

DAFTAR PUSTAKA

- Adewale O.B., Adekeye A.O., Akintayo C.O., Onikanni A., & Saheed S. 2014. Carbon tetrachlorid (CCL₄)-induced hepatic damage in experimental Sprague Dawley rats: Antioxidant potential of *Xylopiya aethiopica*. *J.Phytopharm.* 3(2); 118-123.
- Al-Rasheed N.M., Fadda L.M., Al-Rasheed N.M., Ali M.H., & Yacoub H.I. 2016. Down-Regulation of NFkB, Bax, TGF-β, Smad-2Mrna expression in the Livers of Carbon Tetrachloride Treated Rats using Different Natural Antioxidants. *Braz. Arch. Bio. Tech. Inter.J.* 59; 1-10.
- Anan, A., Baskin-Bey, E.S., Bronk, S.F., Werneburg, N.W., Shah, V.H., & Gores, G.J. 2006. Proteasome inhibition induces hepatic stellate cell apoptosis. *Hepatol. J.* 43;335–344.
- Arthur, M.J., 1995. Collagenases and liver fibrosis. *J. Hepatol.* 22;43–48.
- Ashihara, H., Clifford, M.N., Crozier, A., 2006. Plant Secondary Metabolites: Occurrence, Structure and Role in the Human Diet. *Expert Rev. Gastroenterol. Hepatol.* 4;459–472.
- Agency for Toxic Substances Disease Registry. 2014. Carbon Tetrachloride : Relevance to Public Health. Agency for Toxic Substances and Disease Registry *online*. Home page on-line. Available from <https://www.atsdr.cdc.gov/toxprofiles/tp30-c2.pdf>; Internet access December 6, 2016.06.00.
- Ayalign A., & Sabally K. 2013. Determination of Chlorogenic Acid (CGA) IN Coffe Beans Using HPLC. *Am.J. Res.Com.* 1(2);78-91.
- Bai Y., Dong L., Shi H., Zhang L., Zhang Y., & Zhao J. 2009. Chlorogenic Acid Against carbon tetrachloride-induced liver fibrosis in rats. *Evr. J. Pharmacol.* 623;119-124.
- Bao C., Fu M., Gong X., Wu D., & Xie J. 2015. Chlorogenic Acid Protects Againts Cholestatic Liver Injury in Rats. *Pharmacol. Scie. J.* 129;171-182.
- Bataller R., & Brenner D. 2005. Liver Fibrosis. *Clin. Invest. J.* 2 (115);209-2118.
- Basilico C., Yu C., Huang X., Jin C., Mckeehan W. L., Miller D.L., & Wang F., 2003. Role of fibroblast growth factor type 1 and 2 in carbon tetrachloride-induced hepatic injury and fibrogenesis. *Am. J. Pathol.* 163;1653–1662.
- Bataille F., Hellerbrand C., Steiling H., Muhlbauer M., Scholmerich J., & Werner S. 2004. Activated hepatic stellate cells express keratinocyte growth factor in chronic liver disease. *Am. J. Pathol.* 165;1233–1241.

