No	First Author	Title	Publication	Country origin of study	Anticancer	Antibacterial	Immunpotentiating	Antitoxicity	Antiinfection	General-health	Purification	Toxicity
1	Hirotani M	Biosynthesis of blazeispirol A, an unprecedented skeleton from the cultured mycelia of the fungus Agaricus blazei	TetrahedronLetters 2000 Aug; 41(32): 6101-6104								x	
2	Hirotani M	Blazeispirol X and Y, two novel carbon skeletal sterols from the cultured mycelia of the fungus Agaricus blazei	TetrahedronLetters 2000 Jun; 41(26): 5107-5110								x	
3	Mizuno M	Anti-tumor polysaccharide from the mycelium of liquid-cultured Agaricus blazei mill.	Biochem Mol Biol Int. 1999 Apr;47(4):707-14.	Japan	x							
4	Fujimiya Y	Tumor-specific cytocidal and immunopotentiating effects of relatively low molecular weight products derived from the basidiomycete, Agaricus blazei Murill.	Anticancer Res. 1999 Jan-Feb;19(1A):113-8.	Japan	x		x					
5	Hirotani M	Blazeispirol A, an Unprecedented Skeleton from the Cultured Mycelia of the Fungus Agaricus blazei	TetrahedronLetters 1999 Jan; 40(2): 329-332								x	
6	Ebina T	Antitumor effect of a peptide-glucan preparation extracted from Agaricus blazei in a double-grafted tumor system in mice.	Biotherapy. 1998;11(4):259-65.	Japan	x							
7	Fujimiya Y	Selective tumoricidal effect of soluble proteoglucan extracted from the basidiomycete, Agaricus blazei Murill, mediated via natural killer cell activation and apoptosis.	Cancer Immunol Immunother. 1998 May;46(3):147-59.	Japan	x		x					
8	Mizuno M	Polysaccharides from Agaricus blazei stimulate lymphocyte T-cell subsets in mice.	Biosci Biotechnol Biochem. 1998 Mar;62(3):434-7.	Japan			x					
9	Higaki M	[A stable culturing method and pharmacological effects of the Agaricus blazei][Article in Japanese]	Nippon Yakurigaku Zasshi. 1997 Oct;110 Suppl 1:98P-103P.	Japan							x	
10	Ito H	Antitumor effects of a new polysaccharide-protein complex (ATOM) prepared from Agaricus blazei (Iwade strain 101) "Himematsutake" and its mechanisms in tumor-bearing mice.	Anticancer Res. 1997 Jan-Feb;17(1A):277-84.	Japan	x							
11	Itoh H	Inhibitory action of a (1-->6)-beta-D-glucan-protein complex (F III-2-b) isolated from Agaricus blazei Murill ("himematsutake") on Meth A fibrosarcoma-bearing mice and its antitumor mechanism.	Jpn J Pharmacol. 1994Oct;66(2):265-71.	Japan	x							
12	Osaki Y	[Antimutagenic and bactericidal substances in the fruit body of a Basidiomycete Agaricus blazei, Jun-17] [Article in Japanese]	Yakugaku Zasshi. 1994 May;114(5):342-50.	Japan	x	x						
13	Kawagishi H	Fractionation and antitumor activity of the water-insoluble residue of Agaricus blazei fruiting bodies.	Carbohydr Res. 1989 Mar 15;186(2):267-73.	Japan	x						x	
14	Kawagishi H	Isolation and properties of a lectin from the fruiting bodies of Agaricus blazei.	Carbohydr Res. 1988 Nov 15;183(1):150-4.	Japan							x	
15	Tian X, Lun Z, Wang J, Ito H, Shimura K.	Clinical observation on treatment of acute nonlymphocytic leukemia with Agaricus blazei.	J Lanzhou Med College 1994; 20: 169-171.	China	x							
16	Zhang X, Wang J, Wang J.	An experimental study on effect of Agaricus blazei on hematopoietic cells in bone marrow and hemopoietic stimulatory factor of radiation injury mice.	"Chinese J Radiat Mediation Protect 1993; 6: 459."	China								
17	Mizuno T, Hagiwara T, Nakamura T, Ito H, Shimura K, Sumiya T, et al.	Antitumor activity and some properties of water-soluble polysaccharides from 'Himematsutake', the fruiting body of Agaricus blazei Murill.	Agric Biol Chem 1990; 54: 2889-2896.		x							
18	Levery SB	Comparative analysis of glycosylinositol phosphorylceramides from fungi by electrospray tandem mass spectrometry with low-energy collision-induced dissociation of Li(+) adduct ions.	Rapid Commun Mass Spectrom. 2001;15(23):2240-58.	USA							x	

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19	Nagata J	Effects of water-soluble hemicellulose from soybean hull on serum antibody levels and activation of macrophages in rats.	J Agric Food Chem. 2001 Oct;49(10):4965-70.	Japan			x					
20	Delmanto RD	Antimutagenic effect of Agaricus blazei Murrill mushroom on the genotoxicity induced by cyclophosphamide.	Mutat Res. 2001 Sep 20;496(1-2-):15-21.	Brazil				x				
21	Menoli RC	Antimutagenic effects of the mushroom Agaricus blazei Murrill extracts on V79 cells.	Mutat Res. 2001 Sep 20;496(1-2-):5-13.	Brazil				x				
22	Sorimachi K	Inhibition by Agaricus blazei Murill fractions of cytopathic effect induced by western equine encephalitis (WEE) virus on VERO cells in vitro.	Biosci Biotechnol Biochem. 2001 Jul;65(7):1645-7	Japan					x			
23	Okamura T	Characteristics of wine produced by mushroom fermentation.	Biosci Biotechnol Biochem. 2001 Jul;65(7):1596-600.	Japan							x	
24	Sorimachi K	Secretion of TNF-alpha, IL-8 and nitric oxide by macrophages activated with Agaricus blazei Murill fractions in vitro.	Cell Struct Funct. 2001 Apr;26(2):103-8.	Japan			x					
25	Ohno N	Antitumor beta glucan from the cultured fruit body of Agaricus blazei.	Biol Pharm Bull. 2001 Jul;24(7):820-8.	Japan	x							
