



REFERENCES

- Abate N (2000):** Obesity and cardiovascular disease: Pathogenetic role of the Metabolic syndrome and therapeutic implications. *Journal of Diabetes and its Complications*, 14(3), 154-174.
- Aguilar D, Fisher M, O'Connor C, Dunne M, Muhlestein J, Yao L, Gupta S, Benner R, Cook T, Edwards D, & Pfeffer M (2006):** Metabolic syndrome, C-reactive protein, and prognosis in patients with established coronary artery disease. *American Heart Journal*, 152(2), 298-304.
- Ahima RS (2006):** Adipose tissue as an endocrine organ. *Obesity (Silver Spring)* 14, Suppl 5:242S–249S.
- Akın S, Yazgan D, Çınar N ,et al.; (2012):** Pigment epithelium-derived factor (PEDF) increases in type 2 diabetes after treatment with metformin_Accepted manuscript online: 16 JAN 2012 10:15PM EST | DOI: 10.1111/j.1365-2265.2012.04341.x
- Alberti K.G. et al.; (2006):** Metabolic syndrome– anew world-wide definition. Aconsensus Statement from the International Diabetes Federation. *Diabet Med* 23:469–480
- American Diabetes Association (2007):** Standards of medical care in diabetes—2007. *Diabetes Care* 30:S4–S41.
- American Heart Association (n.d.) (2008):** What is metabolic syndrome? *Circulation*, 112(17), 285-290.
- Anand S, Yi Q, Gerstein H, Lonn E, Jacobs R, Vuksan V, Teo K, Davis B, Montague P and Yusuf S (2003):** Relationship of metabolic



syndrome and fibrinolytic dysfunction to cardiovascular disease. *Circulation*, 108, 420-425.

Andrew JW, Blakemore IA and Froguel P (2006): Genetics of obesity and the prediction of risk for health. *Human Molecular Genetics.*, 15(2): R124–R130.

Aouadi M, Binetruy B, Caron L, Le Marchand-Brustel Y and Bost F(2006): Role Of MAPKs in development and differentiation: lessons from knock out mice. *Biochimie* 88:1091–1098.

Arimura T, Miura S, Sugihara M, et al.; (2011): Association between plasma levels of pigment epithelium-derived factor and renal dysfunction in patients with coronary artery disease, *Cardiology Journal*2011, Vol. 18, No. X, pp. 1–x

Arkan MC, Hevener AL, Greten, FR Maeda S, Li ZW, Long JM, Wynshaw-Boris A, Poli G, Olefsky J and Karin M (2005): IKK-beta links inflammation to obesity-induced insulin resistance. *Nat. Med.*, 11, pp. 191–198.

Aruna DP, Manson EJ, Rifai N, Buring JE and Ridker PM (2001): C-reactive protein, interleukin 6, and risk of developing type 2 diabetes mellitus. *Journal of the American Medical Association.*, 286: 327-334.

Aso Y, Wakabayashi S, Yammoto R, Matsutomo R, Takebayashi K and Inukai T (2005): Metabolic syndrome accompanied by hypercholesterolemia is strongly associated with proinflammatory state and impairment of fibrinolysis in patients with type 2 diabetes. *Diabetes Care*, 28(9), 2211-2216.



- Assman G, Schriewer H, Schmitz G and Hagele EO (1983):** Quantification of high density lipoprotein cholesterol by precipitation with phosphotungstic acid/MgC₁₂. Clin. Chem. 29: 2026-2027.
- Bacha F, Saad R, Gungor N and Arslanian S. (2006):** Are obesity-related metabolic risk factors modulated by the degree of insulin resistance in adolescents? Diabetes Care., 29: 1599-1604.
- Becerra SP, Palmer I, Kumar A, Steele F, Shiloach J, Notario V and Chader GJ (1993):** Overexpression of fetal human pigment epithelium-derived factor in E. coli: a functionally active neurotrophic factor. J. Biol. Chem. 268, 23148–23156
- Becerra SP, Sagasti A and Spinella P (1995):** Pigment Epithelium-derived Factor Behaves Like a Noninhibitory Serpin: Vol.270, No.43, Issue of October 27, pp .25992 – 25999, 1995 Printed in U.S.A.
- Borque L, et al., (2000):** Clin Chem.46:1839.
- Bouck N, Stellmach V, Hsu S, Hanahan D and Folkman J (1996):** Adv. Cancer Res. **69**, 135 (1996); Cell 86, 353
- Brasier AR, Recinos AIII and Eledrisi MS (2002):** Vascular inflammation and the renin–angiotensin system. Arterioscler Thromb Vasc Biol22:1257–1266
- Brouillet Jc, Spyrtos E, Fauque G, Maudelonde T and Rochfort H (1993):** Immunoradiometric assay of pro-cathepsin D in breast cancer. Eur J cer 29: 1248-1251.



