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COVID e Botanicals

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AVIS
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de l'environnement et du travail

**relatif à l'évaluation des risques liés à la consommation de compléments alimentaires
contenant des plantes pouvant interférer avec la réponse immunitaire et inflammatoire
associée à l'infection par le SARS-Cov-2**



Rapporto ISS COVID-19 • n. 51/2020

Integratori alimentari o farmaci? Regolamentazione e raccomandazioni per un uso consapevole in tempo di COVID-19

Gruppo di lavoro ISS Farmaci COVID-19

Versione del 31 maggio 2020



LETTER TO THE EDITOR

WILEY

Phytotherapeutic compounds against coronaviruses: Possible streams for future research

Dear Editor,

Recently, an epidemic disease outbreak caused by a novel human coronavirus named "SARS-CoV-2" (similar to SARS-CoV and MERS-CoV), first reported in China, has surged worldwide (Li & De Clercq, 2020). No vaccination against SARS-CoV-2 exists to date and available therapeutic options are still limited (Li & De Clercq, 2020). Our aim is to briefly describe the potential help of phytotherapy research in finding new integrative therapeutic options against human coronaviruses, and to provide researchers with some essential hints to be used for planning future studies.

Evidence in support of the activity of medicinal plants (or their

Overall, it is possible to identify two possible research streams to follow in the pursuit of finding useful phytotherapeutic compounds to fight infections caused by coronaviruses:

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Cautions and Opportunities for Botanicals in COVID-19 Patients: A Comment on the Position of the French Agency for Food, Environmental and Occupational Health & Safety

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Gian Franco Gensini, MD,⁶ and Valentina Maggini, MS, PhD¹

Introduction

THE COVID-19 PANDEMIC is a global health crisis caused by SARS-CoV-2 and >700 trials are running worldwide (<https://www.covid-trials.org/>) in an attempt to identify effective drugs to prevent the infection, eradicate the virus, and manage disease complications. Research has also involved medicinal herbs, due to their possible antiviral or symptomatic role, although their use in clinical practice is often influenced by tradition and characterized by self-medication. In this regard, the authors believe that the possible administration of medicinal herbs should be discussed, especially for patients suffering from emerging, poorly known, and potentially severe diseases such as COVID-19. Within this field of study, the ultimate objective of the scientific community should be to identify all appropriate clinical uses and potential risks of botanicals, to avoid dangerous interactions with drugs and, at the same time, to outline a list of evidence-based indications (and contraindications) of medicinal herbs in any stage of the disease.

Therefore, adequate communication and dissemination of reliable information are important both for the general population and for health care professionals. As such, the recent effort of the French “National Agency for Food Safety, Environmental and Occupational Health” (ANSES) has been appreciated to raise awareness about the need for caution regarding potentially inappropriate and risky uses of botanicals in COVID-19 patients.¹ However, in the authors’ opinion, it is essential that actual risks are adequately assessed and not inflated nor overestimated, since botanicals may still offer a range of valuable therapeutic options to study in depth.

The study aims to briefly discuss this issue to prompt further research on the topic, in the perspective of eventually formulating a list of evidence-based effective and safe uses of botanicals for COVID-19 patients.

First Consideration

The position article issued by the ANSES discourages patients from using herbal supplements by declaring that botanicals could interfere with viral entry through an upregulation of the angiotensin-converting enzyme 2 (ACE2) receptor. This hypothesis has been previously raised for nonsteroidal anti-inflammatory drugs (NSAIDs), since ibuprofen can increase the expression of ACE2 receptors used by SARS-CoV-2 to penetrate into cells.² Therefore, it has been suggested that ibuprofen can worsen the patient’s symptoms during COVID-19 by indirectly promoting the viral entry into cells. However, the European Medicines Agency, the World Health Organization, and the United States Food & Drug Administration have reported that scientific evidence associating the use of NSAIDs with any worsening of COVID-19 symptoms lacks to date.

Actually, some plants with an anti-inflammatory activity mentioned in the ANSES document belong to traditional long-standing medicinal systems and are also used in modern medicine. Moreover, these plants do not include ibuprofen-like substances in their composition, but pharmacologically different bioactive molecules (e.g., coumarins, polyphenols, and triterpenes), which do not act as enhancers of ACE2 receptor expression.^{3,4} In addition, active components of medicinal plants have always been considered an important



in realtà ...

Indicazioni degli integratori

- ★ **SUPPLEMENTAZIONE DIETETICA PER CARENZE**
- ★ **MANTENIMENTO STATO DI BENESSERE E ATTIVITA' FISIOLOGICA DI ORGANI ED APPARATI**



