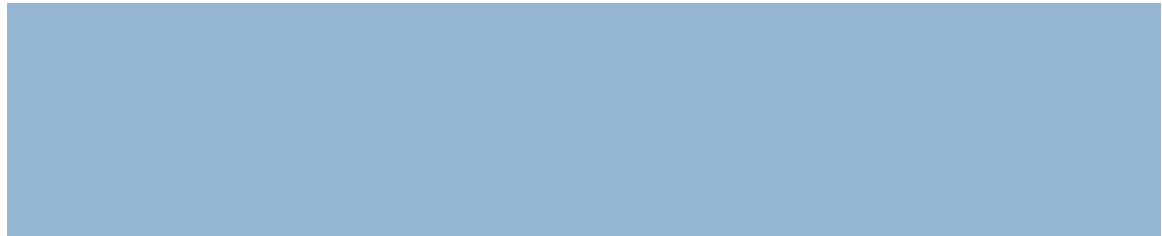


REFERENCES



REFERENCES

- Abdel-Daim, M.M., Abuzead, S.M., Halawa, S.M., 2013. Protective role of *Spirulina platensis* against acute deltamethrin-induced toxicity in rats. PLoS One 8, e72991.
- [Acikel, M.](#), [Buyukokuroglu, M.E.](#), [Erdogan, F.](#), [Aksoy, H.](#), [Bozkurt, E.](#), [Senocak, H.](#), 2005. Protective effects of dantrolene against myocardial injury induced by isoproterenol in rats: biochemical and histological findings. [Int J Cardiol.](#) 98(3), 389-94.
- Aebi, H., 1983. Catalase. In: Bergmeyer, H.U. (Eds.), Methods Enzymology. Academic Press, New York, 276-286.
- Ahotupa, M., Marniemi, J., Lehtimaäki, T., Talvinen, K., Raitakari, O. T., Vasankari, T., 1998. Baseline diene conjugation in LDL lipids as a direct measure of *in vivo* LDL oxidation. Clin Biochem. 31(4), 257-261.
- Anandan, R., Devi, K.P., Devaki, T., Govindaraju, P., 1998. Preventive effects of *Picrorhiza kurroa* on D-galatosamine-induced hepatitis in rats. Indian J Exp Biol. 25, 87–95.
- Anandan, R., Mathew, S., Sankar, T.V., Viswanathan Nair, P.G., 2007. Protective effects of 475 n-3 polyunsaturated fatty acids concentrate on isoproterenol-induced myocardial infarction in rats. Prostaglandins Leukot. Essent. Fatty Acids. 76, 153–158.
- Anosike, C.A., Cajetan, I.C., 2015. Effect of Theobroma Cacao Polyphenol on Isoproterenol Induced Myocardial Infarction in Wistar Rats. Journal of Applied Pharmaceutical Science. 5(07), pp.076-083.
- Antons, K.A., Williams, C.D., Baker, S.K., Phillips, P.S., 2006. Clinical perspectives of statin-induced rhabdomyolysis. Am J Med. 119, 400–409.
- Asadpour, E., Ghorbani, A., Sadeghnia, H.R., 2014. Water-soluble compounds of let-tuce inhibit DNA damage and lipid peroxidation induced by glucose/serumdeprivation in N2a cells. Acta Pol. Pharm. 71, 409–413.

- Bahramikia, S., Yazdanparast, R., 2008. Antioxidant and free radical scavenging activities of different fractions of *Anethum graveolens* leaves using in vitro models. Pharmacol Online. 2:219–233.
- Bakoma, B., Ekl-Gadegbeku, K., Agbonon, A., Aklikokou, K., Bassene, E., Gbeassor, M., 2011. Preventive effect of *Bridelia ferruginea* Benth against high-fructose diet induced glucose intolerance, oxidative stress and hyperlipidemia in male *Wistar rats*. J. Pharmacol. Toxicol. 3, 249–257.
- Bandyopadhyay, D., Chattopadhyay, A., Ghosh, G., Datta, A.G., 2004. Oxidative stress induced ischemic heart disease: protection by antioxidants. Curr Med Chem. 11, 369–87.
- Berliner, J. A., Navab, M., Fogelman, A. M., Frank, J. S., Demer, L. L., Edwards, P. A., Lusis, A. J., 1995. Atherosclerosis: basic mechanisms oxidation, inflammation, and genetics. Circulation, 91(9), 2488-2496.
- Beutler, H.O., 1963. Colorimetric Determination of Glutathione Reduced. in: Bergmeyer, H.U.(Eds.), Methods of Enzymatic Analyses. Deerfield Beach., FL, 376-497.
- Bobryshev, Y.V. Monocyte recruitment and foam cell formation in atherosclerosis. Micron 2006, 37, 208–222.
- Bonting, S.L., Pembroski, T.M., Schmidt, T.H., Blumchen, G., 1970. Membrane ion transport, in: Bio-behavioral base of coronary heart disease. John Wiley and Sons, Inc., London, 254–363.
- Branco, A.F., Sampaio, S.F., Moreira, A.C., Holy, J., Wallace, K.B., Baldeiras, I., Oliveira, P.J., Sardão, V.A., 2012. Differentiation-dependent doxorubicin toxicity on H9c2 cardiomyoblasts. Cardiovasc. Toxicol. 12, 326–340.