26	Takaku T	Isolation of an antitumor compound from Agaricus blazei Murill and its mechanism of action.	J Nutr. 2001 May;131(5):1409-13.	Japan	x						x	
27	Hirotani M	Blazeispirol D and Z, as the actual intermediates of blazeispirol A biosynthesis from the cultured mycelia of the fungus Agaricus blazei	TetrahedronLetters 2001Jul; 42, 5261 - 5264								x	
28	Chang H	Non-volatile taste components of Agaricus blazei, Antrodia camphorata and Cordyceps militaris mycelia	Food Chemistry 2001Aug;74(2), 203-207								x	
29	Martins de Oliveira J	Anti-genotoxic effect of aqueous extracts of sun mushroom (Agaricus blazei Murill lineage 99/26) in mammalian cells in vitro.	Food Chem Toxicol. 2002 Dec;40(12):1775-80.	Brazil				x			x	
30	Barbisan LF	Influence of aqueous extract of Agaricus blazei on rat liver toxicity induced by different doses of diethylnitrosamine.	J Ethnopharmacol. 2002 Nov;83(1-2-):25-32	Brazil	x			x				
31	Hirotani M	Blazeispirane and protoblazeispirane derivatives from the cultured mycelia of the fungus Agaricus blazei.	Phytochemistry. 2002 Nov;61(5):589-95	Japan							x	
32	Shimizu S	Activation of the alternative complement pathway by Agaricus blazei Murill.	Phytomedicine. 2002 Sep;9(6):536-45.	Japan			x					
33	Nakajima A	Effect of hot water extract from Agaricus blazei Murill on antibody-producing cells in mice.	Int Immunopharmacol. 2002 Jul;2(8):1205-11.	Japan			x					
34	Kuo YC	Cell cycle progression and cytokine gene expression of human peripheral blood mononuclear cells modulated by Agaricus blazei.	J Lab Clin Med. 2002 Sep;140(3):176-87.	Taiwan			x					
35	Hashimoto T	Suppressive effect of polysaccharides from the edible and medicinal mushrooms, Lentinus edodes and Agaricus blazei, on the expression of cytochrome P450s in mice.	Biosci Biotechnol Biochem. 2002 Jul;66(7):1610-4.	Japan								
36	Dong Q	Structural characterization of a water-soluble beta-D-glucan from fruiting bodies of Agaricus blazei Murr.	Carbohydr Res. 2002 Sep 3;337(15):1417-21.	China							x	
37	Talorete TP	Agaricus blazei (class Basidiomycotina) aqueous extract enhances the expression of c-Jun protein in MCF7 cells.	J Agric Food Chem. 2002 Aug 28;50(18):5162-6.	Japan								

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38	Oshiman K	Orally administered beta-1,6-D-polyglucose extracted from Agaricus blazei results in tumor regression in tumor-bearing mice.	Planta Med. 2002 Jul;68(7):610-4.	Japan	x						x	
39	Hirotani M	Blazeispirols B, C, E and F, des-A-ergostane-type compounds, from the cultured mycelia of the fungus Agaricus blazei.	Phytoche-mistry. 2002 Mar;59(5):571-7.	Japan							x	
40	Hirotani M	Biosynthetic studies on blazeispirane and protoblazeispirane derivatives from the cultured mycelia of the fungus Agaricus blazei	Tetrahedron 2002 Dec;58(51):10251-7								x	
41	Xing Z	[Analysis on the volatile flavor compounds in Agaricus blazei by GC-MS] [Article in Chinese]	Zhong Yao Cai. 2003 Nov;26(11):789-91.	Shanghai							x	
42	Barbisan LF	Effects of crude extracts of Agaricus blazei on DNA damage and on rat liver carcinogenesis induced by diethylnitrosamine.	Genet Mol Res. 2003 Sep 30;2(3):295-308.	Brasil	x			x				
43	Lee YL	Oral administration of Agaricus blazei (H1 strain) inhibited tumor growth in a sarcoma 180 inoculation model.	Exp Anim. 2003 Oct;52(5):371-5.	Korea	x							
44	Ebina T	[Activation of antitumor immunity by intratumor injection of biological preparations] [Article in Japanese]	Gan To Kagaku Ryoho. 2003 Oct;30(11):1555-8	Japan	x		x					
45	Pinheiro F	Chemoprevention of preneoplastic liver foci development by dietary mushroom Agaricus blazei Murrill in the rat.	Food Chem Toxicol. 2003 Nov;41(11):1543-50	Brazil				x				
46	Shu CH	Enhanced shear protection and increased production of an anti-tumor polysaccharide by Agaricus blazei in xanthan-supplemented cultures.	Biotechnol Lett. 2003 Jun;25(11):873-6	China	x						x	
47	Luiz RC	Mechanism of anticlastogenicity of Agaricus blazei Murill mushroom organic extracts in wild type CHO (K(1)) and repair deficient (xrs5) cells by chromosome aberration and sister chromatid exchange assays.	Mutat Res. 2003 Jul 25;528(1-2):75-9	Brazil				x				
48	Bellini MF	Anticlastogenic effect of aqueous extracts of Agaricus blazei on CHO-k1 cells, studying different developmental phases of the mushroom.	Toxicol In Vitro. 2003 Aug;17(4):465-9.	Brazil				x				
49	Barbisan LF	Agaricus blazei (Himematsutake) does not alter the development of rat diethylnitrosamine-initiated hepatic preneoplastic foci.	Cancer Sci. 2003 Feb;94(2):188-92	Brazil	x			x				
50	Fukuda M	Genetic variation in cultivated strains of Agaricus blazei	Mycoscience Volume: 44, Issue: 6, December 19, 2003, pp. 431 - 436								x	
51	Ribeiro LR	Dietary components may prevent mutation-related diseases in humans	Mutation Rese-arch/Reviews in Mutation Research Volume: 544, Issue: 2-3, November, 2003, pp. 195-201		x			x				