- ★ PRE - COVID
- ★ COVID
- ★ POST - COVID

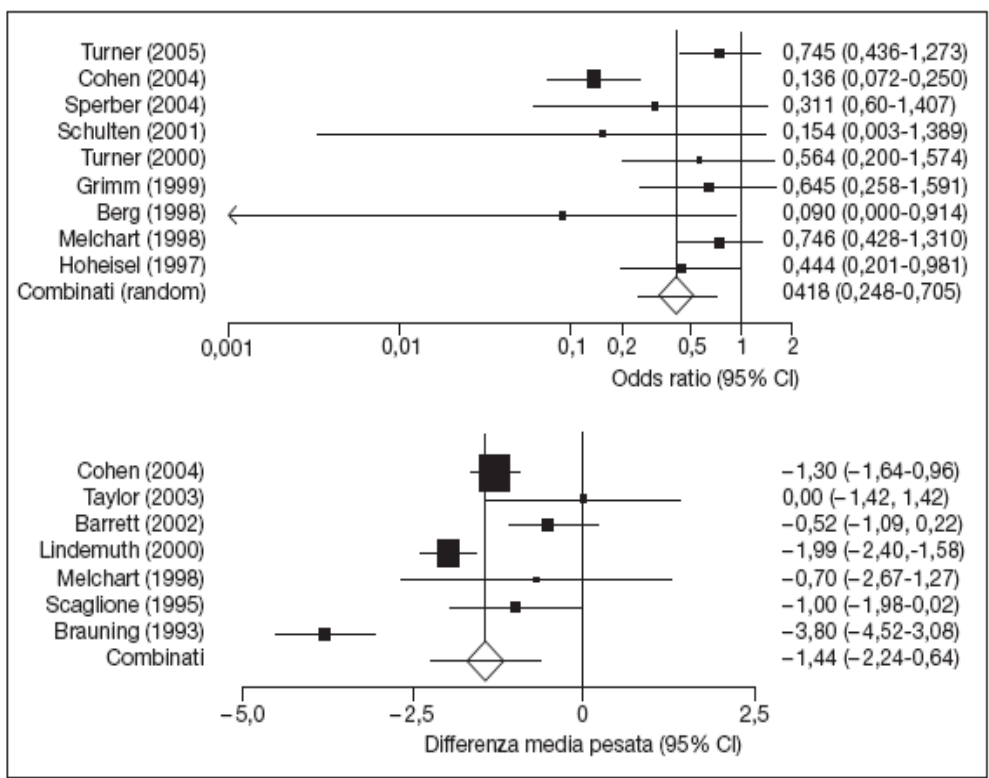
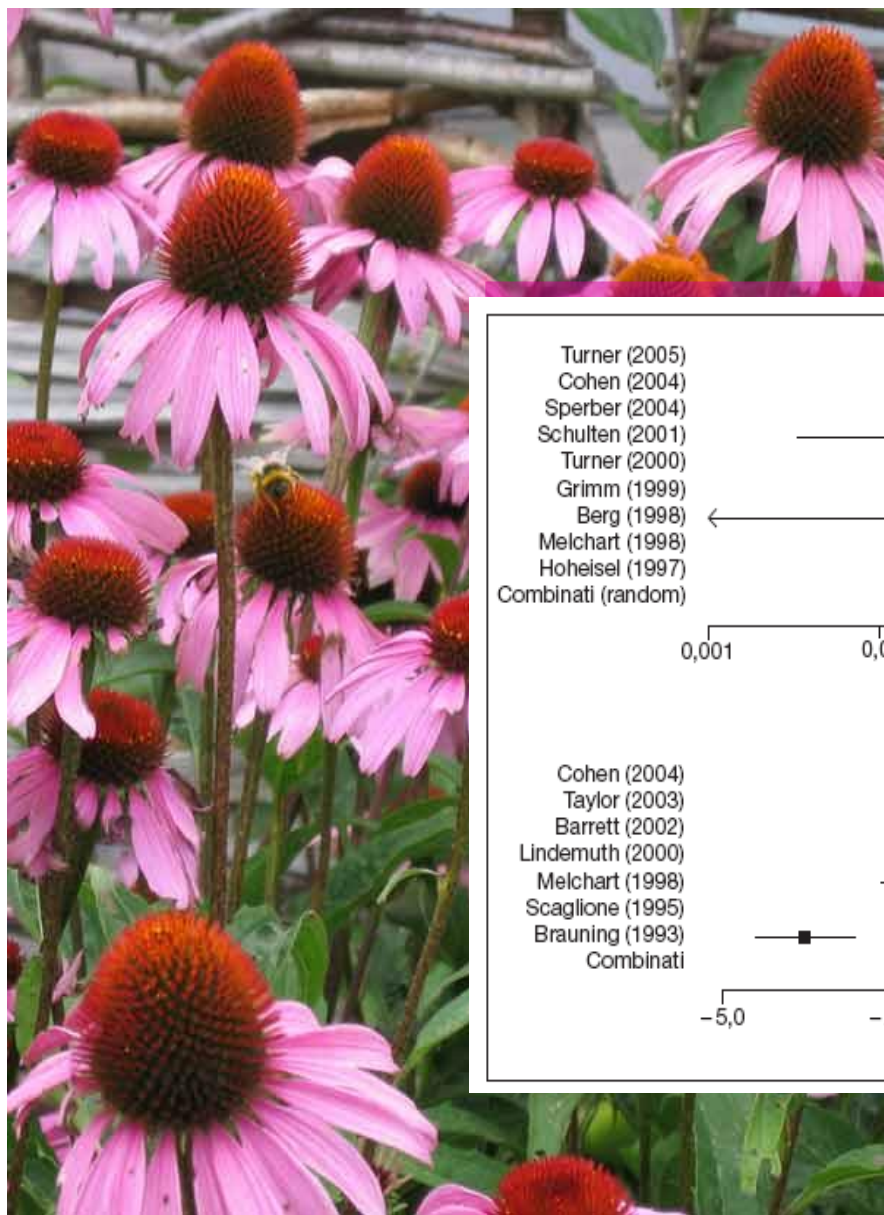


Misure previste, alimentazione, stile di vita...

Pre – COVID

- ★ Soggetti sani
- ★ Operatori sanitari
- ★ Esposti al pubblico
- ★ Deficit nutrizionali
- ★ Efficienza del sistema immunitario
- ★ Contatti
- ★ Positivi asintomatici

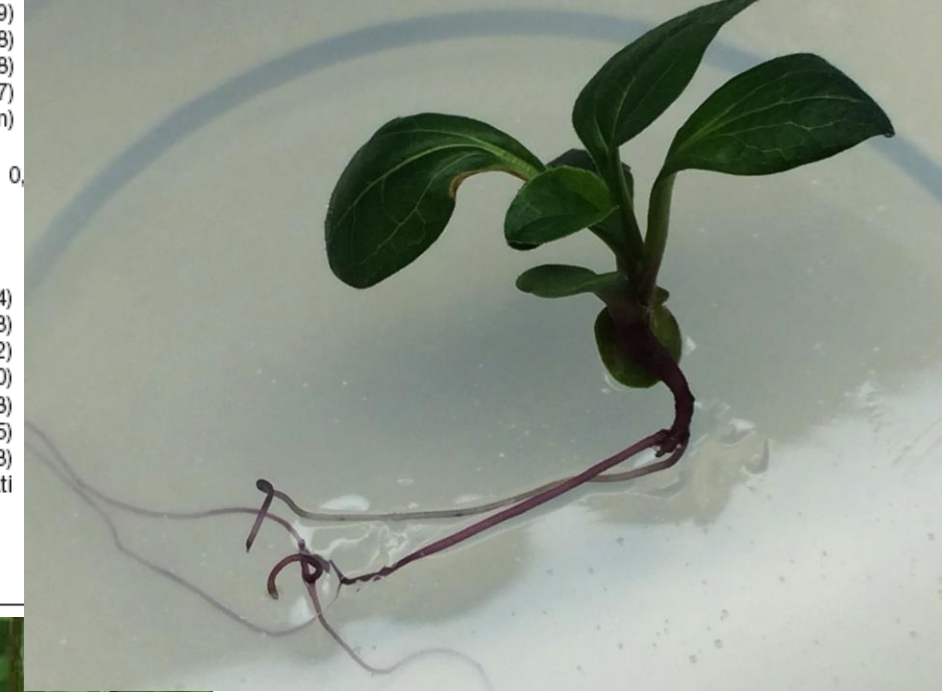
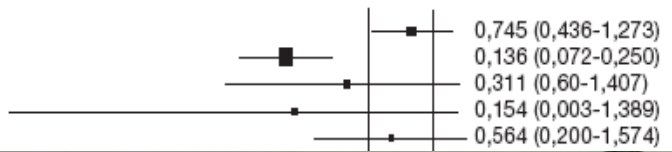




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Turner (2005)
 Cohen (2004)
 Sperber (2004)
 Schulten (2001)
 Turner (2000)
 Grimm (1999)
 Berg (1998)
 Melchart (1998)
 Hoheisel (1997)
 Combinati (random)



Cohen (2004)
 Taylor (2003)
 Barrett (2002)
 Lindemuth (2000)
 Melchart (1998)
 Scaglione (1995)
 Brauning (1993)
 Combinati

