

London, 16 July 2009
Doc. Ref.: EMEA/HMPC/580546/2008

COMMITTEE ON HERBAL MEDICINAL PRODUCTS (HMPC)

DRAFT

LIST OF REFERENCES FOR ASSESSMENT OF

Mate folium
Ilex paraguariensis St. Hil., folium
(maté leaves)

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.

1. Abnet CC. Carcinogenic food contaminants. *Cancer Investigation* 2007, 25(3): 189-96
2. Actis-Goretta L, Mackenzie GG, Oteiza PI, Fraga CG. Comparative study on the antioxidant capacity of wines and other plant-derived beverages. *Ann N Y Acad Sci.* 2002, 957: 279-83
3. Adams J, Palombella VJ, Sausville EA, Johnson J, Destree A, Lazarus DD, Maas J, Pien CS, Prakash S, Elliott PJ. Proteasome inhibitors: a novel class of potent and effective antitumor agents. *Cancer Res* 1999, 59(11): 2615-22
4. Alikaridis F. Natural constituents of *Ilex* species. *J Ethnopharmacol* 1987, 20(2): 121-44
5. Andersen T, Fogh J, Weight loss and delayed gastric emptying following a South American herbal preparation in overweight patients. *J Hum Nutr Diet* 2001, 14(3): 243-50
6. Andrade FD, Piacente S, Pizza C, Vilegas W. Arbutin-2'-sulphonyl from the infusion of *Ilex theezans* leaves. *Fitoterapia* 2004, 75(7-8): 782-4
7. Anesini C, Ferraro G, Filip R: Peroxidase-like activity of *Ilex paraguariensis*. *Food Chemistry* 2006, 97(3): 459-64
8. Anghileri LJ, Thouvenot P, Natural polyphenols-iron interaction: its biological importance. *Biol Trace Elem Res* 2000, 73(3): 251-8
9. Arbiser JL, Li XC, Hossain CF, Nagle DG, Smith DM, Miller P, Govindarajan B, DiCarlo J, Landis-Piwowar KR, Dou QP. Naturally occurring proteasome inhibitors from mate tea (*Ilex paraguayensis*) serve as models for topical proteasome inhibitors. *J Invest Dermatol* 2005, 125(2): 207-12
10. Arendt B M, Winkler P, Boetzer AM, Lemoch H, Rockstroh JK, Berthold HK, Spengler U, Goerlich R. Wirkung polyphenolhaltiger Getränke auf die antioxidative Kapazität im Plasma unter erhöhter oxidativer Belastung. Deutsche Gesellschaft für Ernährung, Abstracts zum 37 wissenschaftl. Kongress, Proc. Germ. Nutr. Soc. Vol. 2. 2000: 40
11. Assis Jacques R, dos Santos Freitas L, Flores Peres V, Dariva C, de Oliveira JV, Bastos Caramao E. Chemical composition of mate tea leaves (*Ilex paraguariensis*): a study of extraction methods. *J Sep Sci* 2006, 29(18): 2780-4

12. Athayde ML, Coelho GC, Schenkel EP. Caffeine and theobromine in epicuticular wax of *Ilex paraguariensis* A. St.-Hil. *Phytochemistry* 2000, 55(7): 853-7
13. Baisch ALM, Johnston KB, Stein FLP. Endothelium-dependent vasorelaxing activity of aqueous extracts of *Ilex paraguariensis* on mesenteric arterial bed of rats. *Journal of Ethnopharmacology* 1998, 60(2): 133-9
14. Bastos DH, Saldanha LA, Catharino RR, Sawaya AC, Cunha IB, Carvalho PO, Eberlin MN. Phenolic antioxidants identified by ESI-MS from Yerba Maté (*Ilex paraguariensis*) and green tea (*Camellia sinensis*) extracts. *Molecules* 2007, 12: 423-32
15. Bastos DHM, Fornari AC, Queiroz YS, Torres EAES. Bioactive compounds content of Chimarrão infusions related to the moisture of yerba mate (*Ilex paraguariensis*) leaves. *Brazilian Archives of Biology and Technology* 2006a, 49(3): 399-404
16. Bastos DHM, Ishimoto E Y, Marquesb MOM, Ferrib A F, Torres EAES. Essential oil and antioxidant activity of green mate and mate tea (*Ilex paraguariensis*) infusions. *J of Food Com and Analysis* 2006b, 19(7): 538-43
17. Bates MN, Hopenhayn C, Rey OA, Moore LE. Bladder cancer and mate consumption in Argentina: a case-control study. *Cancer Lett.* 2007, 246(1-2): 268-73
18. Bchir F, Doqui M, Fradj RB, Arnaud MJ, Saguem S. Differences in pharmacokinetic and electroencephalographic responses to caffeine in sleep-sensitive and non-sensitive subjects. *C R Biol* 2006, 329(7): 512-19, abstract
19. Bidau CJ, Amat AG, Yajía M, Martí DA, Riglos AG, Silvestroni A. Evaluation of the genotoxicity of aqueous extracts of *Ilex paraguariensis* St. Hil. (Aquifoliaceae) using the Allium test. *Cytologia* 2004, 69(2): 109-117
20. Bixby M, Spieler L, Menini T, Guiliucci A. *Ilex paraguariensis* extracts are potent inhibitors of nitrosative stress: A comparative study with green tea and wines using a protein nitration model and mammalian cell toxicity. *Life Sciences* 2005, 77: 345-58
21. Blaschek W, Ebel S, Hackenthal E. *Hagers Enzyklopädie der Arzneistoffe und Drogen*, Wiss. Verlagsgesellschaft, Stuttgart 2007: Coffein
22. Blumenthal M, Busse WR, Goldberg A, Gruenwald J, Hall T, Riggins W, Rister R, Klein S. *The Complete German Commission E Monographs*. The American Botanical Council, Austin, Texas, 1998, 167-8
23. Bracesco N, Dell M, Rocha A, Behtash S, Menini T, Gugliucci A, Nunes E. Antioxidant activity of a botanical extract preparation of *Ilex paraguariensis*: prevention of DNA double-strand breaks in *Saccharomyces cerevisiae* and human low-density lipoprotein oxidation. *J Altern Complement Med* 2003, 9(3): 379-87
24. Bracken MB, Triche EW, Belanger K, Hellenbrand K, Leaderer BP. Association of maternal caffeine consumption with decrements in fetal growth. *Am J Epidemiol* 2003, 157: 456-66
25. Bravo L, Goya L, Lecumberri E. LC/MS characterization of phenolic constituents of mate (*Ilex paraguariensis*, St. Hil.) and its antioxidant activity compared to commonly consumed beverages. *Food Research International* 2007, 40(3): 393-405
26. Caffeine. In: *PharmaMed Datenbank: Monographien B plus Neue Arzneimittel*. Wissenschaftliche Verlagsgesellschaft mbH 1998, 2002
27. Cahier de l'Agence No 3: Médicaments à base de plantes. Agence du Médicament, Paris 1998
28. Carini M, Facino RM, Aldini G, Calloni M, Colombo L. Characterization of phenolic antioxidants from Maté (*Ilex Paraguayensis*) by liquid chromatography/mass spectrometry and liquid chromatography/tandem mass spectrometry. *Rapid. Comm. In Mass Spec* 1998, 12: 1813-19
29. Castellsague X, Munoz N, De Stefani E, Victora CG, Castelletto R, Rolon PA. Influence of mate drinking, hot beverages and diet on esophageal cancer risk in South America. *Int J Cancer* 2000, 88(4): 658-64

