

References

1. Opara EI, Chohan M (2014) Culinary herbs and spices: Their bioactive properties, the contribution of polyphenols and the challenges in deducing their true health benefits. *Int J Mol Sci* 15: 19183–19202
2. Tapsell LC, Hemphill I, Cobiac L et al. (2006) Health benefits of herbs and spices: The past, the present, the future. *Med J Aust* 185: 1–24
3. Mohanty IR, Gupta SK, Mohanty N et al. (2012) The beneficial effects of herbs in cardiovascular diseases. *GJMR* 12: 39–58
4. Report on Biofach 2015 Nuremberg, Germany. URL: [http://spicesboard.in/events\\_list/uploads/Report%20on%20Biofach%202015%20pdf.pdf](http://spicesboard.in/events_list/uploads/Report%20on%20Biofach%202015%20pdf.pdf) Zugriff 03.04.16
5. Loop T, Priebe HJ (1998) Die arterielle Hypertonie: Ihre Bedeutung für die perioperative Morbidität und Mortalität. *Anästhesiol Intensivmed Notfallmed Schmerzther* 33: 292–299
6. Mihailovic-Stanojevic N, Belščak-Cvitanović A, Grujić-Milanović J et al. (2013) Antioxidant and antihypertensive activity of extract from *Thymus serpyllum* L. in experimental hypertension. *Plant Foods Hum Nutr* 68: 235–240
7. Karthik D, Viswanathan P, Venkatraman C (2011) Administration of rosmarinic acid reduces cardiopathology and blood pressure through inhibition of p22phox NADPH oxidase in fructose-fed hypertensive rats. *J Cardiovasc Pharmacol* 58: 514–521
8. Kwon YII, Vattem DA, Shetty K (2006) Evaluation of clonal herbs of Lamiaceae species for management of diabetes and hypertension. *Asia Pac J Clin Nutr* 15: 107–118
9. Aydin Y, Kutlay O, Ari S (2007) Hypotensive effects of carvacrol on the blood pressure of normotensive rats. *Planta Med* 73: 1365–1371
10. Ghayur MN, Gilani AH (2005) Ginger lowers blood pressure through blockade of voltage-dependent calcium channels. *J Cardiovasc Pharmacol* 45: 74–80
11. Akinyemi AJ, Ademiluyi AO, Obboh G (2013) Aqueous extracts of two varieties of ginger (*Zingiber officinale*) inhibit angiotensin I-converting enzyme, iron(II), and sodium nitroprusside-induced lipid peroxidation in the rat heart in vitro. *J Med Food* 16: 641–646
12. Nakasone Y, Nakamura Y, Yamamoto T (2013) Effect of a traditional Japanese garlic preparation on blood pressure in prehypertensive and mildly hypertensive adults. *Exp Ther Med* 5: 399–405
13. Stabler SN, Tejani AM, Huynh F et al. (2012) Garlic for the prevention of cardiovascular morbidity and mortality in hypertensive patients. *Cochrane Database Syst Rev* 8: CD007653
14. Ried K (2016) Garlic lowers blood pressure in hypertensive individuals, regulates serum cholesterol, and stimulates immunity: An updated meta-analysis and review. *J Nutr* 146: 389–396
15. Xiong XJ, Wang PQ, Lic SJ et al. (2015) Garlic for hypertension: A systematic review and meta-analysis of randomized controlled trials. *Phytomedicine* 22: 352–361
16. Chan JYY, Yuen ACY, Chan RJK et al. (2013) A review of the cardiovascular benefits and antioxidant properties of Allicin. *Phytother Res* 27: 637–646
17. Wainstein J, Stern N, Heller S et al. (2011) Dietary cinnamon supplementation and changes in systolic blood pressure in subjects with type 2 diabetes. *J Med Food* 14: 1505–1510
18. Akilen R, Tsiami A, Devendr D (2010) Glycated haemoglobin and blood pressure-lowering effect of cinnamon in multi-ethnic type 2 diabetic patients in the UK: a randomized, placebo-controlled, double-blind clinical trial. *Diabet Med* 27: 1159–1167
19. Ziegenfuss TN, Hofheins JE, Mendel RW et al. (2006) Effects of a water-soluble cinnamon extract on body composition and features of the metabolic syndrome in pre-diabetic men and women. *J Int Soc Sports Nutr* 3: 45–53
