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COMMITTEE ON HERBAL MEDICINAL PRODUCT (HMPC)

DRAFT

LIST OF REFERENCES FOR ASSESSMENT OF:

Quercus robur L., *Quercus petraea*.(Matt.) Liebl. and *Quercus pubescens* Willd.,
Quercus cortex
(oak bark)

The EMEA acknowledges that copies of the underlying works used to produce this monograph were provided for research only with exclusion of any commercial purpose.

Ahmed AE, Smithard R, Ellis M.

Activities of enzymes of the pancreas, and the lumen and mucosa of the small intestine in growing broiler cockerels fed on tannin-containing diets.

Br J Nutr 1991, 65:189-197.

Ahn BZ, Gstirner F.

Über Catechin-Dimere der Eichenrinde

Arch Pharmaz Ber Dtsch Pharm Ges 1971, 304:666-673.

Ahn BZ, Gstirner F.

Über Catechin-Dimere der Eichenrinde IV

Arch Pharm (Weinheim) 1973, 306:353-360.

Akhapkina IG, Zheltikova TM.

[Polyclonal antisera to birch pollen allergen for the screening of aeroallergens] article in russian

Zh Mikrobiol Epidemiol Immunobiol 2004, 1:69-71.

Akiyama H, Fujii K, Yamasaki O, Oono T, Iwatsuki K.

Antibacterial action of several tannins against *Staphylococcus aureus*.

J Antimicrob Chemother 2001, 48: 487-491.

Allen DE, Hatfield G.

Medicinal plants in folk tradition.

Timber Press, Portland, Cambridge 2004, 87-88, 344-345.

Alkofahi A, Atta Ah.

Pharmacological screening of the anti-ulcerogenic effects of some Jordanian medicinal plants in rats.

J Ethnopharmacol 1999, 67:341-345.

Andrensek S, Simonovska B, Vovk I, Fyhrquist P, Vuorela H, Vuorela P.
Antimicrobial and antioxidative enrichment of oak (*Quercus robur*) bark by rotation planar extraction using ExtraChrom.
Int J Food Microbiol 2004, 92:181-187.

Anonymus
Tannic acid and barium enemas.
Br Med J 1964, 1:997.

Bacon JR, Rhodes MJ.
Binding affinity of hydrolyzable tannins to parotid saliva and to proline-rich proteins derived from it.
J Agric Food Chem 2000, 48:838-843.

Balaban M, Uçar G.
Estimation of volatile acids in wood and bark.
Holz als Roh- und Werkst 2003, 61:465-468.

Bartra J, San Miguel Moncin M, Lombardero M, Alonso B, Parra F, Tella R, Cistero-Bahima A.
Rhinoconjunctivitis and bronchial asthma due to monosensitization to *Quercus* pollen.
J Allergy Clin Immunol 2004, 1113:65.

Bate-Smith EC.
Detection and determination of ellagitannins
Phytochemistry 1972, 11:1153-1156.

Baxter NJ, Lilley TH, Haslam E, Williamson MP.
Multiple interactions between polyphenols and a salivary proline-rich protein repeat result in complexation and precipitation.
Biochemistry 1997, 36:5566-5577.

Bedi MK, Shenefelt PD.
Herbal therapy in dermatology
Arch Dermatol 2002, 138:232-242.

Bennick A.
Interaction of plant polyphenols with salivary proteins.
Crit Rev Oral Biol Med 2002, 13:184-196.

Berahou A, Auhmanib A, Fdil N, Benharref A, Jana M, Gadhi CA.
Antibacterial activity of *Quercus ilex* bark's extracts.
J Ethnopharmacol 2007, 112:426-429.

Bisset NG, Wichtl M.
Quercus cortex. Oak bark. In: *Herbal Drugs and Phytopharmaceuticals*.
Medpharm GmbH Scientific Publishers, Stuttgart/CRC Press, Boca Raton, 1994, 402-403.

Bohadana AB, Massin N, Wild P, Toamain JP, Engel S, Goutet P.
Symptoms, airway responsiveness, and exposure to dust in beech and oak wood workers.
Occup Environ Med 2000, 57:268-273.

Boyd EM, Bereczky K, Godi I.
The acute toxicity of tannic acid administered intragastrically.
Can Med Assoc J 1965, 92:1292-1297.