- Buege, J. A., & Aust, S. D., 1978. Microsomal lipid peroxidation. *Methods Enzymol.* 52, 302–310.
- Cai, G.J., Miao, C.Y., Xie, H.H., Lu, L.H., Su, D.F., 2005. Arterial baroreflex dysfunction promotes atherosclerosis in rats. *Atheroscl.* 183, 41–47.
- Chang, G., Zhang, D., Yu, H., Zhang, P., Wang, Y., Zheng A., Qin, S., 2013. Cardioprotective effects of exenatide against oxidative stress-induced injury. *Int. J. Mol. Med.* 32, 1011-1020.
- Cheesbrough, M., 1991. *Medical Laboratory Manual Countries*, vol. 2, 479.
- Cohen-Kohler, J.C., 2007. The morally uncomfortable global drug gap. *Clin. Pharmacol. Ther.* 84, 610-614.
- [Datta, M.](#), [Patel, D.](#), [Desai, S.](#), [Upadhyay, K.](#), [Devkar R.V.](#), 2015. Apoptotic potential of C-phycoerythrin from *Phormidium* sp. A27DM and *Halomicronema* sp. A32DM on human lung carcinoma cells. *EXCLI J.* 14, 527–539.
- [Datta, M.](#), [Patel, D.](#), [Desai, S.](#), [Upadhyay, K.](#), [Devkar R.V.](#), 2015. Cyanobacterial phycoerythrin purified from marine *Lyngbya* sp. induces apoptosis in lung carcinoma cells. *J. Bangl. Pharmacolog. Soc.* 10, 770-778.
- de Azevedo Neta Mahon, R.C.P.C., Colodel, E.M., Balogun, S.O., Oliveira R.G., de Oliveira Martins, D.T. 2014. Toxicological evaluation of the hydroethanolic extract of *Dilodendron bipinnatum*. *J. Ethnopharmacol.* 55, 665–671.
- Devkar, R.V., A.V. Pandya, N.H. Shah, 2012. Protective role of *Brassica oleracea* and *Eugenia jambolana* extracts against H₂O₂ induced cytotoxicity in H9C2 cells. *Food. Funct.* 3, 837-843.

- Diezi, J., 1989. Toxicologie: Principes de base et répercussions cliniques dans Pharmacologie: des concepts fondamentaux aux applications thérapeutiques. Frisson-Roche., 33-43.
- El-Hilaly, J., Israili, Z.H., Lyoussi, B., 2004. Acute and chronic toxicological studies of *Ajuva Iva* in experimental animals. J. Ethnopharmacol. 91, 43-50.
- Emerson, F.S., Shadara, A.C., Devi, P.U., 1993. Toxic effects of Crude extract of *Plumbago rosea* (Rokta chitraka). J. Ethnopharmacol. 38, 79-84.
- Erejuwa, O., Sulaiman, S., Suhaimi, M., Sirajudeen, K., Salleh, S., Gurtu, S., 2011. Impaired Nrf2-ARE pathway contributes to increased oxidative damage in kidney of spontaneously hypertensive rats: effect of antioxidant (honey). International Journal of Cardiology. 152, 45.
- Ernst, E., 2005. The efficacy of herbal medicine-an overview. Fund. Clin. Pharmacol. 19, 405-409.
- Esterbauer, H., Striegl, G., Puhl, H., & Rotheneder, M., 1989. Continuous monitoring of in vitro oxidation of human low density lipoprotein. Free Rad. Res. Comm. 6, 67-75.
- Fadini, G.P., Manzato, E., Crepaldi, C., de Kreutzenberg, S., Tiengo, A., Avogaro, A., 2010. Two cases of statin induced rhabdomyolysis associated with mononeuropathy. Clin Drug Investig. 30, 347-350.
- Farvin, K.H.S., Anandan, R., Kumar, S.H.S., Shiny, K.S., Sankar, T.V., Thankappan, T.K., 2004. Effect of squalene on tissue defense system in isoproterenol-induced myocardial infarction in rats. Pharmacological Research. 50(3), 231-236.
- Ferreira, S.A., Guimarães, A.G., Ferrari, F.C., Carneiro, C.M., Paiva, N.C.N.D., Guimarães, D.A.S., 2014. Assessment of acute toxicity of the ethanolic extract of *Lychnophora pinaster* (Brazilian arnica). Rev. Bras. Farmacogn. 24, 553-560.

- Finotti, P., Palatini, P., 1986. Reduction of erythrocyte (Na⁺-K⁺)ATPase activity in Type 1 (insulin-dependent) diabetic subjects and its activation by homologous plasma. *Diabetologia*, 29(9):623-628.
- Friedewald, W.T., Levy, R.I., 1972. Fredrickson DS. Estimation of the concentration of low-density lipoprotein cholesterol in plasma, without use of the preparative ultracentrifuge. *Clin Chem*. 18, 499–502.
- Fumiyuki, O., Michael, J., Francesco, P., Renu, V., Jagat, N., 2014. Clinical classification of plaque morphology in coronary disease. *Nature Reviews Cardiology*, 11: 379–389.
- Galkina, E., Ley, K., 2009. Immune and Inflammatory Mechanisms of Atherosclerosis. *Annu Rev Immunol*. 27, 165–197.
- Geetha, A., Sanker, R., 1990. Alpha-tocopherol reduces doxorubin induced toxicity in rats, histological and biochemical evidence. *Indian Journal of Physiology and Pharmacology*. 34, 94– 100.
- Geneva. V., Subhose, P., Srinivas, Narayana, A., 2005. Basic principles of pharmaceutical science in Ayurveda. *Bulletin of the Indian Institute of History of Medicine*, vol. 35, no. 2, 83–92.
- Ghorbani, A., Asadpour, E., Sadeghnia, H.R., 2015. Mechanism of protective effect of lettuce against glucose/serum deprivation-induced neurotoxicity. *Nutritional Neuroscience: An Int. J. Nutr. Diet and Nerv. Sys.* 18, 103–109.
- [Govindan S.J., Meeran](#), F.N., Palanisamy, S., 2016. Activation of β_1 -adrenoceptor triggers oxidative stress mediated myocardial membrane destabilization in isoproterenol induced myocardial infarcted rats: 7-hydroxycoumarin and its counter action. *Eur. J. Pharmacol*, 77: 70–77.