20. Preuss HG, Echard B, Polansky MM et al. (2006) Whole cinnamon and aqueous extracts ameliorate sucrose-induced blood pressure elevations in spontaneously hypertensive rats. *J Am Coll Nutr* 25: 144–150
21. Xue YL, Shi HX, Murad F (2011) Vasodilatory effects of cinnamaldehyde and its mechanism of action in the rat aorta. *Vasc Health Risk Manag* 7: 273–280
22. Insull WJr (2009) The pathology of atherosclerosis: plaque development and plaque responses to medical treatment. *Am J Med* 122: 3–14
23. Narasimhulu CA, Fernandez-Ruiz I, Selvarajan K et al. (2016) Atherosclerosis – do we know enough already to prevent it? *Curr Opin Pharmacol* 27: 92–102
24. Panahi Y, Hosseini MS, Khalili N et al. (2015) Antioxidant and anti-inflammatory effects of curcuminoid-piperine combination in subjects with metabolic syndrome: A randomized controlled trial and an updated meta-analysis. *Clin Nutr* 34: 1101–1108
25. Schiborr C, Kocher A, Frank J (2015) Curcumin: Grundlagen der Resorption und des Metabolismus. *Ernährungs Umschau* 62(11): M636–M642
26. Sahebkar A, Mohammadi A, Atabati A (2013) Curcuminoids modulate pro-oxidant-antioxidant balance but not the immune response to heat shock protein 27 and oxidized LDL in obese individuals. *Phytother Res* 27: 1883–1888
27. DiSilvestro RA, Joseph E, Zhao S et al. (2012) Diverse effects of a low dose supplement of lipidated curcumin in healthy middle aged people. *Nutr J* 11: 79
28. Lima Mda S, Quintans-Júnior LJ, de Santana WA (2013) Anti-inflammatory effects of carvacrol: evidence for a key role of interleukin-10. *Eur J Pharmacol* 699: 112–117
29. Arigesavan K, Sudhandiran G (2015) Carvacrol exhibits anti-oxidant and anti-inflammatory effects against 1, 2-dimethylhydrazine plus dextran sodium sulfate induced inflammation associated carcinogenicity in the colon of Fischer 344 rats. *Biochem Biophys Res Commun* 461: 314–320
30. Munoz-Munoz JL, Garcia-Molina F, Ros E et al. (2013) Prooxidant and antioxidant activities of rosmarinic acid. *J Food Biochem* 37: 396–408
31. Gamaro GD, Suyenaga E, Borsoi M et al. (2012) Effect of rosmarinic and caffeic acids on inflammatory and nociception process in rats. *ISRN Pharmacol* 2011: 451682
32. Sangbonig C, Takano H, Osakabe N et al. (2003) Rosmarinic acid inhibits lung injury induced by diesel exhaust particles. *Free Radic Biol Med* 34: 1060–1069
33. Nurmi A, Mursu J, Nurmi T et al. (2006) Consumption of juice fortified with oregano extract markedly increases excretion of phenolic acids but lacks short- and long-term effects on lipid peroxidation in healthy nonsmoking men. *J Agric Food Chem* 54: 5790–5796
34. Özdemir A, Ekbul B, Topal NB et al. (2008) Effects of origanum onites on endothelial function and serum biochemical markers in hyperlipidaemic patients. *J Int Med Res* 36: 1326–1334

35. Martín Peláez S, Mosele JJ, Pizarro N et al. (2015) Effect of virgin olive oil and thyme phenolic compounds on blood lipid profile: implications of human gut microbiota. *Eur J Nutr* [DOI: 10.1007/s00394-015-1063-2]
36. Afshari AT, Shirpoor A, Farshid A (2007) The effect of ginger on diabetic nephropathy, plasma antioxidant capacity and lipid peroxidation in rats. *Food Chem* 101: 148–153
37. Ghasemzadeh A, Jaafar HZE, Rahmat A (2010) Antioxidant activities, total phenolics and flavonoids content in two varieties of malaysia young ginger (*Zingiber officinale* Roscoe). *Molecules* 15: 4324–4333