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Echinacea spp

Modalità di uso

- ★ Estratto secco di radici 300-400 mg
- ★ 1-3 cpr al giorno

Controindicazioni

- ★ Patologie autoimmuni attive
- ★ Farmaci immunosoppressori





Fabio Firenzuoli

Astragalus membranaceus

Modalità di uso

- ★ Estratto secco di radici 70 % 500 mg
- ★ 1-2 cpr tre volte al giorno

Controindicazioni

- ★ Patologie autoimmuni attive
- ★ Farmaci immunosoppressori
- ★ Farmaci anticoagulanti





Uncaria tomentosa

Modalità di uso

- ★ Corteccia estratto secco 3 % 100-500 mg/cpr
- ★ 1 cpr due-tre volte al giorno

Controindicazioni (teoriche)

- ★ Patologie autoimmuni attive
- ★ Farmaci immunosoppressori



Accelerated production of hesperidin-rich citrus pectin from waste citrus peel for prevention and therapy of COVID-19

Francesco Meneguzzo,^[a] Rosaria Ciriminna,^[b] Federica Zabini,^[a] Mario Pagliaro^[b]

Abstract: Computational studies suggest that hesperidin, a flavonoid abundant in citrus peel, binding the three main cellular receptors of SARS-CoV-2 virus can act in the prophylaxis and treatment of COVID-19. Herein we urge the uptake of hydrodynamic cavitation industrial-scale reactors based on the low cost, reliable Venturi tube for the extraction of citrus pectin rich in hesperidin (and in other bioflavonoids including naringin) by very fast processing of waste orange peel or waste lemon peel in water only. A device able to process up to 500 kg of waste peels per session, similar to the one lately deployed in Italy for hydrodynamic cavitation-assisted brewing, is capable to provide 36,000 doses of 1000 mg hesperidin per day.

Keywords: Hesperidin; COVID-19; pectin; flavonoids; hydrodynamic cavitation; IntegroPectin

Recent computational studies suggest that hesperidin, a citrus flavonoid abundant in citrus peel, binding the three main receptors of SARS-CoV-2 (Severe acute respiratory syndrome coronavirus 2) virus is a promising drug to prevent or treat the related disease COVID-19 [1,2,3,4].

In a molecular docking study, scholars in Indonesia conclude

In another study, scholars in China reached similar conclusions [2]. In detail, the team analyzed all the proteins encoded by SARS-CoV-2 genes, compared them with other coronaviruses, such as SARS-CoV and MERS-CoV, and modeled the protein structures using said structures along with those of human relative proteins (human ACE2 and type-II transmembrane serine protease enzymes) as targets to screen three databases of approved drugs. These databases were the following: the

database (including traditional anti-viral drugs) and the Food and Drug Administration screening

The molecular docking analysis showed the interface of ACE2 with RBD, leading the Chinese scholars to conclude that hesperidin, blocking the interface of ACE2 and Spike RBD

overlapping with the RBD, leading the Chinese scholars to conclude that hesperidin, blocking the interface of ACE2 and Spike RBD

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Covid-19

★ Pauci sintomatici

- ★ *Pazienti COVID*
- ★ *Cardiopatici*
- ★ *Ipertesi*
- ★ *Brochitici cronici*
- ★ *Ex fumatori*
- ★ *Diabetici*



**Cautions and Opportunities for Botanicals
in COVID-19 Patients:
A Comment on the Position of the French Agency for
Food, Environmental and Occupational Health & Safety**

Fabio Firenzuoli, MD,¹ Michele Antonelli, MD,^{1–3} Davide Donelli, MD,^{1,4,5}
Gian Franco Gensini, MD,⁶ and Valentina Maggini, MS, PhD¹

TABLE 1. RECOMMENDATIONS FOR THE USE OF SOME PLANTS OR DERIVATIVES DURING COVID-19 EVOLUTION

<i>Phase disease</i>	<i>Treatment</i>	<i>Medicinal plants</i>	<i>Therapeutic effects</i>
Healthy subjects ^a	Home therapy	<i>Echinacea</i> spp.	Immunomodulator Prevention of upper respiratory tract infections
Initial stages	Home therapy	<i>Pelargonium sidoides</i>	Anti-inflammatory Antiviral
Severe pulmonary or systemic complications	Clinical trials	Colchicine TCM	Anti-inflammatory Antiviral
Post-COVID ^b	Home therapy	<i>Astragalus membranaceus</i> <i>Curcuma longa</i>	Immunomodulator Anti-inflammatory Antifibrotic Anti-inflammatory Antioxidant Antifibrotic

^aExposed to the risk of contracting viral infections, such as physicians and health workers, but also children, elderly people, and patients with risk factors (diabetes, hypertension, cardiovascular or respiratory diseases, and cancer).


^bRisk of long-term complications such as pulmonary fibrosis, as well as cardiologic or neurologic sequelae.
COVID, coronavirus disease; TCM, Traditional Chinese Medicine.



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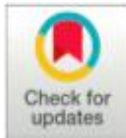
RESEARCH ARTICLE

Pelargonium sidoides radix extract EPs 7630 reduces rhinovirus infection through modulation of viral binding proteins on human bronchial epithelial cells

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 OPEN ACCESS

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Data Availability Statement: The data used to generate the figures is disclosed in the Supporting Information.

Abstract

Bronchial epithelial cells are the first target cell for rhinovirus infection. The course of viral infections in patients with acute bronchitis, asthma and COPD can be improved by oral application of *Pelargonium sidoides* radix extract; however, the mechanism is not well understood. This study investigated the *in vitro* effect of *Pelargonium sidoides* radix extract (EPs 7630) on the expression of virus binding cell membrane and host defence supporting proteins on primary human bronchial epithelial cells (hBEC). Cells were isolated from patients with severe asthma (n = 6), moderate COPD (n = 6) and non-diseased controls (n = 6). Protein expression was determined by Western-blot and immunofluorescence. Rhinovirus infection was determined by immunofluorescence as well as by polymerase chain reaction. Cell survival was determined by manual cell count after live/death immunofluorescence staining. All parameters were determined over a period of 3 days. The results show that EPs 7630 concentration-dependently and significantly increased hBEC survival after rhinovirus infection. This effect was paralleled by decreased expression of the inducible co-stimulator (ICOS), its ligand ICOSL and cell surface calreticulin (C1qR). In contrast, EPs 7630 up-regulated the expression of the host defence supporting proteins β -defensin-1 and SOCS-1, both in rhinovirus infected and un-infected hBEC. The expression of other virus interacting cell membrane proteins such as MyD88, TLR2/4 or ICAM-1 was not altered by EPs 7630. The results indicate that EPs 7630 may reduce rhinovirus infection of human primary BEC by down-regulating cell membrane docking proteins and up-regulating host defence proteins.



RESEARCH ARTICLE

Pelargonium sidoides radix extract EPs 7630 reduces rhinovirus infection through



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

05 June 2018
EMA/HMPC/444244/2015
Committee on Herbal Medicinal Products (HMPC)

European Union herbal monograph on *Pelargonium sidoides* DC and/or *Pelargonium reniforme* Curt., radix

Accepted: December 28, 2016

Published: February 1, 2019

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Data Availability Statement: The data used to generate the figures is disclosed in the Supporting

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Pelargonium sidoides

Modalità di uso

- ★ Radici estratto secco 30 mg
- ★ 1 c mattina e sera

Controindicazioni

- ★ Può interagire con gli anticoagulanti
- ★ Case report di epatopatie



Ricerca possibile...