- Grundy, S.M., 2002. Alternative approaches to cholesterol-lowering therapy. *Am J Cardiol.* 90, 1135–1138.
- Gubdjorson, S., Hallgrimson, J., Skuldottir, G., 1983. Properties of transport adenosine triphosphatase. In: Peter, H, Geshaw GA, Paoethi R (Eds.), *Arterial Pollution*. Plenum Publishing Corporation, New York, p. 103.
- Guo, Y-S., Wang, C-X., Cao, J., 2015. Antioxidant and lipid-regulating effects of probucol combined with atorvastatin in patients with acute coronary syndrome. *J. Thoracic Dis.* 7(3):368-375. doi:10.3978/j.issn.2072-1439.2014.12.29.
- Guozhe, S., Ning, Y., Dongxue, D., Yintao, C., Chao, L., Yingxian, S., 2016. The Protective Role of the TOPK/PBK Pathway in Myocardial Ischemia/Reperfusion and H₂O₂ Induced Injury in H9C2 Cardiomyocytes. *Int. J. Mol. Sci.* 17, 1-14.
- Hajhashemi, V., Abbasi, N., 2008. Hypolipidemic activity of *Anethum graveolens* in rats. *Phytother Res.* 22(3), 372-5.
- Hansson, G.K., Libby, P., 2006. The immune response in atherosclerosis: a double-edged sword. *Nat Rev Immunol.* 6, 508–19.
- [Hassan, M.Q.](#), [Akhtar, M.S.](#), [Akhtar, M.](#), [Ali, J.](#), [Haque, S.E.](#), [Najmi, A.K.](#), 2016. Edaravone, a potent free radical scavenger and a calcium channel blocker attenuate isoproterenol induced myocardial infarction by suppressing oxidative stress, apoptotic signaling and ultrastructural damage. [Therapeutic Advances in Cardiovascular Disease](#) (article in press)
- Hjerken, S., Pan, H., 1983. Purification and characterization of two form of low affinity calciumion ATPase from erythrocyte membrane. *Biochim.Biophys.Acta.* 728, 281–288.

- Holvoet, P., Perez, G., Zhao, Z., Brouwers, E., Bernar, H., Collen, D., 1995. Malondialdehyde-modified low density lipoproteins in patients with atherosclerotic disease. *J Clin Invest.* 95(6), 2611–2619.
- Hosseinia, A., Rajabian, A., 2016. Protective effect of *Rheum turkestanicum* root against doxorubicin-induced toxicity in H9c2 cells. *Braz. J. Pharmacog.* 237, 1-5.
- Hosseinzadeh, H., Karemi, G.R., Ameri, M., 2002. Effects of *Anethum graveolens* L. seed extracts on experimental gastric irritation models in mice. *J. BMC Pharmacol.* 2(1), 21-30.
- Hsieh, Y., Kuo, W., Lin, T., Chang, H., Lin, T., Chen, P., 2007. Protective effects of berberine against low-density lipoprotein (LDL) oxidation and oxidized LDL-induced
- Huang, Z.Y., Yangb, P.Y., Almoftia, M.R., Yua, Y.L., Ruib, Y.C., Yang, P.Y., 2004. Comparative analysis of the proteome of left ventricular heart of arteriosclerosis in rat. *Life Sci.* 75, 3103–3115.
- Hulley, S. B., Roseman, R. H., Bawol, R. D. & Brand, R. J., 1980. Epidemiology as a guide to clinical decisions. The association between triglyceride and coronary heart disease. *N. Engl. J. Med.* 302: 1383–1389.
- Itabe, H., 2009. Oxidative modification of LDL: its pathological role in atherosclerosis. *Clin Rev Allergy Immunol.* 37(1):4-11.
- Ithayarasi, A.P., Devi, C.S., 1997. Effect of alpha-tocopherol on lipid peroxidation in isoproterenol induced myocardial infarction in rats. *Ind. J. Physiol. Pharmacol.* 41 (4): 369–376.
- Jadeja, R. N., Thounaojam, M. C., Singh, T. B., Devkar, R. V., & Ramachandran, A. V., 2012. Traditional uses, phytochemistry and pharmacology of *Clerodendron glandulosum* Coleb—a review. *Asian Pacific journal of tropical medicine*, 5(1), 1-6.