38. Haniadka R, Saldanha E, Sunita V et al. (2013) A review of the gastroprotective effects of ginger (*Zingiber officinale* Roscoe). *Food Funct* 4: 845–855
39. Thomson M, Al-Qattan KK, Al-Sawan SM (2002) The use of ginger (*Zingiber officinale* Rosc.) as a potential anti-inflammatory and antithrombotic agent. *Prostaglandins Leukot Essent Fatty Acids* 67: 475–478
40. Rana SV, Pal R, Vaiphei K et al. (2011) Garlic in health and disease. *Nutr Res Rev* 24: 60–71
41. Wexler L, Brundage B, Crouse J et al. (1996) Coronary artery calcification: pathophysiology, epidemiology, imaging methods, and clinical implications. A statement for health professionals from the American Heart Association. *Circulation* 94: 1175–1192
42. Budoff MJ, Takasu J, Flores FR et al. (2004) Inhibiting progression of coronary calcification using aged garlic extract in patients receiving statin therapy: a preliminary study. *Prev Med* 39: 985–991
43. Budoff MJ, Ahmadi N, Gul KM et al. (2009) Aged garlic extract supplemented with B vitamins, folic acid and L-arginine retards the progression of subclinical atherosclerosis: a randomized clinical trial. *Prev Med* 49(2–3): 101–107
44. Zeb I, Ahmadi N, Nasir K et al. (2012) Aged garlic extract and coenzyme Q10 have favorable effect on inflammatory markers and coronary atherosclerosis progression: A randomized clinical trial. *J Cardiovasc Dis Res* 3: 185–190
45. Ahmadi N, Tsimikas S, Hajsadeghi F et al. (2010) Relation of oxidative biomarkers, vascular dysfunction, and progression of coronary artery calcium. *Am J Cardiol* 105: 459–466
46. Dudonne S, Vitrac X, Coutiere P et al. (2009) Comparative study of antioxidant properties and total phenolic content of 30 plant extracts of industrial interest using DPPH, ABTS, FRAP, SOD, and ORAC assays. *J Agric Food Chem* 57: 1768–1774
47. Anderson RA, Broadhurst CL, Polansky MM et al. (2004) Isolation and characterization of polyphenol type-A polymers from cinnamon with insulin-like biological activity. *J Agric Food Chem* 52: 65–70
48. Ranjbar A, Ghasmeinezhad S, Zamani H et al. (2008) Anti oxidative stress potential of cinnamon (*Cinnamomum zeylanicum*) in operating room personnel; a before/after cross sectional clinical Trial. *Int J Pharmacol* 3: 482–486
49. Roussel AM, Hininger I, Benaraba R et al. (2009) Antioxidant effects of a cinnamon extract in people with impaired fasting glucose that are overweight or obese. *J Am Coll Nutr* 28: 16–21
50. Hong JW, Yang GE, Kim YB et al. (2012) Anti-inflammatory activity of cinnamon water extract in vivo and in vitro LPS-induced models. *BMC Complement Altern Med* 12: 237
51. Harikumar K, Althaf SA, Kishore B et al. (2013) A review on hyperlipidemic. *IJNTPS* 3: 2277–2282
52. Hassan SA, Barthwal R, Nair MS et al. (2012) Aqueous bark extract of *Cinnamomum zeylanicum*: a potential therapeutic agent for streptozotocin-induced type 1 diabetes mellitus (T1DM) rats. *Trop J Pharm Res* 11: 429–435
53. Askari F, Rashidkhani B, Hekmatdoost A (2014) Cinnamon may have therapeutic benefits on lipid profile, liver enzymes, insulin resistance, and high-sensitivity C-reactive protein in nonalcoholic fatty liver disease patients. *Nutr Res* 34: 143–148
54. Al Jamal AR (2009) Effects of cinnamon on blood glucose and lipids levels in diabetic patients (type2). *Jordan J Biol Sci* 2: 135–138
55. Khan A, Safdar M, Ali Khan MM et al. (2003) Cinnamon improves glucose and lipids of people with type 2 diabetes. *Diabetes Care* 12: 3215–3218