- Cao W, Tombran-Tink J, Chen W, et al., (1999):** Pigment epithelium-derived factor protects Cultured retinal neurons against hydrogen peroxide-induced cell death. *J Neurosci Res* 1999;57:789–800.
- Carl A, Ashwood ER and Bruns DE (2006):** Lipids, lipoproteins, apolipoproteins and other cardiovascular risk factors. In *Tietz Textbook of Clinical Chemistry and Molecular Diagnostics*; 2: 903-967.
- Carr D, Utzschneider K and Hull R, (2004):** Intra-abdominal fat is a major determinant of the National Cholesterol Education Program Adult Treatment Panel III criteria for the metabolic syndrome. *Diabetes*, 53(8), 2087-2094.
- Chen C, Cheung B, Wk T, So A, et al., (2011):** Plasma Concentration of Pigment Epithelium-Derived Factor is Closely Associated with Blood Pressure and Predicts Incident Hypertension in Chinese: a 10-Year Prospective Study DOI: 10.1111/j.1365-2265.011.04178.x
- Chuan T, Chen S, Shih, S et al (2010):** Pigment Epithelium-Derived Factor Is an Intrinsic Antifibrosis Factor Targeting Hepatic Stellate Cells *Am J Pathol.* 2010 October; 177(4): 1798–1811.
- Chung JA, Doll AK, Gattu C, Shugrue M, Cornwell P, Fitchev and rawford SE, (2008):** Anti-angiogenic pigment epithelium-derived factor regulates hepatocyte triglyceride content through adipose triglyceride lipase (ATGL). *J. Hepatol.*, 48, pp. 471–478.
- Cinti S, Mitchell G, Barbatelli G, Murano I, Ceresi E, Faloia E, Wang S, Fortier M, Greenberg AS and Obin MS (2005):** Adipocyte death defines macrophage localization and function in adipose



tissue of obese mice and humans. *J. Lipid Res.*, 46, pp. 2347–2355.

Costanzo A, Moretti F, Burgio VL, Bravi C, Guido F, Levrero M and Puri PL (2003): Endothelial activation by angiotensin II through NF kappa Band p38 pathways: involvement of NF kappa B-Inducible kinase (NIK), free oxygen radicals, and selective inhibition by aspirin. *J Cell Physiol* 195:402–410

Crowe S, Wu LE, Economou C, Turpin SM, Matzaris M, Hoehn KL, Hevener AL, James DE, Duh EJ and Watt MJ (2009): Pigment epithelium-derived factor contributes to insulin resistance in obesity. *Cell Metab* 10:40–47

Dahlof B, Devereux RB, Kjeldsen SE, Julius S, Beevers G, de Faire U, Fyhrquist F, Kristiansson K, Lederballe-Pedersen O, Lindholm LH, Nieminen MS, Omvik P, Oparil S, Wedel H and LIFE Study Group (2002): Cardiovascular morbidity and mortality in the Losartan Intervention for Endpoint Reduction in Hypertension Study (LIFE): a randomised trial against atenolol. *Lancet* 359:995–1003

Dandona P, Aljada A, Chaudhuri A, Mohanty P and Garg R (2005): Metabolic syndrome: A comprehensive perspective based on interactions between obesity, diabetes and inflammation. *Circulation*, 111(11), 1448-1454.

Dawson D, Volpert O and Gillis P (1999): Pigment Epithelium-Derived Factor: A Potent Inhibitor of Angiogenesis Vol. 285 no. 5425 pp. 245-248



- DeCosmo S, Trevisan R, Minenna A, et al., (2006):** Insulin resistance and the cluster of abnormalities related to the metabolic syndrome are associated with reduced glomerular filtration rate in patients with Type 2 diabetes. *Diabetes Care*, 29(2), 432-434.
- Dietschy JM, Weeks LE and Delento JJ (1976):** Enzymatic assessment of free and estrified cholesterol levels using the oxygen electrode in a modified glucose analyzer. *Clin. Chem. Acta*; 73: 407
- Eckel R, Grundy S and Zimmet (2005):** The metabolic syndrome. *The Lancet*, 365, 1415-1428.
- Edward and Schultz, MD.(1999):** Selection and interpretation of laboratory procedures. in: *Tietz Textbook of Clinical Chemiatriy*.3rd edition. C.A. Burtis and E.R. Ashwood (Eds)W,B Saunders Co. Philadelphia; pp:310-319
- Filleur S, Nelius T, de W, Riese and Kennedy RC (2009):** Characterization of PEDF: a multi-functional serpin family protein. *J. Cell. Biochem.*, **106**, pp. 769–775.
- Florez H, Castillo-Florez S, Mendez A, Casanova-Romero P, Larreal-Urdaneta C, Lee D and Goldberg R (2006):** C-reactive protein is elevated in obese patients with the metabolic syndrome. *Diabetes Research and Clinical Practice*, 71, 92- 100.
- Folkman J, Mendelsohn PM, Howley MA, Israel LA and Liotta Eds (1995):** In *Molecular Basis of Cancer*, J. (Saunders, Philadelphia, PA, pp. 206–232; *Nature Med.* 1, 27.



