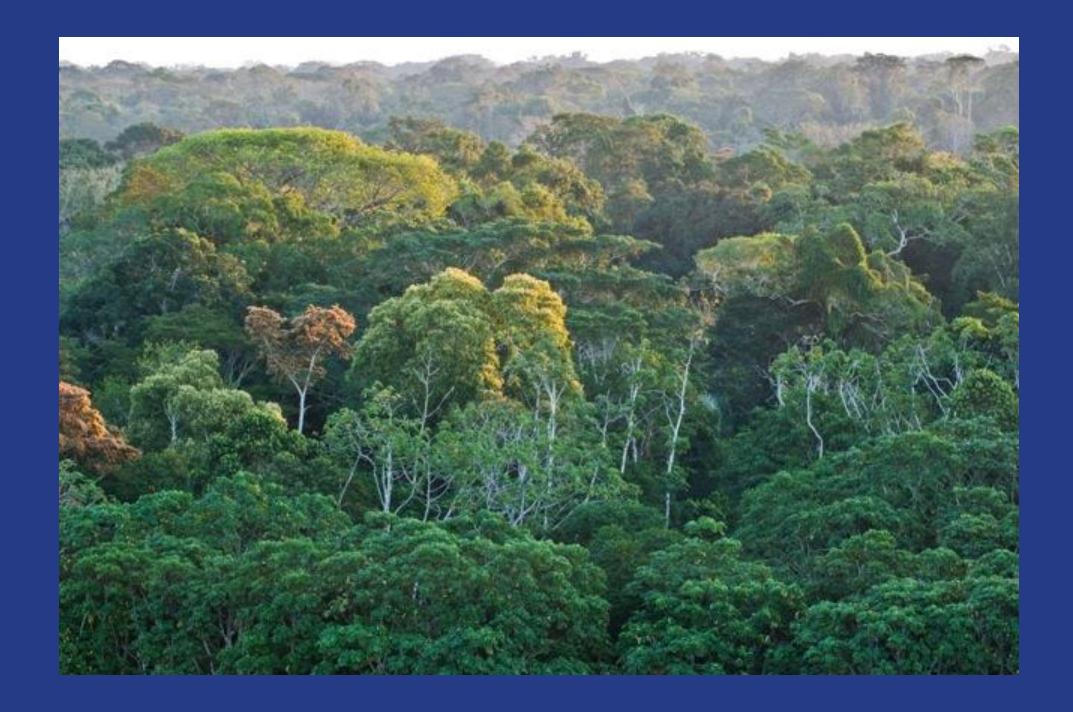


Systematic Reviews
& Meta-Analyses
of Controlled Clinical Trials
that Show Positive
Trends & Results
for Herbs & Phytomedicines

Mark Blumenthal

Founder & Executive Director American Botanical Council Editor, *HerbalGram* & *HerbClip*

Bara Herbs Conference, Tel Aviv November 8, 2016









Total Herbal Dietary Supplement
Sales Up 7.5% in 2015
In All Channels of Trade
in the U.S.
Total Est. = \$6.92 Bn



Sales of Herbal Dietary Supplements in US Increased 7.5% in 2015

Consumers spent \$6.92 billion on herbal supplements in 2015, marking the 12th consecutive year of growth

By Tyler Smitha, Kimberly Kawab, Veronica Ecklb, and James Johnson^c

Introduction

Consumer spending on herbal dietary supplements in the United States reached an all-time high in 2015. Retail sales of herbal supplements totaled an estimated \$6.92 billion in 2015 (Table 1), a 7.5% increase in sales from the previous year. Consumers spent approximately \$480 million more on herbal products in 2015 than in the previous year — an increase that marks the 12th consecutive year of growth for these products.

These figures, and the rest of the data* presented in *HerbalGram*'s 2015 Herb Market Report, were generously provided by the following organizations: SPINS LLC, a

market research firm based in Chicago, which collaborated with IRI (Information Resources Inc.), also a Chicago-based market research company, to determine mainstream multi-outlet retail sales of herbal dietary supplements, and the *Nutrition Business Journal* (NBJ), a publication of New Hope Natural Media, a specialty media company with headquarters in Colorado.

For the seventh year in a row, sales of herbal supplements increased in each

Horehound, for the third year in a row, was the top-selling herbal supplement in the US mainstream multi-outlet channel. Sales of horehound supplements in 2015 reached almost

Table 1. Total Estimated Retail Sales of Herbal Supplements*	
2000	\$4.225 billion
2001	\$4.361 billion
2002	\$4.275 billion
2003	\$4.146 billion
2004	\$4.288 billion
2005	\$4.378 billion

\$115 million (see Table 4), an 8.5% increase from the previous year. Since 2013, horehound supplement sales, which include lozenges with horehound as the primary ingredient, have increased by a total of almost \$8 million in mainstream outlets, indicating strong, continued growth for this member of the mint (Lamiaceae) family.¹

The first documented medicinal use of horehound was in the 1st

a HerbalGram, American Botanical Council; Austin, Texas

b SPINS; Chicago, Illinois

c Nutrition Business Journal, New Hope Natural Media; Boulder, Colorado

Media Reporting
on Safety & Efficacy
of Herbs
&
Dietary Supplements



; author of Tyler's Honest Herbal, and Mark American Botanical Council, look at six popu esearch says about the health pros anical products. There's no se of many herbs, and scientists

ng the immune ty and duration of

atitis in sensitive s not advised in es such as lupus. the studies have rst sign of a cold, it essens the symptoms.

eduction in cholesterol: p in arteries.

irin or other anticoagulant rge amounts of the herb. it of Berlin suggests that deposits on arteries, thus s. Some studies show mild els, possibly 4% to 6%.



How effective are herbs?

New studies seek to remedy gap

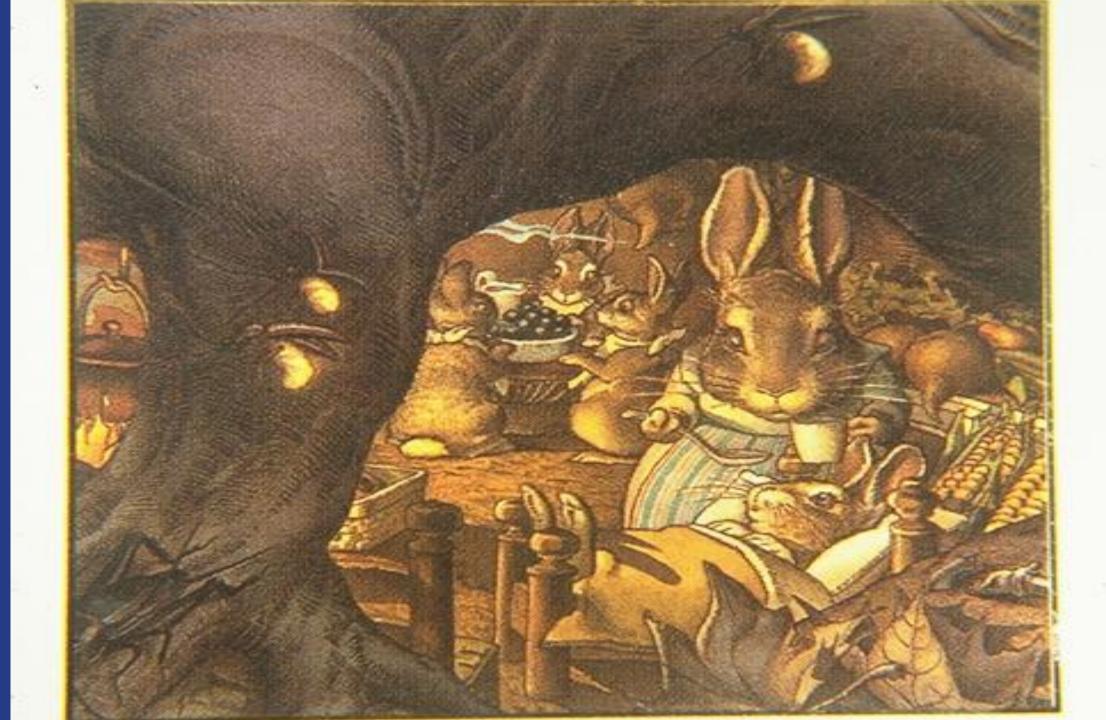
By Nanci Hellmich **USA TODAY**

Herbal remedies have been widely used in other countries for centuries, and Europeans have been conducting studies on them for decades. Now mainstream medicine in the USA is taking a harder look.

Researchers at major medical centers are doing controlled clinical studies on several herbs, including ginkgo biloba for the treatmiliar with herbs. They assume they are like standardized drugs, and they have the same potent effects as synthetic chemicals have And that's just wrong," says Tyler, now retired. He was dean of pharmacy at Purdue University in West Lafayette, Ind., for 20 vears.

Tyler looks on herbal supplements as "diluted drugs. They have mild effects and mild side effects. That's why people use them And that's why they're not used for acute infections."

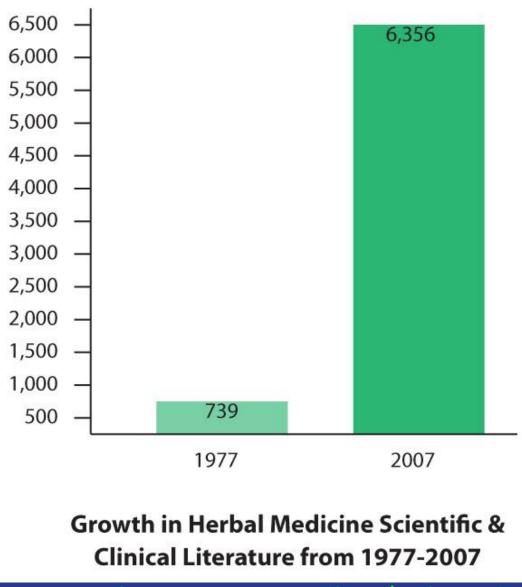
Michael Murray, co-author of The Encyclopedia of Natural Medicine (Prima Publishing \$24.95), says most studies of herbs should evaluate products for their efficacy as treatments for mild to moderate conditions "in-



Growth in Herbal Medicine Scientific & Clinical Literature from 1977 - 2007

- Review of all published articles on herbal medicine appearing between 1977 - 2007 in any language in Medline/PubMed.
- Over 30-yr study period, amount of HM articles published rose from 739 in 1977 to 6,364 in 2007.
- The largest numbers were reviews & RCTs.
 - Hung S-K, Ernst E. Herbal medicine: an overview of the literature from three decades. *J Diet Suppl.* 2010;7(3):217-226.





In any language in Medline/PubMed

Hung S-K, Ernst E. Herbal medicine: an overview of the literature from three decades. *J Diet Suppl.* 2010;7(3):217-226.