Bruneton J.
Pharmacognosy, Phytochemistry, Medicinal Plants
Lavoisier Publishing Inc, Intercept Ltd, London New York 1995.

Bundesanzeiger (BAZ) No 22. 01.02.1990

Quercus cortex

In: [Rośliny Lecznicze w Fitoterapii.

Instytut Roślin i Przetworów Zielarskich. Poznań 1994, 452-453]

Cai K, Bennick A.

Effect of salivary proteins on the transport of tannin and quercetin across intestinal epithelial cells in culture.

Biochem Pharmacol 2006, 72:974-980.

Cai K, Hagerman AE, Minto RE, Bennick A.

Decreased polyphenol transport across cultured intestinal cells by a salivary proline-rich protein.

Biochem Pharmacol 2006, 71:1570-1580.

Carbonaro M, Grant G, Pusztai A.

Evaluation of polyphenol bioavailability in rat small intestine.

Eur J Nutr 2001, 40: 84-90.

Charlton AJ, Baxter NJ, Khan ML, Moir AJ, Haslam E, Davies AP, Williamson MP.

Polyphenol/peptide binding and precipitation.

J Vet Rec 1979, 104:284-285.

Charlton AJ, Baxter NJ, Lilley TH, Haslam E, McDonald CJ, Williamson MP.

Tannin interactions with a full-length human salivary proline-rich protein display a stronger affinity than with single proline-rich repeats.

FEBS Lett. 1996, 382:289-292.

Charrier B; Marques M; Haluk JP.

HPLC analysis of gallic and ellagic acids in European oakwood (*Quercus robur* L.) and eucalyptus (*Eucalyptus globulus*).

Holzforschung 1992, 46:87-89.

Chen CL.

Constituents of *Quercus alba*

Phytochemistry 1970, 9:1149.

Chen CH, Liu TZ, Chen CH, Wong CH, Chen CH, Lu FJ, Chen SC.

The efficacy of protective effects of tannic acid, gallic acid, ellagic acid, and propyl gallate against hydrogen peroxide-induced oxidative stress and DNA damages in IMR-90 cells.

Mol Nutr Food Res 2007, 51:962-968.

Coquet C, Ferré E, Peyronel D, Dal Farra C, Farnet AM.

Identification of new molecules extracted from *Quercus suber* L. cork.

C R Biol 2008, 331:853-858.

Cowan MM.

Plant products as antimicrobial agents.

Clin Microbiol Rev 1999, 12:564-582.

Dar MS, Ikram M.

Studies on *Quercus infectoria*; isolation of syringic acid and determination of its central depressive activity.

Planta Med 1979, 35:156-161.

- Dar MS, Ikram M, Fakouhi T.
Pharmacology of *Quercus infectoria*.
J Pharm Sci 1976, 65:1791-1794.
- Dawra RK, Makkar HPS, Singh B.
Protein-binding capacity of microquantities of tannins.
Anal Bioch 1988, 170:50-53.
- Derakhshanfar A, Pourjafar M, Badiei K, Talebanfard H, Niaie-Shakhse M.
Histopathological, hematobiological and urinalysis changes in experimental consumption of oak (*Quercus brantii*) in sheep.
J Pharmacol Toxicol 2008, 3:153-157.
- Duke JA.
CRC Handbook of Medicinal Herbs.
CRC Press, Inc. Boca Raton. London, New York, Washington 2002, 533.
- Eichenrinde - *Quercus cortex*
[Ph. Eur. 5. Ausgabe, Grundwerk 2005]
<http://www.pharmakobotanik.de/systematik/6droge-f/quercu-c.htm>
- EMA Committee for Veterinary Medicinal Products.
Quercus cortex, summary report.
EMA/MRL/282/97-Final 1997
- Evans WC.
Trease and Evans Pharmacognosy. Sixteenth Edition.
Saunders Elsevier, Edinburgh - London 2009.
- Feldman KS.
Recent progress in ellagitannin chemistry
Phytochemistry 2005, 66:1984-2000.
- Fickel J, Pitra C, Joest BA, Hofmann RR.
A novel method to evaluate the relative tannin-binding capacities of salivary proteins.
Comp Biochem Physiol C Pharmacol Toxicol Endocrinol 1999, 122:225-229.
- Flaoyen A, Handeland K, Arnemo JM, Vikoren T.
Toxicity testing of leaves from oak (*Quercus robur*) harvested in Aust-Agder County, Norway.
Veterinary Res Comm 1999, 23:317-321.
- Fölster-Holst R, Latussek E
Synthetic tannins in dermatology-a therapeutic option in a variety of pediatric dermatoses.
Pediatr Dermatol 2007, 24:296-301.
- Garg SK, Makkar HP, Nagal KB, Sharma SK, Wadhwa DR, Singh B.
Oak (*Quercus incana*) leaf poisoning in cattle.
Vet Hum Toxicol 1992, 34:161-164.
- Gharzouli K, Khennouf S, Amira S, Gharzouli A.
Effects of aqueous extracts from *Quercus ilex* L. root bark, *Punica granatum* L. fruit peel and *Artemisia herba-alba* Asso leaves on ethanol-induced gastric damage in rats.
Phytother Res 1999, 13:42-45.
- Glasl H.
Zur Photometrie in der Drogenstandardisierung.
Dtsch Apoteker Ztg 1983, 123:1979-1987.