30. Centers For Disease Control (USA). Anticholinergic poisoning associated with an herbal tea - New York City. Morbidity and Mortality Weekly Report 1995, 44(11): 193-95
31. Chandra S, De Mejia Gonzalez E. Polyphenolic compounds, antioxidant capacity, and quinone reductase activity of an aqueous extract of *Ardisia compressa* in comparison to mate (*Ilex paraguariensis*) and green (*Camellia sinensis*) teas. *J Agric Food Chem* 2004, 52(11): 3583-9
32. Christian MS, Brent RL. Teratogen update: evaluation of the reproductive and developmental risks of caffeine. *Teratology* 2001, 64(1): 51-78
33. Colpo G, Trevisol F, Teixeira AM, Fachinetto R, Pereira RP, Athayde ML, Rocha JB, Burger ME. *Ilex paraguariensis* has antioxidant potential and attenuates haloperidol-induced orofacial dyskinesia and memory dysfunction in rats. *Neurotox Res* 2007, 12(3): 171-80
34. Committee on toxicity COT. Statement on the reproductive effects of caffeine. 2008, <http://cot.food.gov.uk/dfs/cotstatementcaffeine200804.pdf>
35. De Albuquerque UP, Monteiro JM, Ramos MA, de Amorim ELC. Medicinal and magic plants from a public market in northeastern Brazil. *Journal of Ethnopharmacology* 2007, 110(1): 76-91
36. De Stefani E, Boffetta P, Deneo-Pellegrini H, Correa P, Ronco AL, Brennan P, Ferro G, Acosta G, Mendilaharsu M. Non-alcoholic beverages and risk of bladder cancer in Uruguay. *BMC Cancer* 2007, 29(7): 57
37. De Stefani E, Correa P, Fierro L, Fontham E, Chen V, Zavala D. Black tobacco, Mate, and bladder cancer. A case-control study from Uruguay. *Cancer* 1991, 67(2): 536-40
38. De Stefani E, Correa P, Oreggia F, Deneo-Pellegrini H, Fernandez G, Zavala D, Carzoglio J, Leiva J, Fontham E, Rivero S. Black tobacco, wine and mate in oropharyngeal cancer. A case-control study from Uruguay. *Rev Epidemiol Sante Publique* 1988, 36(6): 389-94
39. De Stefani E, Fierro L, Mendilaharsu M, Ronco A, Larrinaga MT, Balbi JC, Alonso S, Deneo-Pellegrini H. Meat intake, 'mate' drinking and renal cell cancer in Uruguay: a case-control study. *Br J Cancer* 1998, 78(9):1239-43
40. De Stefani E, Fierro L, Correa P, Fontham E, Ronco A, Larrinaga M, Balbi J, Mendilaharsu M. Mate drinking and risk of lung cancer in males: a case-control study from Uruguay. *Cancer Epidemiol Biomarkers Prev* 1996, 5(7): 515-9
41. De Stefani E, Correa P, Oreggia F, Leiva J, Rivero S, Fernandez G, Deneo-Pellegrini H, Zavala D, Fontham E. Risk factors for laryngeal cancer. *Cancer Cytopathology* 1987, 60(12): 3087-91
42. De Stefani E. Esophageal cancer risk mate tea, 15-th international cancer congress, Hamburg, Germany, August 16-22, 1990. *J Cancer res Clin Oncol* 1990, 116(2): 1199
43. De Pasquale C. Sperimentazione clinica controllata in doppio cieco del Maté in soggetti sottoposti a regime dietetico ipocalorico. *Clin Dietol* 1991, 18: 27-38
44. Di Gregorio DE, Huck H, Aristegui R, De Lazzari G, Jech A. ¹³⁷Cs contamination in tea and yerba mate in South America. *J Environ Radioact* 2004, 76(3): 273-81
45. Dickel ML, Rates SM, Ritter MR. Plants popularly used for loosing weight purposes in Porto Alegre, South Brazil. *J Ethnopharmacol* 2007, 109(1): 60-71
46. Di Pentima MC, Steele-Moore L, Muehlbauer L, Klein JD. Are your patients at risk? Fungal contamination of *Ilex paraguariensis* St. Hil (yerba mate). *Transpl Infect Dis* 2005, 7(1): 47-8
47. Dralyuk I, Clouatre D, Preuss HG. Yerba mate: a review. *Original Internist* 2006, 13(3)
48. Dusek B, Hajsova J, Kocourek V. Determination of nitrated polycyclic aromatic hydrocarbons and their precursors in biotic matrices. *J Chromatogr A* 2002, 982(1): 127-43
49. Evans SM, Griffiths RR. Caffeine tolerance and choice in humans. *Psychopharmacology* 1992, 108: 51-9
50. Fagundes RB, Abnet CC, Strickland PT, Kamangar F, Roth MJ, Taylor PR, Dawsey SM. Higher urine 1-hydroxy pyrene glucuronide (1-OHPG) is associated with tobacco smoke