- Belay A., & Gholap A.V. 2009. Characterization and Determination of Chlorogenic Acids (CGA) in Coffee Beans By UV-Vis Spectroscopy. *Afr. J. Pure & App. Chem.* 3(11);234-240.
- Benyon, R.C., & Arthur, M.J. 2001. Extracellular matrix degradation and the role of hepatic stellate cells. *Semin. Liver Dis.* 21;373–384.
- BioServ. 2015. Mouse Diet. BioServ *online*. Home page on-line. Available from <https://www.bio-serv.com/product/S4998.html>; Internet Access January 07, 2016:21.00 p.m.
- Bismut F.I., Carrau J.P., Drane F., Giordanella J.P., Ingiliz P. & Massard J. 2010. Prevalence of Liver Fibrosis and Risk Factor in a General Population using Non-Invasive Biomarkers (FibriTest). *BMC Gastroenterol. J.* 10(40);1-13.
- Blasius A., & Beutler B. 2010. Immunity review: Intracellular Toll-like Receptors. *J. Immun.* 32.
- Borkham-Kamphorst, E., Van Roeyen, C.R., Ostendorf, T., Floege, J., Gressner, A.M., Weiskirchen, R., 2007. Pro-fibrogenic potential of PDGF-D in liver fibrosis. *Hepatol. J.* 46;1064–1074.
- Brigman C. 2015. Phases of Gastric Secretion. Stomach Histology Rugae: Folds in stomach when empty Gastric pits:Openings for gastric glands– Contain cells Surface mucous. *Presentation Lecture*. Florida State University, USA.
- Brun P., Castagliuolo I., Pinzani M., Palu G., & Martines D. 2005. Exposure to bacterial cell wall products triggers an inflammatory phenotype in hepatic stellate cells. *Am. J. Physiol. Gastrointestinal Liver Physiol.* 289, G571–G578.
- Budryn G., Nebesny E., & Oracz J. 2015. Correlation Between the Stability of Chlorogenic Acid , Antioxidant Activity and Acrylamide Conten in Coffee Beans Roasted in Different Conditions. *Internat. J. food. Prop.* 18;290-302.
- Buijsman, M., Hollman, P., Katan, M., B., Olthof, M.R., C., H., N., C., P., Van A., J., M., M. 2003. Chlorogenic acid, quacertin-3-rutinoside and black tea phenol are extensively metabolized on humans. *J. Nutr* 133;1806-14.
- Chairul, Handharyani E., Manalu W., Masriani, Panjaitan R.G.P., & Zakiah Z, 2007. Pengaruh Pemberian Karbon Tetraklorida Terhadap Fungsi Hati dan Ginjal Tikus. *Makara:Kesehatan.* 11(1);11-16.

- Chemical Book. 2014. Chlorogenic Acid. Chemical Book *online*. Home page on-line. Available from http://www.chemicalbook.com/ChemicalProductProperty_EN_cb24789_06.html. Internet access : November 17, 2016 ; 4.00 pm.
- Chen W., Liou S., Tzeng T., Li S., & Liu I. 2013. Effect of topical application of chlorogenic acid on wound healing in rats. *Planta. Med. J.* 79. 616-621.
- Cequera A., & Mendez M.C.L. 2014. Biomarker for liver fibrosis:Advances, Advantages, and Disadvantages. *Rev. Gastroenterol. Mexic. J.* 79(3); 187-199.
- Cong M., Iwaisako K., Jiang C., & Kisseleva T. 2012. Cell Signals Influencing Hepatic Fibrosis. *Internat. J. Hepatol*; 1-12.
- Costanzo L.S. 2014. *Physiology*. 5th ed. 378-380. Saunders: Elsevier.
- Dang X., Dong L., Jia M., Jiang J., Lu X., Zhao G., *et al.* 2012. Chlorogenic Acid Reduces Liver Inflammation and Fibrosis Through Inhibition of Toll-Like Receptor 4 Signaling Pathway. *Toxicol. J.* 303;107-114.
- Dang X., Dong L., Guo X., Jiang J., Liu Y., Lu X., *et al.* 2013. Effect of Chlorogenic Acid in LPS-Proinflammatory Signaling in Hepatic Stellate Cells. *Inflamm. Res. J.* 62;581-587.
- Dockal M., Niiya M., Pollak E.S., Scheifflinger F., Uemura M., Zheng X.W., Wells, R.G., Zheng, X.L., 2006. Increased ADAMTS-13 proteolytic activity in rat hepatic stellate cells upon activation in vitro and in vivo. *Thromb. Haemost J.* 4;1063–1070.
- Dolan C., & Glass G. 2015. Nutritional Consideration for treating patients with neuromuskuloskeletal disorders. CCAPTA *online*. Home page on-line. Available from http://c.ymcdn.com/sites/www.ccapta.org/resource/resmgr/Quality_Practice/Nutrition_Article_shortened_.pdf. Internet access Mei 12, 2017; 10.30 am.
- Dong L., Han N., Hou N., Li J., & Yan Y. 2015. Chlorogenic Acid Enhances The Effect of 5-Fluorouracil in Human Hepatocellular Carcinoma Cells Through The Inhibition of Extracellular Signal-Regulated Kinases. *Preclin. Rep. J.* 26(5);540-546.
- Environmental Protection Agency. 2010. *Toxicological review of carbon tetrachloride*. Wahington DC: Environmental Protection Agency.