- ★ TCM
- ★ **Idrossiclorochina / Colchicina**
- ★ *Liquirizia ...*
- ★ *Boswellia ...*
- ★ *Curcuma ...*
- ★ *Astragalo*
- ★ *Esperidina ...*



Esperidina

- * I citroflavonoidi, sono noti da tempo per le proprietà anti-infiammatorie ed anti-virali e per la capacità di regolare la risposta immunitaria.
- * E' stato dimostrato che SARS-CoV-2 utilizza l'enzima di conversione dell'angiotensina 2 (ACE2) per entrare nelle cellule dell'ospite: il virus si lega al recettore ACE2 attraverso una specifica proteina virale.
- * Uno studio computazionale ha valutato la capacità di 78 potenziali farmaci antivirali di interagire con il recettore ACE2: i modelli di screening hanno indicato l'esperidina, la molecola che meglio si interfaccia con il sito di legame tra ACE2 e SARS-CoV-2 potendo bloccare, quindi, l'ingresso del virus nelle cellule. Inoltre è in grado di inibire la secrezione di citochine pro-infiammatorie come IFN- γ , IL-2, NF- κ B, e IL-6.



- * Le prove a sostegno dell'attività delle piante medicinali (o dei loro estratti) contro i coronavirus derivano principalmente da studi di laboratorio, mentre i dati clinici sono limitati e si riferiscono soprattutto a preparati erboristici multicomponenti utilizzati nella **Medicina Tradizionale Cinese (MTC)** (Liu, Zhang, He , E Li, 2012).
- * In una revisione Cochrane pubblicata nel 2012, si è concluso che, sebbene la metodologia degli studi inclusi fosse discutibile, i rimedi erboristici della MTC in aggiunta alla medicina occidentale possono aiutare a migliorare i sintomi, la qualità della vita, l'assorbimento dell'infiltrazione polmonare e possono ridurre il dosaggio di corticosteroidi in pazienti con **SARS** (Liu et al., 2012).
- * La MTC è molto apprezzata dal governo cinese nella sua attuale campagna per contenere ed eradicare la SARS-CoV-2, e dal 1 marzo 2020, un totale di 303 studi clinici in corso volti a valutare l'efficacia e la sicurezza dei trattamenti per i pazienti con Covid-19 sono stati lanciati in Cina. Tra questi, **50 studi (16,5%) riguardano l'uso della MTC**, inclusi 14 casi (4,6%) che studiano l'effetto del **trattamento combinato con MTC e medicina occidentale**.
- * Nonostante la complessità delle formulazioni della MTC, erbe come la **Liquirizia** e l' **Astragalo** sono le piante medicinali più ricorrenti nelle varie preparazioni tradizionali utilizzate in pazienti COVID.

Hot Topic

Can Chinese Medicine Be Used for Prevention of Corona Virus Disease 2019 (COVID-19)? A Review of Historical Classics, Research Evidence and Current Prevention Programs*

LUO Hui^{1,2}, TANG Qiao-ling³, SHANG Ya-xi^{2,3}, LIANG Shi-bing^{2,3},
 YANG Ming^{2,3}, Nicola Robinson⁴, and LIU Jian-ping^{2,5}

ABSTRACT **Objective:** Since December 2019, an outbreak of corona virus disease 2019 (COVID-19) occurred in Wuhan, and rapidly spread to almost all parts of China. This was followed by prevention programs recommending Chinese medicine (CM) for the prevention. In order to provide evidence for CM recommendations, we reviewed ancient classics and human studies. **Methods:** Historical records on prevention and treatment of infections in CM classics, clinical evidence of CM on the prevention of severe acute respiratory syndrome (SARS) and H1N1 influenza, and CM prevention programs issued by health authorities in China since the COVID-19 outbreak were retrieved from different databases and websites till 12 February, 2020. Research evidence included data from clinical trials, cohort or other population studies using CM for preventing contagious respiratory virus diseases. **Results:** The use of CM to prevent epidemics of infectious diseases was traced back to ancient Chinese practice cited in Huangdi's Internal Classic (Huang Di Nei Jing) where preventive effects were recorded. There were 3 studies using CM for prevention of SARS and 4 studies for H1N1 influenza. None of the participants who took CM contracted SARS in the 3 studies. The infection rate of H1N1 influenza in the CM group was significantly lower than the non-CM group (relative risk 0.38, 95% confidence interval 0.24–0.62; $n=4$). For prevention of COVID-19, 28 provinces in China issued CM programs. The main principles of CM use were to tonify qi to protect from external pathogens, disperse wind and discharge heat, and resolve dampness. The most frequently used herbs included *Radix astragal* (Huangqi), *Radix glycyrrhizae* (Gancao), *Radix asopahrnikovae* (Fangfeng), *Rhizoma Atractylodes Macrocephalae* (Baizhu), *Lonicerae Japonicae Flos* (Jinyinhua), and *Fructus forsythiae* (Lianqiao). **Conclusion:** Based on historical records and human evidence of SARS and H1N1 influenza prevention, Chinese herbal formula could be an alternative approach for prevention of COVID-19 in high-risk population. Prospective, rigorous population studies are warranted to confirm the potential preventive effect of CM.

KEYWORDS Chinese medicine, corona virus disease 2019 (COVID-19), prevention program, clinical evidence, review

In December 2019, a pneumonia associated with the corona virus disease 2019 (COVID-19) emerged in Wuhan, Hubei Province, China.^[1] It is highly contagious and has quickly spread to many other parts of China and some other countries within 1 month since the first report emerged. As of February 11, 2020, 44,653 cases of confirmed infections and 1,113 deaths have been reported in Chinese mainland.^[2] Outside of China, there had been 395 confirmed cases and 1 death from 24 countries were reported as of February 11, 2020.^[3] The outbreak of COVID-19 raised intense attention not only within China but internationally.^[4] On 20 January 2020, the Chinese government added it to the Notifiable Communicable Disease List and gave the highest priority to its prevention and treatment.^[5] On 30 January 2020, the World Health Organization