- Jadeja, R.N., Thouaojam, M.C., Sankhari, J.M., Jain, M., Devkar, R.V., Ramachandran, A.V., 2012. Standardized flavonoid-rich *Eugenia jambolana* seed extract retards *in vitro* and *in vivo* LDL oxidation and expression of VCAM-1 and P-selectin in atherogenic rats. *Cardiovasc Toxicol.* 12(1), 73-82.
- Jadeja, R.N., Thounaojam, M.C., Devkar, R.V., Ramachandran, A.V. 2011. *Clerodendron glandulosum*. Coleb extract prevents *in vitro* human LDL oxidation and oxidized LDL induced apoptosis in human monocyte derived macrophages. *Food Chem. Toxicol.* 49, 1195-1202.
- Jadeja, R.N., Thounaojam, M.C., Devkar, R.V., Ramachandran, A.V., 2011. *Clerodendron glandulosum*. Coleb extract prevents *in vitro* human LDL oxidation and oxidized LDL induced apoptosis in human monocyte derived macrophages. *Food Chem. Toxicol.* 49, 1195–1202.
- Jadeja, R.N., Thounaojam, M.C., Jain, M., Devkar, R.V., Ramachandran, A.V., 2012. *Clerodendron glandulosum*. Coleb leaf extract attenuates *in vitro* macrophage differentiation and expression of VCAM-1 and P-selectin in thoracic aorta of atherogenic diet fed rats. *Immunopharmacol. Immunotoxicol.* 34(3), 443-453.
- Jagetia, G. and Baliga, M.S., 2004. The Evaluation of Nitric Oxide Scavenging Activity of Certain Indian Medicinal Plants *In Vitro*: A Preliminary Study. *J. Med. Food.*, 7(3): 343-348.
- Jana, S., Shekhawa, G.S., 2010. *Anethum graveolens*: An Indian traditional medicinal herb and spice. *Pharmacognoc reviews.* 4(8), 179-184.
- Jeond, S.M., Boka, S.H., Jangb, M.K., Leed, M.K., Namb, K.T., Yarkb, Y.B., Rheec, S.J., Choi, M.S., 2001. Antioxidative activity of naringin and lovastatin in high cholesterol-fed rabbits. *Life Sciences*, 69 (24): 2855–2866.

- Jesus, N.Z.T., Júnior, I.F.S., Lima, J.C.S., Colodel, E.M., Domingos, T.O., Martins, D.T.O., 2012. Hippocratic screening and subchronic oral toxicity assessments of the methanol extract of *Vataireama crocarpa* heart wood in rodents. *Braz. J. Pharmacog.* 22, 1308–1314.
- Jiri, F., Ahmad Al, S., 2013. Cardiovascular risk and atherosclerosis prevention. *Cardiovascular Pathology.* 22: 16–18
- Kasa, J.K., Singh, T.U., Parida, S., Addison, M.P., Darzi, S.A., Choudhury, S., Kandasamy, K., Singh V., Dash, J.R., 2014. Assessment of Indian Rosewood (*Dalbergia sissoo*) Standardized Leaf Extract on Isoproterenol-Induced Myocardial Injury in Rats. *Cardiovascular Toxicology.* 15(3), 250-260.
- Kaur, G.J., Arora, D.S., 2009. Antibacterial and phytochemical screening of *Anethum graveolens*, *Foeniculum vulgare* and *Trachyspermum ammi*. *BMC Complement. Altern. Med.* 9, 30.
- Khalil, M. I., Tanvir, E.M., Afroz, R., Sulaiman, S.A., Gan, S.H., 2015. Cardioprotective effects of tualang honey: amelioration of cholesterol and cardiac enzymes levels. *BioMed Res. Int.* 286051, 8 pages.
- Kim, H.J., Song, J.Y., Park, H.J., Park, H.K., Yun, D.H., Chung, J.H., 2009. Naringin Protects against Rotenone-induced Apoptosis in Human Neuroblastoma SH-SY5Y Cells. *Korean J. Physiol. Pharmacol.* 13(4): 281–285.
- Kim, S., Claiborne, S., 2011. Global Variation in the Relative Burden of Stroke and Ischemic Heart Disease. *Circulation*, 124:314-323.
- Kimes, B.W., Brandt, B.L., 1976. Properties of a clonal muscle cell line from rat heart. *Exp. Cell. Res.* 98, 367–38.

- Korga, A., Burdan, F., Ostrowska, M., Nosowska, B., Iwan, M., Dudka, J., 2016. The effect of a number of H9C2 rat cardiomyocytes passage on repeatability of cytotoxicity study results. *Cytotechnology*, 68:2407–2415.
- Kowalska, K., Socha, E., Milnerowicz, H., 2015. The Role of Paraoxonase in Cardiovascular Diseases. *Annals of Clinical & Laboratory Science*, 45(2), 431-438.
- Lam, M., Dubyakt, G., Nufiez, L.G., Miesfeldt, R.L., Distelhorst, C.W., 1994. Evidence that BCL-2 represses apoptosis by regulating endoplasmic reticulum-associated Ca^{2+} fluxes. *Nati. Acad. Sci. USA* Vol. 91, pp. 6569-6573, July 1994
- Lameire, N., Jager, K., Biesen, W.V., Bacquer, D.D., Vanholder, R., 2005. Chronic kidney disease: A European perspective. *Kidney Int.* 68, S30–S38.
- Li, C., Gao, Y., Xing, Y., Zhu, H., Shen, J., Tian, J., 2011. Fucoidan, a sulfated polysaccharide from brown algae, against myocardial ischemia–reperfusion injury in rats via regulating the inflammation response. *Food Chem. Toxicol.* 49, 2090–2095.
- Liu, Z., Song, X.D., Xin, Y., Wang, X.J., Yu, H., Bai, Y.Y., Liu, J.H., Zhang, C.N., Hui, R.T., 2009. Protective effect of chrysoeriol against doxorubicin-induced cardiotoxicity in vitro. *Chin. Med. J. (Engl.)* 122, 2652–2656.
- Lopez, A., D., M., Ezzati, M., Jamison, D., T., Murray, C., J., Global Burden of Disease and Risk Factors: Disease Control Priorities Project. New York, NY: World Bank and Oxford University Press; 2006.
- Lopez, P., Sanchez, C., Batlle, R., Nerin, C., 2005. Solid- and vapor-phase antimicrobial activities of six essential oils: susceptibility of selected foodborne bacterial and fungal strains. *J. Agric. Food Chem.* 53(17), 6939-6946.
- Lowenstein, C., Matsushita, K., 2004. The acute phase response and atherosclerosis. *Drug Discov Today Dis Mech.* 1, 17–22.