Survey:

Newspapers Under-report Herbal Clinical Trials & Tend to Show Negative Bias

- The content of articles as analyzed w/ a scoring frame.
- Internet search for UK, US, Australia/New Zealand, & Canada
- 1995 2005.
- Researchers identified 57 herbal remedy CTs referenced in 352 newspaper articles.
- Despite a vast increase in the number of HCTs in recent years, there has *not* been a corresponding increase in newspaper articles about them.

Bubela T, Boon H, Caulfield T. Herbal remedy clinical trials in the media: a comparison with the coverage of conventional pharmaceuticals. BMC Complement Altern Med. 2008;6:35.



Pharma Ads in Medical Journals: Correlation w/ DS articles?

- 11 medical journals reviewed for pharma ads:
 - general medicine, internal medicine, or pediatrics; June 06 June 07.
- Js w/ fewest pharmaceutical ads published the most major DS articles.
- Js w/ most pharma advertising were also significantly more likely to publish major articles concluding that DS were unsafe than journals with medium or low level of pharma advertising.
 - Kemper KJ, Hood KL. Does pharmaceutical advertising affect journal publication about dietary supplements? BMC Complementary and Alternative Medicine. April 9, 2008. DOI: 10.1186/1472-6882-8-11.



High Quality of Herb Clinical Trials

- Swiss university researchers' review concludes that design quality of herb/phytomedicine clinical trials vs. conventional drug trials are comparatively higher.
- 86 phyto RCTs vs. 277 for conventional
 - Nartey L, Huwiler-Müntener K, Shang A, Liewald K, Jüni P, Egger M. Matched-pair study showed higher quality of placebo-controlled trials in Western phytotherapy than conventional medicine. *J Clin Epidemiol* 2007;60:787-94.



Research on Herbs & Phytomedicines





"The active ingredient is marketing."



Levels of Evidence Evidence-based Herbal Medicine

- Experimental Science
 - Chemical data
 - Pharmacological data in vitro
 - Pharmacological & Toxicological data in vivo
 - Laboratory Animals (mice, rats, guinea pigs, lawyers, et al.)

Human Data

- Ethnobotanical record
- Folklore
- Systems of Traditional Medicine Ayurveda & TCM
- Empirical/observational data
- Case Reports
- Human Clinical Trials
 - Uncontrolled/Observational Trials
 - Randomized Controlled Trials (the "Gold Standard")
 - Systematic Reviews





SYSTEMATIC REVIEWS AND META-ANALYSES SUPPORT THE EFFICACY OF NUMEROUS POPULAR HERBS AND PHYTOMEDICINES

Mark Blumenthal

Mark Blumenthal is founder and executive director of the nonprofit American Botanical Council (www.herbalgram.org), editor of its journal, Herbal Gram, and senior editor of The Complete German Commission E Monographs—Therapeutic Guide to Herbal Medicines and The ABC Clinical Guide to Herbs. (Altern Ther Health Med. 2009;15(2):14-15.)

here has been controversy in the past decade about the pros and cons of evidence-based medicine (EBM). Proponents argue that EBM is the best way to assess the safety and efficacy of various therapeutic interventions, whether they be conventional pharmaceutical drugs or phytomedicines derived from herbs. Many in the complementary and alternative medicine (CAM) scientific community believe that EBM methods of assessment, primarily the randomized controlled clinical trial (RCT), are often too simplistic and reductionistic to appropriately and successfully measure the effectiveness of herbal and other CAM interventions.

tions met the inclusion criteria (covering a total of 5489 patients); 18 RCTs compared SJW with placebo, and 17 RCTs compared SJW with conventional pharmaceutical antidepressants. The authors conclude, "The available evidence suggests that the hypericum extracts tested in the included trials a) are superior to placebo in patients with major depression; b) are similarly effective as standard antidepressants; c) and have fewer side effects than standard antidepressants." Why was this information not communicated in the media? First, Cochrane does not publish press releases on its reviews. Second, as many observers are aware, the media tends to prefer to run stories about negative findings.

The perennial favorite, garlic, has been used in recent folklore for various cardiovascular conditions and has been promoted for both blood lipid reduction and as a mild hypotensive, in addition to its empirically documented antivampiral effects. Although recent RCTs have shown negative results on the lipidlowering activity of garlic preparations, a recent review supports confirmed mild blood pressure (BP)-lowering effects.2 Of 25 con-































Distorted View of Herbs

 Despite suggestive, promising, even compellingly positive conclusions re the safety & efficacy of various popular herbs & phytomedicines from EBM reviews, the media & health professionals generally ignore this information.





"Of course you feel great. These things are loaded with antidepressants."



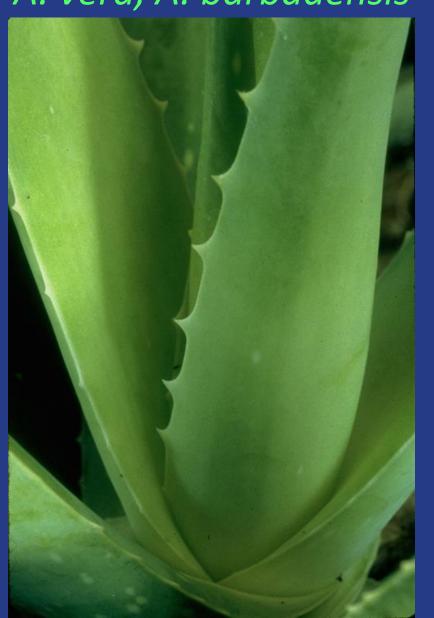
St. John's Wort

Hypericum perforatum

Treats Mild – Moderate Depression

- 29 RCTs on various SJW preparations in M-A
 - N = total of 5489 patients
 - 18 RCTs compared SJW w/ placebo
 - 17 RCTs compared SJW w/ conventional Rx drugs
- Conclusion: "The available evidence suggests that the hypericum extracts tested in the included trials
 - a) are superior to placebo in patients with major depression;
 - b) are similarly effective as standard antidepressants;
 - c) and have fewer side effects than standard antidepressants."
 - Linde K, BernerMM, Kriston L. St John's wort for major
 depression. Cochrane Database Syst Rev. 2008; (4):CD000448.

Aloe Vera
A. vera, A. barbadensis





Aloe Vera Speeds Up Healing of Burn Wounds

- Total studies =1069; studies included in SR = 4; N = 371
- SR of fresh aloe mucilage, 85% aloe gel, aloe cream, and 1% aloe pwdr.
- To determine efficacy of topical aloe vera for tmt of burn wounds
- M-A of 2 trials showed that healing time of aloe group was 8.79 d shorter than control group.
- Conclusions: Aloe used in various dosage forms might help accelerate wound-healing process & increase success rate of healing & rate of epithelialization, in 1st- & 2d-degree burns compared w/ conventional treatments.
- However, differences in products used & in outcome measures make it difficult to draw a specific conclusion on effect of aloe on burn wound healing.



• Maenthaisong R, Chaiyakunapruk N, Niruntraporn S, Kongkaew C. The efficacy of aloe vera used for burn wound healing: a systematic review. *Burns*. 2007; epub ahead of print. doi:10.1016/j.burns.2006.10.384.

Aloe Vera Products Reduce Fasting Blood Glucose in Prediabetes & HbA1c in Type 2 Diabetes -- M-A

- 8 RCTs (out of 610 articles); n = 470 pts(235 each for prediabetes and type 2 diabetes)
- Conclusions:
 - (1) some potential benefit of Aloe vera in improving glycemic control in prediabetes & type 2 diabetes.
 - (2) However, given the limitations of available evidence and high heterogeneity in study results, high-quality, well-powered randomized controlled trials using standardized preparations are needed to quantify any beneficial effects of *Aloe vera* on glycemic control.



 Suksomboon N, Poolsup N, Punthanitisarn S. Effect of Aloe vera on glycaemic control in prediabetes and type 2 diabetes: a systematic review and meta-analysis. J Clin Pharm Ther. April 2016;41(2):180-

Andrographis paniculata + Eleutherococcus senticosus









Andrographis + Eleuthero Kang Jang® (SHA-10) for Upper Respiratory Tract Infection

- 7 DP, PC trials in SR; N = 896
- 48-60 mg/day



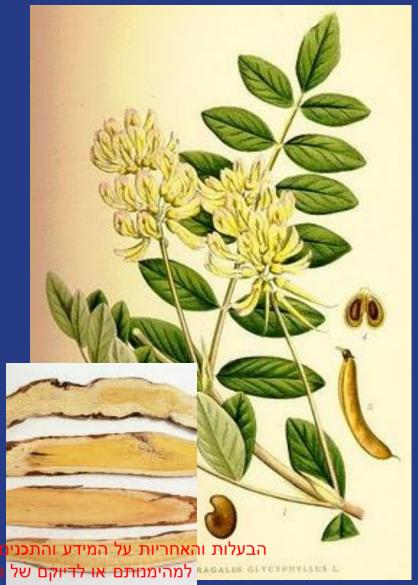
- Superior to placebo in alleviating subjective symptoms of uncomplicated URTI.
- Preliminary evidence of a preventive effect.
- AEs generally mild & infrequent.
 - Coon JT, Ernst E. Andrographis paniculata in the Treatment of Upper Respiratory Tract Infections: A Systematic Review of Safety and Efficacy. *Planta Med*. 2004;70:293-8.

Astragalus & Diabetic Nephropathy

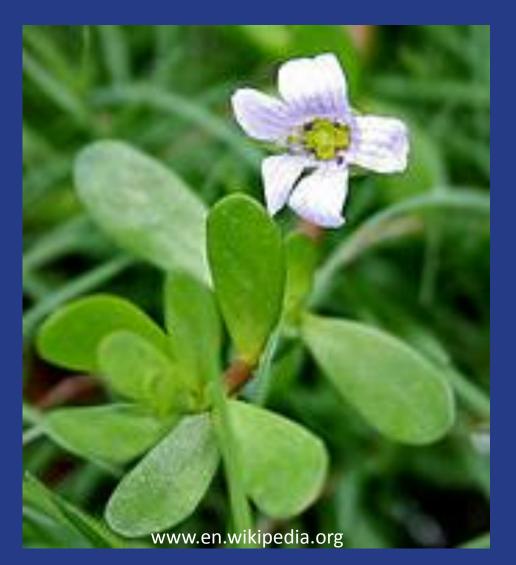
Astragalus membranaceus

- 25 studies comprising 21 RCTs & 4 CCTs (n= 1804 pts)
- M-A demonstrates that astragalus <u>injections</u> improve kidney function in people w/ diabetic nephropathy.
- Improvement is greater in people receiving astragalus injections than in people receiving standard medical care for their diabetic nephropathy.
- Authors acknowledge that most of the trials were of poor quality.
 - 121258: Li M, Wang W, Xue J, Gu Y, Lin S. Meta-analysis of the clinical value of *Astragalus membranaceus* in diabetic nephropathy. *J Ethnopharmacol*. January 27, 2011;133(2):412-419.