52	Hirotani M	Agariblazeispirols A and B, an unprecedented skeleton from the cultu-red mycelia of the fungus, Agaricus blazei	TetrahedronLetters Volume: 44, Issue: 43, October 20, 2003, pp. 7975 - 7979								x	
53	Okamura-Matsui T	Discovery of alcohol dehydrogenase from mushrooms and application to alcoholic beverages	Journal of Mole-cular Catalysis B: Enzymatic Volume: 23, Issue: 2-6, Sep-tember 1, 2003, pp. 133-144								x	
54	Kasai H	IL-12 Production Induced by Agaricus blazei Fraction H (ABH) Involves Toll-like Receptor (TLR).	Evid Based Complement Al-ternat Med. 2004 Dec;1(3):259-267	Japan			x					
55	Kimura Y	Isolation of an anti-angiogenic substance from Agaricus blazei Murill: its antitumor and antimetastatic actions.	Cancer Sci. 2004 Sep;95(9):758-64.	Japan	x							

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56	Ahn WS	Natural killer cell activity and quality of life were improved by consumption of a mushroom extract, Agaricus blazei Murill Kyowa, in gynecological cancer patients undergoing chemotherapy.	Int J Gynecol Cancer. 2004 Jul-Aug;14(4):589-94	South Korea	x		x					
57	Kaneno R	Effects of extracts from Brazilian sun-mushroom (Agaricus blazei) on the NK activity and lymphoproliferative responsiveness of Ehrlich tumor-bearing mice.	Food Chem Toxicol. 2004 Jun;42(6):909-16	Brazi	x		x					
58	Shu CH	Monitoring the polysaccharide quality of Agaricus blazei in submerged culture by examining molecular weight distribution and TNF-alpha release capability of macrophage cell line RAW 264.7.	Biotechnol Lett. 2004 Feb;26(4):2061-4	Taiwan			x				x	
59	Guterrez ZR	Variation of the antimutagenicity effects of water extracts of Agaricus blazei Murrill in vitro.	Toxicol In Vitro. 2004 Jun;18(3):301-9	Brazil				x				
60	Chen L	Coimmunization of Agaricus blazei Murill extract with hepatitis B virus core protein through DNA vaccine enhances cellular and humoral immune responses.	Int Immunopharmacol. 2004 Mar;4(3):403-9.	China			x		x			
61	Izawa S	A screening system for antioxidants using thioredoxin-deficient yeast: discovery of thermostable antioxidant activity from Agaricus blazei Murill.	Appl Microbiol Biotechnol. 2004 May;64(4):537-42.	Japan				x				
62	Kim HH	Optimization of submerged culture conditions for mycelial growth and exopolysaccharides production by Agaricus blazei.	Journal of Microbiology & Biotechnology. Vol. 14(5)(pp 944-951), 2004.								x	
63	Costa WF	Protective effect of the tea of sun mushroom (Agaricus blazei Murill) against genotoxic action of urethane on somatic cells of Drosophila to melanogaster.	"Revista de Ciencias Farmaceuticas. Vol. 24(2)(pp 153-158), 2004. "					x				
64	Shu C-H	Effects of culture pH on the production of bioactive polysaccharides by Agaricus blazei in batch cultures.	"Journal of Chemical Technology & Biotechnology. Vol. 79(9)(pp998-1002), 2004. "								x	
65	Ebina T	Antitumor Effect of a Hot Water Extract of Agaricus blazei, 'Himematsutake,' Combined with an Organogermanium Compound, Ge-132.	Biotherapy (Tokyo). Vol. 18(2)(pp 161-165), 2004.		x							
66	Kerrigan RW	Agaricus subrufescens, a cultivated edible and medicinal mushroom, and its synonyms.	Mycologia. 2005 Jan-Feb;97(1):12-24	USA								
67	Zhong M	In vitro augmentation of natural killer activity and interferon-gamma production in murine spleen cells with Agaricus blazei fruiting body fractions.	Biosci Biotechnol Biochem. 2005 Dec;69(12):2466-9	Japan			x					
68	Ebina T	[Antitumor effects of intratumoral injection of Basidiomycetes preparations] [Article in Japanese]	Gan To Kagaku Ryoho. 2005 Oct;32(11):1654-6.	Japan	x							
69	Bernardshaw S	An extract of the mushroom Agaricus blazei Murill administered orally protects against systemic Streptococcus pneumoniae infection in mice.	Scand J Immunol. 2005 Oct;62(4):393-8	Norway		x						
70	Ker YB	Antioxidant capability of polysaccharides fractionated from submerge-cultured Agaricus blazei mycelia.	J Agric Food Chem. 2005 Sep 7;53(18):7052-8	Taiwan				x				
71	Kim GY	Effect of water-soluble proteoglycan isolated from Agaricus blazei on the maturation of murine bone marrow-derived dendritic cells.	Int Immunopharmacol. 2005 Sep;5(10):1523-32.	Republic of Korea			x					
72	Yoshimura K	Use of complementary and alternative medicine by patients with urologic cancer: a prospective study at a single Japanese institution.	Support Care Cancer. 2005 Sep;13(9):685-90	Japan						x		
73	Kim YW	Anti-diabetic activity of beta-glucans and their enzymatically hydrolyzed oligosaccharides from Agaricus blazei.	Biotechnol Lett. 2005 Apr;27(7):483-7	Republic of Korea								

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74	Kobayashi H	Suppressing effects of daily oral supplementation of beta-glucan extracted from Agaricus blazei Murill on spontaneous and peritoneal disseminated metastasis in mouse model.	J Cancer Res Clin Oncol. 2005 Aug;131(8):527-38	Japan	x							
75	Kuroiwa Y	Lack of subchronic toxicity of an aqueous extract of Agaricus blazei Murrill in F344 rats.	Food Chem Toxicol. 2005 Jul;43(7):1047-53	Japan								