56. Allen RW, Schwartzman E, Baker WL et al. (2013) Cinnamon use in type 2 diabetes: an updated systematic review and meta-analysis. *Ann Fam Med* 11: 452–459
57. Ranasinghe P, Jayawardana R, Galappaththy P et al. (2012) Efficacy and safety of 'true' cinnamon (*Cinnamomum zeylanicum*) as a pharmaceutical agent in diabetes: a systematic review and meta-analysis. *Diabet Med* 29: 1480–1492
58. Siegel G, Walter A, Engel S et al. (1999) Pleiotropic effects of garlic. *Wien Med Wochenschr* 149: 217–224
59. Zeng T, Guo FF, Zhang CL et al. (2012) A meta-analysis of randomized, double-blind, placebo-controlled trials for the effects of garlic on serum lipid profiles. *J Sci Food Agric* 92: 1892–1902
60. Silagy C, Neil A (1994) Garlic as a lipid lowering agent—a meta-analysis. *J R Coll Physicians Lond* 28: 39–45
61. Al Jamal AR, Alqadi T (2011) Effects of rosemary (*Rosmarinus officinalis*) on lipid profile of diabetic rats. *Jordan J Biol Sci* 4: 199–204
62. Müller M, Lukas B, Novak J (2008) *Oregano*: A source for peroxisome proliferator-activated receptor  $\gamma$  antagonists. *J Agric Food Chem* 56: 11621–11630
63. Zhao Y, Sedighi S, Wang P (2015) Carnosic acid as a major bioactive component in rosemary extract ameliorates high-fat-diet-induced obesity and metabolic syndrome in mice. *J Agric Food Chem* 63: 4843–4852
64. Park MY, Mun ST (2013) Dietary carnosic acid suppresses hepatic steatosis formation via regulation of hepatic fatty acid metabolism in high-fat diet-fed mice. *Nutr Res Pract* 7: 294–301
65. Jeon SM, Kim HK, Kim HJ (2007) Hypocholesterolemic and antioxidative effects of naringenin and its two metabolites in high-cholesterol fed rats. *Transl Res* 149: 15–21
66. Shalaby MA, Saifan HY (2014) Some pharmacological effects of cinnamon and ginger herbs in obese diabetic rats. *J Intercult Ethnopharmacol* 3: 144–149
67. Arablou T, Aryaeian N, Valizadeh M et al. (2014) The effect of ginger consumption on glycemic status, lipid profile and some inflammatory markers in patients with type 2 diabetes mellitus. *Int J Food Sci Nutr* 65: 515–520
68. Alizadeh-Narvei R, Roozbeh F, Saravi M et al. (2008) Investigation of the effect of ginger on the lipid levels. *Saudi Med J* 29: 1280–1284
69. Ling JJ, Wei B, Lv G (2012) Anti-hyperlipidaemic and antioxidant effects of turmeric oil in hyperlipidaemic rats. *Food Chem* 130: 229–235
70. Arafa HM (2005) Curcumin attenuates diet-induced hypercholesterolemia in rats. *Med Sci Monit* 11: 228–234
71. Ramírez-Boscá A, Soler A, Carrión MA et al. (2000) An hydroalcoholic extract of

- curcuma longa lowers the apo B/apo A ratio. Implications for atherogenesis prevention. *Mech Ageing Dev* 119: 41–47
72. Yang YS, Su YF, Yang HW et al. (2014) Lipid-lowering effects of curcumin in patients with metabolic syndrome: a randomized, double-blind, placebo-controlled trial. *Phytother Res* 28: 1770–1777
73. Alwi I, Santoso T, Suyono S et al. (2008) The effect of curcumin on lipid level in patients with acute coronary syndrome. *Acta Med Indones* 40: 201–210
74. Kocher A, Bohnert L, Schiborr C et al. (2016) Highly bioavailable micellar curcuminoids accumulate in blood, are safe and do not reduce blood lipids and inflammation markers in moderately hyperlipidaemic individuals. *Mol Nutr Food Res* [DOI: 10.1002/mnfr.201501034]
75. Pungcharoenkul K, Thongnopnua P (2011) Effect of different curcuminoid supplement dosages on total in vivo antioxidant capacity and cholesterol levels of healthy human subjects. *Phytother Res* 25: 1721–1726