- Graça J, Santos S.
Suberin: a biopolyester of plants' skin.
Macromol Biosci 2007, 7:128-135.
- Grimme H, Augustin M.
Phytotherapie bei chronischen Dermatosen und Wunden: Was ist gesichert?
Forsch.Komplemet.Med/Res Complementary Med 1999, 6:5-8.
- Grundhöfer P, Niemetz R, Schilling G, Gross GG.
Biosynthesis and subcellular distribution of hydrolyzable tannins.
Phytochemistry 2001, 57:915-927.
- Güllüce M, Adigüzel A, Ögütçü H, Şengül M, Karaman İ, Şahin F.
Antimicrobial effects of *Quercus ilex* L. extract.
Phytother Res 2004, 18:208-211.
- Hagerman A, Butler LG.
The specificity of Proanthocyanidin-Protein Interactions.
J Biol Chem 1981, 256:4494-4497.
- Haslam E.
Vegetable tannins – lesson of phytochemical lifetime.
Phytochemistry 2007, 68:2713-2721.
- Haslam E, Cai Y.
Plant polyphenols (vegetable tannins): gallic acid metabolism.
Nat Prod Rep 1994, 11:41-66.
- Hathway DE.
Experiments on the origin of oak-bark tannin.
Biochem J 1959, 71:533-537.
- Hathway DE.
Oak-bark tannins.
Biochem J 1958, 70:34-42.
- Hänsel, R., Keller, K., Rimpler, H., Scheider, G. (eds)
Hagers Handbuch der. Pharmazeutischen Praxis, Band 4-6
Quercus
Springer, Berlin Heidelberg New York Tokyo 1994, 335-354 (HN: 205 1900)
- He Q, Shi B, Yao K.
Interactions of galotannins with proteins, amino acids, phospholipids and sugars.
Food Chemistry 2006, 95:250-254.
- Helmerhorst EJ, Oppenheim FG
Saliva: a Dynamic Proteome
J Dent Res 2007, 86:680-693.
- Henson GL, Niemeyer L, Ansong G, Forkner R, Makkar HP, Hagerman AE.
A modified method for determining protein binding capacity of plant polyphenolics using radiolabelled protein.
Phytochem Anal 2004, 15:159-163.