- Lowry, O. H., Rosebrough, N. J., Farr, A. L., & Randall, R. J., 1951. Protein measurement with the Folin phenol reagent. *J. Biol. Chem.* 193, 265–275.
- Mahran, G.H., Kadry, H.A., Isaac, Z.G., Thabet, C.K., Al-Azizi, M.M., El-Olemy, M.M., 1992. Investigation of diuretic drug plants. 1. Phytochemical investigation and pharmacological evaluation of *Anethum graveolens* L., *Apium graveolens* L., *Daucus carota* L. and *Eruca sativa* Mill. *Phytother. Res.* 5, 169-172.
- Manglik A., Kim, T.H., Masureel, M., Altenbach, C., Yang, Z., Hilger, D., Lerch, M.T., Kobilka, T.S., Thian, F.S., Hubbell, W.L., Prosser, R. S., Kobilka, B.K., 2015. Structural Insights into the Dynamic Process of β 2-Adrenergic Receptor Signaling. *Cell* . 161(5), 1101–1111.
- Maor, I., Hayek, T., Coleman, R., Aviram, M. Plasma LDL oxidation leads to its aggregation in the atherosclerotic apolipoprotein E-deficient mice. *Arterioscler Thromb Vasc Biol* 1997, 17, 2995–3005.
- Marius, R., Robciuc, R., Ian, M., Jan, F., Theo, H., Harri, E., Feven, T., Dmitry, M., Veli-Matti, L., Reijo Käkälä, L., Eklund, D., Wasserman, A., Groen, K., 2016. VEGFB/VEGFR1-Induced Expansion of Adipose Vasculature Counteracts Obesity and Related Metabolic Complications. *Cell Metabolism*, 23(4): p712–724
- Marklund, S., Marklund, G., 1974. Involvement of the superoxide anion radical in the autoxidation of pyrogallol and a convenient assay for superoxide dismutase. *Eur. J. Biochem.* 47, 469-74.
- Mdhuli, M., 2001. Toxicological and antifertility investigations of oleanolic acid in male vervet monkeys (*Chlorocebusaethiops*). Discipline of Physiological Sciences, University of the Western Cape, Cape Town, South Africa.

- Mishra, N., 2013 Haematological and hypoglycemic potential *Anethum graveolens* seeds extract in normal and diabetic Swiss albino mice. *Vet World*. 6:502–7. doi: 10.5455/vetworld.2013.502-507
- [Misra, M.K.](#), Sarwat, M., Bhakuni, P., [Tuteja, R.](#), Tuteja, N., 2009. Oxidative stress and ischemic myocardial syndromes. [Med. Sci. Monit.](#) 15, 2009-2019.
- Mohanty, I., Arya, D.S., Dinda, A., Talwar, K.K., Joshi, S., Gupta, S.K., 2004. Mechanisms of cardioprotective effects of *Withania somnifera* in experimentally induced myocardial infarction. *Basic Clin Pharmacol Toxicol*. 94, 184–190.
- Mukinda, J.T., Syce, J.A., 2007. Acute and chronic toxicity of the aqueous extract of *Artemisia afra* in rodents. *J. Ethnopharmacol*. 112, 138–144.
- Munari, C.C., Alves, J.M., Bastos, J.K., Tavares, D.C., 2010. Evaluation of the genotoxic and antigenotoxic potential of *Baccharisdr cunculifolia* extract on V79 cells by the comet assay. *J. Appl. Toxicol*. 30, 22–28.
- Natarajan, R., Cai, Q. Monocyte retention in the pathology of atherosclerosis. *Future Cardiol* 2005, 1, 331–340.
- Nicoll, R., Wiklund, U., Zhao, Y., Diederichsen, A., Mickley, H., Ovrehus, K., Amorano, J., Gueret, P., Schmermund, A., Maffei, E., Cademartiri, F., Budoff, M., Henein, M., 2016. Gender and age effects on risk factor-based prediction of coronary artery calcium in symptomatic patients: A Euro-CCAD study. *Atherosclerosis*, 252: 32–3
- Nimse, S.B., Dilipkumar, P., 2015. Free radicals, natural antioxidants, and their reaction mechanisms. *RSC Adv.*, 2015, 5, 27986-28006.
- Nourooz-Zadeh, J., Tajaddini-Sarmadi, J., Ling, K. L., & Wolff, S. P., 1996. Low-density lipoprotein is the major carrier of lipid hydroperoxides in plasma. Relevance to