אראית 1419. הבעלות והאחריות על המידע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין חברת ברא צמווים אחראית אחראית על המימנותם או לדיוקם של תכנים אילו, והם אינם מהווים ייעוץ מקצועי או התוויה רפואית.



Brahmi Bacopa monnieri





Systematic Review Suggests Bacopa Extracts Improve Free Recall Memory

- Total 64 studies located; 6 met all inclusion criteria; all were R, DB, PC, parallel-group studies, 12-wks
 - 3 RCTs = KeenMind® (Flordis/SFI; Australia),
 - 2 trials = BacoMind® (Natural Remedies,India),
 - 1 trial = Mediherb[®] Bacopa (Mediherb, Australia).
- Bacopa extract is efficacious in improving free recall of information in subjects w/out significant memory impairment.



Pase MP, Kean J, Sarris J, Neale C, Scholey AB, Stough C. The cognitive-enhancing effects of *Bacopa monnieri*: a systematic review of randomized, controlled human clinical trials. *J Altern Complement Med*. 2012;18(7):647-652.





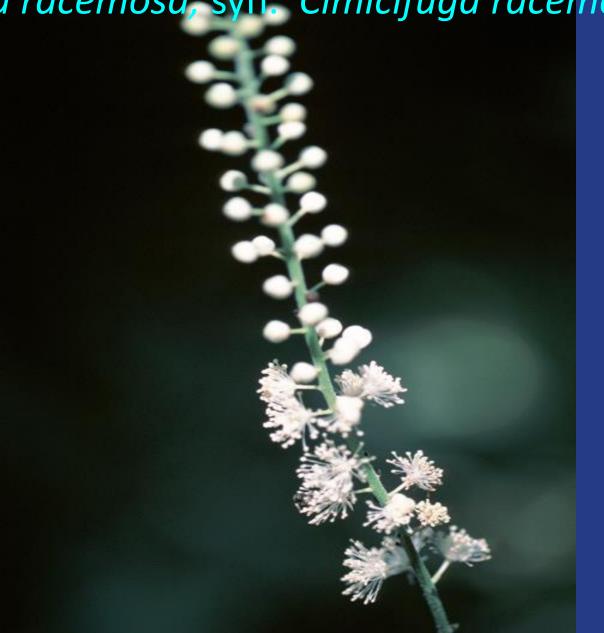
- # studies available: 289
- # studies included: 9[7 = healthy; 2 = impaired memory]
- N = 437

Bacopa M-A

- Conclusion: Bacopa extract has potential to improve cognitive performance, particularly speed of attention by reducing choice reaction time. The effect on memory remains inconclusive but dosage of 300 mg daily could be considered as a reference point for effective dosage of bacopa extract for future studies on trtmt of cognitive impairment in clinical settings.
- Kongkeaw C, Dilokthornsakul P, Thanarangsarit P, et al. Meta-analysis of randomized controlled trials on cognitive effects of *Bacopa monnieri*. *J Ethnopharmacol*. 2013;151(1):528-535.
- Duration: אין 24 wks בעלות והאחריות על המידע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין מערכנים במדע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין מערכנים אילו, והם אינם מהווים ייעוץ מעצועי או התוויה רפואית.

Black Cohosh

Actaea racemosa; syn. Cimicifuga racemosa







Black Cohosh

Actaea racemosa

Reduces Menopause Symptoms

- Total studies = 31; studies included in M-A = 9
- BC alone improved vasomotor symptoms by 26%
- However, trials were significantly heterogeneous.
- Further analysis revealed that BC in combination w/ other botanicals (e.g., SJW) showed a 41% improvement.
- Results are consistent with those of earlier reviews suggesting a benefit of BC in reducing vasomotor symptoms.
- This M-A "advances the literature on the efficacy of black cohosh in reducing the vasomotor symptoms in menopause because we have included more RCTs and performed a quantitative meta-analysis of these trials,"
 - Shams T, Setia MS, Hemmings R, McCusker J, Sewitch M, Ciampi A. Efficacy of black cohosh-containing preparations on menopausal symptoms: a meta-analysis. *Altern Ther Health Med*. January/February 2010;16(1):36-44.



New Black Cohosh S-R



- 888 articles located
- 16 RCTs, n= total of 2027 perimenopausal & postmenopausal women met SR criteria.
- Conclusion: This review is unable to draw any conclusions about the effect of orally administered monopreps of BC (doses ranging from 8 to 160 mg daily, (ranging 4-52 wks) on frequency & intensity of vasomotor symptoms, or global changes in menopausal symptom

 Large range of doses, treatment durations, and methodologies for measuring outcomes make comparisons among studies difficult.

Leach MJ, Moore V. Black cohosh (*Cimicifuga* spp.) for menopausal symptoms.
 Cochrane Database of Systematic Reviews 2012, Issue 9. Art. No.: CD007244. DOI: 10.1002/14651858.CD007244.p ub2.

הבעלות והאחריות על המידע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין חברת ברא צמחים אחראית. scores.
למהימנותם או לדיוקם של תכנים אילו, והם אינם מהווים ייעוץ מקצועי או התוויה רפואית.



Anti-Migraine Butterbur Root Petasites hybridus





Butterbur Root Extract

Petasites hybridus

Reduces Migraines

- Total studies available= 4; studies included = 2
- Product: Petadolex® (Weber & Weber, Germany)
- 2 trials judged of high quality; consumption of 150 mg/d of Petadolex taken for 3-4 months decreased frequency of migraines by ca 15% compared to placebo
- Conclusion: There is moderate evidence for effectiveness of butterbur rt extr in preventing migraines.
- Recommendation: Further rigorous studies be conducted to strengthen the evidence and that future trials evaluate a higher dose of 300 mg per day.
- [2012 Report: Amer Academy of Neurology & American Headache Society researchers concluded that Petadolex is effective in reducing the frequency of episodic migraines.]
 - Agosti R, Duke RK, Chrubasik JE, Chrubasik S. Effectiveness of *Petasites hybridus* preparations in the prophylaxis of migraine: a systematic review. *Phytomed.* September 2006;13(9-10):743-746.







Chaste Berry

Vitex agnus-castus

Reduces PMS Symptoms

- No. studies included in SR = 4; N = 500
- Timeline = 8 wks, 3 cycles
- 4 trials were of different designs, 1 of which compared vitex directly w/ fluoxetine (Prozac®).
- Conclusion: Vitex was reported to consistently ameliorate PMS better than placebo.
 - Dante G, Facchinietti F. Herbal treatments for alleviating premenstrual symptoms: a systematic review. *J Psychosom Obstet Gynaecol*. 2011;32(1):42-51.

הבעלות והאחריות על המידע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין חברת ברא צמחים אחראית למהימנותם או לדיוקם של תכנים אילו, והם אינם מהווים ייעוץ מקצועי או התוויה רפואית.

CinnamonCinnamomum zeylanicum; C. cassia



Cinnamon

Cinnamomum zeylanicum; C. cassia

Glycemic Control / Fasting Blood Glucose

- 8 trials included in M-A
- 5.5 -16 wks
- Results show cinnamon & cinnamon extr supplementation significantly lowered FBG.
- Conclusion: M-A shows that intake of cinnamon/cinnamon extract by type 2 diabetics or prediabetics lowers blood glucose significantly, although modestly.
- Although the hypoglycemic activity of cinnamon is <u>comparable w/ metformin</u>, more mechanistic work is needed to definitively use cinnamon w/ this drug for diabetes therapy.
 - Davis PA, Yokoyama W. Cinnamon intake lowers fasting blood glucose: meta-analysis. J Med Food. April 2011; [epub ahead of print]. doi:10.1089/jmf.2010.0180.



Cacao / Cocoa / Chocolate

Theobroma cacao, Sterculiaceae





http://library.thinkquest.org/08aug/01181/cacao.html

AMERICAN BOTÁNICAL COUNCIL

Cocoa

Theobroma cacao Reduces BP

- No. studies in M-A = 10; N = 297 pts
- M-A of RCTs assessing antihypertensive fx of flavanol-rich cocoa products.
- Primary outcome measure was the change in systolic & diastolic BP between intervention & control groups.
- **RESULTS:** The populations studied were either healthy normotensive adults or pts w/ prehypertension/stage 1 hypertension.
- Treatment duration ranged from 2 18 wks. Mean BP change in active treatment arms across all trials was -4.5 mm Hg, for systolic BP and -2.5 mm Hg for diastolic BP.
- CONCLUSIONS: The M-A confirms the BP-lowering capacity of flavanol-rich cocoa products in a larger set of trials than previously reported.
 - However, significant statistical heterogeneity across studies could be found, and questions such as the most appropriate dose and the long-term side effect profile warrant further investigation before cocoa products can be recommended as a treatment option in hypertension.
 - <u>Desch S, Schmidt J, Kobler D, Sonnabend M, Eitel I, Sareban M, Rahimi K, Schuler G, Thiele H.</u> Effect of cocoa products on blood pressure: systematic review and meta-analysis. *Am J Hypertens*. 2010 Jan;23(1):97-103. Epub 2009 Nov 12.

הבעלות והאחריות על המידע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין חברת ברא צמחים אחראית למהימנותם או לדיוקם של תכנים אילו, והם אינם מהווים ייעוץ מקצועי או התוויה רפואית.



SR & M-A of Cocoa & Chocolate on Important CV Risk Factors Finds Multiple Benefits

- 1637 potential studies initially identified;
- 42 trials (total n=1297 subjects) examined cocoa, chocolate, or flavan-3-ols & had outcomes relating to the study.
- 1st SR & M-A to assess fx & validity of all RCTs on cocoa & choco related to many important CVD risk factors.
- It shows (1st time) that cocoa & choco reduce insulin resistance as a result of reduced insulin secretion.
- Also shows strong effect on FMD of real clinical significance.
 - Hooper L, Kay C, Abdelhamid A, et al. Effects of chocolate, cocoa, and flavan-3-ols on cardiovascular health: a systematic review and meta-analysis of randomized trials. *Am J Clin Nutr.* 2012 Mar;95(3):740-751.

הבעלות והאחריות על המידע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין חברת ברא צמחים אחראיר למהימנותם או לדיוקם של תכנים אילו, והם אינם מהווים ייעוץ מקצועי או התוויה רפואית.

Comfrey Symphytum officinale, S. spp.