51. Felippi R, Wilhelm-Filho D, Ribeiro Do Vale Nicolau RM, Silva EL. Administration of aqueous extract of *Ilex paraguariensis* reverses endothelial disfunction in LDL receptor knockout mice. *Free Radical Research* 2006, 40 (1): 104
52. Ferreira F, Vázquez A, Güntner C, Moyna P. Inhibition of the passive diffusion of cholic acid by the *Ilex paraguariensis* St. Hil. saponins. *Phytotherapy Research* 1997, 11(1): 79-81
53. Filip R, Lopez P, Coussio J, Ferraro G. Mate substitutes or adulterants: study of xanthine content. *Phytotherapy research* 1998, 12(2): 129-31
54. Filip R, Ferraro GE. Researching on new species of "Mate": *Ilex brevicuspis*: phytochemical and pharmacology study. *Eur J Nutr* 2003, 42(1): 50-4
55. Filip R, Lopez P, Giberti G, Coussio J, Ferraro G. Phenolic compounds in seven South American *Ilex* species. *Fitoterapia*. 2001, 72(7): 774-8
56. Filip R, Sebastian T, Ferraro G, Anesini C. Effect of *Ilex* extracts and isolated compounds on peroxidase secretion of rat submandibular glands. *Food Chem Toxicol* 2007, 45(4): 649-55
57. Filip R, Lotito SB, Ferraro G, Fraga CG. Antioxidant activity of *Ilex paraguariensis* and related species. *Nutrition Research* 2000, 20(10): 1437-46
58. Fonseca CA, Otto SS, Paumgarten FJ, Leitao AC. Nontoxic, mutagenic, and clastogenic activities of Mate-Chimarrão (*Ilex paraguariensis*). *J Environ Pathol Oncol* 2000; 19(4): 333-46
59. Food standards agency (FSA). Food standards agency publishes new caffeine advice for pregnant women. 2008, <http://food.gov.uk/news/pressreleases/2008/nov/caffeineadvice>
60. Ford RPK, Schluter PJ, Mitchell EA, Taylor BJ, Scragg R, Stewart AW. Heavy caffeine intake in pregnancy and sudden infant death syndrome. *Arch Dis Child* 1998, 78: 9-13
61. Fossati C. On the virtue and therapeutic properties of "yerba-mate" (*Ilex paraguayensis* or *paraguariensis* St. Hilaire 1838). *Clin Ter* 1976, 78(3): 265-72
62. Garcia RV, Basualdo I, Peralta I, de Herebia M, Caballero S. Minerals content of Paraguayan yerba mate (*Ilex paraguariensis*, S.H.). *Arch Latinoam Nutr* 1997, 47(1): 77-80
63. Ghadirian P. Thermal irritation and esophageal Cancer in Northern Iran. *Cancer* 1987, 60(8): 1909-14
64. Giulian R, Santos CE, Shubeita Sde M, Silva LM, Dias JF, Yoneama ML. Elemental characterization of commercial mate tea leaves (*Ilex paraguariensis* A. St.-Hil.) before and after hot water infusion using ion beam techniques. *J Agric Food Chem* 2007, 55(3): 741-46
65. Goldenberg D, Golz A, Joachims HZ. The beverage mate: a risk factor for cancer of the head and neck. *Head Neck* 2003, 25(7): 595-601
66. Goldenberg D, Lee J, Koch WM, Kim MM, Trink B, Sidransky D, Moon CS. Habitual risk factors for head and neck cancer. *Otolaryngol Head Neck Surg*. 2004, 131(6): 986-93
67. Goldenberg D. Mate: a risk factor for oral and oropharyngeal cancer. *Oral Oncol* 2002, 38(7): 646-49
68. Gonzalez de Mejia E, Song YS, Ramirez-Mares MV, Kobayashi H. Effect of yerba mate (*Ilex paraguariensis*) tea on topoisomerase inhibition and oral carcinoma cell proliferation. *J Agric Food Chem* 2005, 53(6): 1966-73
69. Gonzalez de Mejia E, Ramirez M. Cytotoxicity of *Camellia sinensis*, *Ilex paraguariensis* and *Ardisia compressa* tea extracts and selected polyphenols on human hepatoma (HepG2) cancer cells. *FASEB Journal* 2004, 18(4-5): 360.10
70. Görgen M, Turatti K, Medeiros AR, Buffon A, Bonan CD, Sarkis JJ, Pereira GS. Aqueous extract of *Ilex paraguariensis* decreases nucleotide hydrolysis in rat blood serum. *J Ethnopharmacol* 2005, 97(1): 73-7