- Hervé du Penhoat CLM, Michon VMF, Peng S, Viriot C, Scalbert A, Gage D.
The structural elucidation of new dimeric ellagitannins from *Quercus robur* L., roburin A - E.
J Chem Soc Perkin Trans 1991a, 1:1653-1660.
- Hervé du Penhoat CLM, Michon VMF, Ohassan A, Peng S, Scalbert C, Gage D.
Roburin A, A dimeric ellagitannin from heartwood of *Quercus robur*
Phytochemistry 1991b, 30:329-332.
- Holloway PJ.
Some variations in the composition of suberin from the cork layers of higher plants.
Phytochemistry 1983, 22:495-502.
- Hu SJ, Loo A, Wong DT.
Human Saliva Proteome Analysis
Ann NY Acad Sci 2007, 1098:323-329.
- Hwang EI, Ahn BT, Lee HB, Kim YK, Lee KS, Bok SH, Kim YT, Kim SU.
Inhibitory activity for chitin synthase II from *Saccharomyces cerevisiae* by tannins and related compounds.
Planta Med 2001, 67:501-504.
- Jassim SA, Naji MA.
Novel antiviral agents: a medicinal plant perspective.
J Appl Microbiol 2003, 95:412-427.
- Jöbstl E, Howse JR, Fairclough JP, Williamson MP.
Noncovalent cross-linking of casein by epigallocatechin gallate characterized by single molecule force microscopy.
J Agric Food Chem 2006, 54:4077-4081.
- Kandra L, Gyémánt G, Zajác A, Batta G.
Inhibitory effects of tannin on human salivary alpha-amylase.
Biochem Biophys Res Commun 2004, 319:1265-1271.
- Khanbabaee K, Van Ree T.
Tannins: classification and definition.
Nat Prod Rep 2001, 18:641-649.
- Khenouf S, Benabdallah H, Harzouli K, Amira S, Ito H, Kim T, Yoshida T, Gharzouli A.
Effect of tannins from *Quercus suber* and *Quercus coccifera* leaves on ethanol induced gastric lesions in mice.
J Agric. Food Chem 2003, 51:1469-1473.
- Kim HS, Miller DD.
Proline-rich proteins moderate the inhibitory effect of tea on iron absorption in rats.
J Nutr 2005, 135:532-537.
- Klumpers J, Scalbert A, Janin, G.
Ellagitannins in European oak wood: polymerization during wood ageing.
Phytochemistry 1994, 36:1249-1252.
- Kohlmünzer S.
Farmakognozja. Podręcznik dla studentów farmacji. Cortex *Quercus*.
PZWL, Warszawa 2000, 244-245.

- Koide T, Nose M, Inoue M, Ogihara Y, Yabu Y, Ohta N.
Trypanocidal effects of gallic acid and related compounds.
Planta Med 1998, 64:27–30.
- Kolodziej H, Kayser O, Latte KP, Ferreira D.
Evaluation of the antimicrobial potency of tannins and related compounds using the microdilution broth method.
Planta Med 1999, 65:444-446.
- König M, Scholz E, Hartmann R, Lehmann W, Rimpler H.
Ellagitannins and complex tannins from *Quercus petraea* bark.
J Nat Prod 1994, 57:1411-1415.
- Kuliev ZA, Vdovin AD, Abdullaev ND, Makhmatkulov AB, Malikov VM.
Study of the catechins and proanthocyanidins of *Quercus robur*
Chem Natl Comp 1997, 33:642-652.
- Labieniec M, Gabryelak T.
Effects of tannins on Chinese hamster cell line B14.
Mutation Res 2003, 539:127-135.
- Lawless HT, Corrigan CJ, Lee CB.
Interaction of astringent substances.
Chemical Senses 1994, 19:141-154.
- Limsuwan S, Vanmanee S, Voravuthikunchai S.
Effect of Thai medicinal plant extracts on cell aggregation of *Escherichia coli* O157: H7.
Songklanakarinn J Sci Technol 2005, 27 (Suppl. 2):545-554.
- Lu Y, Bennick A.
Interaction of tannin with human salivary proline-rich proteins.
Arch Oral Biol 1998, 43:717-728.
- Luck G, Liao H, Murray NJ, Grimmer HR, Warminski EE, Williamson MP, Lilley TH, Haslam E.
Polyphenols, astringency and proline-rich proteins.
Phytochemistry 1994, 37:357-371.
- Lucke HH, Hodge KE, Patt NL.
Fatal liver damage after barium enemas containing tannic acid.
Can Med Assoc J 1963, 89:1111-1114.
- Madaus G.
Lehrbuch der Biologischen Heilmittel.
Quercus robur. Stieleiche. Fagaceae.
(1938), <http://www.henriettesherbal.com/eclectic/madaus/quercus.html>
- Martin GR, Wallace JL.
Gastrointestinal inflammation: a central component of mucosal defense and repair.
Exp Biol Med (Maywood) 2006, 231:130-137.
- Martindale
The Complete Drug Reference
The Pharmaceutical Press 2007
- Matthée G, Wright AD, König GM.
HIV reverse transcriptase inhibitors of natural origin.
Planta Med 1999, 65:493-506.