76. Bundesärztekammer, Kassenärztliche Bundesvereinigung, Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften. Patientenleitlinie zur Nationalen Versorgungsleitlinie „Therapie des Typ-2-Diabetes“. (2015)
77. Olokoba AB, Obateru OA, Olokoba LB (2012) Type 2 diabetes mellitus: a review of current trends. *Oman Med J* 27: 269–273
78. Jayanthi G, Subramanian S (2014) Rosmarinic acid, a polyphenol, ameliorates hyperglycemia by regulating the key enzymes of carbohydrate metabolism in high fat diet – STZ induced experimental diabetes mellitus. *Biomed Prev Nutr* 4: 431–437
79. Valentová K, Truong NT, Moncion A et al. (2007) Induction of glucokinase mRNA by dietary phenolic compounds in rat liver cells in vitro. *J Agric Food Chem* 55: 7726–7731
80. Jayanthi G, Subramanian S (2015) Rosmarinic acid modulates the antioxidant status and protects pancreatic tissues from glucolipotoxicity mediated oxidative stress in high-fat diet: streptozotocin-induced diabetic rats. *Mol Cell Biochem* 404: 143–159
81. Koga K, Shibata H, Yoshino K et al. (2006) Effects of 50 % ethanol extract from rosemary (*Rosmarinus officinalis*) on  $\alpha$ -glucosidase inhibitory activity and the elevation of plasma glucose level in rats, and its active compound. *J Food Sci* 71:507–512
82. Mohamed NA, Nassier OA (2013) The anti-hyperglycaemic effect of the aqueous extract of *Origanium vulgare* leaves in streptozotocin-induced diabetic rats. *Jordan J Biol Sci* 6: 31–38
83. Sheng X, Zhang Y, Gong Z et al. (2008) Improved insulin resistance and lipid metabolism by cinnamon extract through activation of peroxisome proliferator-activated receptors. *PPAR Res* 2008: 581348
84. Shidfar F, Rajab A, Rahideh T et al. (2015) The effect of ginger (*Zingiber officinale*) on glycemic markers in patients with type 2 diabetes. *J Complement Integr Med* 12: 165–170
85. Imani H, Tabibi H, Najafi I et al. (2015) Effects of ginger on serum glucose, advanced glycation end products, and inflammation in peritoneal dialysis patients. *Nutrition* 31: 703–707
86. Son MJ, Miura Y, Yagasaki K (2015) Mechanisms for antidiabetic effect of gingerol in cultured cells and obese diabetic model mice. *Cytotechnology* 67: 641–652
87. Chuengsamarn S, Rattanamongkolgul S, Luechapudiporn R et al. (2012) Curcumin extract for prevention of type 2 diabetes. *Diabetes Care* 35: 2121–2127
88. Na LX, Li Y, Pan HZ et al. (2013) Curcuminoids exert glucose-lowering effect in type 2 diabetes by decreasing serum free fatty acids: a double-blind, placebo-controlled trial. *Mol Nutr Food Res* 57: 1569–1577
89. Anwar MM, Meki AR (2003) Oxidative stress in streptozotocin-induced diabetic rats: effects of garlic oil and melatonin. *Comp Biochem Physiol A Mol Integr Physiol* 135: 539–547
90. El-Demerdash FM, Yousef MI, El-Naga NI (2005) Biochemical study on the hypoglycemic effects of onion and garlic in alloxan-induced diabetic rats. *Food Chem Toxicol* 43: 57–63
91. Jelodar GA, Maleki M, Motadayen MH et al. (2005) Effect of fenugreek, onion and garlic on blood glucose and histopathology of pancreas of alloxan-induced diabetic rats. *Indian J Med Sci* 59: 64–69
92. Kiesewetter H, Jung F, Pindur G (1991) Effect of garlic on thrombocyte aggregation, microcirculation, and other risk factors. *Int J Clin Pharmacol Ther Toxicol* 29: 151–155
93. Sobenin IA, Nedosugova LV, Filatova LV et al. (2008) Metabolic effects of time-released garlic powder tablets in type 2 diabetes mellitus: the results of double-blinded placebo-controlled study. *Acta Diabetol* 45: 1–6
94. Zhang XH, Lowe D, Giles P et al. (2001) Gender may affect the action of garlic oil on plasma cholesterol and glucose levels of normal subjects. *J Nutr* 131: 1471–1478