71. Gorzalczany S, Filip R, Alonso MR, Mino J, Ferraro GE, Acevedo C. Choleretic effect and intestinal propulsion of 'mate' (*Ilex paraguariensis*) and its substitutes or adulterants. *J Ethnopharmacol* 2001, 75(2-3): 291-94
72. Gosmann G, Schenkel EP. A new Saponine from Maté, *Ilex paraguariensis*, *J Nat Prod* 1989, 52(6): 1367-70
73. Gosmann G, Guillaume D, Taketa AT, Schenkel EP. Triterpenoid saponins from *Ilex paraguariensis*. *J Nat Prod* 1995, 58(3): 438-41
74. Groves FD, Zavala DE, Correa P. Variation in international cancer mortality: factor and cluster analysis. *Int J Epidemiol* 1987, 16(4): 501-8
75. Gugliucci A, Menini T. The botanical extracts of Achyrocline satureoides and *Ilex paraguariensis* prevent methylglyoxal-induced inhibition of plasminogen and antithrombin III. *Life Sci* 2002, 72(3): 279-92
76. Gugliucci A, Stahl AJ. Low density lipoprotein oxidation is inhibited by extracts of *Ilex paraguariensis*. *Biochem Mol Biol* 1995, 35(1): 47-56
77. Gugliucci A. Antioxidant effects of *Ilex paraguariensis*: Induction of decreased oxidability of human LDL in vivo. *Biochem and Biophys Res Communications* 1996, 224: 338-44
78. Gutnisky A, Rizzo N, Castro ME, Garbossa G. The inhibitory action of chlorogenic acid on the intestinal iron absorption in rats. *Acta Physiol Pharmacol Ther Latinoam* 1992, 42(3):139-46
79. Haaf M. *Ilex paraguariensis* St. Hilaire (Mate). Dissertation 2004, http://hss.ulb.uni-bonn.de/diss_online/math_nat_fak/2004/haaf_melanie/haaf.htm
80. Coffein. In: Hunnius C, Burger A, Wachter H. *Pharmazeutisches Wörterbuch* ; Walter de Gruyter GmbH & Co. Berlin, New York 2009
81. Heck CI, de Mejia EG. Yerba Mate Tea (*Ilex paraguariensis*): a comprehensive review on chemistry, health implications, and technological considerations. *Journal of Food Science* 2007, 72(9): 138-51
82. Hin-Pang Chang, Jing-Ting Liao, Jia-Yin Chen, Yu-Ling Yang, Yu-Han Chang, Meng-Tsan Chiang. Effect of mate tea leaves on plasma and hepatic lipids in type 2 diabetic rats. *Taiwanese Journal of Agricultural Chemistry and Food Science* 2007, 45(3): 172-81
83. Infante-Rivard C, Fernandez A, Gauthier R, David M, Rivard GE. Fetal loss associated with caffeine intake before and during pregnancy. *JAMA* 1993, 270(24): 2940-3
84. International Agency for Research on Cancer (IARC)- Summaries & Evaluations. Mate. Mate (group 3) Hot Mate (group 2A). *IPCS Inchem*. 1991, 51: 273
85. Islami F, Pourshams A, Nayrollahzadeh D, Kamanger F. et al. Tea drinking habits and oesophageal cancer in a high risk area in northern Iran: population based case-control study. *BMJ* 2009, 338: 929
86. Ivanova D, Gerova D, Chervenkov T, Yankova T. Polyphenols and antioxidant capacity of Bulgarian medicinal plants. *J Ethnopharmacol* 2005, 96(1-2): 145-50
87. Jacques RA, Arruda EJ, de Oliveira LC, de Oliveira AP, Dariva C, de Oliveira JV, Caramao EB. Influence of agronomic variables on the macronutrient and micronutrient contents and thermal behaviour of mate tea leaves (*Ilex paraguariensis*). *J Agric Food Chem* 2007, 55(18): 7510-16
88. Jacques RA, dos Santos Freitas L, Perez VF, Dariva C, de Oliveira AP, de Oliveira JV, Caramao EB. The use of ultrasound in the extraction of *Ilex paraguariensis* leaves: a comparison with maceration. *Ultrason Sonochem*. 2007, 14(1): 6-12
89. James JE, Crosbie J. Somatic and psychological health implications of heavy caffeine use. *Br J of Addict* 1987, 82: 503-9