76	Machado MP	Cytotoxicity, genotoxicity and antimutagenicity of hexane extracts of Agaricus blazei determined in vitro by the comet assay and CHO/HGPRT gene mutation assay.	Toxicol In Vitro. 2005 Jun;19(4):533-9	Brazil				x				
77	Kimura Y	New anticancer agents: in vitro and in vivo evaluation of the antitumor and antimetastatic actions of various compounds isolated from medicinal plants.	In Vivo. 2005 Jan-Feb;19(1):37-60	Japan	x							
78	Kawamura M	Antithetical effects of hemicellulase-treated Agaricus blazei on the maturation of murine bone-marrow-derived dendritic cells.	Immunology. 2005 Mar;114(3):397-409	Japan			x					
79	Kubo N	Protective effects of a water-soluble extract from cultured medium of Ganoderma lucidum (Rei-shi) mycelia and Agaricus blazei murill against X-irradiation in B6C3F1 mice: Increased small intestinal crypt survival and prolongation of average time to animal death.	Int J Mol Med. 2005 Mar;15(3):401-6.	Japan				x				
80	Ullrich R	Laccase from the medicinal mushroom Agaricus blazei: production, purification and characterization.	Appl Microbiol Biotechnol. 2005 May;67(3):357-63.	Germany							x	
81	Hirotani M	Agariblazeispirol C from the cultured mycelia of the fungus, Agaricus blazei, and the chemical conversion of blazeispirol A	Tetrahedron Volume:61,Issue:1, January 3, 2005, pp. 189-194								x	
82	Gonzaga ML	Isolation and characterization of polysaccharides from Agaricus blazei Murill	Carbohydrate Polymers Volume: 60, Issue: 1, April 7, 2005, pp. 43-49								x	
83	Chen S.C.	Antiangiogenic activities of polysaccharides isolated from medicinal fungi	FEMSMicrobiology Letters Volume: 249, Issue: 2, August 15, 2005, pp. 247-254									
84	Melo S.C.	"Rapid and efficient protocol for DNA extraction and molecular identification of the basidiomycete Crinipellis perniciosa."	Genet Mol Res. 2006 Dec 14;5(4):851-5.	Brazil							x	
85	Mukai H	"An alternative medicine, Agaricus blazei, may have induced severe hepatic dysfunction in cancer patients."	Jpn J Clin Oncol. 2006 Dec;36(12):808-10	Japan	x					x		
86	Jin CY	"Induction of G2/M arrest and apoptosis in human gastric epithelial AGS cells by aqueous extract of Agaricus blazei."	Oncol Rep. 2006 Dec;16(6):1349-55.	Korea	x							
87	Choi YH	Inhibitory effects of Agaricus blazei on mast cell-mediated anaphylaxis-like reactions.	Biol Pharm Bull. 2006Jul;29(7):1366-71.	Republic of Kora			x					
88	Angeli JP	Protective effects of beta-glucan extracted from Agaricus brasiliensis against chemically induced DNA damage in human lymphocytes.	Cell Biol Toxicol. 2006 Jul;22(4):285-91.	Brazil	x			x				
89	Grinde B	Effects on gene expression and viral load of a medicinal extract from Agaricus blazei in patients with chronic hepatitis C infection.	Int Immunopharmacol. 2006 Aug;6(8):1311-4	Norway					x			
90	Nagaokaa MH	Measurement of a genotoxic hydrazine, agaritine, and its derivatives by HPLC with fluorescence derivatization in the agaricus mushroom and its products.	Chem Pharm Bull (Tokyo). 2006 Jun;54(6):922-4.	Japan							x	
91	Bernardshaw S	An extract of the mushroom agaricus blazei Murill protects against lethal septicemia in a mouse model of fecal peritonitis.	Shock. 2006 Apr;25(4):420-5	Norway		x						

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92	Lin JH	Mycelium and polysaccharide production of Agaricus blazei Murrill by submerged fermentation.	J Microbiol Immunol Infect. 2006 Apr;39(2):98-108.	Taiwan							x	
93	Ellertsen LK	Effect of a medicinal extract from Agaricus blazei Murill on gene expression in a human monocyte cell line as examined by microarrays and immuno assays.	Int Immunopharmacol. 2006 Feb;6(2):133-43	Norway			x					
94	Chen L	Extract from Agaricus blazei Murill can enhance immune responses elicited by DNA vaccine against foot-and-mouth disease.	Vet Immunol Immunopathol. 2006 Jan 15;109(1-2-):177-82	China			x		x			
95	Bellini MF	Antigenotoxicity of Agaricus blazei mushroom organic and aqueous extracts in chromosomal aberration and cytokinesis block micronucleus assays in CHO-k1 and HTC cells.	Toxicol In Vitro. 2006Apr;20(3):355-60.	Brazil				x				
96	Akiyama H	"[Agaritine and phenylhydrazine derivatives in Agaricus bisporus and Agaricus blazei Murrill]"	Shokuhin Eiseigaku Zasshi. 2007 Dec;48(6):J397-401. Review.	Japan							x	
97	Shibata H	[Evaluation of beta-D-glucan density in blood after drinking an extraction element of Agaricus blazei murill]	Rinsho Biseibutshu Jinsoku Shindan Kenkyukai Shi. 2007;18(2):103-7.	Japan								
98	Talcott JA	Measuring perceived effects of drinking an extract of basidiomycetes Agaricus blazei Murill: a survey of Japanese consumers with cancer.	BMC Complement Altern Med. 2007 Oct 29;7:32.	Boston, MA, USA						x		
99	Gao L	Primary mechanism of apoptosis induction in a leukemia cell line by fraction FA-2-b-ss prepared from the mushroom Agaricus blazei Murill.	Braz J Med Biol Res. 2007 Nov;40(11):1545-55.	China	x							
100	Murakawa K	Therapy of myeloma in vivo using marine phospholipid in combination with Agaricus blazei Murill as an immune respond activator.	J Oleo Sci. 2007;56(4):179-88.	Japan	x							