95. Jain RC, Vyas CR (1975) Garlic in alloxan-induced diabetic rabbits. *Am J Clin Nutr* 7: 684–685
96. Augusti KT, Mathew PT (1975) Effect of allixin on certain enzymes of liver after a short term feeding to normal rats. *Experientia* 31: 148–149
97. Liu Y, Qi H, Wang Y (2012) Allixin protects against myocardial apoptosis and fibrosis in streptozotocin-induced diabetic rats. *Phytomedicine* 19: 693–698
98. World Cancer Research Fund. Link between lifestyle and cancer. URL: [www.wcrf.org/int/link-between-lifestyle-cancer-risk](http://www.wcrf.org/int/link-between-lifestyle-cancer-risk) Zugriff 04.04.16
99. Johnson CM, Wei C, Ensor JE et al. (2013) Meta-analyses of colorectal cancer risk factors. *Cancer Causes Control* 24: 1207–1222
100. Masuda Y, Kikuzaki H, Hisamoto M et al. (2004) Antioxidant properties of gingerol related compounds from ginger. *Biofactors* 21: 293–296
101. Koldaş S, Demirtas I, Ozen T et al. (2015) Phytochemical screening, anticancer and antioxidant activities of *Origanum vulgare* L. ssp. *viride* (Boiss.) Hayek, a plant of traditional usage. *J Sci Food Agric* 95: 786–798
102. Yan M, Li G, Patiwal SM et al. (2014) Anti-cancer activity of rosemary extract in colon cancer cells: Involvement of Nrf2 and ERK pathways. *Cancer Res* 74: 4122
103. Johnson JJ, Syed DN, Suh Y et al. (2010) Disruption of androgen and estrogen receptor activity in prostate cancer by a novel dietary diterpene carnosol: implications for chemoprevention. *Cancer Prev Res* 3: 1112–1123
104. Hossan S, Rahman S, Bashar ABMA et al. (2014) Rosmarinic acid: A review of its anticancer action. *World J Pharm Sci* 3: 57–70
105. Fan K, Li X, Cao Y et al. (2015) Carvacrol inhibits proliferation and induces apoptosis in human colon cancer cells. *Anticancer Drugs* 26: 813–823
106. Mahady GB, Pendland SL, Yun GS et al. (2003) Ginger (*Zingiber officinale* Roscoe) and the gingerols inhibit the growth of Cag A+ strains of *Helicobacter pylori*. *Anticancer Res* 23: 3699–3702

107. Radhakrishnan EK, Bava SV, Narayanan SS et al. (2014) [6]-Gingerol induces caspase-dependent apoptosis and prevents PMA-induced proliferation in colon cancer cells by inhibiting MAPK/AP-1 signaling. *PLoS One* 9: e104401
108. Jeong CH, Bode AM, Pugliese A et al. (2009) [6]-Gingerol suppresses colon cancer growth by targeting leukotriene A4 hydrolase. *Cancer Res* 69: 5584–5591
109. Park YJ, Wen J, Bang S et al. (2006) [6]-Gingerol induces cell cycle arrest and cell death of mutant p53-expressing pancreatic cancer cells. *Yonsei Med J* 47: 688–697
110. Prasad S, Tyagi AK (2015) Ginger and its constituents: role in prevention and treatment of gastrointestinal cancer. *Gastroenterol Res Pract* DOI: 142979
111. Nicastro HL, Ross SA, Milner JA (2015) Garlic and onions: their cancer prevention properties. *Cancer Prev Res (Phila)* 8: 181–189
112. Siegers CP, Steffen B, Röbbke A et al. (1999) The effects of garlic preparations against human tumor cell proliferation. *Phyto-medicine* 6: 7–11
113. Wang Z, Liu Z, Cao Z et al. (2012) Allicin induces apoptosis in EL-4 cells in vitro by activation of expression of caspase-3 and -12 and up-regulation of the ratio of Bax/Bcl-2. *Nat Prod Res* 26: 1033–1037
114. Wu CC, Chung JG, Tsai SJ et al. (2004) Differential effects of allyl sulfides from garlic essential oil on cell cycle regulation in human liver tumor cells. *Food Chem Toxicol* 42: 1937–1947