90. Kamangar F, Schantz MM, Abnet CC, Fagundes RB, Dawsey SM. High level of carcinogenic polycyclic aromatic hydrocarbons in Maté drinks. *Cancer epidemiology Biomarkers and Prevention* 2008, 17(5): 1262-8
91. Kawakami M, Kobayashi A. Volatile constituents of green mate and roasted mate. *J Agric food Chem* 1991, 39: 1275-9
92. Kiselova Y, Ivanova D, Chervenkov T, Gerova D, Galunska B, Yankova T. Correlation between the in vitro antioxidant activity and polyphenol content of aqueous extracts from Bulgarian herbs. *Phytother Res* 2006, 20(11): 961-5
93. Knöss W, Haaf M, Mate von der Tradition zur Gegenwart. *Ztsch für Phytotherapie*. 2005, 26: 94-8
94. Knöss W, Schlüter W, Stolte F, Brand K, Gheno LB. Mate (*Ilex paraguariensis*): Control of Natural Constituents during Processing, 46th Annual Congress of the Soc for Med Plant Res, Vienna 1998, E08
95. Knöss W. Matetee: Herkunft, Inhaltsstoffe und Wirkungen. *Topicos Heft Landeskunde* 1997, 2: 14-7
96. Konje JC, Cade JE. Maternal caffeine intake during pregnancy and risk of fetal growth restriction: a large prospective observational study. CARE study group. *BMJ* 2008, 337: 2332
97. Kraemer KH, Taketa AT, Schenkel EP, Gosmann G, Guillaume D. Mate saponin 5, a highly polar saponin from *Ilex paraguariensis*. *Phytochemistry* 1996, 42(4): 1119-22
98. Kubo I, Mupoi H, Himejima M. Antibacterial activity against *Streptococcus mutans* of Mate tea flavor components. *J Agric Food Chem* 1993, 41(1): 107-11
99. Lanzetti M, Siva-Bezerra F, Romana-Souza B, Brando-Lima A., Goncalves Koatz VL, Cristovao Porto L, Santos Valenzia S. Mate tea reduced acute lung inflammation in mice exposed to cigarette smoke. *Nutrition* 2008, 24(4): 375-81
100. Leitao AC, Braga RS. Mutagenic and genotoxic effects of Mate (*Ilex paraguariensis*) in prokaryotic organisms. *Brazilian J Med Bio Res* 1994, 27: 1517-25
101. Lelo A, Birkett DJ, Robson RA, Miners JO. Comparative pharmacokinetics of caffeine and its primary demethylated metabolites paraxanthine, theobromine and theophylline in man. *Br J Clin Pharmacol* 1986, 22(2): 177-82
102. Lewis CE, Caan B, Funkhouser E, Hilner JE, Bragg C, Dyer A, Raczyński JM, Savage PJ, Armstrong MA, Friedman GD. Inconsistent Associations caffeine-containing beverages with blood pressure and with Lipoproteine. *Am J Epidemiol* 1993, 138(7): 502-7
103. Lozano PR, Cadwallader KR, Gonzalez de Mejia E. Identification of characteristic aroma compounds of Maté (*Ilex paraguariensis*) tea. In Tunick MH, de Mejia EG. editors. Hispanic food: chemistry and flavour. Washington D.C., Am Chem Soc 2007, 143-50
104. Lunceford N, Gugliucci A. *Ilex paraguariensis* extracts inhibit AGE formation more efficiently than green tea. *Fitoterapia* 2005, 76(5): 419-27
105. Marchisio PF, Sales A, Cerutti S, Marchevski E, Martinez LD. On-line preconcentration/determination of lead in *Ilex paraguariensis* samples (mate tea) using polyurethane foam as filter and USN-ICP-OES. *J Hazard Mater* 2005, 124(1-3):113-8
106. Mateblätter, geröstete. In: Deutscher Arzneimittel Codex (DAC) 2008, Hrgs: Bundesverband Deutscher Apothekerverbände (ABDA); Govi-Verlag Pharmazeutischer Verlag GmbH; Eschborn; Deutscher Apothekerverlag, Stuttgart, M-065
107. Mateblätter, Grün. In: Deutscher Arzneimittel Codex (DAC) 2008, Hrgs: Bundesverband Deutscher Apothekerverbände (ABDA); Govi-Verlag Pharmazeutischer Verlag GmbH; Eschborn; Deutscher Apothekerverlag, Stuttgart, M-066
108. Maté Vert. In: Pharmacopée française 10'eme edition, Januvier 1994