SR Shows Benefits of Comfrey's External Use

- 26 papers: 13 RCTs, 5 non-randomized CTs, & 8 observational studies
- CONCLUSIONS: Individual clinical trials showed evidence of benefit for ankle distortion, back pain, abrasion wounds, & OA.
- Topical application appears to be safe but further rigorous assessment is needed. SRs focusing on particular indications may clarify the treatment effect & safety of external C preparations.

• Frost R, MacPherson H, O'Meara S. A critical scoping review of external uses of comfrey (*Symphytum* spp.). *Complement Ther Med*. December 2013;21(6):724-745.



Cranberry

Vaccinium macrocarpon, Ericaceae





Cranberry Prevents Urinary Tract Infections

- 10 studies [7 trials on C juice; 3 on C tablets] in M-A
- n = 1049 subjects
- "...evidence from 4 RCTs indicates that cranberry products can be effective in reducing UTIs. However, it may only be effective in certain sub-populations."
- Some evidence indicates that C juice may be effective in women w/ symptomatic UTIs, but evidence is inconclusive for elderly.
 - Jepson RG, Craig JC. Cranberries for preventing urinary tract infections (Review).
 Cochrane Database Syst Rev. 2008;
 DOI: 10.1002/14651858.CD001321.pub.4.

ת והאחריות על המידע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין חברת ברא צמחים אחראית. למהימותם או לדיוקם של תכנים אילו, והם אינם מהווים ייעוץ מקצועי או התוויה רפואית.



Cranberry Prevention M-A

- 24 trials (n =4473)
- Conclusion: The addition of 14 further studies suggests that cranberry juice is less effective than previously indicated.
- Cranberry juice cannot currently be recommended for prevention of UTIs.

- Other preparations (e,g., powders) need to be quantified using standardised methods to ensure the potency, & contain enough of the 'active' ingredient, before being evaluated in clinical studies or recommended for use. [ca 36 mg PACs/d]
 - Jepson RG, Williams G, Craig JC.
 Cranberries for preventing urinary tract infections. Cochrane Database Syst Rev. 2012 Oct 17;10:CD001321.

Meta-analysis:

Cranberry Juice May Be Effective for <u>Treatment</u> of UTIs in Certain Populations

- 13 RCTs; n = 1616
- Dose = 0.4 g 4 g/day C pwd or extr in capsule; or 64.8 - 194.4 g/day of C juice
- 6 months in most trials
- Problems re heterogeneity of C preps
- Results: C. may be most beneficial in a 2x/d dose as juice, in women w/ recurrent UTIs, female populations generally, & in children specifically.
 - Wang CH, Fang CC, Chen NC, et al. Cranberry-containing products for prevention of urinary tract infections in susceptible populations: A systematic review and metaanalysis of randomized controlled trials. *Arch Intern Med.* 2012;172(13):988-996.





Devil's Claw for Osteoarthritis Systematic Review

- 10 trials included in this review.
- 2 high quality trials examining fx of DC found strong evidence that daily doses standardized to 50 mg or 100 mg harpagoside were better than placebo for short-term improvements in pain & rescue medication.
 - Cameron M, Gagnier JJ, Little CV, Parsons TJ, Anette Blümle A, Chrubasik S. Evidence of effectiveness of herbal medicinal products in the treatment of arthritis. Part 1: osteoarthritis. *Phytother Res*. 2009;23: 1497-1515.





Herbs for Lower Back Pain: Systematic Review

10 trials identified

Harpagophytum
 procumbens, Salix alba,
 & Capsicum frutescens
 "seem to reduce pain
 more than placebo."



www.gardencross<mark>in</mark>

 Gagnier JJ, van Tulder MW, Berman B, Bombardier C. <u>Herbal medicine for</u> low back pain: a Cochrane review. *Spine*. 2007 Jan 1;32(1):82-92.

והאחריות על המידע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין חברת ברא צמחים אחראי למהימנותם או לדיוקם של תכנים אילו, והם אינם מהווים ייעוץ מקצועי או התוויה רפואית.

http://www.alibaba.com



Review of 3 M-As on Echinacea

"As with most medications for the treatment of the common cold, the clinical data on Echinacea so far are not conclusive."

- "There is a clear indication that preparations from the aerial parts and roots of Echinacea purpurea may be effective.
- 3 RCTs on Bioforce Echinaforce[®] showed clinical benefit in M-A by Schoop et al.
- "However, more studies with precisely standardized products (pressed juices and tinctures) are necessary in various clinical settings, also for prevention.
 - Woelkart K, Linde K, Bauer R. Echinacea for preventing and treating the common cold.
 Planta Med. 2008;74(6):633-637.
 - Schoop R, Klein P, Suter A, Johnston S. Echinacea in the prevention of induced rhinovirus colds: a meta-analysis *Clin Ther*. 2006;28(2):174-183.



Review of 3 M-As on Echinacea cont.



- "So far in preventative trials, only a trend in inhibition of the development and severity of colds could be demonstrated.
- "Preparations from Echinacea angustifolia and E. pallida roots need further controlled clinical trials, in order to provide a better evidence for clinical efficacy.
- "In addition to studies with laboratory-measured biomarkers, more studies on patient-oriented quality-of-life measures are also needed."
 - Woelkart K, Linde K, Bauer R. Echinacea for preventing and treating the common cold. *Planta Med*. 2008;74(6):633-637.
 - Schoop R, Klein P, Suter A, Johnston S. Echinacea in the prevention of induced rhinovirus colds: a meta-analysis *Clin Ther*. 2006;28(2):174-183.

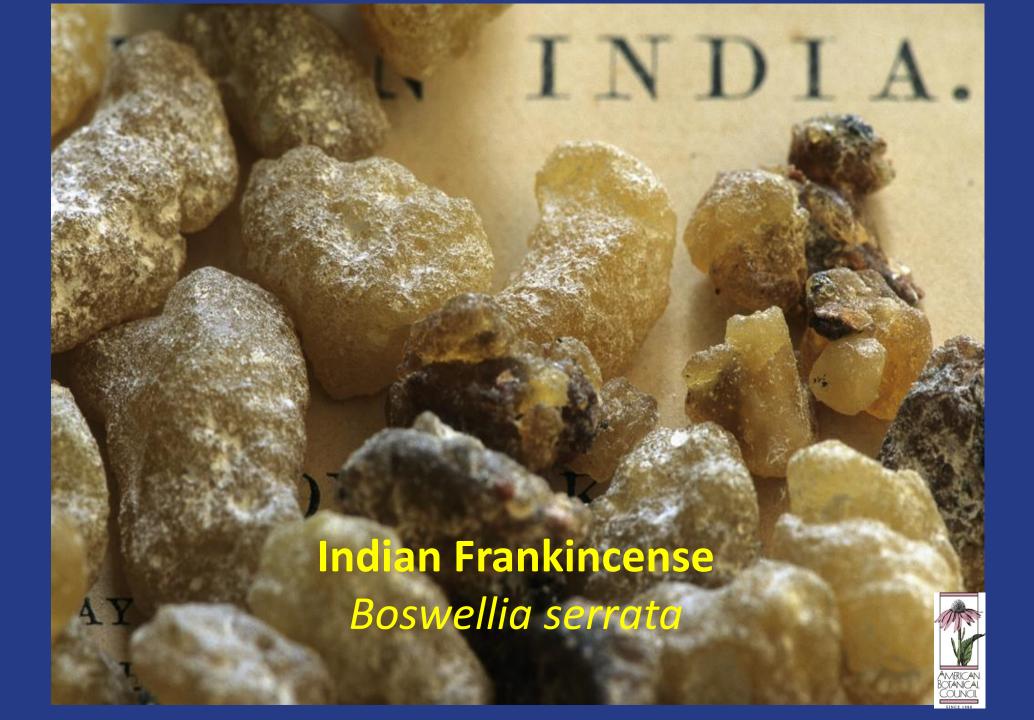


Echinacea Extracts Safely Reduce Risk of Respiratory Tract Infection Recurrence & Complications (MA)

- 6 RCT of 101 trials found; n = 2458
- 3 independent studies found that in individuals w/ higher susceptibility, stress, or state of immunological weakness, *Echinacea* halved the risk of recurrent respiratory infections.
- CONCLUSION: Evidence indicates that *Echinacea* potently lowers risk of recurrent respiratory infections & complications thereof.
- Immune modulatory, antiviral, & anti-inflammatory fx might contribute to the observed clinical benefits, which appear strongest in susceptible individuals.



• Schapowal A, Klein P, Johnston SL. *Echinacea* reduces the risk of recurrent respiratory tract infections and complications: a meta-analysis of randomized controlled trials. *Adv Ther*. March 2015;32(3):187-200.



Frankincense/Inflammation Boswellia serrata

- 7 RCTs
- "Collectively, these data seem to indicate that *B. serrata* extracts are effective in treating a range of conditions caused or maintained by inflammatory processes."
- However, not enough large randomized clinical trials have been published for any condition,
- Conclusion: for several inflammatory conditions the "evidence for the effectiveness of *B. serrata* extracts is encouraging but not compelling."







Garlic

Allium sativum

SR + M-A: Garlic Moderately Lowers BP

- Review of 25 controlled & uncontrolled trials publ betw/ 1955 2007 measuring garlic's activity on BP:
- 11 trials met inclusion criteria:
 - 9 RCTs compared garlic preparations to placebo,
 - 2 trials compared garlic on BP to a conventional hypotensive drug (n=525).
- There was a significant positive difference betw/ measurements of *systolic* BP in garlic groups compared to placebo, while there was no significant difference in *diastolic* BP.
- Conclusion: "This systematic review and meta-analysis suggest that

garlic preparations are superior to placebo in reducing blood pressure in individuals with hypertension."

Ried K, Frank OR, Stocks NP, Fakler P, Sullivan T. Effect of garlic on blood pressure: a systematic review and meta-analysis. *BMC Cardiovasc Disord*. 2008;8:13. doi:10.1186/1471-2261-8-13.





Anti-hypertensive Effect of Garlic (SR/M-A)

- 9 RCTs; n=577
- The authors conclude that the observed improvements are clinically relevant and garlic preparations offer promise as alternative treatments for reducing high BP.
- BUT, as of now, there is insufficient evidence to have confidence that garlic preparations are an effective alternative or complementary/adjunct herbal medication to conventional antihypertensive drugs.
 - Rohner A, Ried K, Sobenin IA, Bucher HC, Nordmann AJ. A systematic review and metaanalysis on the effects of garlic preparations on blood pressure in individuals





Garlic Is Superior to Placebo in Reducing Blood Pressure in Hypertensive Patients (MA)

- 17 RCTs
- Garlic intake caused a 3.75-mm Hg reduction in SBP and 3.39-mm Hg reduction in DBP compared w/ controls.
- CONCLUSION: Garlic supplements are superior to controls (placebo in most trails) in reducing BP, especially in hypertensive patients.