- determination of total plasma lipid hydroperoxide concentrations. *Biochem. J.* 1, 781–786.
- OECD (testing guideline, 407), 1995. Repeat dose 28 days oral toxicity study in rodents; In: Guidance document for the development of OECD guideline for testing of chemicals Environmental monograph No 76; <http://oecd.org/document/30.0.2340,en??2647-34377-19166381111,00html>
- Ohinishi, T., Suzuki, T., Suzuki, Y., Ozawa K., 1982. A comparative study of plasma membrane Mg^{2+} ATPase activities in normal, regenerating and malignant cells. *Biochim. Biophys. Acta.* 684, 67–74.
- Ono, K., 2012. Current concept of reverse cholesterol transport and novel strategy for atheroprotection. *J. Cardiol.* 60(5), 339–343.
- Ortan, A., Popescu, M., Gaita, A., Dinu-Pîrvu, C., Câmpeanu, G.H., 2009. Contributions to the Pharmacognostical Study on *Anethum graveolens*, Dill (Apiaceae). *Romanian Biotechnological Letters*, 14(2), 4342-4348.
- Osujih, M., 1993. Exploration of the frontiers of tradomedical practices: Basis for development of alternative medical healthcare services in developing countries. *J. R. Soc. Health* 113, 190-194.
- Palm, M., Lundblad, A., 2005. Creatinine concentration in plasma from dog, rat, and mouse: A comparison of 3 different methods. *Vet. Clin. Pathol.* 34, 232–236.
- Panda, S., 2008. The effect of *Anethum graveolens* L. (dill) on corticosteroid induced diabetes mellitus: involvement of thyroid hormones. *Phytother. Res.* 22, 1695-1697.
- Panda, V.S., Naik, S.R., 2008. Cardioprotective activity of Ginkgo biloba Phytosomes in 524 isoproterenol-induced myocardial necrosis in rats: a biochemical and histoarchitectural evaluation. *Exp. Toxicol. Pathol.* 60, 397–404.

- Pandey, M. M., Rastogi, S., Rawat, A.K.S., 2013. Indian Traditional Ayurvedic System of Medicine and Nutritional Supplementation. *eCAM*. 1-12 .
- Patel, D., Desai, S., Devkar, R., & Ramachandran, A. V., 2012. Acute and sub-chronic toxicological evaluation of hydro-methanolic extract of *Coriandrum sativum* L seeds. *EXCLI J*, 11, 566-75.
- Patel, D.K., Desai, S.N., Gajaria, T., Devkar, R.V., Ramachandran, A.V., 2013. *Coriandrum sativum* L. Seed extract mitigates lipotoxicity in RAW 264.7 cells and prevents atherogenic changes in rats. *Excli J*. 12, 313–334.
- Patel, D.K., Desai, S.N., Gandhi, H.P., Devkar, R.V., Ramachandran, A.V., 2012. Cardio protective effect of *Coriandrum sativum* L: On isoproterenol induced myocardial necrosis in rats. *Food. Chem. Toxicol*. 50, 3120-3125.
- Pereira, C. F., Oliveira, C. R., 2000. Oxidative glutamate toxicity involves mitochondrial dysfunction and perturbation of intracellular Ca^{2+} homeostasis. *Neurosci. Res*. 37, 227–236.
- Petersen, K. E., Lykkesfeldt, J., Raun, K., Rakipovski, G., 2016. Plasma lipid oxidation predicts atherosclerotic status better than cholesterol in diabetic apolipoprotein E deficient mice, *Exp Biol Med*. (Article in press).
- Priscilla, D.H., Prince, P.S.M., 2009. Cardioprotective effect of gallic acid on cardiac troponin-T, cardiac marker enzymes, lipid peroxidation products and antioxidants in experimentally induced myocardial infarction in Wistar rats. *Chem. Biol. Int*. 179(2-3), 118–124.
- Quehenberger, O. Thematic review series: The immune system and atherogenesis. Molecular mechanisms regulating monocyte recruitment in atherosclerosis. *J Lipid Res* 2005, 46, 1582–1590.

- Rahal, A., Kumar, A., Singh, V., Yadav, B., Tiwari, R., Chakraborty, S., Dhama, K., 2014. Oxidative Stress, Prooxidants, and Antioxidants: The Interplay-Review Article. *BioMed. Res. Int.* 1-19
- Rahman, I., MacNee, W., 1999. Lung glutathione and oxidative stress: implications in cigarette smoke-induced airway disease. *American J. Physiol. Lung Cell. Mol. Physiol.*, 277 (60): L1067-L1088.
- Rahman, S., Poulton, J., Marchington, D., Suomalainen, A., 2001. Decrease of 3243 A>G mtDNA mutation from blood in MELAS syndrome: a longitudinal study. *Am. J. Hum. Genet.* 68, 238–40.
- Rajendran, S., Deepalakshmi, P. D., Parasakthy, K., Devaraj, H., &Devaraj, S. N., 1996. Effect of tincture of *Crataegus* on the LDL-receptor activity of hepatic plasma membrane of rats fed an atherogenic diet. *Atherosclerosis*, 123(1), 235-241.
- Reznick, A. Z., & Packer, L., 1994. Oxidative damage to proteins: spectrophotometric method for carbonyl assay. *Methods Enzymol.* 233, 357–363.
- Roe, J.H., Küether, C.A., 1943. The determination of ascorbic acid in whole blood and urine through 2-4 dinitrophenyl hydrazine derivative of dehydro ascorbic acid. *J. Biol. Chem.* 147, 399–407.
- Rosenson, R.S., 2004. Statins in atherosclerosis: lipid-lowering agents with antioxidant capabilities. *Atherosclerosis*. 173(1), 1-12.
- Ross, R., 1999. Atherosclerosis-an inflammatory disease. *N Engl J Med.* 340, 115–26.
- Rotruck, J.T., Pope, H.E., Ganther, A.B., Swanson, D.G., Hoekstra, W.G., 1973. Selenium: Biochemical role as a component of glutathione peroxidase. *Sci.* 179, 588-590.
- Saad, B., Azaizeh, H., Abu-Hijleh, G., Said, O., 2006. Safety of traditional Arab herbal medicine. *Evid. Based Comp. Alternat. Med.* 3, 433-439.