Ford E and Giles W (2003): A comparison of the prevalence of the metabolic syndrome using two proposed definitions. *Diabetes Care*, 26, 575-581.

Friedwald W.T.; Levy R.I. and Fridrickson D.S. (1972): Estimation of the concentration of low-density lipoprotein cholesterol in plasma without use of the preparative ultracentrifugation. *Clin. Chem.*, 18: 449-501.

Godsland I, Crook D, Proudler A and Stevenson J (2005): Hemostatic risk factors and insulin sensitivity, regional body fat distribution and the metabolic syndrome. *Journal of Clinical Endocrinology and Metabolism*, 90(1), 190-197.

Goff D, Zaccaro D, Haffner S, et al., (2003): Insulin sensitivity and the risk of incident hypertension. *Diabetes Care*, 26(3), 805-809.

Greenfield JR, Samaras K, Jenkins AB, Kelly PJ, Spector TD, Gallimore JR, Pepys MB and Campbell LV (2004): Obesity is an important determinant of baseline serum C-reactive protein concentration in monozygotic twins, independent of genetic influences. *Circulation.*, 109: 3022–3028.

Grisanti S and Guidry C (1995): Transdifferentiation of retinal pigment epithelial cells from epithelial to mesenchymal phenotype. *Invest Ophthalmol Vis Sci* 36: 391+05.

Grundey S (2004): Metabolic syndrome: A growing clinical challenge. *Medscape Cardiology*, 8(2) from <http://www.medscape.com/viewarticle/484166> accessed October 29.



- Guilherme JV, Virbasius V, Puri and Czech MP (2008):** Adipocyte dysfunctions linking obesity to insulin resistance and type 2 diabetes. *Nat. Rev. Mol. Cell Biol*, 9, pp. 367–377.
- Halaas JL, Gajiwala KS, Maffei M, Cohen SL, Chait BT, Rabinowitz D, Lallone RL, Burley SK and Friedman, JM (1995):** Weight-reducing effects of the plasma protein encoded by the obese gene. *Science*, 269, pp. 543–5
- Hamaguchi M, Kojima T, Takeda N, et al.; (2005):** The metabolic syndrome as a predictor of nonalcoholic fatty liver disease. *Ann Intern Med*. Nov 15 2005;143(10):722-728.
- Hamilton SR and Aaltonen LA (2000):** Editors. Pathology and genetics of tumours of the Digestive system. Lyon, France: IARC Press.
- Hanshuang Shao, Iris Schvartz and Shmuel Shaltiel (2003):** Secretion of pigment epithelium Derived factor; *European Journal of Biochemistry*, 10 Sep 2003.
- Hassinen M, Lakka T, Komulainen P, & Gylling H (2006):** C-reactive protein and metabolic syndrome in elderly women: A 12-year follow-up study. *Diabetes Care*, 29(4), 931-933.
- Hirosumi J, Tuncman G, Chang L, Gorgun C.Z. Uysal KT, Maeda K, Karin M and Hotamisligil GS (2002):** A central role for JNK in obesity and insulin resistance. *Nature*, 420, pp. 333–336.
- Hoffmann R and Valencia A (2004):** Agene network for navigating the literature; *Nature Genetics* 36, 664
- Holland WL, Brozinick JT, Wang LP, Hawkins ED, Sargent KM, Liu Y, Narra K, Hoehn KL, Knotts TA and Siesky A et al.; (2007):**



Inhibition of ceramide synthesis ameliorates glucocorticoid-, saturated-fat-, and obesity-induced insulin resistance. *Cell Metab.*, 5 (2007), pp. 167–179.

Horowitz JF, Coppack SW, Paramore D, Cryer PE, Zhao G and Klein S (1999): Effect of short-term fasting on lipid kinetics in lean and obese women. *Am. J. Physiol.*, 276 (1999), pp. E278–E284.

Hotamisligil GS(2006): Inflammation and metabolic disorders. *Nature* 444:860–867

Hutley L and Prins J (2005): Fat as an endocrine organ: relationship to metabolic syndrome. *American Journal of the Medical Sciences*, 303(6), 280-289.

International Diabetes Federation (n.d.) .(2006): The IDF worldwide definition of the metabolic syndrome. From http://www.idf.org/webdata/docs/MetSyndrome_FINAL.pdf accessed on October 29, 2006.

Jager J, Thierry G, Cormont M, Yannick MP and Tanti F. (2007): Interleukin-1 β -induced insulin resistance in adipocytes through down-regulation of Insulin Receptor Substrate-1 Expression. *Endocrinology.*, 148(1): 241–251.