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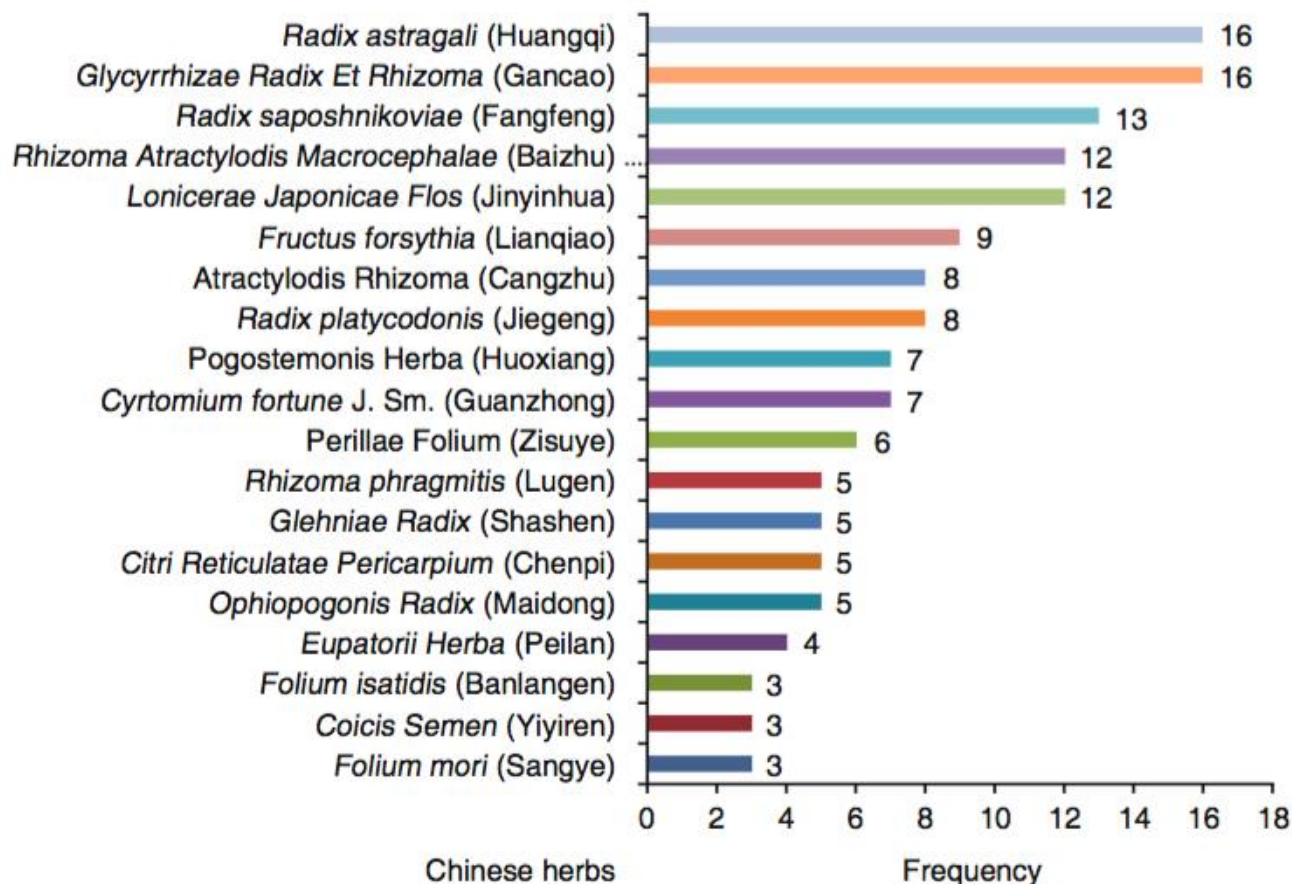


Figure 2. Frequency of Commonly Used Herbs in Preventive Formulae for COVID-19

Glycyrrhiza glabra



- * **Pianta tradizionalmente usata come espettorante e lassativo**

- * **In realtà**
 - Gastroprotettore
 - Antiinfiammatorio utile nei pazienti con artriti croniche

- * **Potenzia l'efficacia di alcuni farmaci**

– Cortisonici	ipertensione, ipo K
– Digitalici	tossicità
– Diuretici	ipopotassiemia
– Antiaritmici-Lassativi	rschio di aritmie



POST-COVID

- ★ Ansia
- ★ Insonnia
- ★ Stanchezza
- ★ Dolori muscolari
- ★ Sovrappeso
- ★ Intolleranza glucidica
- ★ ...





Review

Effects of lavender on anxiety: A systematic review and meta-analysis

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ARTICLE INFO

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Anxiety

ABSTRACT

Background: Anxiety is one of the uprising psychiatric disorders of the last decades and lavender administration has been traditionally suggested as a possible treatment. The objective of this review is to assess the efficacy of lavender, in any form and way of administration, on anxiety and anxiety-related conditions.

Methods: The PRISMA guidelines were followed. Retrieved data were qualitatively and quantitatively synthesized. Randomized Controlled Trials (RCTs) and Non-Randomized Studies (NRSs) which investigated the efficacy of lavender, in any form and way of administration, on patients with anxiety, involved in anxiety-inducing settings or undergoing anxiety-inducing activities, compared to any type of control, without language restrictions, were identified through electronic database searches. Medline via PubMed, Scopus, Web of Science, Cochrane Library, EMBASE, and Google Scholar were systematically searched. All databases were screened up to November 2018. Risk of bias was assessed with the Cochrane risk-of-bias tool and the following domains were considered: randomization, allocation sequence concealment, blinding, incomplete outcome data, selective outcome reporting, and other biases.

Results: 65 RCTs (7993 participants) and 25 NRSs (1200 participants) were included in the qualitative synthesis and 37 RCTs (3964 participants) were included in the quantitative synthesis. Overall, the qualitative synthesis indicated that 54 RCTs and 17 NRSs reported at least a significant result in favor of lavender use for anxiety. The quantitative synthesis showed that lavender inhalation can significantly reduce anxiety levels measured with any validated scale (Hedges' $g = -0.73$ [95% CI -1.00 to -0.46], $p < 0.00001$, 1682 participants), as well as state anxiety (Spielberger's state-trait anxiety inventory (STAI)-State mean difference = -5.99 [95% CI -9.39 to -2.59], $p < 0.001$, 901 participants) and trait anxiety (STAI-Trait mean difference = -8.14 [95% CI -14.44 to -1.84], $p < 0.05$, 196 participants). Lavender inhalation did not show a significant effect in reducing systolic blood pressure as a physiological parameter of anxiety. A significant effect in diminishing anxiety levels was also found in favor of the use of oral Silexan® 80 mg/die for at least 6 weeks (Hamilton Anxiety Scale mean difference = -2.90 [95% CI -4.86 to -0.95], $p = 0.004$, 1173 participants; Zung Self-rating Anxiety Scale mean difference = -2.62 [95% CI -4.84 to -0.39], $p < 0.05$, 451 participants) or of the administration of massage with lavender oil (Hedges' $g = -0.66$ [95% CI -0.97 to -0.35], $p < 0.0001$, 448 participants).