- Sádabaa, M.C., Martín-Estalb, I., Puchea, J.E., Castilla-Cortázar, I., 2016. Insulin-like growth factor 1 (IGF-1) therapy: Mitochondrial dysfunction and diseases BBA-Mol. BASIS Dis. (In Press, Accepted Manuscript).
- Sadeghipour, A., Eidi, M., Ilchizadeh Kavgani, A., Ghahramani, R., Shahabzadeh, S., & Anissian, A., 2014. Lipid lowering effect of *Punicagranatum* L. peel in high lipid diet fed male rats. Evidence-Based Complementary and Alternative Medicine, 2014.
- Safar, M.E., Levy, B.I., Struijker-Boudier, H., 2003. Current perspectives on arterial stiffness and pulse pressure in hypertension and cardiovascular diseases. *Circulation*. 107, 2864–2869.
- Saffi, M.A.L., Furtado, M.V., Polanczyk, C.A., Montenegro, M.M., Rbeiro, I.W.J., Kampits, C., Haas, A.N., Rösing, C.K., Silva, E.R.R., 2015. Relationship between vascular endothelium and periodontal disease in atherosclerotic lesions: Review article. *World J Cardiol*. 7(1), 26–30.
- Sankhari, J. M., Jadeja, R. N., Thounaojam, M. C., Devkar, R. V., & Ramachandran, A. V. , 2010. Safety evaluation of *Eugenia jambolana* seed extract. *Asian Pacific Journal of Tropical Medicine*, 3(12), 982-987.
- Sankhari, J.M., Thounaojam, M.C., Jadejam, R.N., Devkar, R.V., Ramachandran, A.V., 2012. Anthocyanin-rich red cabbage (*Brassica oleracea* L.) extract attenuates cardiac and hepatic oxidative stress in rats fed an atherogenic diet. *J Sci Food Agric*. 92(8), 1688-93.
- Satish, B. N. and Dilipkumar, P., 2015. Free radicals, natural antioxidants, and their reaction mechanisms. *Royal Society of Chemistry*, 5, 27986-28006
- Sies, H., 1997. Oxidative stress: oxidants and antioxidants. *Exp. Physiol*. 82, 291-295.

- Silva, J. P., Sardao, V. A., Coutinho, O. P., Oliveira, P. J., 2010. Nitrogen compounds prevent H9c2 myoblast oxidative stress-induced mitochondrial dysfunction and cell death. *Cardiovasc. Toxicol.* 10, 51–65.
- Singal, P.K., Kapur, N., Dhillon, K.S., Beamish, R.E., Dhalla, N.S., 1983. Role of free radicals in catecholamine-induced cardiomyopathy. *Can. J. Physiol. Pharm.* 60, 1390–7.
- Singh, G., Kapoor, I.P.S., Pandey, S.K., Singh, U.K., Singh, R.K., 2001. Studies on essential oils: part 10, Antibacterial activity of volatile oils of some spices. *Phytother. Res.* 16, 680-682.
- Singh, G., Maurya, S., De-Lampasona, M.P., Catalan, C., 2005. Chemical constituents, antimicrobial investigations and antioxidant potentials of *Anethum graveolens* L. essential oil and acetone extract: Part 52. *J Food Sci.* 70, 208-215.
- Singh, R. B., Niaz, M. A., & Ghosh, S., 1994. Hypolipidemic and antioxidant effects of *Commiphora mukul* as an adjunct to dietary therapy in patients with hypercholesterolemia. *Cardiovascular drugs and therapy*, 8(4), 659-664.
- Speer, M.Y., Giachelli, C.M. Regulation of cardiovascular calcification. *Cardiovasc Pathol* 2004, 13, 63–70.
- Stavri, M., Gibbons, S., 2005. The antimycobacterial constituents of dill (*Anethum graveolens*). *Phytother. Res.* 19(11), 938-941
- Steinberg, D., 2005. Thematic review series: the pathogenesis of atherosclerosis. An interpretive history of the cholesterol controversy: part II: the early evidence linking hypercholesterolemia to coronary disease in humans. *J Lipid Res.* 46, 179–190.
- Steiner, M., Khan, A. H., Holbert, D., & Lin, R. I., 1996. A double-blind crossover study in moderately hypercholesterolemic men that compared the effect of aged garlic extract