109. Matijasevich A, Barros FC, Santos I, Yemini A. Maternal caffeine consumption and fetal death: a case-control study in Uruguay. *Paediatr Perinat Epidemiol* 2006, 20(2): 100-9
110. Martin I, Lopez-Vilchez MA, Mur A, Garcia-Algar O, Rossi S, Marchei E, Pichini S. Neonatal withdrawal syndrome after chronic maternal drinking of mate. *Ther Drug Monit* 2007, 29(1): 127-9
111. Martinet A, Hostettmann K, Schutz Y. Thermogenic effects of commercially available plant preparations aimed at treating human obesity. *Phytomedicine* 1999, 6(4): 231-8
112. Martinet A, Ndjoko K, Terreaux C, Marston A, Hostettmann K, Schutz Y. NMR and LC-MS characterisation of two minor saponins from *Ilex paraguariensis*. *Phytochem Anal* 2001, 12(1): 48-52
113. Matzkies F. Minimierung von Nebenwirkungen während der Gewichtsreduktion mit matehaltigem Tee. *Therapeutikon* 1989, 3(11): 624-31
114. McGee JOD, Patrick RS, Wood CB, Blumgart LH. A case of veno-occlusive disease of the liver in Britain associated with herbal tea consumption. *J Clin Path* 1976, 29: 788-94
115. Meggs WJ, Weisman R, Hoffman RS, Shih R, Weimer SM, Fill SM, Deannuntis GJ, Goldfrank LR, Hsu CK, Sabo S, Leo P, Shastry D, Rubin K, Constantine I, Somwaru S, Munshi A. Anticholinergic poisoning associated with an herbal tea-New York City 1994. *Morbidity and Mortality Weekly Report* 1995, 44(11): 193-5
116. Mendes FR, Carlini EA. Brazilian plants as possible adaptogens: an ethnopharmacological survey of books edited in Brazil. *J Ethnopharmacol* 2007, 109: 493-500
117. Menini T, Heck C, Schulze J, de Mejia E, Gugliucci A. Protective Action of *Ilex paraguariensis* Extract against Free Radical Inactivation of Paraoxonase-1 in High-Density Lipoprotein. *Planta Med* 2007, 73(11): 1141-7
118. Michl H, Haberler F. Über die Bestimmung von Purinen in coffeinhaltigen Drogen. *Monatshefte für Chemie / Chemical Monthly* 1954, 85: 779-795
119. Milioli EM, Cogni P, Santos CC, Marcos TD, Yunes VM, Fernandes MS, Schoenfelder T, Costa-Campos L. Effect of acute administration of hydroalcohol extract of *Ilex paraguariensis* St Hilaire (Aequifoliaceae) in animal models of Parkinson's disease. *Phytother Res* 2007, 21(8): 771-6
120. Miranda D C, Arcart DP, Pedrazzoli J, Carvalho P, Cerutti SM, Bastos HM, Ribeiro ML. Protective effects of mate tea (*Ilex paraguariensis*) on H₂O₂-induced DNA damage and DNA repair in mice. *Mutagenesis* 2008, 23(4): 261
121. Momoi N, Tinney JP, Liu LJ, Elshershari H, Hoffmann PJ, Ralphe JC, Keller B, Toita K. Modest maternal caffeine exposure affects developing embryonic cardiovascular function and growth. *Am J Physiol Heart Circ Physiol* 2008, 294: 2248-56
122. Mosimann ALP, Wilhelm-Filho D, da Silva EL. Aqueous extract of *Ilex paraguariensis* attenuates the progression of atherosclerosis in cholesterol-fed rabbits. *Biofactors* 2006, 26(1): 59-70
123. Mosimann ALP, Mantovani CL, Bordignon JC, Pedrosa RC, Silva EL. Reduction of atherosclerosis in cholesterol-fed rabbits by *Ilex paraguariensis* extract (mate). *Free Radic Biol Med* 2002, 33(1): 244
124. Muccillo Baisch AL, Johnston KB, Paganini Stein FL. Endothelium-dependent vasorelaxing activity of aqueous extracts of *Ilex paraguariensis* on mesenteric arterial bed of rats. *J Ethnopharmacol* 1998, 60(2): 133-9
125. Munoz SE, Navarro A, Lantieri MJ, Fabro ME, Peyrano MG, Ferraroni M, Decarli A, La Vecchia C, Eynard AR. Alcohol, methylxanthine-containing beverages, and colorectal cancer in Cordoba, Argentina. *Eur J Cancer Prev* 1998, 7(3): 207-13

126. Munoz N, Victora CG, Crespi M, Saul C, Braga NM, Correa P. Hot mate drinking and precancerous lesions of the oesophagus: an endoscopic survey in southern Brazil. *Int J Cancer* 1987, 39(6): 708-9
127. Nestle N, Pauls S, Wunderlich A. Oral magnetic resonance imaging contrast agent based on *Ilex paraguayensis* herbal extract. *Magn Reson Med* 2006, 55(4): 923-29
128. OECD (Organisation for Economic Co-operation and Development). Guideline for testing of chemicals 21 July 1997, Bacterial reverse mutation test, 471
129. Ohem N, Holzl J. Some New Investigations on *Ilex paraguariensis*: Flavonoids and Triterpenes. *Planta Med* 1988, 54(6): 576
130. Ohem N. Auf den Spuren des Mate. *Dtsch Apoth Ztg* 1990, 130(32): 1769- 73
131. Ohem N. Mate. *Naturw Rdsch* 1996, 49(7): 259-61
132. Ohem N, Hölzl J. Der Mate-eine Genuß- und Heilpflanze aus dem mittleren Südamerika. *Pharmazeutische Zeitung* 1990, 41(135): 2737- 46 (9-18)
133. Opala T, Rzymski P, Pischel I, Wilczak M, Wozniak J. Efficacy of 12 weeks supplementation of a botanical extract-based weight loss formula on body weight, body composition and blood chemistry in healthy, overweight subjects - a randomised double-blind placebo-controlled clinical trial. *Eur J Med Res* 2006, 11(8): 343-50
134. Paganini Stein FL, Schmidt B, Furlong EB, Souza-Soares LA, Soares MC, Vaz MR, Muccillo Baisch AL. Vascular responses to extractable fractions of *Ilex paraguariensis* in rats fed standard and high-cholesterol diets. *Biol Res Nurs* 2005, 7(2): 146-56
135. Paganini Stein F, Schmidt B, Furlong E, Cezar Vaz M, Souza Soares L, Muccillo Baisch AL. Acid butanolic (aBF) and aqueous (AqF) fraction from *Ilex paraguariensis* relaxes rat mesenteric arterial bed (MAB) of normal and cholesterol-fed rats. *Fundam Clin Pharmacol* 2002b, 16 (5): 419 (A-303), abstract
136. Paganini Stein F, Bourscheid A, Furlong E, Vaz MC, Soares LS, Muccillo Baisch AL. Endothelium-dependent vasorelaxing activity of flavonoid-rich extract from *Ilex paraguariensis* on mesenteric arterial bed of rats (MAB). *Fundam Clin Pharmacol* 2002a, 16(5): 419 (A-302), abstract
137. Pang J, Choi Y, Park T. *Ilex paraguariensis* extract ameliorates obesity induced by high-fat diet: Potential role of AMPK in the visceral adipose tissue. *Arch Biochem Biophys* 2008, 576(2): 178-85
138. Pasqualotto FF, Gupta S, Umezu FM, Pasqualotto EB, Salvador M, Agarwal A. Relationship between *Ilex paraguariensis* (Chimarrão) consumption and seminal antioxidants levels in infertile men. *Fertility and Sterility* 2006, 86: 448-9
139. Pereira Jotz G, Menzes HS, Zettler CG, Vargas Alves RJ, Chacur R, Buzzatti C, Dias de Olivera M, Maeso Montes TH, Hübner M, Zettler EW. Mate (*Ilex paraguariensis*) as an etiological agent of neoplasia in the aerodigestive tract. An experiment study. *Intl Ach Otorhinolaryngol Sao Paulo*, 10: 306-11
140. Peckolt T. Maté or Paraguay tea. *The Pharmaceutical Journal and Transaction* 1883, 14: 121-4
141. Piccinelli AL, De Simone F, Passi S, Rastrelli L. Phenolic constituents and antioxidant activity of *Wendita calysina* leaves (Burrito), a folk Paraguayan tea. *J Agric Food Chem* 2004, 52(19): 5863-8
142. Pintos J, Franco EL, Oliveira BV, Kowalski LP, Curado MP, Dewar R. Mate, coffee, and tea consumption and risk of cancers of the upper aerodigestive tract in southern Brazil. *Epidemiology* 1994, 5(6): 583-90
143. Pittler MH, Schmidt K, Ernst E. Adverse events of herbal food supplements for body weight reduction: systematic review. *Obes Rev* 2005, 6(2): 93-111
144. Pittler MH, Ernst E. Dietary supplements for body-weight reduction: A systematic review. *Am J Clin Nutr* 2004, 79(4): 529-36