Discussion: The most important limitation of this review is the low overall quality of available studies on the

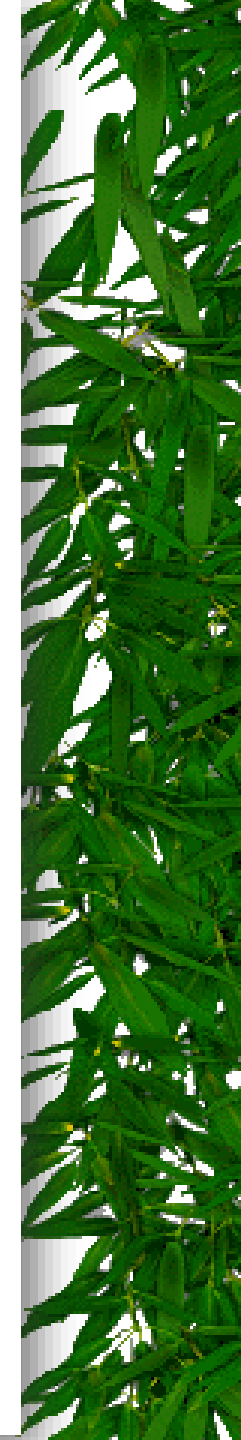
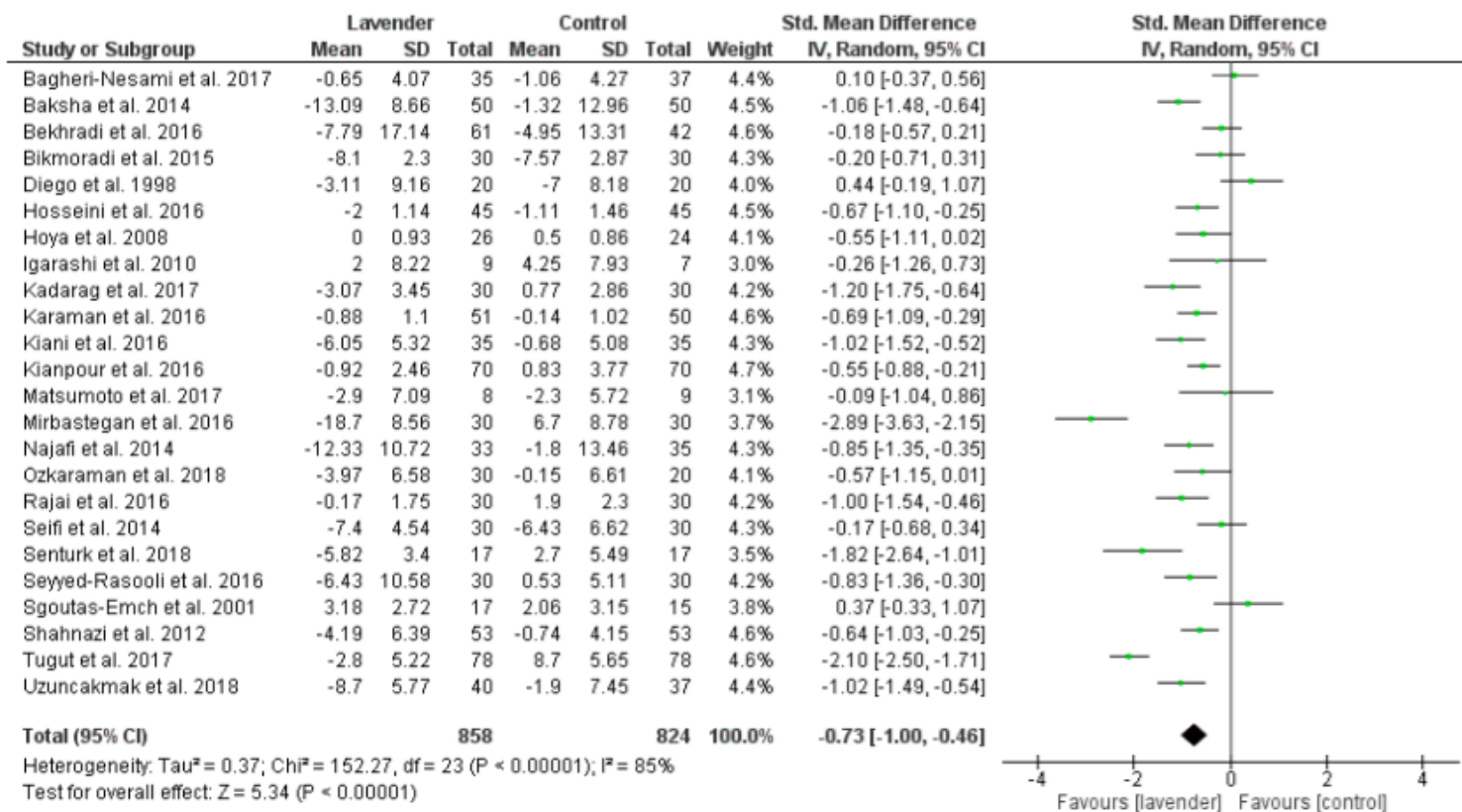


Figure 7: Forest plot referred to the meta-analysis about effects of inhalation of lavender essential oil on anxiety levels (pre-post intervention variations assessed with any validated scale) regardless of comparison type.

Description: Anxiety levels (measured with any validated scale) mean changes-from-baseline after intervention (lavender essential oil inhalation) compared to any comparison type. Means and standard deviations are reported in columns and a random-effect model was adopted to better estimate overall size effects.



Donelli D, Antonelli M; Bellinazzi; C, Gensini GF; Firenzuoli F.
 .Phytomedicine, 2019.

Lavanda

Modalità d'uso

- ★ *Lavandula angustifolia*
- ★ Olio essenziale
- ★ 80 mg/die

Avvertenze

- ★ Può aumentare l'efficacia BZD





Fabio Firenzuoli



Valeriana officinalis

- ★ **Modalità d'uso**

- ★ Radici

- ★ estratto secco FU 200-400 mg

- ★ 1-2 cpr coricandosi

- ★ **Avvertenze**

- ★ Potenzia l'effetto dei barbiturici e BZD





Fabio Firenzuoli



Panax Ginseng

Modalità d'uso

- ★ Radici
- ★ Estratto secco
- ★ qb 10-30 mg ginsenosidi/die

Controindicazioni

- ★ Ipertensione arteriosa
- ★ Farmaci anticoagulanti



EFFECTS ON HEALTH OF POMEGRANATE JUICE: AN UMBRELLA REVIEW

MICHELE ANTONELLI¹, DAVIDE DONELLI², FABIO FIRENZUOLI²

¹ TERME DI MONTICELLI, PARMA & INSTITUTE OF PUBLIC HEALTH, UNIVERSITY OF PARMA
² CERFIT, CAREGGI UNIVERSITY HOSPITAL, FLORENCE

RESEARCH AIM

To evaluate whether Pomegranate (*Punica granatum*) Juice (PJ) consumption can have any beneficial effect on health.

METHODS

PubMed, EMBASE, Web of Science, Cochrane Library, and Google Scholar were searched for relevant systematic reviews.

Sources were screened up to December 23rd, 2019.

RESULTS

408 articles were found and 14 systematic reviews were included.