- and placebo administration on blood lipids. The American journal of clinical nutrition, 64(6), 866-870.
- [Suchalatha, S., Shyamala Devi, C.S.](#),2004. Protective effect of *Terminalia chebula* against experimental myocardial injury induced by isoproterenol. [Ind. J. Exp. Biol.](#) 42(2), 174-8.
- Taher, M., Ghannadi, A., Karmiyan, R., 2007. Effects of volatile oil extracts of *Anethum graveolens* L. and *Apium graveolens* L. seeds on activity of liver enzymes in rat. The Journal of Qazvin Univ. of Med. Sci. 11(2), 8-12.
- Tahraoui, A., Israili, Z.H., Lyoussi, B., 2010. Acute and sub-chronic toxicity of a lyophilised aqueous extract of *Centaurium erythraea* in rodents. J. Ethnopharmacol. 132, 48–55.
- Thounaojam, M.C, Jadeja, R.N., Salunke, S.P., Devkar, R.V., Ramachandran, A.V., 2012. *Sida rhomboidea*.Roxb aqueous extract down-regulates in vivo expression of vascular cell adhesion molecules in atherogenic rats and inhibits *in vitro* macrophage differentiation and foam cell formation. Immunopharmacol Immunotoxicol. 34(5), 832-43.
- Thounaojam, M.C., Jadeja, R.N., Devkar, R.V., Ramachandran, A.V., 2010. Antioxidant and free radical scavenging activity of *Sida rhomboidea*. Roxb methanolic extract determined using different *in vitro* models. BLACPM. 9 (3), 191-198.
- Thygesen, K., Alpert, J. S., & White, H. D., 2007.Universal definition of myocardial infarction. Journal of the American College of Cardiology, 50(22), 2173-2195.
- Vyas K., Jadeja, R.N., Patel, D., Devkar R.V., 2014. Effect of ligand substitution in pyrazolone based binary and ternary Cu(II) complexes on DNA binding, protein binding and anti-cancer activity on A549 lung carcinoma cell lines. Polyhedron 80, 20–33.

- Weber, C., Zernecke, A., Libby, P., 2008. The multifaceted contributions of leukocyte subsets to atherosclerosis: lessons from mouse models. *Nat Rev Immunol.* 8, 802–15.
- Wexler, B.C., 1978. Myocardial infarction in young vs old male rats; pathophysiologic changes. *Am. Heart J.* 96, 70–80.
- WHO, 2009. Traditional Medicine, Available at <http://www.who.int/mediacentre/factsheets/fs134/en/> (Accessed 1.17.2009).
- WHO, 2013. World Health Organization traditional medicine strategy: 2014–2023.
- WHO/Download raw data files of the WHO Mortality, WHO, 2014 (Database http://www.who.int/healthinfo/statistics/mortality_rawdata/en/)
- Witzum, J., L., 1994. The oxidation hypothesis of atherosclerosis. *Lancet*, 344:793–5.
- Xu, S., Huang, Y., Xie, Y., Lan, T., Le, K., Chen, J., Chen, S., Gao, S., Xu, Z., Shen, X., Huang, H., Liu, P., 2010. Evaluation of foam cell formation in cultured macrophages: an improved method with Oil Red O staining and DiI-oxLDL uptake. *Cytotechnology.* 62(5), 473–481.
- Yang, Y., Jun R.D., Chen, Y.W., Zhong, M.Q., 2008. Protection against hydrogen peroxide-induced injury by Z-ligustilide in PC12 cells. *Exp. Brain Res.* 184, 307–312.
- Yazdanparast, R., Bahramikia, S., 2008. Evaluation of the effect of *Anethum graveolens* L. crude extracts on serum lipids and lipoproteins profiles in hypercholesterolaemic rats. *DARU*, 16(2):88–94.
- Young, Y.S., Woodside, J.V., 2001. Antioxidants in health and disease. *J. Clin. Pathol.* 54, 176–86.

- Zheng, G., Kenney, P.M., Lam, L.K.T., 1992. Anethofuran, Carvone and Limonene: Potential cancer chemopreventive agents from dill weed oil and caraway oil, *Planta Medica*. 58, 339-341.
- Zheng, S., Qian, Z., Tang, F., Sheng, L. Suppression of vascular cell adhesion molecule-1 expression by crocetin contributes to attenuation of atherosclerosis in hypercholesterolemic rabbits. *Biochem Pharmacol* 2005, 70, 1192–1199.
- Zhou, R., Xu, Q., Zheng, P., Yan, L., Zheng, J., Dai, G., 2008. Cardioprotective effect of 569 fluvastatin on isoproterenol-induced myocardial infarction in rat. *Eur. J. Pharmacol.* 586, 244–250.
- Zykova, T.A., Zhu, F., Vakorina, T.I., Zhang, J., Higgins, L.A., Urusova, D.V., Bode, A.M., Dong, Z. 2010. T-LAKcell-originated protein kinase (TOPK) phosphorylation of Prx1 at Ser-32 prevents UVB-induced apoptosis in RPMI7951 melanoma cells through the regulation of Prx1 peroxidase activity. *J. Biol. Chem.* 285, 29138–29146

REFERENCES FROM INTERNET SOURCE

<http://php.med.unsw.edu.au/medwiki/index.php?>

title=Pathophysiology_of_syndromes_of_Ischaemic_Heart_Disease#cite_note-Zhang-31

<http://pureintentessentials.com/pure/wp-content/uploads/2013/06/Dill-Seeds.jpg>

<http://www.euro.who.int/en/health-topics/noncommunicable-diseases/cardiovascular-diseases/cardiovascular-diseases2/definition-of-cardiovascular-diseases>

<http://www.graines.be/photos/Anethum-Graveolens.jpg>

<http://www.nhlbi.nih.gov/health/health-topics/topics/atherosclerosis/atrisk.html>)

<http://www.nhs.uk/Conditions/Atherosclerosis/Pages/Treatment.aspx>)

<http://www.torontomastergardeners.ca/wp-content/uploads/2012/05/DillSeeds-AnethumGraveolens.jpg>

<https://www.google.co.in/search?>

q=atherosclerosis+mechanism&safe=strict&biw=1366&bih=667&source=lnms&tbm=isch&sa=X&sqi=2&ved=0ahUKEwjPi8Ca_ZbPAhUDTo8KHVJJAXsQ_AUIBigB#safe=strict&tbm=isch&q=+foam+cell+formation+mechanism&imgc=tHOrGx7GGJQYOM%3A