Jenkins SX, Zhang A, Gosmanova C, Aston A, Dashti MZ, Baker T, Yons L and Ma JX (2008): Increased serum Pigment Epithelium Derived Factor levels in Type 2 diabetes patients. *Diabetes Res. Clin. Pract.*, 82, pp. e5–e7



John N and Fain (2010): Release of inflammatory mediators by human adipose tissue is enhanced in obesity and primarily by the nonfat cells Obesity Research.; 513948, 20.

Kadowaki T, Yamauchi T, Kubola N, et al., (2006): Adiponectin and adiponectin receptors in insulin resistance, diabetes, and the metabolic syndrome. The Journal of Clinical Investigation, 116(7), 1784-1792.

Katakami N, Kaneto H, Yamasaki Y, et al.; (2008): Increased serum pigment-derived factor levels in type1diabetic patient with diabetic retinopathy.Diabetes research and clinical practice 8i e4-e7.

Kershaw E and Flier J., et al.; (2004): Fat as an endocrine organ. The Journal of clinical Endocrinology and Metabolism, 89(6), 2548-2556.

Kim S, Kim H, Hur K, et al.; (2004): Visceral fat thickness measured by ultrasonography can estimate not only visceral obesity but also risks of cardiovascular and metabolic diseases. American Society for Clinical Nutrition, 79, 593-599.

Lam DCL, Xu A, Lam KSL, Lam B, Lam JCM, Lui MS and Ip MSM (2009): Serum adipocyte-fatty acid binding protein level is elevated in severe obstructive sleep apnea and correlates with insulin resistance. European Respiratory Journal., 33: 346-351.

Langin D, Dicker A, Tavernier G, Hoffstedt J, Mairal A, Ryden M, Arner E, Sicard A, Jenkins CM and Viguerie N, et al. (2005): Adipocyte lipases and defect of lipolysis in human obesity.



Diabetes, 54 (2005), pp. 3190–3197.

Lara-Castro C, Luo N, Wallace P, et al., (2006): Adiponectin multimeric complexes and the metabolic syndrome trait cluster. Diabetes, 55, 249-259.

Lemieux I, Agnès P, Prud'homme D, Alméras N, Bogaty P, Nadeau A, Bergeron J and Després JP (2001): Elevated C- reactive protein another component of the atherothrombotic profile of abdominal obesity. Arteriosclerosis Thrombosis and Vascular Biology., 21:961-967.

Lumeng CN, Bodzin JL and Saltiel AR (2007): Obesity induces a phenotypic switch in adipose tissue macrophage polarization. J. Clin. Invest., 117, pp. 175–184.

Maeda N, Shimomura I, Kishida K, Nishizawa H, Matsuda M, Nagaretani H, Furuyama N, Kondo H, Takahashi M and Arita Y et al., (2002): Diet-induced insulin resistance in mice lacking adiponectin/ACRP30. Nat. Med., 8, pp. 731–737.

Maggi S, Noale M, Gallina P & Bianchi D (2006): Metabolic syndrome, diabetes, and cardiovascular disease in an elderly Caucasian cohort: The Italian longitudinal study on aging. The Journals of Gerontology, 61A (5), 505-511.

Maki KC, Pelkman CL, Kelley KM, Lawless AL, Schild A, Rains TM.(2011): Effects of Type 2 resistant starch consumption on insulin sensitivity in men and women. Poster presented at Experimental Biology, Washington D.C., April 10, 2011.http://www.fasebj.org/cgi/content/meeting_abstract/25/1_M



meetingAbstracts/587.9?sid=f92de866-73b9-4549-ae7a-ca3417713fb4

Makoto N, Toshiki M, Yoshiro S and Keiko YT (2007): Abdominal obesity exhibits distinct effect on inflammatory and anti-inflammatory proteins in apparently healthy Japanese men. Cardiovascular Diabetology., 6: 27-31.

Malnick SDH and Knobler H (2006): Complications of obesity. Oxford Journal of Medicine., 99: 565–579.

Mancia G (2006): What is new in ESH guidelines? Program and abstracts from the 16th European Meeting on Hypertension; June 12-15, 2006; Madrid, Spain.

Mancini MC: (2009): Metabolic Syndrome in children and adolescents- criteria for diagnosis. Diabetol Metab Syndr 2009, 1(1):20.

Mark Greener (2003): Tumor necrosis factor linked to insulin resistance. Int J obes Related metabolic disorders; 27 (1)

Marques-Vidal P, Mazoyer E, Bongard V, Gourdy P, Ruidavets J, Drouet L and Ferrieres J. (2002): Prevalence of insulin resistance syndrome in southwestern France and its relationship with inflammatory and hemostatic markers. Diabetes Care, 25(8), 1371-1377.

Matsuyama K, Ogata N, Matsuoka M, et al., (2008): Relationship between pigment epithelium –derived factor (PEDF) and renal function in patient with diabetic retinopathy, Molecular Vision 2008; 14:992-996.