101	Lee IP	Lack of carcinogenicity of lyophilized Agaricus blazei Murill in a F344 rat two year bioassay.	Food Chem Toxicol. 2008 Jan;46(1):87-95.	Republic of Korea								x
102	Nakajima Y	Antioxidant small phenolic ingredients in Inonotus obliquus (persoon) Pilat (Chaga).	Chem Pharm Bull (Tokyo). 2007 Aug;55(8):1222-6	Japan				x				
103	Jin CY	Bcl-2 and caspase-3 are major regulators in Agaricus blazei-induced human leukemic U937 cell apoptosis through dephoshorylation of Akt.	Biol Pharm Bull. 2007 Aug;30(8):1432-7	Republic of Korea.	x							
104	Chan Y	Immunomodulatory effects of Agaricus blazei Murill in Balb/cByJ mice.	J Microbiol Immunol Infect. 2007 Jun;40(3):201-8.	Taiwan			x					
105	Faccin LC	Antiviral activity of aqueous and ethanol extracts and of an isolated polysaccharide from Agaricus brasiliensis against poliovirus type 1.	Lett Appl Microbiol. 2007 Jul;45(1):24-8.	Brazil					x			
106	Freire RA	Biological control of Bradysia matogrossensis (Diptera: Sciaridae) in mushroom cultivation with predatory mites.	Exp Appl Acarol. 2007;42(2):87-93.	Brazil							x	
107	Bernardshaw S	Effect of an extract of the mushroom Agaricus blazei Murill on expression of adhesion molecules and production of reactive oxygen species in monocytes and granulocytes in human whole blood ex vivo.	APMIS. 2007 Jun;115(6):719-25.	Norway		x	x		x			
108	Rabinovich M	Copper- and zinc-enriched mycelium of Agaricus blazei Murrill: bioaccumulation and bioavailability.	J Med Food. 2007 Mar;10(1):175-83.	Argentina								
109	Suehiro M	Cheilitis due to Agaricus blazei Murill mushroom extract.	Contact Dermatitis. 2007 May;56(5):293-4.	Japan			x					x
110	Oliveira OM	Antioxidant activity of Agaricus blazei.	Fitoterapia. 2007 Apr;78(3):263-4.	Brazil				x				
111	YuminamochiE	Interleukin-12- and interferon-gamma-mediated natural killer cell activation by Agaricus blazei Murill.	Immunology. 2007 Jun;121(2):197-206.	Japan			x					

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112	Kawamura M	"Delayed Cell Cycle Progression and Apoptosis Induced by Hemicellulase-Treated Agaricus blazei."	Evid Based Complement Alternat Med. 2007 Mar;4(1):83-94.	Japan	x							
113	Hsu CH	The mushroom Agaricus Blazei Murill in combination with metformin and gliclazide improves insulin resistance in type 2 diabetes: a randomized, double-blinded, and placebo-controlled clinical trial.	J Altern Complement Med. 2007 Jan-Feb;13(1):97-102.	Taiwan						x		
114	Liu GQ	"Optimization of critical medium components using response surface methodology for biomass and extracellular polysaccharide production by Agaricus blazei."	Appl Microbiol Biotechnol. 2007 Feb;74(1):78-83.	China							x	
115	Kimura N	Effect of supplementation of Agaricus mushroom meal extracts on enzyme activities in peripheral leukocytes of calves.	Res Vet Sci. 2007 Feb;82(1):7-10	Japan			x					
116	Watanabe T	In vitro and in vivo anti-oxidant activity of hot water extract of basidiomycetes-X, newly identified edible fungus.	Biol Pharm Bull. 2008 Jan;31(1):111-7.	Japan				x				
117	Sorimachi	Inhibitory effect of Agaricu blazei Murill components on abnormal collagen fiber formation in human hepatocarcinoma cells.	Biosci Biotechnol Biochem. 2008 Feb;72(2):621-3.	Japan	x							
118	Firenzuoli F	The Medicinal Mushroom Agaricus blazei Murrill: Review of Literature and Pharmaco-Toxicological Problems.	Evid Based Complement Alternat Med. 2008 Mar;5(1):3-15.	Italy								
119	Sumiya T	Himematsutake (Iwade Strain 101) extract (ABM-FD): Genetic toxicology and a 3-month dietary toxicity study in rats.	Food Chem Toxicol. 2008 Jun;46(6):1949-59.	Japan								x
120	Hsu CH	The mushroom Agaricus blazei Murill extract normalizes liver function in patients with chronic hepatitis B.	J Altern Complement Med. 2008 Apr;14(3):299-301.	Taiwan				x	x			
121	Angeli JP	beta-Glucan extracted from the medicinal mushroom Agaricus blazei prevents the genotoxic effects of benzo[a]pyrene in the human hepatoma cell line HepG2.	Arch Toxicol. 2009 Jan;83(1):81-6.	Brazil				x				
122	Jeurink PV	Immunomodulatory capacity of fungal proteins on the cytokine production of human peripheral blood mononuclear cells.	Int Immunopharmacol. 2008 Aug;8(8):1124-33.	The Netherlands			x					
123	Takimoto H	Amelioration of Skewed Th1/Th2 Balance in Tumor-Bearing and Asthma-Induced Mice by Oral Administration of Agaricus blazei Extracts.	Immunopharmacol Immunotoxicol. 2008;30(4):747-60	Japan	x		x					
124	Gonzaga ML	In vivo growth-inhibition of Sarcoma 180 by an alpha-(1 --> 4)-glucan-beta-(1 --> 6)-glucan-protein complex polysaccharide obtained from Agaricus blazei Murill.	Nat Med (Tokyo).2009 Jan;63(1):32-40.	Brazil	x		x				x	
125	Mori K	Nerve growth factor-inducing activity of Hericium erinaceus in 1321N1 human astrocytoma cells.	Biol Pharm Bull. 2008 Sep;31(9):1727-32.	Japan								
126	Hetland G	Effects of the medicinal mushroom Agaricus blazei Murill on immunity, infection and cancer.	Scand J Immunol. 2008Oct;68(4):363-70.	Norway	x		x					