- Fallowfield J.A., Iredale J.P., Pellicoro A., & Ramachandran P. 2014. Liver Fibrosis and Repair: Immune regulation of Wound Healing in a Solid Organ. *Nat. Imm.Rev.J.* 14;181.
- Fauci, A.S., Mavilio, D., Kottlil, S., 2005. NK cells in HIV infection: paradigm for protection or targets for ambush. *Nat. Rev. Immunol. J.* 5;835–843.
- Feng R., Lu Y., Bowman L.L., Qian Y., Castranova V., & Ding M. 2005. Inhibition of Activator Protein-1, NF- κ B, and MAPKs and Induction of Detoxifying Enzym Activity by Chlorogenic Acid. *J. Biol. Chemist.* 30 (280). 27888–27895.
- Friedman S.L. 2008. Hepatic fibrosis—Overview. *Toxicol. J.* 201;120-129.
- Friedman S.L., & Lee U.E. 2011. Mechanisms of Hepatic Fibrogenesis. *Best Pract & Res. Clin.Gast. J.* 25;195-206.
- Gerberding, J.L. 2015. *Toxicological profil carbon tetrachloride*. United States: Departement of Health and Human Services.
- Goodman Z.P. 2007. Grading and Staging Systems for Inflammation and Fibrosis in Chronic Liver Diseases. *Hepatol. J.* 47; 598-607.
- Gonthier, M., P., Marie, A., V., Catherine, B., Christian, R., & Augustin, S. 2003. Chlorogenic acid bioavailability largely depends on metabolism of the gut microflora in rats. *J. Nutr.* 133;1858-1859.
- Gressner O.A., Weiskirchen R., & Gressner A.M. 2007. Evolving concepts of liver fibrogenesis provide new diagnostic and therapeutic options. *Comp. Hepatol. J.* 6(7); 1-13.
- Guo J. & Friedman S. 2010. Toll-like receptor 4 signaling in liver injury and hepatic fibrogenesis. *J. Biomed. Central.* 3:21; 1-19.
- Hasty K. A., Hibbs M. S., Kang A. H., and Mainardi C. L. 1986. Secreted forms of human neutrophil collagenase. *J. Biol. Chem.* 261: 5645–5650.
- Hassan E.M., El-Kherbawy G.M., Ali M.A.M., & Dewidar O.M. 2013. The potential effect of special formulas on cirrhotic rats. *J. Food. Nut. Sci.* 4; 594-603.
- Hyder M.A., Hasan M., & Moheildein A.H. 2013. Comparative Levels of ALT, AST, ALP, and GGT in liver associated Diseases. *Euro J. Exp.Bio.* 3(2);280-284
- Iredale, J.P., 2001. Hepatic stellate cell behavior during resolution of liver injury. *Semin. Liver Dis.* 21;427–436.

- Iseki K., Itagaki S., Kobayashi M., Kurokawa T., Hirano T., Sato Y., *et al.* 2010. In vitro and In vivo Antioxidant Properties of Chlorogenic Acid and Caffeic Acid. *Int.J. Pharm.* 430;136-138.
- Ji L., Lu B., Sheng Y., & Zheng Z. 2015. The therapeutic Detoxification of Chlorogenic Acid Against Acetaminofen-Induced Liver Injury By Ameliorating Hepatic Inflammation. *Chemico-Bio. Interact. J.* 238;93-108.
- Juggi J.S & Lim W.M. 1978. Bilirubin tolerance in rats with acute liver damage from carbon tetrachloride. *Bio. Med. J.* 20. 285-295.
- Kementerian Kesehatan RI. 2014. Situasi dan Analisis Hepatitis. *Pusat Data dan Informasi Kementerian Kesehatan RI article*;1-8.
- Kim J., Jeong I., Kim C., Lee Y.M., Kim J.M & Kim J.S. 2011. Chlorogenic acid inhibits the formation of advanced glycation end product and associated protein cross-linking. *J. Arch. Pharm. Res.* 34(3);495-500.
- Kim W.R. & Lim Y.S. 2008. The global impact of hepatic fibrosis and end-stage liver disease. *Clin. Liver Dis. J.* 12;733-746.
- Korim, K., M., M., Rowan, E., S., 2014. Chlorogenic and caffeic acids in liver stress induced by methamphetamine. *J. Toxicol*;1-10.
- Kuhnert N., Said I.H., & Jaiswal R. 2014. Assignment of Regio- and Stereochemistry of Natural Products Using Mass Spectrometry Chlorogenic Acids and Derivatives as a Case Study. *J. Stud. Nat. Prod. Chem.* 42; 305-339.
- Kumar H., Kawai T., & Akira S. 2009. Toll-like receptors and innate immunity. *J. Biochem. Biophysic. Res.Com.* 388; 621-625.
- Lafay S., Morand C., Manach C., Besson C., & Scalbert A. 2006. Absorption and metabolism of caffeic acid and chlorogenic acid in the small intestine of rats. *Brit. J. Nutr.* 96;39-46.
- Laurence D.R., & Bacharach A.L. 1964. Toxicity tests: Evaluation of drug activities. *Pharmacometrics*, 161. London: Academic Press
- Lawrence T. 2009. The Nuclear Factor NF- κ B Pathway in Inflammation. *J. HSC Persp. Biol.* 1; 1-10.
- Lechuga, C.G., Hernandez-Nazara, Z.H., Hernandez, E., Bustamante, M., Desierto, G., Cotty, A., Dharker, N., Choe, M., & Rojkind, M. 2006. PI3K is involved in PDGF-beta receptor upregulation post-PDGF-BB treatment in mouse HSC. *Am. J. Physiol. Gastrointest. Liver Physiol.* 291;G1051-G1061.