115. Trio PZ, You S, He X et al. (2014) Chemopreventive functions and molecular mechanisms of garlic organosulfur compounds. *Food Funct* 5: 833–844
116. Zhang W, Ha M, Gong Y et al. (2010) Allicin induces apoptosis in gastric cancer cells through activation of both extrinsic and intrinsic pathways. *Oncol Rep* 24: 1585–1592
117. Lee J, Gupta S, Huang JS (2013) HPLC-MTT assay: anticancer activity of aqueous garlic extract is from allicin. *Anal Biochem* 436: 187–189
118. Chen J, He ZM, Wang FL et al. (2016) Curcumin and its promise as an anti-cancer drug: An analysis of its anticancer and antifungal effects in cancer and associated complications from invasive fungal infections. *Eur J Pharmacol* 772: 33–42
119. Yance DR Jr, Sagar SM (2006) Targeting angiogenesis with integrative cancer therapies. *Integr Cancer Ther* 5: 9–29
120. Helson L (2013) Curcumin (diferuloylmethane) delivery methods: a review. *Bio-factors* 39: 21–26
121. Shehzad A, Lee J, Huh TL et al. (2013) Curcumin induces apoptosis in human colorectal carcinoma (HCT-15) cells by regulating expression of Prp4 and p53. *Mol Cells* 35: 526–532
122. Li Y, Zhang T (2014) Targeting cancer stem cells by curcumin and clinical applications. *Cancer Lett* 346: 197–205
123. Dhillon N, Aggarwal BB, Newman RA et al. (2008) Phase II trial of curcumin in patients with advanced pancreatic cancer. *Clin Cancer Res* 14: 4491–4499
124. Sharma RA, McLelland HR, Hill KA et al. (2001) Pharmacodynamic and pharmacokinetic study of oral curcuma extract in patients with colorectal cancer. *Clin Cancer Res* 7: 1894–1900
125. Rubió L, Macià A, Castell-Auví A et al. (2014) Effect of the co-occurring olive oil and thyme extracts on the phenolic bioaccessibility and bioavailability assessed by in vitro digestion and cell models. *Food Chem* 149: 277–284
126. Soler-Rivas C, Marín FR, Santoyo S et al. (2010) Testing and enhancing the in vitro bioaccessibility and bioavailability of *Rosmarinus officinalis* extracts with a high level of antioxidant abietanes. *J Agric Food Chem* 58: 1144–1152
127. Marín L, Miguélez EM, Villar CJ et al. (2015) Bioavailability of dietary polyphenols and gut microbiota metabolism: antimicrobial properties. *Biomed Res Int* 2015: 905215
128. Borrelli F, Capasso R, Izzo AA (2007) Garlic (*Allium sativum* L.): adverse effects and drug interactions in humans. *Mol Nutr Food Res* 51: 1386–1397
129. Di Lorenzo C, Ceschi A, Kupferschmidt H et al. (2015) Adverse effects of plant food supplements and botanical preparations: a systematic review with critical evaluation of causality. *Br J Clin Pharmacol* 79: 578–592
130. Chan HT, So LT, Li SW et al. (2011) Effect of herbal consumption on time in therapeutic range of warfarin therapy in patients with atrial fibrillation. *J Cardiovasc Pharmacol* 58: 87–90
131. Chua YT, Ang XL, Zhong XM et al. (2015) Interaction between warfarin and Chinese herbal medicines. *Singapore Med J* 56: 11–18
132. Basch E, Ulbricht C, Hammerness P et al. (2004) Thyme (*Thymus vulgaris* L.), thymol. *J Herb Pharmacother* 4: 49–67
133. Dinesh R, Leela NK, Zachariah TJ (2015) Controversies surrounding coumarin in cassia: the good, the bad and the not so ugly. *Curr Sci* 108: 482–484
134. Bundesinstitut für Risikobewertung. Fragen und Antworten zu Cumarin in Zimt und anderen Lebensmitteln. URL: [www.bfr.bund.de/de/fragen\\_und\\_antworten\\_zu\\_cumarin\\_in\\_zimt\\_und\\_anderen\\_lebensmitteln-8439.html](http://www.bfr.bund.de/de/fragen_und_antworten_zu_cumarin_in_zimt_und_anderen_lebensmitteln-8439.html) Zugriff 04.07.16

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