- **PJ DOSE:** from 50 to 500 ml/day
- **DURATION OF PJ ADMINISTRATION:** from 1 week to 3 months.
- **QUALITY OF REVIEWS:** fair-to-good (NIH tool)
- **QUALITY OF CLINICAL TRIALS:** unclear-to-high risk of bias (Cochrane tool)

POTENTIAL BENEFITS OF PJ SUPPLEMENTATION:

- Improve athletic performances and post-exercise recovery
(fair clinical evidence)
- Lower blood pressure
(weak clinical evidence)
- Ameliorate glucose levels and insulin resistance
(unclear clinical evidence)
- Attenuate bone loss in rheumatic diseases
(preliminary clinical evidence)
- Protect memory in elderly subjects
(preliminary clinical evidence)
- Help to fight some infectious diseases
(preclinical data)





Contents lists available at ScienceDirect

Complementary Therapies in Medicine

journal homepage: www.elsevier.com/locate/ctim



Ginseng integrative supplementation for seasonal acute upper respiratory infections: A systematic review and meta-analysis

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ARTICLE INFO

Keywords:

Ginseng

Flu

Cold

Complementary medicine

Systematic review

Meta-analysis

ABSTRACT

Background: The aim of the review was to assess whether ginseng can be a useful supplementation for seasonal acute upper respiratory infections (SAURIs).

Methods: All clinical studies investigating ginseng efficacy for the treatment or prevention of SAURIs were included in the review. Medline, EMBASE, Web of Science, Scopus, Cochrane Library, Google Scholar were systematically screened for relevant articles up to May 26th, 2020. The risk of bias was assessed with the Cochrane tool (RoB 2).

Results: Nine articles (describing ten trials about *P. ginseng* or *P. quinquefolius*) were included in the review. Evidence globally indicated some useful activity of intervention when administered in adjunct to influenza vaccination. The results of our quantitative synthesis suggested a significant effect on SAURIs incidence (RR = 0.69 [95 % C.I. 0.52 to 0.90], $p < 0.05$), as well as a significant reduction of their duration if only studies with healthy individuals were included in the analysis (MD = -3.11 [95 % C.I. -5.81 to -0.40], $p < 0.05$). However, the risk of bias was high-to-unclear for most included trials, and publication bias couldn't be excluded.

Discussion: Limitations of existing evidence don't allow to draw conclusions on the topic. Nevertheless, it is not excluded that ginseng supplementation in adjunct to influenza vaccination and standard care might be useful for SAURIs prevention and management in healthy adult subjects, but further high-quality trials are needed to support this hypothesis.

Other: This research was not funded. The protocol was registered in PROSPERO under the following code: CRD42020156235.

Depressione e Covid-19: 200 mila persone depresse in più



PSICHIATRIA | REDAZIONE DOTNET |
15/06/2020 13:52

L'isolamento sociale dovuto alla pandemia da Coronavirus ha portato ad un aumento di disturbi quali ansia e depressione, tanto che l'OMS parla di un'emergenza Covid-19 che riguarda anche la salute mentale

L'Organizzazione Mondiale della **Sanità ritiene che l'emergenza Coronavirus riguardi anche la salute mentale**. *"L'emergenza sanitaria prolunga la sua ombra sul benessere psicologico delle persone, con effetti a breve e a lungo termine i cui esiti si potranno vedere anche nei prossimi anni"*, spiega **Claudio Mencacci (nella foto)**, Direttore Dipartimento

Neuroscienze e Salute Mentale, ASST Fatebenefratelli-Sacco, Milano. *"Nell'arco di qualche mese si è verificato, infatti, un aumento dei sintomi depressivi nella popolazione a causa della concomitanza di più fattori di rischio quali distanziamento sociale, solitudine, paura del contagio ed evitamento, ma prevediamo anche una crescita delle depressioni dovuta da un lato alle conseguenze di una serie di lutti complicati e dall'altro dall'imminente crisi economica. Basso reddito e aumento della disoccupazione determineranno, secondo diversi studi, un rischio 2-3 volte superiore di ammalarsi. In particolare, la disoccupazione generata dalla crisi economica potrebbe determinare un aumento dai 150-200.000 casi di depressione, pari al 7% delle persone depresse. Con queste prospettive il numero di depressi si appresta a raggiungere quello di malati di diabete in Italia, con un maggior impatto della depressione sia a livello economico sia sulla qualità di vita"*.

La depressione è riconosciuta dall'OMS come **prima causa di disabilità a livello mondiale e riguarda circa 3 milioni** di italiani, di cui circa 1 milione soffre della forma più grave, la depressione maggiore.

Fabio Firenzuoli



Depressione e Covid-19: 200 mila persone depresse in più



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COMMON ST. JOHNSWORT
Hypericum perforatum L.
ST. JOHNSWORT FAMILY

Interazione tra farmaci - Farmacocinetica

INDUZIONE ENZIMATICA CYP450

THE LANCET • Vol 355 • February 12, 2000

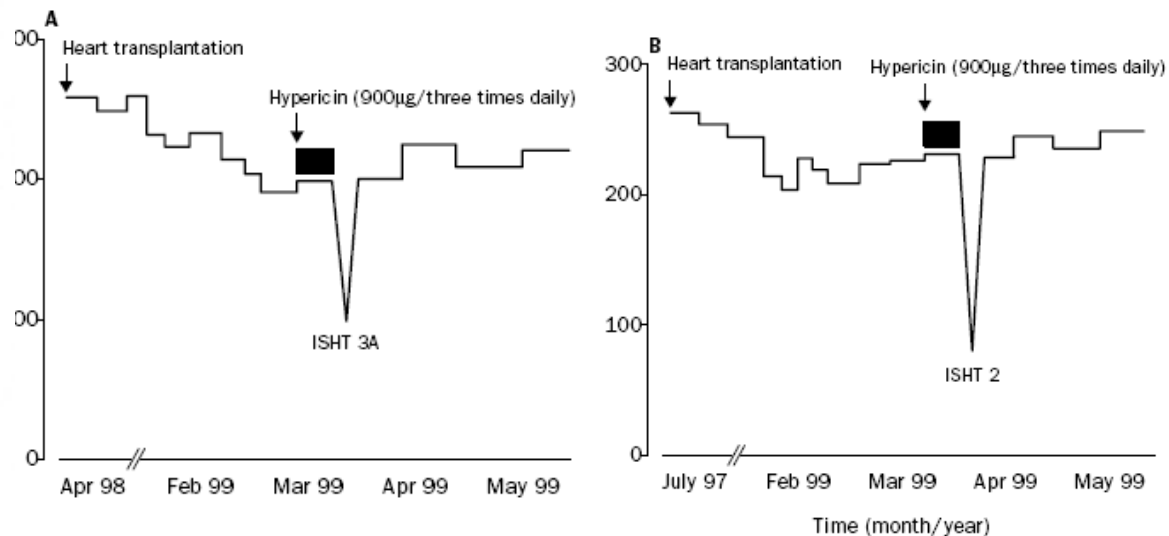


COMMON ST. JOHN SWORT
Hypericum perforatum L.
ST. JOHN SWORT FAMILY

Acute heart transplant rejection due to Saint John's wort

*Frank Ruschitzka, Peter J Meier, Marko Turina,
Thomas F Lüscher, Georg Noll*

We report here acute rejection in two transplant patients due to a metabolic interaction of St John's wort and ciclosporin.