- Le H.D., Meijer V.E., Meisel J.A., Nose V., Popov Y., Puder M., & Schuppan D. 2010. Broad Spectrum Matrix Metalloproteinase Inhibition Curbs Inflammation and Liver Injury but Aggravates Experimental Liver Fibrosis in Mice. *J.p.one.* 5(6);e11256
- Liver Doctor Group & Cabot S. 2014. Liver Function Tests. Liver doctor *online*. Home page on-line. Available from <https://www.liverdoctor.com/liver/liver-function-tests/>. Internet Access December 23, 2016; 9.03 pm.
- Ludwig I.A., Mena P.M., Calani L., Cid C., Rio D.D., Lean M.E.J., *et al.* 2014. Variation in Caffeine and Chlorogenic Acid Contents of Coffees: What are We Drinking? *Food Func. J.* 5:1718-1726.
- Luedde T. & Schwabe R.F. 2011. NF- κ B in the liver-linking injury, fibrosis and hepatocellular carcinoma. *Nat. Rev. Gastroenterol. Hepatol. J.* 8(2); 108-118.
- Martijo. 1992. *Kesehatan dan Kemampuan Adaptasi Hewan*, Universitas Gadjah Mada, Yogyakarta.
- McCay, P.B., Lai, E.K., & Poyer, J.L. 1984. Oxygen and carbon-centered free radical formation during carbon tetrachloride metabolism. Observation of lipid radicals in vivo and in vitro. *J. Biol. Chem.* 259;2135-2143.
- Melton, A.C., & Yee, H.F. 2007. Hepatic stellate cell protrusions couple platelet-derived growth factor-BB to chemotaxis. *Hepatol. J.* 45;1446–1453.
- Melton, A.C., Datta, A., & Yee Jr., H.F. 2006. [Ca²⁺] i-independent contractile force generation by rat hepatic stellate cells in response to endothelin-1. *Am. J. Physiol. Gastrointest. Liver Physiol.* 290;G7–13.
- Murali A.R., & Carey W.D. 2014. Liver Test Interpretation-Approach to the Patient with Liver Disease: A Guide to Commonly Used Liver Test. Clevelandmeded *online*. Home page on-line. Available from <http://www.clevelandclinic-meded.com/medicalpubs/diseasemanagement/hepatology/guide-to-common-liver-tests/>. Internet access Mei 8, 2017. 9.00 pm.
- Muriel P. 2009. NF- κ B in liver diseases: a target for drug therapy. *J. App. Toxicol.* 29; 91–100.
- Murphy G., Reynolds J. J., Bretz U., & Baggiolini M. 1977. Collagenase is a component of the specific granules of human neutrophil leucocytes. *Biochem. J.* 162; 195–197.