• Wang H-P, Yang J, Qin L-Q, Yang X-J. Effect of garlic on blood pressure: a meta-analysis. *J Clin Hypertens (Greenwich)*. March 2015;17(3):223-231.





Garlic Intake May Positively Affect the Risk of Gastric Cancer -- M-A

- 145 papers identified; 17 included in review.
- High, low, & any intake of garlic were all associated w/ reduced gastric cancer risk, w/ higher intake, however defined, offering most protection.

• Kodali RT, Eslick GD. Meta-analysis: does garlic intake reduce risk of gastric cancer? *Nutr Cancer*. 2015;67(1):1-11.



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Garlic & Common Cold

- 6 trials; 1 met inclusion criteria (n= 146)
- Garlic DS (180 mg of allicin "content"; Allisure® [?]) or P (once daily): 12 wks.
- Trial reported 24 occurrences of common cold in G group vs 65 in P grp
 - Fewer illness days in G grp vs P grp (111 v 366).
- Conclusion: "There is insufficient clinical trial evidence regarding the
 effects of garlic in preventing or treating the common cold. A single trial
 suggested that garlic may prevent occurrences of the common cold but
 more studies are needed to validate this finding. Claims of effectiveness
 appear to rely largely on poor-quality evidence."
 - Lissiman E, Bhasale AL, Cohen M. Garlic for the common cold. Cochrane Database of Systematic Reviews 2012, Issue 3. Art. No.: CD006206. DOI: 10.1002/14651858.CD006206.pub3.





Anti-hypertensive Effect of Garlic (SR/MA)

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Rohner A, Ried K, Sobenin IA, Bucher HC, Nordmann AJ. A systematic review and
metaanalysis on the effects of garlic preparations on blood pressure in individuals with
hypertension. Am J Hypertens. March 2015;28(3):414-423.
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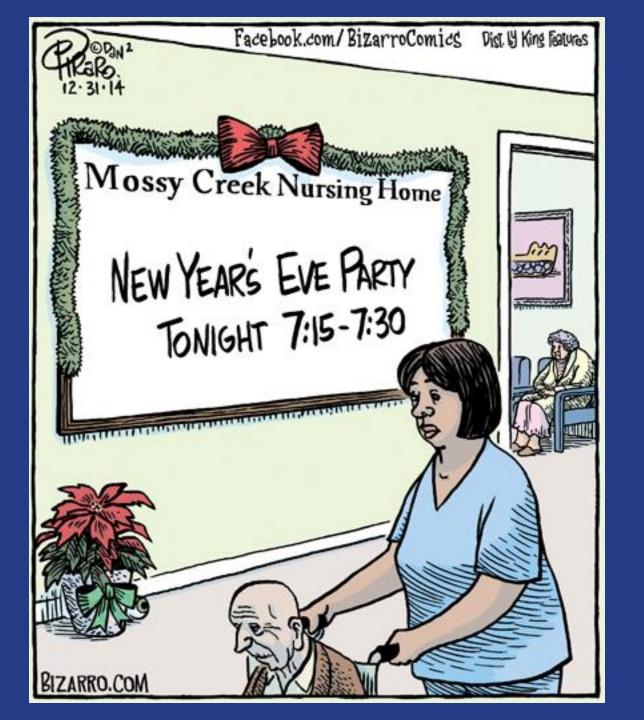


Ginger May Modestly Reduce Exercise-induced Muscle Pain & Soreness -- SR

- 7 RCTs
- 2 g/d of G (5-14 days) may modestly reduce muscle pain stemming from eccentric resistance exercise & prolonged running, particularly if taken for a min. of 5d.
- 4 g/d G may accelerate the recovery of muscular strength.

• Wilson PB. Ginger (*Zingiber officinale*) as an analgesic and ergogenic aid in sport: a systemic review. *J Strength Cond Res*. October 2015;29(10):2980-2995.







Ginkgo Leaf Extract

Ginkgo biloba

Dementia

- Studies included in M-A = 6; n = 1,838 subjects
- 22-52 wks
- Results: Bivariate random effects M-A of data from 6 trials showed a significant difference in ADAS-cog scores betw/ ginkgo & placebo.
- Conclusion: This M-A demonstrated that stdzd GBE given for a period of 6 mos. significantly improved cognitive function in people w/ mild dementia.



 Wang B-S, Wang H, Song Y-Y, et al. Effectiveness of standardized Ginkgo biloba extract on cognitive symptoms of dementia with a six-month treatment: a bivariate random effect meta-analysis. Pharmacopsychiatry. May 2010;43(3):86-91.

הבעלות והאחריות על המידע והתכנים המופיעים במצגת שייכים ללותב בלבור ואין חברוניבוא צמחים אחראיו למהימנותם או לדיוקם של תכנים אילו, והם אינם מהווים ייעוץ מקצועי או התוויה רפואית.

SR & M-A of Ginkgo EGb 761® in Dementia

- 754 clinical papers; 17 reported on 9 studies meeting all of the inclusion criteria.
 - All 9 studies = R DB & moderate to good methodological quality.
 - 8 = PC; 1 compared ginkgo with donepezil (Aricept®).
 - All used EGb 761[®] (W. Schwabe)
- EGb 761 was statistically significantly superior to placebo in improving cognition for whole group of patients w/dementia.
- In a subgroup analysis of 6 studies that included patients w/ Alzheimer's disease, EGb 761 treatment was statistically superior to placebo trmt.



• Weinmann S, Roll S, Schwarzbach C, Vauth C, Willich SN. Effects of *Ginkgo biloba* in dementia: systematic review and meta-analysis. *BMC Geriatr*. 2010:10:14.DOI:10.1186/1471-2318-10-14.

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Ginkgo Ameliorates Tinnitus -SR

- 8 total trials met incl criteria for SR.
 - 3 RCTs on pts w/ tinnitus as a primary complaint.
 - 5 RCTs on pts w/ dementia or age-associated cognitive decline w/ tinnitus as a concomitant complaint were included in SR.
 - -N = 1199
- Conclusion: All 8 RCTs of standardized *Ginkgo biloba* extract EGb 761[®] showed statistically significant superiority of active treatment over placebo.
 - von Boetticher A. *Ginkgo biloba* extract in the treatment of tinnitus: a systematic review. *Neuropsychiatr Dis Treat.* 2011; 7: 441–447.





Safety & Efficacy of Ginkgo Extract EGb 761® for Treating Dementia in Elderly (MA)

- 7 of 15 RCTs; n = 2625
- Change in, activities of daily living, and global rating significantly favored EGb 761 vs. placebo.
- CONCLUSION: MA confirmed efficacy & good tolerability (safety) of ginkgo extract EGb 761 in patients w/ dementia.
 - Gauthier S, Schlaefke S. Efficacy and tolerability of Ginkgo
 biloba extract EGb 761[®] in dementia: a systematic review and meta-analysis of randomized placebo-controlled trials. *Clin Interv Aging*.
 Nov. 28, 2014;9:2065-2077.



Ginkgo Extract EGb 761[®] in Dementia w/ Behavioral & Psychological Symptoms (SR)

- 4 RCTs; n = 1,628 outpatients w/ mild-to-moderate dementia
- **CONCLUSIONS:** The pooled analyses provide evidence of efficacy of EGb 761[®] at 240 mg/day in treatment of outpatients suffering from Alzheimer's, vascular, or mixed dementia with BPSD.
 - von Gunten A, Schlaefke S, Überla K. Efficacy of *Ginkgo biloba* extract EGb 761[®] in dementia with behavioural and psychological symptoms: A systematic review. *World J Biol Psychiatry*. August 27, 2015.

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Ginkgo Extract Studies on Patients w/ Chronic Schizophrenia on Antipsychotic Medication Demonstrates Efficacy as Adjunct Therapy - SR

- 8 RCTs; n= 1033
- Egb® had significant difference in ameliorating total & negative symptoms of chronic schizophrenia as an adjuvant therapy to antipsychotics.
- Conclusion: EGb therapy + antipsychotics might be more efficacious.
 - Chen X, Hong Y, Zheng P. Efficacy and safety of extract of *Ginkgo biloba* as an adjunct therapy in chronic schizophrenia: A systematic review of randomized, double-blind, placebo-controlled studies with meta-analysis. *Psychiatry Res.* 2015;228(1):121-127.

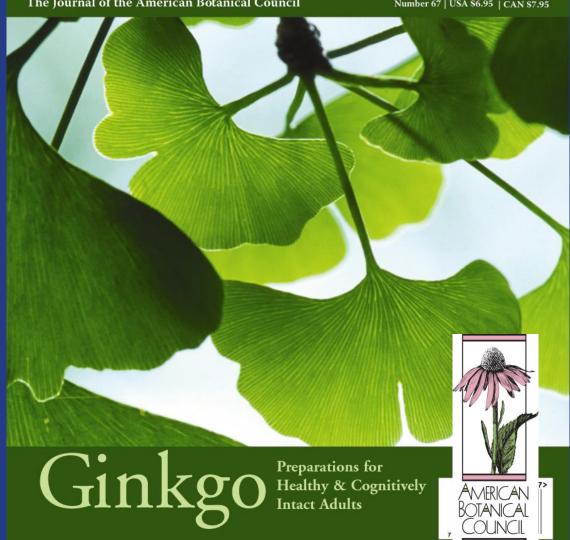


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Asian Red Ginseng & Erectile Dysfunction

- 28 trials on ginseng and ED-related effects
- 7 RCTs met inclusion criteria.
- Korean red ginseng root (steamed fresh rts)
- Total daily doses = 1800 mg 3000 mg.
- n = 363 men, aged 24-70 years.
- 4 12 weeks
- 6 trials reported an improvement in erectile function in ginseng subjects.
- Jang D-J, Lee MS, Shin B-C, Lee Y-C, Ernst E. Red ginseng for treating erectile dysfunction: a systematic review. *Br J Clin Pharmacol*. 2008;66(4):444-450.



Asian Ginseng & Ischemic Heart Disease (MA)

- 18 RCTs; n= 1549
- Results of MA suggest that ginseng-based medications treat angina pectoris more effectively than nitrates.





Evidence for Red Clover for Treatment of Menopausal Hot Flashes (MA)

• 8 RCTs; n = 665

• CONCLUSION: Results showed that red clover, vs. placebo, was effective in reducing menopausal hot flashes when administered for 3-4 months, but their effect did not persist at 12 months, nor did RC reduce HF frequency.

• Gartoulla P, Han MM. Red clover extract for alleviating hot flushes in postmenopausal women: A meta-analysis. *Maturitas*. 2014;79(1):58-64.