145. Pomilio AB, Trajtemberg S, Vitale AA. High-performance capillary electrophoresis analysis of mate infusions prepared from stems and leaves of *Ilex paraguariensis* using automated micellar electrokinetic capillary chromatography. *Phytochem Anal* 2002, 13(4): 235-41
146. Ramirez-Mares MV, Chandra S, de Mejia EG. In vitro chemopreventive activity of *Camellia sinensis*, *Ilex paraguariensis* and *Ardisia compressa* tea extracts and selected polyphenols. *Mutat Res* 2004, 554(1-2): 53-65
147. Reginatto FH, Athayde ML, Gosmann G, Schenkel EP. Methylxanthines Accumulation in *Ilex* Species- Caffeine and Theobromine in Erva Mate (*Ilex paraguariensis*) and other *Ilex* Species. *J Braz Chem Soc* 1999, 10(6): 443-6
148. Rivelli DP, da Silva VV, Ropke CD, Miranda DV, Almeida RL, Sawada TCH, de Moraes Barros SB. Simultaneous determination of chlorogenic acid, caffeic acid and caffeine in hydroalcoholic and aqueous extracts of *Ilex paraguariensis* by HPLC and correlation with antioxidant capacity of the extracts by DPPH[•] reduction. *Rev Bras Cienc Farm* 2007, 43(2): 215-22
149. Rojo de camargo M, Toledo MC. Chá Maté e Café como fontes de hidrocarbonetos policíclicos aromáticos (HPAS) na dieta da população de campinas 1. *Food Sci Tech (Cienc tecnol. Aliment, campinas)* 2002, 22: 49-53
150. Rolon PA, Castellsague X, Benz M, Munoz N. Hot and Cold Mate Drinking and Esophageal Cancer in Paraguay. *Cancer Epidemiol Biomarkers Prev* 1995, 4(6): 595-605
151. Ruxton CHS. Efficacy of Zotrim: a herbal weight loss preparation. *Nutr & Food Sci* 2004, 34(1): 25-8
152. Ruxton CHS, Kirkwood L, McMillan B, St John D, Evans CEL. Effectiveness of a herbal supplement (ZotrimTM) for weight management. *British Food Journal* 2007, 109(6): 416-28
153. Saldana MD, Zetzl C, Mohamed RS, Brunner G. Extraction of methylxanthines from guarana seeds, mate leaves, and cocoa beans using supercritical carbon dioxide and ethanol. *J Agric Food Chem* 2002, 50(17): 4820-6
154. Saldana MD, Mohamed RS, Baer MG, Mazzafera P. Extraction of purine alkaloids from mate (*Ilex paraguariensis*) using supercritical CO₂. *J Agric Food Chem* 1999, 47(9): 3804-8
155. Santos IS, Matijasevich A, Valle NC. Mate drinking during pregnancy and risk of preterm and small for gestational age birth. *J Nutr* 2005, 135(5): 1120-3
156. Santos IS, Victora CG, Huttly S, Carvalhal JB. Caffeine intake and low birth weight: a population-based case-control study. *Am J Epidemiol* 1998, 147(7): 620-7
157. Sansberro P, Rey H, Bernardis A, Luna C, Collavino M, Mroginski L. Plant regeneration of *Ilex paraguariensis* (Aquifoliaceae) by in vitro culture of nodal segments. *Biocell* 2000, 24(1): 53-63
158. Sari F, Turkmen N, Polat G, Veloglu YS. Total polyphenol, antioxidant and antibacterial activities of black mate tea. *Food Science and Technology Research* 2007, 13(3): 265-9
159. Scherer R, Urfer P, Mayol MR, Belingheri LD, Marx F, Janssens MJJ. Inheritance studies of caffeine and theobromine content of Mate (*ilex paraguariensis*) in Misiones Argentina. *Euphytica* 2002, 126(2): 203-10
160. Schenkel EP, Montanha JA, Gosmann G. Triterpene saponins from mate, *Ilex paraguariensis*. *Adv Exp Med Biol* 1996, 405: 47-56
161. Schinella G, Fantinelli JC, Mosca SM. Cardioprotective effects of *Ilex paraguariensis* extract: evidence for a nitric oxide-dependent mechanism. *Clin Nutr* 2005, 24(3): 360-6
162. Schinella GR, Troiani G, Davila V, de Buschiazza PM, Tournier HA. Antioxidant effects of an aqueous extract of *Ilex paraguariensis*. *Biochem Biophys Res Commun* 2000, 269(2): 357-60
163. Schubert A, Pereira DF, Zanin FF, Alves SH, Beck RCR, Athayde ML. Comparison of antioxidant activities and total polyphenolic and methylxanthine contents between the unripe fruit and leaves of *Ilex paraguariensis*. *A. St. Hil. Pharmazie* 2007, 62 (11): 876-80