- Matsuzawa Y (2006):** Therapy in sight: Adipocytokines in metabolic Syndrome and related cardiovascular disease. *Nat Clin Pract Cardiovasc Med* 2006; 3:35–42.
- McAlister FA, Ezekowitz J, Tonelli M, Armstrong PW (2004):** Renal insufficiency and heart failure. Prognostic and therapeutic implications from a prospective cohort study. *Circulation* 109:1004–1009.
- McGowan MW, Artiss JD and Strooburgh DR (1983):** A peroxidase-coupled method for the colorimetric determination of serum triglycerides. *Clin. Chem.* 29: 273-278.
- Menuet R, Lavie C and Milani R (2005):** Importance and management of dyslipidemia in the metabolic syndrome. *The American Journal of the Medical Sciences*, 330(6), 295-302
- Mitka M (2006):** Groups call truce over metabolic syndrome. *JAMA*. Aug 9 2006; 296(6):641.
- Miyazaki Y, Pipek R, Mandarino L and Ralph A (2003):** Tumor necrosis factor (and insulin resistance in obese type 2 diabetic patients. *International Journal of obesity*; 27: 88.
- Molin D and Post MJ (2007):** Therapeutic angiogenesis in the heart: protect and serve. *Curr Opin Pharmacol* 7(2):158–163.
- Moon Y S, Kim D H and Song D K (2004):** Serum tumor necrosis factor- α levels and components of the metabolic syndrome in obese adolescents. *Metabolism*; 53 (7): 863.



Morse S, Zhang R, Thakur V, et al.; (2005): Hypertension and the metabolic syndrome. American Journal of the Medical Sciences, 330(6), 303-310.

Nader R, et al. (2001): Clin.Chem.47:403.

National Cholesterol Education Program (NCEP)(2001): Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III): Third report of the national cholesterol education program (NCEP) expert panel on detection, evaluation, and treatment of high blood cholesterol in adults (adult treatment panel III) final report. Circulation106 :3143–3421.

New man DJ, Pricw CP and Ashwood ER (1999): Renal function and nitrogen metabolites Tietz Textbook of Clinical Chemistry .1999.B.1204-70

O'Dea K, Walker K, Colagiuri S, Hepburn A, Holt P and Colagiuri R (2002): Evidence based guidelines for type 2 diabetes mellitus. National English Journal of Medicine., 346: 393-403.

O'Hanlon R, O'Shea P, Ledwidge M, et al.; (2007): The biologic variability of B-type natriuretic peptide and N-terminal pro-B-type natriuretic peptide in stable heart failure patients. J Card Fail 13(1):50–55

Ogata N, Matsuoka M, Matsuyama K, Shima C, Tajika A, Nishiyama T, Wada M, Jo N, Higuchi A, Minamino K, Matsunaga H, Takeda T and Matsumura M (2007): Plasma concentration of pigment epithelium-derived factor in patients



with diabetic retinopathy. *J Clin Endocrinol Metab* 2007; 92:1176-9.

Ogata N, Matsuoka M, Matsuyama K, Shima C, Tajika A, Nishiyama T, Wada M, Jo N, Higuchi A and Minamino K, et al., (2007): Plasma concentration of pigment epithelium-derived factor in patients with diabetic retinopathy. *J. Clin. Endocrinol. Metab.*, 92 (2007), pp. 1176–1179.

Ogata N, Wada M, Otsuji T, Jo N, Tombran-Tink J, Matsumura M (2002): Expression of pigment epithelium-derived factor in normal adult rat eye and experimental choroidal neovascularization. *Invest Ophthalmol Vis Sci* 2002, 43(4):1168-1175.

Olufadi R and Byrne C (2008): Clinical and laboratory diagnosis of the metabolic syndrome. *J Clin. Pathol*; 61:697-706.

Ort T, Arjona AA, MacDougall JR, Nelson PJ, Rothenberg ME, Wu F, Eisen A and Halvorsen YD, (2005): Recombinant human FIZZ3/resistin stimulates lipolysis in cultured human adipocytes, mouse adipose explants, and normal mice. *Endocrinology*, **146** (2005), pp. 2200–2209

Pang I, Zeng H and Fleenor D (2007): Pigment epithelium-derived factor protects retinal ganglion cells *BMC Neuroscience* 2007, 8:11doi:10.1186/1471-2202-8-11

Pang I, Zeng H and Flenoor E (2007): Pigment epithelium-derived factor protects retinal ganglion cells *BMC Neuroscience* 2007, 8:11doi:10.1186/1471-2202-8-11