- PERBIDKES. 2015. Anatomi dan Fisiologi Hati. Perbidkes *online*. Home page online. Available from <http://www.perbidkes.com/2015/anatomi-dan-fisiologi-hati.html?m=1>. Internet Access November 22, 2016; 22.45.
- Pena M.P.D., Pyrzynska K., Sentkowska A., & Skowron M. J. 2016. Chlorogenic Acids, Caffeine Content and Antioxidant Properties of Green Coffee Extracts: Influence of Green Coffee Bean Preparation. *Eur. Food Res. Technol. J.* 242;1403-1409.
- Pinzani M. 2000. Liver Fibrosis. *Springer Semin. Immunopathol. J.* 21; pp475-490.
- Pinzani, M., & Marra, F. 2001. Cytokine receptors and signaling in hepatic stellate cells. *Semin. Liver Dis.* 21;397-416.
- Pinzani, M. 2002. PDGF and signal transduction in hepatic stellate cells. *Front. Biosci.* 7;d1720-d1726.
- Pound A.W & Lawson A.T. 1974. Protection By Carbon Tetrachloride Against The Toxic Effects of Dimethylnitrosamine in Mice. *Brit.J.exp.Path.* 56;77-82.
- PubChem. 2014. Compound Chlorogenic Acid . PubChem *online*. Home page online. Available from https://pubchem.ncbi.nlm.nih.gov/compound/chlorogenic_acid#section=KEGG--Phytochemical-Compounds; Internet Access November 22, 2016: 1.14 p.m.
- PubChem. 2004. Compound Chlorogenic Acid . PubChem *online*. Home page online. Available from https://pubchem.ncbi.nlm.nih.gov/compound/sodium_chloride#section=Top; Internet Access May 9, 2017: 10.14 a.m.
- Ramadori, G., Veit, T., Schwogler, S., Dienes, H.P., Knittel, T., Rieder, H., Meyer Zum Buschenfelde, K.H., 1990. Expression of the gene of the alpha-smooth muscleactin isoform in rat liver and in rat fat-storing (ITO) cells. *Virchows Arch. B Cell Pathol. Incl. Mol. Pathol.* 59;349-357.
- Reynaert H., Thompson, M.G., Thomas, T., & Geerts, A. 2002. Hepatic stellate cells: role in microcirculation and pathophysiology of portal hypertension. *J. Gut.* 50;571-581.
- Riufeng G., Yunhe F., Zhengkai W., Ershun Z., Yimeng L., Minjun Y. 2014. Chlorogenic acid attenuates lipopolisaccharide-induced mice mastitis by suppressing TLR4-mediated NFkB signaling pathway. *Euro. J. Pharm.* 729;54-58.
- Rockey D.C., 2003. Vascular mediators in the injured liver. *Hepatology. J.* 37;4-12.

- Rockey, D.C., Boyles, J.K., Gabbiani, G., Friedman, S.L., 1992. Rat hepatic lipocytes express smooth muscle actin upon activation in vivo and in culture. *J. Submicrosc. Cytol. Pathol.* 24;193–203.
- Ross C.W. & Salisbury, F.B., 1995. *Fisiologi Tumbuhan, Jilid 2*. penerjemah: Lukman DR, Sumaryono. Bandung: Penerbit ITB;145-147.
- Santoso P. 2011. Pemberian Ekstrak Buah Mengkudu (*Morinda Citrifolia L.*) Menurunkan Kadar Malondihaldehida Darah Mencit Yang di Induksi Karbon Tetraklorida. Tesis S2. Universitas Udayana, Denpasar. Tesis S2.
- School of Veterinary Medicine Upenn, 2002. Upenn *online*. Home page on-line. Available from <http://cal.vet.upenn.edu/projects/ssclinic/refdesk/refrange.htm>; Internet access: Mei 07, 2017; 4.00 pm.
- Seki E., Minicis S.D., Osterreicher C.H., Kluwe J., Osawa Y., Brenner D.A., and *et al.* 2007. TLR enhances TGF- β signaling and hepatic fibrosis. *Nat. Med. J.* 11(11); 1324-1332.
- Seruga M & Tomac I. 2016. Electrochemical Properties of Chlorogenic Acids and Determination of Their Content in Coffee Using Differential Pulse Voltametry. *Int. J. Electrochem. Sci.* 11;2854-2876.
- Sherwood L. 2014. *Human Physiology: From Cells to Systems*. 9th Ed. USA: Cengage Learning; 593.
- Shier D., Butler J., & Lewis R. 2009. *Hole's : Human Anatomy & Physiology*. 12th ed. The McGraw-Hill Companies.
- Shi H., Shi A., Dong L., Lu X., Wang Y., Zhao J., *et al.* 2015. Chlorogenic acid protects against liver fibrosis in vivo and in vitro through inhibition of oxidative stress. *Clin. Nut. J.* 35;1366-1373.
- Steiling H., Muhlbauer M., Bataille F., Scholmerich J., Werner S., Hellerbrand C., 2004. Activated hepatic stellate cells express keratinocyte growth factor in chronic liver disease. *Am. J. Pathol.* 165;233–1241.
- Shimoda H., Seki E., & Aitani M. 2006. Inhibitory effect of green coffee bean extract on fat accumulation and body weight gain in mice. *BMC Comp. Altern. Med. J.* 6(9);1-9.
- Silvia A. 2017. Pengaruh pemberian asam klorogenat pada model fibrosis hepar karena induksi CCL₄ pada mencit. Tesis S2. Ilmu Kedokteran Dasar dan Biomedis, Universitas Gadjah Mada, Yogyakarta.