164. Seeger H. Starker Coffeinkonsum kann zu Fehlgeburten führen. *Dtsch Apoth Ztg* 1994, 134(25): 59-60
165. Sewram V, De Stefani E, Brennan P, Boffetta P. Mate consumption and the risk of squamous cell esophageal cancer in Uruguay. *Cancer Epidemiol Biomarkers Prev* 2003, 12(6): 508-13
166. Shimada A, Kamiyama S, Caminha JA, Moriguchi Y. Regional differences of death from chronic disease in Rio Grande Do Sul, Brazil from 1970 to 1976. *Soc Sci Med* 1981, 15: 187-98
167. Sichieri R, Everhart JE, Mendonca GA. Diet and mortality from common cancers in Brazil: an ecological study. *Cad Saude Publica* 1996, 12(1): 53-9
168. Spinella M. Herbal Medicines and Epilepsy: The Potential for Benefit and Adverse Effects. *Epilepsy Behav* 2001, 2(6): 524-32
169. Stein FLP, Schmidt B, Furlong EB, Soares LAS, Soares MCF, Vaz MRC, Baisch ALM. Vascular responses to extractable fractions of *Ilex paraguariensis* in rats fed standard and high-cholesterol diets. *Biosaldanalogical Res for Nurs* 2005, 7 (2): 146-56
170. Taketa AT, Gnoatto SC, Gosmann G, Pires VS, Schenkel EP, Guillaume D. Triterpenoids from Brazilian *Ilex* species and their in vitro antitrypanosomal activity. *J Nat Prod* 2004, 67(10): 1697-1700
171. Thomson Micomedex. Haelthcare series. Caffeine. In Drug interaction for the health care professional. Vol. 1. USP DI 27th ed. 2007, 665
172. Tisanes. In: *Pharmacopée Francaise* 10 éme edition, Janvier 1989
173. Turkmen N, Sari F, Velioglu YS. Effects of extraction solvents on concentration and antioxidant activity of black and black mate tea polyphenols determined by ferrous tartrate and Folin-Ciocalteu methods. *Food Chemistry* 2006, 99(4): 835-41
174. Turner M, McCrory P, Johnston A. Time for tea, anyone? *Br J Sports Med* 2005, 39(10): 37
175. Vargas-Alves R J, Jotz GP, Amaral V, Montes TMH, Menezes HS, de Andarde HHR. The evaluation of Mate (*Ilex paraguariensis*) genetetic toxicity in human lymphocytes by the cytokinesis-block in the micronucleus assay. *Toxicology in vitro* 2008a, 22(3): 695-8
176. Vargas-Alves RJ, Montes TMH, Chacur R, Oliveira MD, Hübner MD, Buzzatti C, Jotz GP, Menezes HS, Zettler C. Yerba/Erva mate (*Ilex paraguariensis*) etiological agent of lingual neoplasia. *Rev Amrigs, Porto Alegre*, 2008b, 51(1): 7-11
177. Vassallo A, Correa P, De Stefani E, Cendan M, Zavala D, Chen V, Carzoglio J, Deneo-Pellegrini H. Esophageal cancer in Uruguay: a case-control study. *J Natl Cancer Inst* 1985, 75(6): 1005-9
178. Vazquez A, Moyna P. Studies on Mate drinking. *J of Ethnopharm* 1986, 18: 267-72
179. Victoria CG, Muñoz N, Day NE, Barcelos LB, Peccin DA and Braga NM. Hot beverages and oesophageal cancer in Southern Brazil: a case-control study. *Int J Cancer* 1987, 39: 710-16
180. Wada M, Takita T, Innami S. Some kinds of teas suppress a sideration of diabetes in streptozotocin-administered rats. *J Clin Biochem Nutr* 1996, 20(1): 61-9
181. Zielinsky P, Manica JL, Piccoli A Jr, Areias JC, Nicoloso LH, Menezes HS, Frajndlich R, Busato AK, Petracco R, Hagemann L, Moraes MR, Silva J, Alievi M, Centeno P, Barra M. Experimental study of the role of maternal consumption of green tea, mate tea and grape juice on fetal ductal constriction. *Ultrasound Obstet Gynecol* 2007, 30(4): 515
182. Zuin VG, Montero L, Bauer C, Popp P. Stir bar sorptive extraction and high-performance liquid chromatography-fluorescence detection for the determination of polycyclic aromatic hydrocarbons in Mate teas. *J Chromatogr A* 2005, 1091(1-2): 2-10