- Matthews S, Mila I, Scalbert A, Donnelly DMX.
Extractable and non-extractable proanthocyanidins in barks.
Phytochemistry 1997, 45:405-410.
- Mämmelä P, Savolainen H, Lindroos L, Kangas J, Vartiainen F.
Analysis of oak tannins by liquid chromatography-electrospray ionisation mass spectrometry.
J Chromatogr A 2000, 891:75-83.
- Miller LG.
Herbal medicinals: Selected clinical considerations focusing on known or potential drug-herb interactions.
Arch Intern Med 1998, 158:2200.
- Mills S, Bone K.
Principles and Practice of Phytotherapy. Modern Herbal Medicine
Tannins
Churchill Livingstone, London 2000, 66.
- Mohan D, Shi J, Nicholas DD, Pittman CU Jr, Steele PH, Cooper JE.
Fungicidal values of bio-oils and their lignin-rich fractions obtained from wood/bark fast pyrolysis.
Chemosphere 2008, 71:456-465.
- Mołochko VA, Laswtotchkina TM, Krylov IA, Brangulis KA.
[Antistaphylococcal properties of some plant extracts in view of using these extracts in treatment and prevention of skin diseases]Russ.
Vestn Dermatol Venerol 1990, 8:54-56.
- Murray NJ, Williamson MP, Lilley TH, Haslam E.
Study of the interaction between salivary proline-rich proteins and a polyphenol by ¹H-NMR spectroscopy.
Eur J Biochem 1994, 219:923-935.
- Niemetz R, Gross GG.
Enzymology of gallotannin and ellagitannin biosynthesis.
Phytochemistry 2005, 66:2001-2011.
- Oak bark. *Quercus cortex*.
European Pharmacopoeia 6.0, 01/2008:1887, 2539.
- O'Connell JE, Fox PF.
Effects of extracts of oak (*Quercus petraea*) bark, oak leaves, aloe vera (Curacao aloe), coconut shell and wine on the colloidal stability of milk and concentrated milk.
Food Chem 1999, 66:93-96.
- Okuda T.
Systematics and health effects of chemically distinct tannins in medicinal plants.
Phytochemistry 2005, 66:2012-2031.
- Okuda T, Yoshida T, Hatano T.
Classification of oligomeric hydrolysable tannins and specificity of their occurrence in plants
Phytochemistry 1993, 32:507-521.
- Okuda T, Yoshida T, Hatano T.
Ellagitannins as active constituents of medicinal plants.
Planta Med 1989, 55:117-122.

Pallenbach E, Scholz E, König M, Hunkler D, Rimpler H.
Proanthocyanidins from *Quercus petrea* bark
Planta Med 1991, 57 (Suppl. 2) A127.

Pallenbach E, Scholz E, König M, Rimpler H.
Proanthocyanidins from *Quercus petrea* bark
Planta Med 1993, 59:264-268.

Pan MH, Lin JH, Lin-Shiau SY, Lin JK.
Induction of apoptosis by penta-O-galloyl-beta-D-glucose through activation of caspase-3 in human leukemia HL-60 cells.
Eur J Pharmacol 1999, 381:171-183.

Paolini VFH.
In vitro effects of three woody plant and sainfoin extracts on 3rd-stage larvae and adult worms of three gastrointestinal nematodes.
Parasitology 2004, 129:69-77.

Park MH, Hwang SJ, Ahn CY, Kim BH, Oh HM.
Screening of seventeen oak extracts for the growth inhibition of the cyanobacterium *Microcystis aeruginosa* Kütz. em. Elenkin.
Bull Environ Contam Toxicol 2006, 77:9-14.

PDR for Herbal Medicines
Oak
Thomson Medical Economics, Montvale 2000, 549-550.

PDR for Herbal Medicines
Oak
Thomson Medical Economics, Montvale 2004, 597-598.

Peng S, Scalbert A, Monties B.
Insoluble ellagitannins in *Castanea sativa* and *Quercus petraea* woods
Phytochemistry 1991, 30:775-778.

Plumlee KH, Johnson B, Galey FD.
Comparison of disease in calves dosed orally with oak or commercial tannic acid.
J Vet Diagn Invest 1998, 10:263-267.

Poppenga RH.
Herbal medicine: potential for intoxication and interactions with conventional drugs.
Clin Tech Small Anim Pract 2002, 17:6-18.

Prinz JF, Lucas PW.
Saliva tannin interactions.
J Oral Rehabil 2000, 27:991-994.