- Park HS, Park JY and Yu R (2005):** Relationship of Obesity and visceral adiposity with serum Concentrations of CRP, TNF-alpha and IL-6. *Diabetes Res Clin Pract.* 2005;69(1):29–35.
- Pascual-Figal DA, Domingo M, Casas T, et al.; (2008):** Usefulness of clinical and NT-proBNP monitoring for prognostic guidance in destabilized heart failure outpatients. *Eur Heart J* 29(8):1011–1018.
- Patricia and Becerra (2006):** Structure-Function Relationships of PEDF; National Eye Institute December 2006.
- Pepys MB and Hirschfield GM (2003):** C-reactive protein: a critical update. *Journal of Clinical Investigation.*, 111: 1805–1812.
- Phillippa J, Miranda M and Ralph A (2005):** Metabolic syndrome: Definition, patho-physiology, and mechanisms. *American Heart Journal*; 149 (1) 33-45.
- Pignolo RJ, Cristofalo VJ, Rotenberg MO, Tombran-Tink JJ, et al., (1993):** *Biol. Chem.* 268, 8949; *J. Neurosci.* 15, 4992 (1995).
- Plandevall M, Singal B, Williams L, et al (2006):** A single factor underlies the metabolic syndrome. *Diabetes Care*, 29(1), 113-122.
- Plomgaard P, Fischer CP, Ibfelt T, Pedersen BK and Van Hall G (2008):** Tumor necrosis factor-alpha modulates human in vivo lipolysis. *J. Clin. Endocrinol. Metab.*, **93** (2008), pp. 543–549.
- Prasad A and Quyyumi A (2004):** Renin-angiotensin system and angiotensin receptor blockers in the metabolic syndrome. *Circulation*, 110(11), 1507-1512.



- Quigley HA, and Broman AT (2006):** The number of people with glaucoma worldwide in 2010 and 2020. *Br J Ophthalmol* 2006, 90 (3): 262-267.
- Ram Weiss, James D, Tamia S, William V, Sara E, Catherine W, Karin A, Melinda L, Mary S, John M, Robert S and Sonia C (2004):** Obesity and the metabolic syndrome in children and adolescents *NEJM*; 350 (23): 2362.
- Recasens M, Lopez-Bermejo A, Ricart W, Vendrell J, Casamitjana R. and Fernandez-Real J (2005):** An inflammation score is better associated with basal than stimulated surrogate indexes of insulin resistance. *Journal of Clinical Endocrinology and Metabolism*, 90(1), 112-118.
- Reilly M, Wolfe M, Rhodes R, et al.; (2004):** Measures of insulin resistance add incremental value to the clinical diagnosis of metabolic syndrome in association with coronary atherosclerosis. *Circulation*, 110(7), 803-809.
- Rifai N and Ridker PM. (2001):** High-sensitivity C-reactive protein: anovel and promising marker of coronary heart disease. *Clin Chem*. 2001; 47:403-411.
- Rosen ED and Spiegelman BM (2006):** Adipocytes as regulators of energy balance and glucose homeostasis. *Nature*, 444, pp. 847–853.
- Ruige J, Ballaux D, Funahashi T, et al., (2005):** Resting metabolic rate is an important predictor of serum adiponectin concentrations: Potential implications for obesity-related disorders. *American Journal of Clinical Nutrition*, 82(1), 21-25.



- Rutter M, Meigs J, Sullivan L, et al. (2005):** Insulin resistance, the metabolic syndrome and incident cardiovascular events in the Framingham Offspring Study. *Diabetes*, 54, 3252-3558.
- Rychli K, Niessner A and Philipp J (2010):** Prognostic Value of Pigment Epithelium-Derived Factor in Patients With Advanced Heart Failure CHEST September 2010 vol. 138 no. 3 656-664
- Ryden M and Arner P (2007):** Tumour necrosis factor-alpha in human adipose tissue—from signalling mechanisms to clinical implications. *J. Intern. Med.*, **262** (2007), pp. 431–438.
- Sabater M, Jose M and José F (2010):** Circulating Pigment Epithelium-Derived Factor Levels Are Associated with Insulin Resistance and Decrease after Weight Loss The Journal of Clinical Endocrinology & Metabolism. **vol. 95** no. 10 4720-4728
- Sabio G, Das M, Mora A, Zhang Z, Jun JY, Ko HJ, Barrett T, Kim JK and Davis RJ (2008):** A stress signaling pathway in adipose tissue regulates hepatic insulin resistance. *Science*, **322** (2008), pp. 1539–1543.
- Sarah X, Zhang, Joshua J, Wang and Guoquan Gao (2000):** Pigment epithelium-derived factor (PEDF) is an Endogenous antiinflammatory factor . doi: 10.1096/fj.05-4313fje
- Sattar N, Williams K, Sniderman A, D'Agostino R, Jr. and Haffnr S (2004):** Comparison of the associations of apolipoprotein B and non-high-density lipoprotein cholesterol with other cardiovascular risk factors in patients with the metabolic



syndrome in the Insulin Resistance Atherosclerosis Study. *Circulation*, 110(17), 2687-2693.