127	Ziliotto L	Lack of chemoprevention of dietary Agaricus blazei against rat colonic aberrant crypt foci.	Hum Exp Toxicol. 2008Jun;27(6):505-11.	Brazil	x			x				
128	Gu Y	Tumoricidal effects of beta-glucans: mechanisms include both antioxidant activity plus enhanced systemic and topical immunity.	Nutr Cancer. 2008;60(5):685-91.	Japan	x							
129	Su ZY	Black Soybean Promotes the Formation of Active Components with Antihepatoma Activity in the Fermentation Product of Agaricus blazei.	J Agric Food Chem. 2008 Oct 22;56(20):9447-54.	Taiwan	x							
130	Ra Yoon M	Antioxidative and antimutagenic activities of 70% ethanolic extracts from four fungal mycelia-fermented specialty rices.	J Clin Biochem Nutr. 2008 Sep;43(2):118-25.	Korea				x				

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131	Yu CH	Inhibitory mechanisms of Agaricus blazei Murill on the growth of prostate cancer in vitro and in vivo.	J Nutr Biochem. 2008 Oct 14.	Taiwan	x							
132	Schmidt TF	Interaction of polysaccharide-protein complex from Agaricus blazei with Langmuir and Langmuir-Blodgett films of phospholipids.	J Colloid Interface Sci. 2008 Oct 17.	Brasil								
133	Ribeiro-Santos G	Lack of chemopreventive activity of Agaricus blazei mushroom on the development of 1,2-dimethylhydrazine-induced colonic aberrant crypt foci in rats.	Nutr Cancer. 2008;60(6):768-75.	Brazil	x							x
134	Itoh H	Blazein of a new steroid isolated from Agaricus blazei Murrill (himematsutake) induces cell death and morphological change indicative of apoptotic chromatin condensation in human lung cancer LU99 and stomach cancer KATO III cells.	Oncol Rep. 2008 Dec;20(6):1359-61.	Japan	x							
135	Niu YC	A low molecular weight polysaccharide isolated from Agaricus blazei suppresses tumor growth and angiogenesis in vivo.	Oncol Rep. 2009 Jan;21(1):145-52.	China	x							
136	Kim CF	Inhibitory effects of Agaricus blazei extracts on human myeloid leukemia cells.	J Ethnopharmacol. 2008 Dec 27. [Epub ahead of print]	Hong Kong	x							
137	Ziliotto L	Screening for in vitro and in vivo antitumor activities of the mushroom Agaricus blazei.	Nutr Cancer. 2009;61(2):245-50.	Brazil	x							
138	Johnson E	Effect of an extract based on the medicinal mushroom Agaricus blazei murill on release of cytokines, chemokines and leukocyte growth factors in human blood ex vivo and in vivo.	Scand J Immunol. 2009Mar;69(3):242-50	Norway			x					
139	Ellertsen LK	An extract of the medicinal mushroom Agaricus blazei Murill can protect against allergy.	Clin Mol Allergy. 2009 May 5;7(1):6. [Epub ahead of print]	Norway			x					
140	Padilha MM	Anti-inflammatory activity of aqueous and alkaline extracts from mushrooms (Agaricus blazei Murill).	J Med Food. 2009 Apr;12(2):359-64	Brasil	x			x				
141	Ribas LC	Use of spent mushroom substrates from Agaricus subrufescens (syn. A. blazei, A. brasiliensis) and Lentinula edodes productions in the enrichment of a soil-based potting media for lettuce (Lactuca sativa) cultivation: Growth promotion and soil bioremediation	Bioresour Technol. 2009 Oct;100(20):4750-7.	Brasil							x	
142	Niu YC	Immunostimulatory activities of a low molecular weight antitumoral polysaccharide isolated from Agaricus blazei Murill (LMPAB) in Sarcoma 180 ascitic tumor-bearing mice.	Pharmazie. 2009 Jul;64(7):472-6.	China	x		x					
143	" Engdal S"	In vitro inhibition of CYP3A4 by herbal remedies frequently used by cancer patients	Phytotherapy Research 23 (7), 906-912	Norway	x							
144	Holliday JC	Preclinical evaluation of concurrent medicinal mushroom-based immune-enhancement supplementation in dogs undergoing chemotherapy for various cancers	International Journal of Medicinal Mushrooms 11 (2),167-184	United States	x					x		
145	Ishibashi K-I	Effect of oral administration of dried royal sun agaricus, agaricus brasiliensis S. Wasser et al. (Agaricomycetideae), fruit bodies on anti-β-glucan antibody titers in humans	International Journal of Medicinal Mushrooms 11 (2), 17-131	Japan			x					
146	da Silva, AC	Use of mushroom extract as natural antioxidant in vegetal oil	Ciencia e Agrotecnologia 33 (4), 1103-1108	Brazil				x				
147	Han S-SR	Antimetastatic and Immunomodulating Effect of Water Extracts From Various Mushrooms	JAMS Journal of Acupuncture and Meridian Studies 2 (3), 218-227	South Korea	x		x					
148	Tang NY	Effects of Agaricus blazei murill extract on immune responses in normal BALB/c mice	In Vivo. 2009 Sep-Oct;23(5):761-6.	Taiwan	x		x					
149	Yu CH	Inhibitory mechanisms of Agaricus blazei Murill on the growth of prostate cancer in vitro and in vivo	Journal of Nutritional Biochemistry 20 (10), 753-764	Taiwan	x							

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150	Schmidt TF	Interaction of polysaccharide-protein complex from Agaricus blazei with Langmuir and Langmuir-Blodgett films of phospholipids.	J Colloid Interface Sci. 2008 Oct 17.	Brazil								
151	Ribeiro-Santos G	Lack of chemopreventive activity of Agaricus blazei mushroom on the development of 1,2-dimethylhydrazine-induced colonic aberrant crypt foci in rats.	Nutr Cancer. 2008;60(6):768-75.	Brazil	x							x