Quercia (Italian Monograph)
Quercus Cortex
Bundesanzeiger Nr. 22a (01.02.1990)

Receptariusz Zielarski
Zjednoczenie Przemysłu Zielarskiego Herbapol
Wydawnictwo Przemysłu Lekkiego i Spożywczego, Warszawa 1967, Recipe Nr 388, 269

- Reed JD.
Nutritional toxicology of tannins and related polyphenols in forage legumes.
J Anim Sci 1995, 73:1516-1528.
- Salem HB, Salem IB, Ben Said MS.
Effect of the level and frequency of PEG supply on intake, digestion, biochemical and clinical parameters by goats given kermes oak (*Quercus coccifera* L.)-based diets.
Small Ruminant Res 2005, 56:127-137.
- Salminen JP, Roslin T, Karonen M, Sinkkonen J, Pihlaja K, Pulkkinen P.
Seasonal variation in the content of hydrolysable tannins, flavonoid glycosides and proanthocyanidins in oak leaves.
Journal of Chemical Ecology 2004, 30:1693-1711.
- Savolainen H.
Reactions of tannins with human serum proteoglycans.
J Appl Toxicol 1997, 17:133-5.
- Scalbert, A.
Antimicrobial properties of tannins.
Phytochemistry 1991, 30:3875-3883.
- Scalbert A, Duval L, Peng S, Monies B, Herve du Penhoat CLM.
Polyphenols of *Quercus robur* L. II. Preparative isolation by low-pressure and high-pressure liquid chromatography of heartwood ellagitannins.
J Chrom 1990, 502:107-119.
- Scalbert A, Monties B, Janin G.
Tannins in wood: comparison of different estimation methods.
J Agric Food Chem 1989; 37:1324-1329.
- Scalbert A, Haslam E.
Polyphenols and chemical defence of the leaves of *Quercus robur*.
Phytochemistry 1987, 26:3191-3195.
- Scalbert A, Monties B, Favre JM.
Polyphenols of *Quercus-robur* - adult tree and in vitro grown calli and shoots.
Phytochemistry 1988, 27:3483-3488.
- Schenkels LCPM, Veerman ECI, Nieuw Amerongen AV.
Biochemical composition of human saliva in relation to other mucosal fluids.
Crit Rev Oral Biol Med 1995, 6:161-175.
- Schilcher H.
Phytotherapy in Paediatrics. Handbook for Physicians and Pharmacists
Medpharm Scientific Publishers, Berlin 1997, 49-50.
- Schimpfky, R
Unsere Heilpflanzen in Bild und Wort für Jedermann. Ihr Nutzen und ihre Anwendung in Haus und Familie
Hugo Bermühler Verlag, Berlin-Lichterfelde 1900, Vol.1, 21.
- Schofield P, Mbugua DM, Pell AN.
Analysis of condensed tannins: a review.
Anim Feed Sci Techn 2001, 91:21-40.

- Schulz V, Hänsel R, Tyler VE.
Rational; Phytotherapy. A Physician's Guide to Herbal Medicine.
SpringerVerlag, Berlin Heidelberg 1998, 193-194.
- Sehrawat A, Sharma S, Sultana S.
Preventive effect of tannic acid on 2-acetylaminofluorene induced antioxidant level, tumor promotion and hepatotoxicity: a chemopreventive study.
Redox Rep 2006, 11:85-95.
- Shimada T.
Salivary proteins as a defense against dietary tannins.
J Chem Ecol 2006, 32:1149-1163.
- Skopec MM, Hagerman AE, Karasov WH.
Do salivary proline-rich proteins counteract dietary hydrolyzable tannin in laboratory rats?
J Chem Ecol 2004, 30:1679-1692.
- Smout TC.
Oak as a commercial crop in the eighteenth and nineteenth centuries.
Bot J Scot 2007, 57:107-114.
- Sousa AF, Pinto PC, Silvestre AJ, Pascoal Neto C.
Triterpenic and other lipophilic components from industrial cork byproducts.
J Agric Food Chem 2006, 54:68-88.
- Spencer T.
Practical observations on epidemic cholera, spasmodic cholera etc, etc, with a brief outline of its treatment, founded on the pathology of the disease.
Utica Observer, 1832.
- Spier SJ, Smith BP, Seawright AA, Norman BB, Ostrowski SR, Oliver MN.
Oak toxicosis in cattle in northern California: clinical and pathologic findings.
J Am Vet Med Assoc 1987, 191:958-964.
- Takahashi RN, De Lima TC, Morato GS.
Pharmacological actions of tannic acid; II. Evaluation of CNS activity in animals.
Planta Med 1986, 4:272-275.
- Thompson RS, Jacques D, Haslam E, Tanner RJN.
Plant proanthocyanidins. Part I. Introduction; the isolation, structure, and distribution in nature of plant procyranidins
J Chem Soc, Perkin Trans 1972, 1:1387-1399.
- Uchida S, Ikari N, Ohta H, Niwa M, Nonaka G, Nishioka I, Ozaki M.
Inhibitory effects of condensed tannins on angiotensin converting enzyme.
Jpn J Pharmacol 1987, 43:242-246.
- Uozaki M, Yamasaki H, Katsuyama Y, Higuchi M, Higuti T, Koyama AH.
Antiviral effect of octyl gallate against DNA and RNA viruses.
Antiviral Res 2007, 73:85-91.
- Van Huynh N.
Deproteinization of bacterial genomic and plasmid DNAs by tannic acid.
J Microbiol Meth 2008, 75:379-381.