Savage DB, Petersen KF and Shulman GI (2007): Disordered lipid metabolism and the pathogenesis of insulin resistance. *Physiol. Rev.*, 87, pp. 507–520.

Schaller AF and Dean V (2008): Addressing overweight and obesity: evolving to a medical consensus. *The Journal of the American Osteopathic Association*, 108 (2): 2-15.

Schmitz-Peiffer C, Craig DL and Biden, TJ (1999): Ceramide generation is sufficient to account for the inhibition of the insulin-stimulated PKB pathway in C2C12 skeletal muscle cells pretreated with palmitate. *J. Biol. Chem.*, 274 (1999), pp. 24202–24210

Schneider JH, Glaesmer H, Klotsche J, Lehnert H, Andreas MZ, Winfried M, Pittrow D, Günter KS and Wittchen HU (2006): Accuracy of anthropometric indicators of obesity to predict cardiovascular risk. *The Journal of Clinical Endocrinology & Metabolism.*, 92(2): 589-594.

Shoelson S, Lee J and Goldfine A (2006): Inflammation and insulin resistance. *The Journal of Clinical Investigation*, 116(7), 1793-1901.

Shoelson SE, Herrero L and Naaz A (2007): Obesity, inflammation, and insulin resistance. *Gastroenterology* 132:2169–2180



- Silha JV, Krsek M, Sucharda P and Murphy LJ (2005):** Angiogenic factors are elevated in overweight and obese individuals. *Int. J. Obes. (Lond)*, **29**, pp. 1308–1314.
- Simin L, Manson EJ, Buring EJ, Stampfer JM, Willett CW, Ridker MP (2002):** Relation between a diet with a high glycemic load and plasma concentrations of high-sensitivity C-reactive protein in middle-aged women. *The American Journal of Clinical Nutrition*, **75**: 492–498.
- Snodgrass JJ, William RL, Tarskaia AL, McDade WT, Sorensen VM, Alekseev PV and Krivoschapkin GV (2007):** Anthropometric correlates of C- reactive protein among indigenous Siberians. *Journal of Physiological Anthropology*, **26**: 241–246.
- Solinas G, Vilcu C, Neels JG, Bandyopadhyay GK, Luo JL, Naugler W, Grivennikov S, Wynshaw-Boris A, Scadeng M and Olefsky JM, et al., (2007):** JNK1 in hematopoietically derived cells contributes to diet-induced inflammation and insulin resistance without affecting obesity. *Cell Metab.*, **6**, pp. 386–397.
- Sorescu D, Weiss D, Lasseque B, Clempus RE, Szocs K, Sorescu GP, Valppu L, Quinn MT, Lambeth JD, Vega JD, Taylor WR and Griending KK (2002):** Superoxide production and expression of Noxfamily proteins in human atherosclerosis. *Circulation* **105**:1429–1435
- Steen V and Petersen,(2003):** Pigment-epithelium-derived factor (PEDF)occurs at a physiologically Relevant concentration in human blood: purification and characterization iochem. J.(2003) **374**, 199–206 (Printedin Great Britain).



Steen V, Petersen, Zuzana Valnickova and Jan J Enghild (2003): Pigment-epithelium-derived factor (PEDF) occurs at a physiologically relevant concentration in human blood: purification and Characterization; *Biochem J.* 2003 August 15; 374 (Pt1): 199–206.

Stejskal D, Karpisek M, Svestak M, et al.; (2010): Pigment Epithelium Derived Factor as a New Marker of Metabolic Syndrome in Caucasian Population *Journal of Clinical Laboratory Analysis* 24 : 17–19.

Stellmach V, Crawford SE, Zhou W and Bouck N (2001): Prevention of ischemia induced retinopathy by the natural ocular antiangiogenic agent pigment epithelium-derived factor. *Proc. Natl. Acad. Sci. U.S.A.* 98, 2593–2597

Tavil Y, Sen N, Yazici HU and Hizal F (2007): Mean platelet volume in patients with metabolic syndrome and its relationship with coronary artery disease. *Thrombosis Research*; 120: 245-250.

Thomas T, and Frank Fuert L (1998): *Clinical laboratory diagnostic* 1st ed.p.241

Tilg H and Moschen AR (2006): Adipocytokines: mediators linking adipose tissue, inflammation and immunity. *Nat. Rev. Immunol.*, 6, pp. 772–783.

Tombran-Tink J and Barnstable CJ (2003): " PEDF: a multifaceted neurotrophic factor. *Nat. Rev. Neurosci.*, 4, pp. 628–636.