152	Itoh H	Blazein of a new steroid isolated from Agaricus blazei Murrill (himematsutake) induces cell death and morphological change indicative of apoptotic chromatin condensation in human lung cancer LU99 and stomach cancer KATO III cells.	Oncol Rep. 2008 Dec;20(6):1359-61.	Japan	x							
153	Liu Y	Immunomodulating Activity of Agaricus brasiliensis KA21 in Mice and in Human Volunteers	Evid Based Complement Alternat Med. 2008 Jun;5(2):205-219.	Japan	x		x					
154	Ishibashi K-I	Effect of oral administration of dried royal sun agaricus, agaricus brasiliensis S. Wasser et al. (Agaricomycetideae), fruit bodies on anti-β-glucan antibody titers in humans	International Journal of Medicinal Mushrooms 11, 17-131	Japan			x					
155	da Silva, AC	Use of mushroom extract as natural antioxidant in vegetal oil	Ciencia e Agrotecnologia 33, 1103-1108	Japan				x				
156	Han S-SR	Antimetastatic and Immunomodulating Effect of Water Extracts From Various Mushrooms	JAMS Journal of Acupuncture and Meridian Studies 2 (3), 218-227	South Korea	x		x					
157	Tang NY	Effects of Agaricus blazei murill extract on immune responses in normal BALB/c mice	In Vivo. 2009; 23: 761-6.	Taiwan	x		x					
158	Mourão F	Antineoplasic activity of Agaricus brasiliensis basidiocarps on different maturation phases	Brazilian Journal of Microbiology 40, 901-905	Brasil	x							
159	Qian J-Y	Adulteration identification of some fungal polysaccharides with SEM, XRD, IR and optical rotation: A primary approach	Carbohydrate Polymers 78, 620-625	China							x	
160	da Silva CKF	Determination of the diffusion coefficient of dry mushrooms using the inverse method	Journal of Food Engineering 95, 1-10	Brasil							x	
161	de Siqueira FG	Cultivation of Agaricus blazei ss. Heinemann using different soils as source of casing materials	Scientia Agricola 66 , 827-830	Brasil							x	
162	Liu J	Optimization of polysaccharides (ABP) extraction from the fruiting bodies of Agaricus blazei Murill using response surface methodology (RSM)	Carbohydrate Polymers 78, 704-709	China							x	
163	Førland DT	An extract based on the medicinal mushroom Agaricus blazei Murill stimulates monocyte-derived dendritic cells to cytokine and chemokine production in vitro	Cytokine 49, 245-50	Norway			x					
164	Volman JJ	Effects of mushroom-derived beta-glucan-rich polysaccharide extracts on nitric oxide production by bone marrow-derived macrophages and nuclear factor-kappaB transactivation in Caco-2 reporter cells: Can effects be explained by structure?	Mol Nutr Food Res. 54, 268-276	The Netherlands		x	x					
165	Chu JN	Agaricicola taiwanensis gen. nov., sp. nov., an alphaproteobacterium isolated from the edible mushroom Agaricus blazei.	Int J Syst Evol Microbiol. 2010 Sep; 60, 2032-5	China							x	
166	Kobayashi H	Endotoxin contamination of Agaricus blazei Murrill extract enhances murine immunologic responses and inhibits the growth of sarcoma 180 implants in vivo.	J Environ Pathol Toxicol Oncol. 2010;29(2):159-68	Japan	x						x	

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167	Di Naso FC	Effect of Agaricus blazei Murill on the pulmonary tissue of animals with streptozotocin-induced diabetes.	Exp Diabetes Res. 2010;2010:543926	Brazil				x				
168	Endo M	Agaritine purified from Agaricus blazei Murrill exerts anti-tumor activity against leukemic cells.	Biochim Biophys Acta. 2010 Jul;1800(7):669-73	Japan	x							
169	Konishi H	Possible case for false-positive reaction in serum 5-S-cysteinyldopa levels in a patient with malignant melanoma by ingestion of Agaricus blazei Murrill extract.	J Dermatol. 2010 Aug;37(8):773-5	Japan								x
170	Sui Z	Chemical analysis of Agaricus blazei polysaccharides and effect of the polysaccharides on IL-1beta mRNA expression in skin of burn wound-treated rats.	Int J Biol Macromol. 2010 Aug 1;47(2):155-7	China			x					
171	Györfi J	Mineral composition of different strains of edible medicinal mushroom Agaricus subrufescens Peck.	J Med Food. 2010 Dec;13(6):1510-4.	Hungary							x	x
172	Jiang J	Novel medicinal mushroom blend suppresses growth and invasiveness of human breast cancer cells.	Int J Oncol. 2010 Dec;37(6):1529-36.	USA	x							
173	Førland DT	Effect of an extract based on the medicinal mushroom Agaricus blazei Murill on expression of cytokines and calprotectin in patients with ulcerative colitis and Crohn's disease.	Scand J Immunol. 2011 Jan;73(1):66-75	Norway			x					
174	Lima CU	Does the Agaricus blazei Murill mushroom have properties that affect the immune system? An integrative review.	J Med Food. 2011 Jan-Feb;14(1-2):2-8	Brazil			x					
175	Fantuzzi E	Evaluation of Royal Sun Agaricus, Agaricus brasiliensis S. Wasser et al., aqueous extract in mice challenged with Salmonella enterica serovar Typhimurium.	Int J Med Mushrooms. 2011;13(3):281-8	Brazil			x					
176	Wu MF	Agaricus blazei Murill extract abrogates CCl4-induced liver injury in rats.	In Vivo. 2011 Jan-Feb;25(1):35-40	Taiwan				x				