Hawthorn

Crataegus laevigata, C. oxyacantha

Meta-Analysis Shows Cardiac Benefits

- 14 trials (n = 1,110 patients)
- Dose = 160 -1,800 mg/day H leaf w/ flower extract (WS 1442[®], Crataegutt[®] [Schwabe] or LI 132[®], Faros[®] 300 [Lichtwer])
- Most trials, H extr used as adjunct to conventional medications for CHF, incl diuretics (4 trials) & ACE inhibitors (3).
- M-A of trials reporting maximal workload showed significant increase in patients receiving H extr, compared w/ P.
- Other measured parameters indicated benefits of H: pressureheart rate product, exercise tolerance, etc.
 - Pittler MH, Guo R, Ernst E. Hawthorn extract for treating chronic heart failure. *Cochrane Database of Systematic Reviews*. 2008; 1: Art No.: CD005312. DOI: 10.1002/14651858. CD005312.pub2.





Hawthorn for Heart Disease

Editorial & Systematic Review

- Trails from 1990 2008
- 6 RCTs (4-16 wks)
- Nonrandomized cohort study (8 wks),
- Prospective prospective cohort study (2-5 years) of hawthorn extracts.
- "The increase in interest in Crataegus [Hawthorn] as a therapeutic tool in the treatment of some cardiovascular illnesses appears justified, in spite of some ambivalent results recorded from various clinical trials."
 - Furey A, Tassell M. Towards a systematic scientific approach in the assessment of efficacy of an herbal preparation: hawthorn (*Crataegus* spp.). *Eur J Heart Failure*. 2008;10(12):1153-1157.

HibiscusHibiscus sabdariffa





http://www.studentsoftheworld.info/sites/country/img/10192_hhhhh.jpg

http://2.bp.blogspot.com/_71CfuOXvFAI/SJpb8Avh0WI/AAAAAAAAAAdw/DnTSpZIDZ9w/s320/hibiscus+sabdariffa+L.jpg

Cochrane Review of Hibiscus Effects on Rload Pressure

- 5 RCTs found significant reductions in SBP.
- "No reliable conclusions can be drawn about the benefit of Roselle [hibiscus] for either controlling or lowering blood pressure in patients with hypertension compared to placebo or no treatment."
- Nonetheless, clinical studies comparing hibiscus tea w/ drug treatments & black (or "ordinary") tea (Camellia sinensis) have found beneficial effects in the treatment of hypertension.
 - Ngamjarus C, Pattanittum P, Somboonporn C. Roselle for hypertension in adults. *Cochrane Database Syst Rev.* Jan 20, 2010; (1):CD007894.







Horse Chestnut Seed Extract, HCSE

Aesculus hippocastanum

Chronic Venous Insufficiency

- Studies included in M-A = 16; N = 11,776
- **Timeline:** Duration of treatment had to last at least 20 d.
- Results: All symptoms improved after trtmt w/ HCSE.
 - Compared with placebo, leg volume reduction was 46 mL greater in HCSE grp, ankle circumference decreased by 45 cm, & 53% more patients in HCSE grp showed improvements in edema.
 - In 2 of 3 observational studies, HCSE treatment improved edema in 84% of CVI patients, reduced pain in 91% of pts, & improved leg fatigue & heaviness in 85% of pts.
- Conclusion: The results of M-A indicate a "clinically relevant and statistically significant effect of HCSE in the treatment of CVI" & confirm the "short-term efficacy" of HCSE.
 - Siebert U, Brach M, Sroczynski G, Überla K. Efficacy, routine effectiveness, and safety of horsechestnut seed extract in the treatment of chronic venous insufficiency. A meta-analysis of randomized controlled trials and large observational studies. *International Angiology.* 2002;21:305–15.



Mistletoe Extract

Extracts from *Viscum album* (VA-E), European white-berry mistletoe, [fermented VA-E <u>Iscador®</u>]

- # studies available: 17
- # studies included: 4
- N = 3328
- Timeline: Median duration for 4 trials ranged from 15-52 mos. Follow-up 15-81 mos for Iscador trmt grp v. 10-60 mos control grps.
- Conclusion: Adjunctive application of VA-E is an effective adjuvant trmt for cancer pts. The studies included in this design had a high homogeneity in the effects of VA-E treatment in various types of cancer & show effects comparable w/findings of another recent M-A which included studies of various designs.
 - Ostermann T, Bussing A. Retrospective studies on the survival of cancer patients treated with mistletoe extracts: a meta-analysis. *Explore*. 2012;8(5):277-281.

UmckaloaboPelargonium sidoides









Pelargonium sidoides Extract Treats Acute Bronchitis

- 6 RCTs on extr *Pelargonium sidoides*
 - Umckaloabo[®], EPs[®]7630 (Schwabe; Nature's Way)
- 4 of 5 PC trials show that EPs 7630 significantly decreased bronchitis symptom scores after 7 d tmt.
- MoA = ability of EPs 7630 to antagonize bacterial adhesion &/or invasion of intact epithelia, thus protecting upper respiratory tract from bacteria colonization & infection.
- "...encouraging evidence from currently available data that P. sidoides is effective compared to placebo for patients with acute bronchitis."
- No serious AEs reported in any trials, but mild to moderate AEs were reported in all 6 trials.
 - Agbabiaka TB, Guo R, Ernst E. Pelargonium sidoides for acute bronchitis: a systematic review and meta-analysis. *Phytomed*. May 2008;15(5):378-385.





Pelargonium sidoides May Reduce Severity of Acute Bronchitis & Sinusitis (SR)

- 8 RCTs: 3 RCTs on adults w/ acute bronchitis (n=746), 3 RCTs on children w/ acute bronchitis (n=819)
- CONCLUSIONS: P. sidoides may be effective in alleviating symptoms of acute rhinosinusitis and common cold in adults, but doubt exists.
- It may be effective in relieving symptoms in acute bronchitis in adults & children, & sinusitis in adults.



• Timmer A, Günther J, Motschall E, Rücker G, Antes G, Kern WV. *Pelargonium sidoides* extract for treating acute respiratory tract infections. *Cochrane Database Syst Rev.* 2013;10:CD006323. doi: 10.1002/14651858.CD006323.pub3.

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Red Yeast Rice Monascus purpurea





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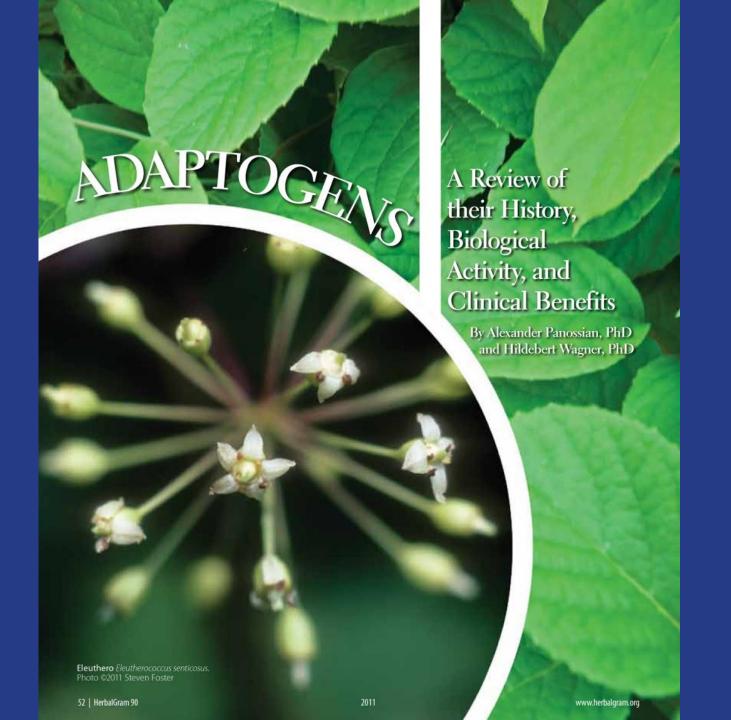


Red Yeast Rice

Monascus purpurea

Beneficial Effects on Blood Lipids

- Studies available: 372; studies included in M-A = 93; N = 9,625
- Results:
 - Combined results showed significant reduction of serum TC levels, triglycerides levels, & LDL levels, & increase of HDL compared w/ placebo.
 - Lipid modification effects appeared to be similar to statins: pravastatin, simvastatin, lovastatin, atorvastatin, or fluvastatin.
 - Compared w/ non-statin lipid-lowering agents, RYR preparations appeared superior to nicotinate & fish oils, but equal to or less effective than fenofibrate & gemfibrozil (Lopid®).
- Conclusion: Current evidence from RCTs shows short-term beneficial effects of RYR preparations on lipid modification.
- More rigorous trials needed & long-term effects & safety should be investigated if RYR preparations are to be recommended as an alt. trmt for primary hyperlipidemia.
 - Liu J, Zhang J, Shi Y, Grimsgaard S, Alraek T, Fønnebø V. Chinese red yeast rice (Monascus purpureus) for primary hyperlipidemia: a meta-analysis of randomized controlled trials.
 Chinese Medicine. 2006;1:4 הבעלות והאחריות על המידע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין חברת ברא צמחים.
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Rhodiola Root; Arctic Root Rhodiola rosea





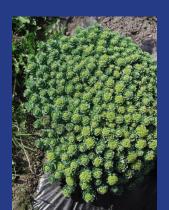


Rhodiola Root

Rhodiola rosea

Shows Enhanced Physical & Mental Functions

- 11 RCTs, n=503 total subjects
- Conclusion: R. rosea root preparations may be active in a variety of ways & might be used to treat several ailments, including those brought on by stress & depression.



» Hung SK, Perry R, Ernst E. The effectiveness and efficacy of *Rhodiola rosea* L.: a systematic review of randomized clinical trials. *Phytomedicine*. February 15, 2011;18(4):235-244.

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Danish Rose Hips

Rosa canina







DanishRose Hip (Rosa canina) & **Osteoarthritis — M-A**



- 3 RCTs reviewed (n = 37 studies total); n = 306 pts.
- **Results:** Regarding changes in pain scores & changes in use of pain medication there was a statistically significant trend favoring specialized rose hips powder compared w/ placebo.
 - Further, pts taking rose hips pwd were 2x as likely to respond to therapy as those in placebo grp.
 - Total number of responders in 3 trials on rose hip powder was 94 of 153 (61.4%), compared w/ 65 of 153 patients in placebo grp (42.5%).
- Conclusion: The result of the analysis was a small-to-moderate short-term efficacy of preparations w/ rose hip powder w/ a small but clinically relevant reduction of pain in OA pts.
 - Christensen R, Bartels EM, Altman RD, Astrup A, Bliddal H. Does the hip powder of Rosa canina (rosehip) reduce pain in osteoarthritis patients? — a meta-analysis of randomized controlled trials. Osteoarthritis Cartilage. 2008:16:965-972.