Tombran-Tink J, Chader GJ and Johnson LV (1991): *Exp.EyeRes.* 53,411–414



- Tombran-tink J, et al.; (1995):** Expression, Secretion, and Age-Related Downregulation of Pigment Epithelium-Derived Factor, a Serpin with Neurotrophic Activity *The Journal of Neuroscience*, July 1995, 15(7): 4992-5003.
- Umei H, Yamagishi SI and Imaizumi T(2010):** Sensitivity C-reactive protein in apparently healthy unmedicated subjects *J Int Med Res.* 2010 Mar-Apr;38(2):443-8.
- Volpert OV, Zaichuk T, Zhou W, Reiher F, Ferguson TA, Stuart PM, Amin M and Bouck NP (2002):** Inducer stimulated Fas targets activated endothelium for destruction by anti-angiogenic thrombospondin-1 and pigment epithelium-derived factor. *Nat. Med.* 8, 349–357
- Voros G, Maquoi E, Demeulemeester D, Clerx N, Collen D and Lijnen HR, (2005):** Modulation of angiogenesis during adipose tissue development in murine models of obesity. *Endocrinology*, **146**, pp. 4545–4554.
- Wang JJ, Zhang SX, Lu K, Chen Y, Mott R, Sato S and Ma JX (2005):** Decreased expression of pigment epithelium-derived factor is involved in the pathogenesis of diabetic nephropathy. *Diabetes* 2005; 54:243-50.
- Wang M, Park K and Qian X (2009):** Pigment epithelium-derived factor suppresses adipogenesis via inhibition of the MAPK/ERK pathway in 3T3-L1 preadipocytes *Am J Physiol Endocrinol Metab* 297:E1378-E1387, 2009.



- Wellen and Hotamisligil (2005):** K.E. Wellen and G.S. Hotamisligil, Inflammation, stress, and diabetes. *J. Clin. Invest.*, 115, pp. 1111–1119.
- William LR, et al.(2001):** Clin.Chem.47:418.
- World Health Organization. (1999):** Definition, diagnosis and classification of diabetes mellitus and its complications: report of a WHO Consultation. Part 1: diagnosis and classification of diabetes mellitus. Geneva, Switzerland: World Health Organization; 1999. Available at: http://whqlibdoc.who.int/hq/1999/WHO_NCD_NCS_99.2.pdf.
- World J, Gastrointest and Pathophysiol (2010):** August 15; 1(3): 91-114
- Yamagishi S, Adachi H, Yashiro T, et al.;(2006):** Elevated Serum Levels of Pigment Epithelium-Derived Factor in the Metabolic Syndrome. *Journal of Clinical Endocrinology & Metabolism* (6): 2447.
- Yamagishi S, Inagaki Y, Amano S, Okamoto T, Takeuchi M, Makita Z (2002):** Pigment epithelium-derived factor protects cultured Retinal pericytes from advanced glycation end product-induced Injury through its antioxidative properties. *Biochem Biophys Res Commun* 296:877–882
- Yamagishi S, Mstsui T, Adachi H, et al., (2010):** Positive association of circulating levels of advanced glycation end products (AGEs) with pigment epithelium –derived factor (PEDF) in a general population pharmacological research 61(2010)103-107
- Yamagishi S, Nakamura K, Ueda S, Kato S and Imaizumi T (2005):** Pigment epithelium-derived factor (PEDF) blocks angiotensin II



signaling in endothelial cells via suppression of NADPH oxidase: a novel anti-oxidative mechanism of PEDF. *Cell Tissue Res* 320:437–445.

Yamamoto Y, Hirose H, Saito I, et al., (2004): Adiponectin, an adipocytes derived protein, predicts future insulin resistance: Two-year follow-up study in Japanese population. *Journal of Clinical Endocrinology and Metabolism*, 89, 87-90.

Yoshihiro Motomiya, Sho-ichi Yamagishi, Hisashi Adachi and Akio Abe (2006): Increased Serum Concentrations of Pigment Epithelium-Derived Factor in Patients with End-Stage Renal Disease; *Clinical Chemistry*. 2006; 52: 1970-1971.

Yu Y, Chen GW, Cline D, Zhang Zong H, Wang Y, Bergeron R, Kim JK, Cushman SW and Cooney GJ et al.; (2002): Mechanism by which fatty acids inhibit insulin activation of insulin receptor substrate-1 (IRS-1)-associated phosphatidylinositol 3-kinase activity in muscle. *J. Biol. Chem.*, 277, pp. 50230–50236

Yuji T., Kazuo M., Fumio U. (2005): High-Sensitivity C - reactive protein in Japanese Patients with Type 2 Diabetes. *Obesity Research*., 13(10): 1810-1816.

Zvonic S, Lefevre M, Kilroy G, Floyd ZE, DeLany JP, Kheterpal I, Gravois A, Dow R, White A, Wu X and Gimble JM (2007): Secretome of primary cultures of human adipose-derived stem cells (ASCs): modulation of serpins by adipogenesis. *Mol Cell Proteomics* 6:18–28



Zweig MH and Campbell G (1999): Receiver-operating characteristic (ROC) plots: a fundamental evaluation tool in clinical medicine. Clini. Chem: 39:561-577