- Weiss FR, Fintelman V.
Herbal Medicine. *Quercus robur* (Qu. Petrea), Oak
Thieme, Stuttgart, New York 2000, 87
- Weissmann G, Kubel H, Lange W.
Untersuchungen zur Cancerogenität von Holzstaub.
Holzforschung 1989, 43:75-82.
- Vega D, Martínez C, Palacios B.
Anaphylactic reaction to ingestion of *Quercus ilex* acorn nut
Clin Exp Allergy 1998, 28:739-742.
- Verhaeren EH, Lemli J.
The effect of gallotannins and (+)-catechin on the stimulated fluid secretion on the colon, following a
rheinfusion in guinea pigs.
Planta Med 1986, 52:269-272.
- Vivas N, Laguerre M, Glories Y, Bourgeois G, Vitry C.
Structure simulation of two ellagitannins from *Quercus robur* L.
Phytochemistry 1995, 39:1193-1199.
- Voravuthikunchai S, Kitpipit L.
Antibacterial activity of crude extracts of Thai medicinal plants against clinical isolates of methicillin-
resistant *Staphylococcus aureus*.
Songklanakarinn J Sci Technol 2005, 27(Suppl. 2):525-534.
- Voravuthikunchai S, Kitpipit L.
Activity of medicinal plant extracts against hospital isolates of methicillin-resistant *Staphylococcus*
aureus.
Clin Microbiol Infection 2005, 11:510-512.
- Voravuthikunchai SP, Limsuwan S, Mitchel H.
Effects of *Punica granatum* pericarps and *Quercus infectoria* nutgalls on cell surface hydrophobicity
and cell survival of *Helicobacter pylori*.
J Health Sci 2006, 52:154-159.
- Voravuthikunchai S, Lortheeranuwat A, Jeeju W, Sririrak T, Phongpaichit S, Supawita T.
Effective medicinal plants against enterohaemorrhagic
Escherichia coli O157:H7.
J Ethnopharmacol 2004, 94:49-54.
- Vovk I, Simonovska B, Andresek S, Vuorela H, Vuorela P.
Rotation planar extraction and rotation planar chromatography of oak (*Quercus robur* L.) bark.
J Chromatogr A. 2003, 991:267-274.
- Yamasaki H, Uozaki M, Katsuyama Y, Utsunomiya H, Arakawa T, Higuchi M, Higuti T,
Koyama AH.
Antiviral effect of octyl gallate against influenza and other RNA viruses.
Int J Mol Med. 2007, 19:685-658.
- Yoshida T, Hatano T, Okuda T, Memon MU, Shingu T, Inoue K.
Spectral and chromatographic analyses of tannins. I: [¹³C] nuclear magnetic resonance spectra of
hydrolyzable tannins
Chem Pharm Bull 1984, 32:1790-1799.

Zapatero L, Baeza ML, Sierra Z, Molero MI.
Anaphylaxis by fruits of the *Fagaceae* family: acorn and chestnut.
Allerg 2005, 60:1542.

Zhou ZC, Norpoth KH, Nelson E.
Genotoxicity of wood dust in a human embryonic lung cell line.
Arch Toxicol 1995, 70:57-60.

Zhu M, Phillipson JD, Greengrass PM, Bowery NE, Cai Y.
Plant polyphenols: biologically active compounds or non-selective binders to protein?
Phytochemistry 1997, 44:441-447.