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Soy *Glycine max*



Soy Reduces BP in Hypertensive Patients — M-A

- 11 trials included in M-A
- The reductions in SBP seen in hypertensive pts w/ soy tmt are comparable to those seen w/ Rx antihypertensive agents (-5 mmHg).
- Therefore, authors suggest that ingestion of 65-153 mg/day of soy for 1-12 mos can make a significant impact on CV disease risk in hypertensive population.
- MoA for this effect not well understood, but may involve improvement of endothelial function.
- Also unclear whether the causal compound is soy protein or soy isoflavones, or whether the 2 act synergistically

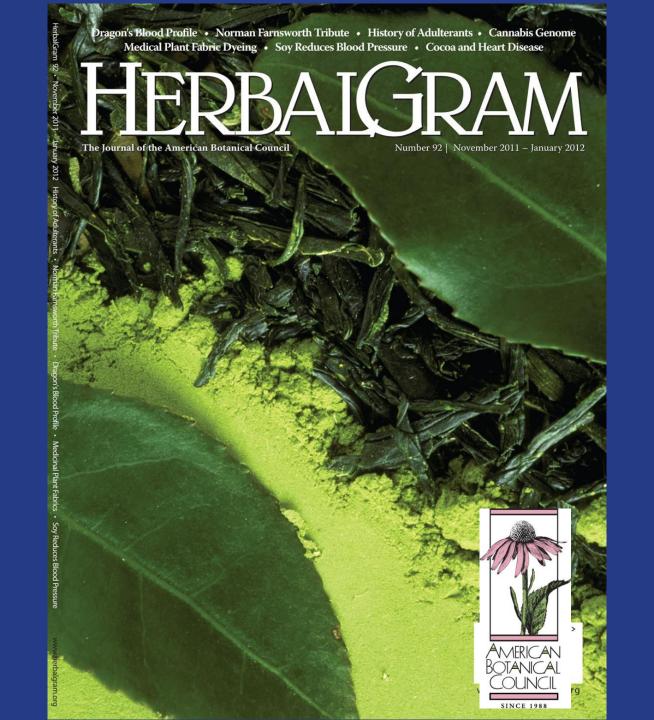


• Liu XX, Li SH, Chen JZ, et al. Effect of soy isoflavones on blood pressure: a metaanalysis of randomized controlled trials. *Nutr Metab Cardiovasc Dis*. February 8, 2011; [epub ahead of print]. doi:10.1016/j.numecd.2010.09.006.

TCM Can Be a Safe & Effective Adjuvant Therapy for Treatment of Cervical Cancer

- 48 trials retrieved; 18 trials reviewed (n = 1657 pts)
- Herbs most frequently used to improve Survival Rate (SurvRt) & Tumor Reduction (>50%) (TRR):
 - astragalus (Astragalus membranaceus) root (44.4%), ginseng (Panax spp.) root (25.9%), dong quai (Angelica sinensis) root (25.9%), poria (Wolfiporia cocos) (22.2%), licorice (Glycyrrhiza uralensis) root (22.2%), turmeric (Curcuma longa) rhizome (22.2%), pinellia (Pinellia ternata) rhizome (22.2%), bai-zhu atractylodes (Atractylodes macrocephala) rhizome (18.5%), Job's tears (Coix lacryma-jobi) seed (18.5%), and barbed skullcap (Scutellaria barbata) (18.5%).
- This is 1st SR & M-A assessing efficacy & safety of TCM herbs as an adjuvant to standard cancer therapy in tmt of cervical cancer.
- Results indicate that TCM herbs appear to significantly increase SurvRt & TRRs, & decrease common adverse effects, including Vesicle Complications, compared to standard therapy alone.





M-A Supports Protective Effect of Green Tea against Liver Disease

- 15 studies in M-A of total 1390 articles (9 prospective cohort studies, 3 retrospective studies, 4 cross-sectional studies).
- Collectively, the studies included 440,903 regular green tea drinkers & 385,246 non-regular green tea drinkers.
- M-A revealed an overall significant reduction in incidence of liver diseases favoring green tea consumption.
- This trend is also observed regardless of the race of the individual concerned where the Asian, American and European subgroups all demonstrated a reduced risk of liver disease.
 - Yin X, Yang J, Li T, et al. The effect of green tea intake on risk of liver disease: a meta analysis. Int J Clin Exp Med. 2015;8(6):8339-8346.



Few Liver-Related Safety Incidents w/ Green Tea Extract in RCTs -- SR

- 34 RCTs identified (from 561 titles & abstracts + 119 full-text articles)
- Liver events reported in 4 RCTs (n=7 subjects in GTE group)
- "The few events reported in both groups were elevations of liver enzymes. Most were mild, and no serious liver-related adverse events were reported.
- CONCLUSION: Although not conclusive, results suggest that liver-related AEs after intake of GTE are expected to be rare.

• Isomura T, Suzuki S, Origasa H et al. Liver-related safety assessment of green tea extracts in humans: a systematic review of randomized controlled trials. *Eur J Clin Nutr*. 2016 Nov;70(11):1221-1229. doi: 10.1038/ejcn.2016.78. Epub 2016 May 18.

w/Reduced Risk for Gynecologic Cancers

- PubMed search (from 1962 Dec 2010) for English-language articles (with 1 exception) on epidemiologic studies evaluating tea intake & cancers of the ovary, endometrium, cervix, vagina, &/or vulva in humans.
- 17 epidemiologic studies have evaluated tea & ovarian cancer risk.
- Overall, authors report that in their critical review & M-A of published studies from observational data, GT intake is assoc. w/ decreases of 32% for ovarian cancer risk & 23% for endometrial cancer risk.
- The strong experimental evidence for the antitumor, antiviral,& immunomodulatory effects of GT catechins on HPV-positive cells & tumors supports an underlying mechanism for GT & protection against genital cancers.

הבעלות והאחריות על המידע והתכנים המופיעים במצגת שייכים לכותב בלבד ואין חברת ברא צמחים אחראית למהימנותם או לדיוקם של תכנים אילו. והם אינם מהווים ייעוץ מקצועי או החוויה בפואים.

• Butler LM, Wu AH. Green and black tea in relation to gynecologic cance Mol Nutr Food Res. 2011 Jun;55(6):931-940.



Curcumin an Effective Adjunct Treatment for Major Depressive Disorder – M-A

- Total of 1757 studies identified: 6 met all inclusion criteria
 (4 RCTs; 1 crossover; 1 open-label study); n = 342 pts
- All pts received Rx antidepressant therapy + either curcumin prep (1 g/day [5 studies] or 500 mg/day [1 study]) or placebo.
- 1st M-A on fx of C on MDD.
- Conclusion:
 - (1) C is effective in reducing symptoms of depression in pts w/ MDD on Rx antidepressants;
 - (2) C more effective in middle-aged pts, at 1 g/day, when taken for > 6 wks.
 - Al-Karawi D, Al Mamoori DA, Tayyar Y. The role of curcumin administration in patients with major depressive disorder: Mini meta-analysis of clinical trials. *Phytother Res.* 2016;30(2):175-183.



Effects of Turmeric for Skin Diseases -- SR

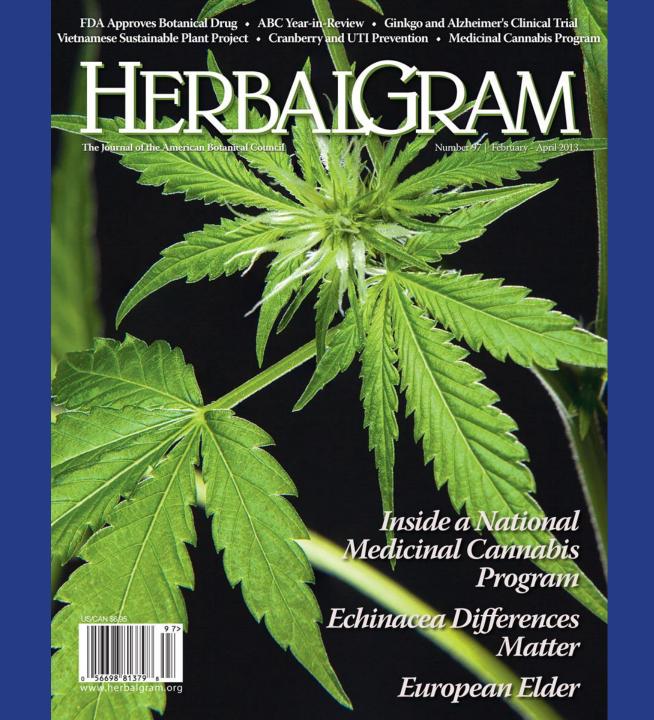
- 18 studies met inclusion criteria; total 234 articles collected.
- 9 trials = ingestion; 8 = topical; 1 = both
- Conditions: acne, alopecia, atopic dermatitis, facial photoaging, oral lichen planus, pruritus, psoriasis, radiodermatitis, vitiligo.
- 10 studies noted statistically significant improvement in skin disease severity in the turmeric/curcumin treatment groups compared w/ control groups.
- CONCLUSION: There is early evidence that oral & topical turmeric/curcumin products & supplements may provide therapeutic benefits for skin health.













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Update Profile

Volume 7, Number 6, June 2010

dear reader

ABC has recently initiated new projects to further its nonprofit educational mission. In late May, ABC submitted its first article to Care2, a popular online community with millions of members that focuses on environmental and healthy living topics. ABC's contributed article summarizes HerbalGram's recent feature on botanical alternatives to animal-based remedies. ABC Founder and Executive Director Mark Blumenthal, meanwhile, is about to lead a webinar on



Bhut Jolokia peppers. ©2010 Chile Pepper Institute

June 29. He will discuss current issues and trends in the herbal industry. Interested persons can register for the webinar here.

ABC has also announced that its annual ecotour to the Peruvian Amazon Rainforest is now open for registration. This has been a key ABC program for over 15 years, and the 2010 workshop and ecotour will feature new learning and sightseeing opportunities.

Interesting news from India is featured in this issue, including the development of a new chili pepper grenade derived from India's "ghost chili." Another article focuses on efforts to conserve wild medicinal plants and increase cultivation of Ayurvedic herbs in India. Additionally, this issue features comments from industry groups concerning the Dietary Supplement Full Implementation and Enforcement Act.

Mark your calendars: ABC's Blumenthal will be delivering 2 presentations

media watch

We have tested the links of the following articles prior to publication; however, some news organizations remove stories and disable links at various times.