- Standish R.A., Cholongitas E., Dhillon A., Burroughs A., & Dhillon A.P. 2006. An Appraisal of The Histopathological Assessment of Liver Fibrosis. *Gut. J.* 55; 569-578.
- Taj D., Khan H., Sultana V., Ara J., & Ehteshamul-Haque S. 2014. Antihepatotoxic effect of golden berry (*Physalis peruviana Linn.*) in carbon tetrachloride (CCL₄) Intoxicated rats. *Pak. J. Pharm. Sci.* 27(3); 491-494.
- The United States Departement of Agriculture. 2015. Food Composition Databases. USDA *online*. Home page on-line. Available from https://ndb.nal.usda.gov/ndb/search/list?qlookup=&qt=&manu=&SYNCHRONIZER_URI=%2Fnd%2Fsearch%2Flist&SYNCHRONIZER_TOKEN=8e7000bc-4bff-45d9-af39-ced739e103ca&ds=. Internet access Mei 12, 2017; 10.30 am.
- Ugazio G., Torrielli M.V.,Burdino E., & Sawyer B.C. 1976. Long-Range of Product of Carbon Tetrachloride-Stimulated Lipid Peroksidation. *J. Hepatol.* 4; 353-356.
- UNSW. 2011. Gastrointestinal Tract-Liver Histology. *Unsw online*. Home page on-line. Available from https://embryology.med.unsw.edu.au/embryology/index.php/Gastrointestinal_Tract_-_Liver_Histology; internet access December 23, 2016; 7.41 a.m.
- Verrecchia F & Mauviel A. 2007. Transforming growth factor- β and Fibrosis. *J.Gastroenterol.* 13(22); 3056-3062.
- Wang F.S., Xu R., & Zang Z. 2012. Liver fibrosis: mechanisms of immune-mediated liver injury. *Cell. Mol. Imm. J.* 9;296-301.
- Wehbi M. 2015. Bilirubin. *Emedicine online*. Home page on-line. Available from <http://emedicine.medscape.com/article/2074068-overview#a1>. Internet access June 11, 2017. 13.08 a.m
- WHO. 2012. Chapter 7: Global Policy Report in the Prevention and Control of Viral Hepatitis. WHO *online*. Home page on-line. Available from http://global-report.worldhepatitisalliance.org/en/download/government-download.html?file=files/global_report/download/regional-findings/WHO%20SouthEast%20Asia%20Region.pdf. Internet access December 20, 2016. 10.00 am.
- Wolf, C.R., Mansuy, D., Nastainczyk, W., Deutschmann, & G., Ulrich, V. 1977. The reduction of polyhalogenated methanes by liver microsomal cytochrome P-450. *J. Mol. Pharmacol.* 13;698-705.
- Wu D., Bao C., Li L., Fu., Wang D., & Xie J. 2015. Chlorogenic acid against cholestatic liver injury in rats. *J. Pharm. Sci.* 129; 177-182.

- Xu, Y., Chen, J., Yu,X., Tao, W., Jiang, F., *et al.* 2010. Protective effects of chlorogenic acid on acute hepatotoxicity induced by lipopolysaccharide in mice. *Inflamm. Res. J.* 59;871–877.
- Yang L. & Seki E. 2012. Toll-like receptor in liver fibrosis: cellular crosstalk and mechanisms. *J. Fronti. Physiol.* 3; 1-18.
- Yu, C.,Wang, F., Jin, C., Huang, X., Miller, D.L., Basilico, C., & Mckeehan,W.L. 2003. Role of fibroblast growth factor type 1 and 2 in carbon tetrachloride-induced hepatic injury and fibrogenesis. *Am. J. Pathol.* 163;1653–1662.
- Zeiger E. 1998. Chlorogenic Acid and Caffeic Acid. *Review of Toxicological Literature.* ILS-North Carolina;1-112.