177	Bouike G	Oral Treatment with Extract of Agaricus blazei Murill Enhanced Th1 Response through Intestinal Epithelial Cells and Suppressed OVA-Sensitized Allergy in Mice.	Evid Based Complement Alternat Med. 2011;2011. pii: 532180	Japan			x					
178	Ohno S	Phase I Clinical Study of the Dietary Supplement, Agaricus blazei Murill, in Cancer Patients in Remission.	Evid Based Complement Alternat Med. 2011;2011:192381	Japan	x							
179	Hetland G	The Mushroom Agaricus blazei Murill Elicits Medicinal Effects on Tumor, Infection, Allergy, and Inflammation through Its Modulation of Innate Immunity and Amelioration of Th1/Th2 Imbalance and Inflammation.	Adv Pharmacol Sci. 2011;2011:157015	Norway	x	x	x					
180	Lee JS	Agaricus blazei Murill enhances doxorubicin-induced apoptosis in human hepatocellular carcinoma cells by NFκB-mediated increase of intracellular doxorubicin accumulation.	Int J Oncol. 2011 Feb;38(2):401-8.	Republic of Korea	x							
181	Fernandes MB	Influence of drying methods over in vitro antitumoral effects of exopolysaccharides produced by Agaricus blazei LPB 03 on submerged fermentation.	Bioprocess Biosyst Eng. 2011 Mar;34(3):253-61	Brazil	x							

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182	Ishii PL	Evaluation of Agaricus blazei in vivo for antigenotoxic, anticarcinogenic, phagocytic and immunomodulatory activities.	Regul Toxicol Pharmacol. 2011 Apr;59(3):412-22	Brazil			x	x				
183	Ueguchi Y	Constituents of cultivated Agaricus blazei.	J Nat Med. 2011 Apr;65(2):307-12	Japan	x							
184	Rahar S	Preparation, characterization, and biological properties of β-glucans.	J Adv Pharm Technol Res. 2011 Apr;2(2):94-103	India						x	x	
185	Niwa A	Ipomoea batatas and Agarics blazei ameliorate diabetic disorders with therapeutic antioxidant potential in streptozotocin-induced diabetic rats.	J Clin Biochem Nutr. 2011 May;48(3):194-202.	Japan				x				
186	Wu MF	Possible reduction of hepatoma formation by Smmu 7721 cells in SCID mice and metastasis formation by B16F10 melanoma cells in C57BL/6 mice by Agaricus blazei murill extract.	In Vivo. 2011 May-Jun;25(3):399-404.	Taiwan	x							
187	Akiyama H	Agaritine from Agaricus blazei Murrill induces apoptosis in the leukemic cell line U937.	Biochim Biophys Acta. 2011 May;1810(5):519-25	Japan	x							
188	Su ZY	Blazeispirol A from Agaricus blazei fermentation product induces cell death in human hepatoma Hep 3B cells through caspase-dependent and caspase-independent pathways.	J Agric Food Chem. 2011 May 11;59(9):5109-16.	China	x							
189	Wu MF	Effect of Agaricus blazei Murrill extract on HT-29 human colon cancer cells in SCID mice in vivo.	In Vivo. 2011 Jul-Aug;25(4):673-7	Taiwan	x							
190	Sorimachi K	Alternative medicine safety: agaricus blazei and propolis.	Comb Chem High Throughput Screen. 2011 Aug;14(7):616-21.	Japan								x
191	Peter-Valence F	Chemical characterization of the biomass of an edible medicinal mushroom, Agaricus subrufescens, via solid-state 13C NMR.	J Agric Food Chem. 2011 Aug 24;59(16):8939-43.	France							x	
192	Liu J	Structural elucidation of a heteroglycan from the fruiting bodies of Agaricus blazei Murill.	Int J Biol Macromol. 2011 Nov 1;49(4):716-20.	China							x	
193	Chang JB	Carbon tetrachloride-induced hepatotoxicity and its amelioration by Agaricus blazei Murrill extract in a mouse model.	In Vivo. 2011 Nov-Dec;25(6):971-6.	Taiwan				x				
194	Gonçalves JL	Pro-inflammatory effects of the mushroom Agaricus blazei and its consequences on atherosclerosis development.	Eur J Nutr. 2011 Nov 16	Brazil								x
195	Yamanaka D	Effect of Agaricus brasiliensis-derived cold water extract on Toll-like receptor 2-dependent cytokine production in vitro.	Immunopharmacol Immunotoxicol. 2011 Nov 29	Japan			x					
196	Valadares DG	Leishmanicidal activity of the Agaricus blazei Murill in different Leishmania species.	Parasitol Int. 2011 Dec;60(4):357-63	Brazil		x						

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197	Lima CU	Agaricus blazei Murrill and inflammatory mediators in elderly women: a randomized clinical trial.	Scand J Immunol. 2012 Mar;75(3):336-41.	Brazil						x		
198	Dong S	Estrogen-like activity and dual roles in cell signaling of an Agaricus blazei Murrill mycelia-dikaryon extract.	Microbiol Res. 2012 Apr 20;167(4):231-7.	Japan								
199	Wu B	A polysaccharide from Agaricus blazei inhibits proliferation and promotes apoptosis of osteosarcoma cells.	Int J Biol Macromol. 2012 May 1;50(4):1116-20	China	x							
200	Chang JB	Evaluation of Genotoxicity and Subclinical Toxicity of Agaricus blazei Murrill in the Ames Test and in Histopathological and Biochemical Analysis.	In Vivo. 2012 May;26(3):437-45.	China				x				
201	Sun L	Bioaccessibility of cadmium in fresh and cooked Agaricus blazei Murill assessed by in vitro biomimetic digestion system.	Food Chem Toxicol. 2012 May;50(5):1729-33.	China							x	x
202	Johnson E	Effect of AndoSan(™) on expression of adhesion molecules and production of reactive oxygen species in human monocytes and granulocytes in vivo.	Scand J Gastroenterol. 2012 May 8	Norway			x					