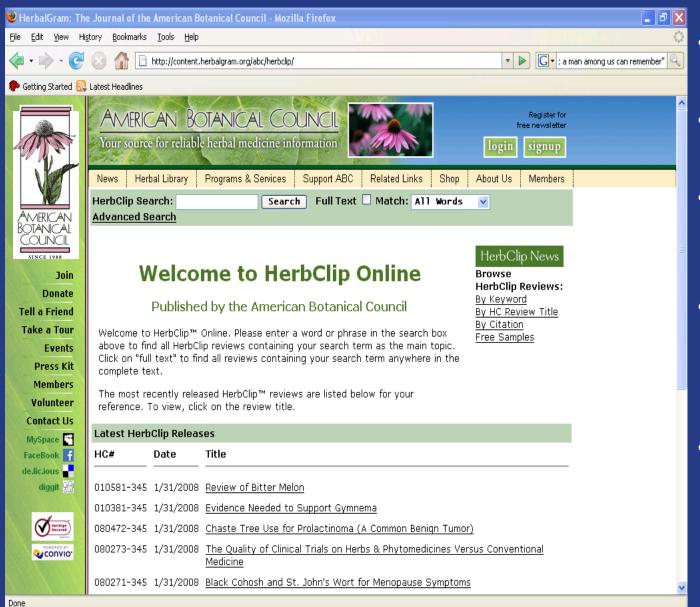
New Anti-Cancer Compound Derived from Ancient Plant. University of Arizona News. 5-27-10. Scientists have used a new technique to produce a water-soluble form of a compound from Withania somnifera that combats cancer and encourages survival of healthy cells.

Are Pets GNC's Next Big Market? Pittsburgh Post Gazette. 5-27-10. GNC and PetSmart team up to enter the growing market for dietary supplements for dogs and cats.

Study Finds Herbal Supplements Contain Contaminants. New York Times. 5-25-10. A report by the Government Accountability Office found that nearly all of the herbal dietary supplements investigated contained trace amounts of lead and other contaminants, although levels of heavy metals did not exceed thresholds considered dangerous.

Clock Ticking in War on Tuberculosis. Daily Gleaner, 5-25-10. Since strains of TB can develop resistance to antibiotics, two New Brunswick researchers are examining natives' traditional plant knowledge to create new treatments.

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NEW



Natural Foods Merchandiser's 2012 Natural Products Market Overview. Sept. 13, 2012. Online. This 60-minute webinar will cover 2011 sales trends in the natural products industry and look at expectations for growth in the 2012 data. This webinar is complimentary. More information.



USP Science & Standards Symposium on Functional Foods and Dietary Supplements: Global Opportunities and Challenges. Sept. 17-20, 2012. Boston, MA. This symposium is dedicated to interactively discussing cutting-edge topics with ndustry, regulators, and academia. More information.



Dietary Supplement GMP Seminar. Sept. 20-21, 2012. Alexandria, VA. Led by former FDA compliance officials, this intensive training program will provide information on the CONSULTING GROUP responsibilities of firms who manufacture, label, pack, or hold dietary supplements for sale in the United States, including

those involved with the testing, quality control, and distribution of supplements. More information.



Respiratory Support with Evidence-Based Integrative Nutraceuticals. Sept. 20, 2012. Online. Jeremy Appleton, ND, will review recent research and the effectiveness of natural interventions for respiratory

system support. Free webinar for licensed healthcare practitioners. More information

mark's talks

NEW



Let's Talk Nutrition. Oct. 30, 2012. Online, 2-4 p.m. EST. ABC's Mark

Blumenthal will be a guest on this interactive, health talk radio show, hosted by Michael Garko, PhD. Mark will be discussing the latest research in herbal medicine. Listen online here or live on the air in the Tampa, FL area at AM 1250 WHNZ. More information.

NEW



10th Anniversary Natural SCTIPPS Supplements: An Evidence-Based Update.

Jan. 30 - Feb. 2, 2013. San Diego, CA. Mark will lead a pre-conference herb walk as well as give a lecture on the latest trends in the natural supplements industry. More information.

Five to Thrive Live. Tomorrow: Sept. 12, 2012 at 8 p.m. EST. Online radio broadcast at W4CS.com radio. Mark will be live on the air discussing the top-selling herbal supplements of 2011. More information



10th Annual Restorative Medicine Conference, Sept. 13-16, 2012. San Diego, CA. Mark will give a review of the safety and benefits of numerous herbs souther by the Adversaries and phytomedicinal dietary

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SCIENTIFIC NAME: Ginkgo biloba

COMMON NAME: ginkgo FAMILY NAME: Ginkgoaceae

Evidence for Efficacy (Human Data)

Clinical Trials (361)

Observational Studies/Case Reports (71)

Traditional and Folk Use (80)

Evidence of Activity

Animal Studies (465)

Pharmacodynamics (527)

Analytical Chemistry (176)

Pharmacokinetics (ADME) (50)

Genetics (72)

Literature Reviews (45)

Dolotod Lipko (44)

Other Information

Pictures & Distribution Maps (7)

Cultivation, Conservation & Ecology (63)

Safety Data

Adverse Effects & Toxicity (53)

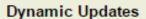
Interactions (40)

Contraindications (4)

Formulas/Blends

Modern Methods of Preparation (46)

Patents (7)



Live PubMed Searches (15)



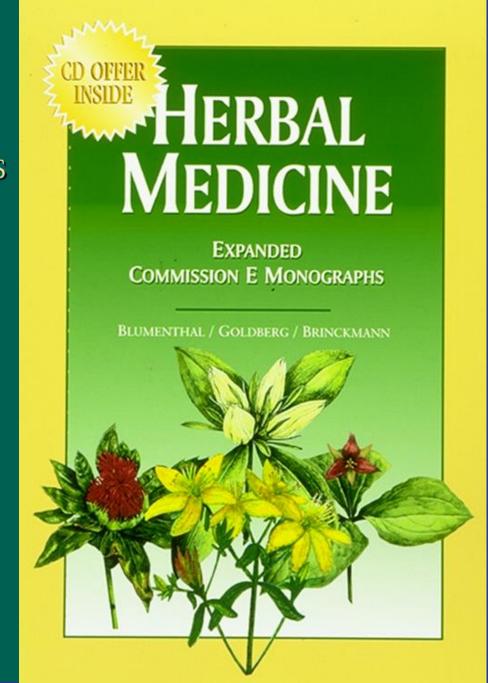
THE AMERICAN BOTANICAL COUNCIL

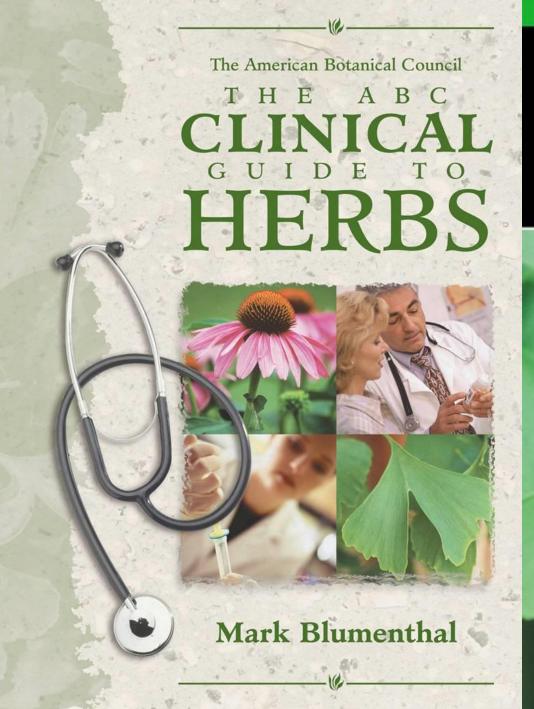
THE COMPLETE GERMAN COMMISSION EMONOGRAPHS

THERAPEUTIC GUIDE TO HERBAL MEDICINES



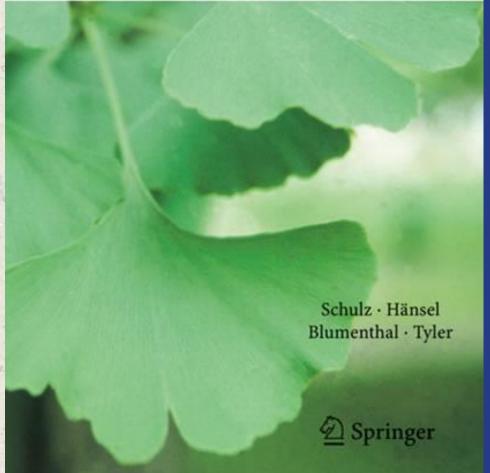
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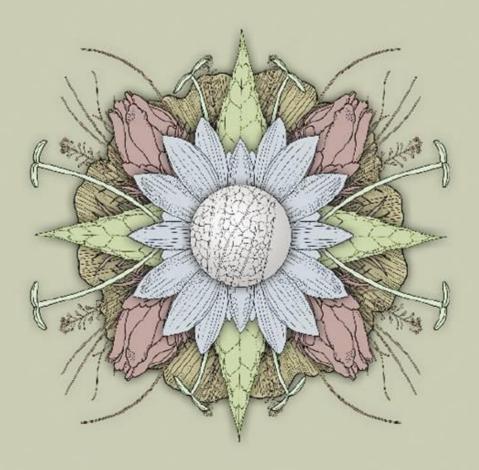
RATIONAL PHYTOTHERAPY

A Reference Guide for Physicians and Pharmacists
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The Identification of Medicinal Plants

A Handbook of the Morphology of Botanicals in Commerce





by Wendy Applequist, Ph.D.

Foreword by Mark Blumenthal & Steven Foster

Illustrations by Barbara Alongi



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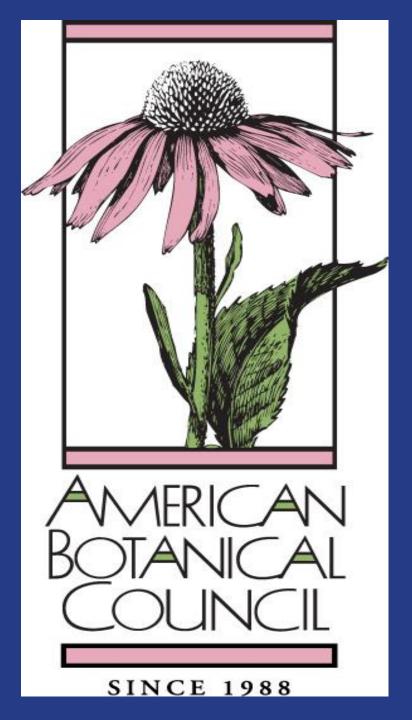


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