Ministero della Salute

Il documento:

- nelle prime tre colonne con sfondo grigio riporta l'Allegato 1 al DM 9 luglio 2012 sulle "Sostanze e preparati vegetali ammessi" come aggiornato da ultimo con Decreto 27 marzo 2014;
- nella quarta colonna con sfondo bianco, che non è parte integrante del predetto DM, riporta le "Linee guida ministeriali di riferimento per gli effetti fisiologici" aggiornate secondo il parere della Commissione Unica per la Dietetica e la Nutrizione (CUDN) del 18 dicembre 2013.

MINISTERO DELLA SALUTE DECRETO 9 luglio 2012 Disciplina dell'impiego negli integratori alimentari di sostanze e preparati vegetali (G.U. 21-7-2012 serie generale n. 169)	LINEE GUIDA MINISTERIALI DI RIFERIMENTO PER GLI EFFETTI FISILOGICI applicabili in attesa della definizione dei claims sui "botanicals" a livello comunitario
ALLEGATO 1 aggiornato con Decreto 27 marzo 2014	<small>Gli effetti fisiologici sono volti ad ottimizzare le funzioni dell'organismo nell'ambito dell'omeostasi, secondo il modello definito al riguardo dal Consiglio d'Europa [Homeostasis, a model to distinguish between foods (including food supplements) and medicinal products – 07.02.2008].</small>

CROCUS SATIVUS L.

stigmata

Funzione digestiva. Normale tono dell'umore. Contrasto dei disturbi del ciclo mestruale.

Fabio Firenzuoli





- **Meta-analysis**

Saffron (*Crocus sativus* L.) and major depressive disorder: a meta-analysis of randomized clinical trials

Heather Ann Hausenblas¹, Debbie Saha², Pamela Jean Dubyak², Stephen Douglas Anton²

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2. Department of Aging and Geriatric Research, University of Florida, Gainesville, Florida 32611, USA

DOI: 10.3736/jintegrmed2013056

Hausenblas HA, Saha D, Dubyak PJ, Anton SD. Saffron (*Crocus sativus* L.) and major depressive disorder: a meta-analysis of randomized clinical trials. *J Integr Med.* 2013; 11(6): 377-383.

Received May 28, 2013; accepted October 15, 2013.

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Correspondence: Heather Ann Hausenblas, PhD, Associate Professor; E-mail: hhausen@ju.edu



Table 1 Summary of clinical trials examining effects of saffron supplementation on patients with major depression

First author (year)	Design	Participants	Treatment group	Control/ comparison group	Main results	Number of adverse events (saffron vs control/ comparison group)	ES data
Akhondzadeh (2005) ^[19]	Six-week double-blind, placebo-controlled	<i>N</i> = 35; <i>M</i> age = 36.3	Saffron capsule (30 mg/d) (stigma)	Placebo capsule	Saffron had better outcome on HDRS	18 vs 10	ES = 1.51, CI: 0.81-2.21, <i>Z</i> value = 4.22, <i>P</i> < 0.001
Akhondzadeh Basti (2007) ^[20]	Six-week double-blind randomized	<i>N</i> = 38; <i>M</i> age = 34.8	Saffron capsule (30 mg/d) (petal)	Fluoxetine (20 mg/d)	Saffron and fluoxetine similarly effective in improving HDRS	18 vs 41	ES = -0.05, CI: -0.67-0.56, <i>Z</i> value = -0.36, <i>P</i> = 0.86
Moshiri (2006) ^[21]	Six-week double-blind, placebo controlled, randomized	<i>N</i> = 36; <i>M</i> age = 35.65	Saffron capsule (30 mg/d) (petal)	Placebo capsule	Saffron had better improvement on HDRS scores than control	29 vs 13	ES = 1.75, CI: 0.97-2.51, <i>Z</i> value = 4.45, <i>P</i> < 0.001
Noorbala (2005) ^[22]	Six-week double-blind randomized	<i>N</i> = 38; <i>M</i> age = 36.9	Saffron capsule (30 mg/d) (stigma)	Capsule of fluoxetine (20 mg/d)	Both groups similarly effective in treating depression	16 vs 34	ES = -0.15, CI: -0.73-0.50, <i>Z</i> value = 0.43, <i>P</i> = 0.71
Akhondzadeh (2004) ^[23]	Six-week double-blind randomized trial	<i>N</i> = 30; <i>M</i> age = 34	Saffron capsule (30 mg/d)	Imipramine (100 mg/d)	Saffron and imipramine similarly effective in improving HDRS	18 vs 33	ES = -0.33, CI: -1.05-0.38, <i>Z</i> value = -0.90, <i>P</i> = 0.38

N: number of participants who completed the trial; *M* age: mean age of the participants; CI: 95% confidence intervals; HDRS: Hamilton Depression Rating Scale; positive effect size (ES): saffron group performed better than control/comparison group.



Satiereal, a *Crocus sativus* L extract, reduces snacking and increases satiety in a randomized placebo-controlled study of mildly overweight, healthy women

Bernard Gout^{a,*}, Cédric Bourges^b, Séverine Paineau-Dubreuil^b

^aBiomedical and Global Clinical Solutions, Parc Technologique du Canal, 26 rue Hermès, 31520 Ramonville Saint-Agne, France

^bNutraveris, Parc Technologique du Zoopôle, 18c rue du Sabot, 22440 Ploufragan, France

Received 18 January 2010; revised 14 April 2010; accepted 21 April 2010



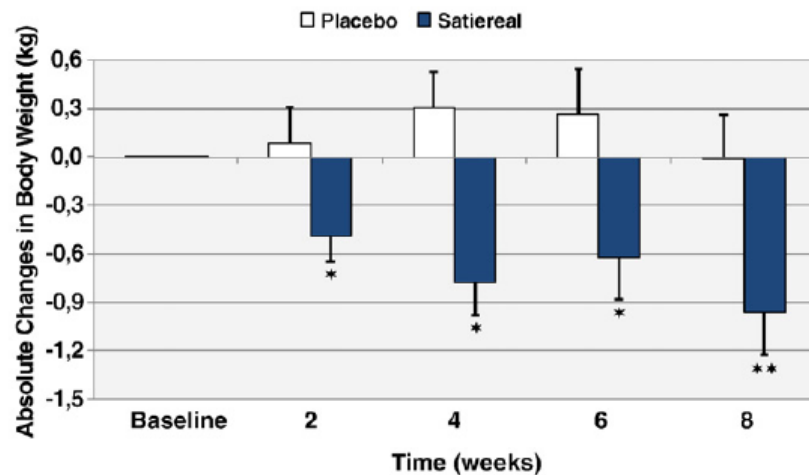
Satiereal, a *Crocus sativus* L extract, reduces snacking and increases satiety in a randomized placebo-controlled study of mildly overweight, healthy women

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Received 18 January 2010; revised 14 April 2010; accepted 21 April 2010



Fabio Firenzuoli



Dismetabolismi

Review

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(wileyonlinelibrary.com) DOI 10.1002/jsfa.6458

A systematic review of *Gymnema sylvestre* in obesity and diabetes management

Ramesh Pothuraju,* Raj Kumar Sharma, Jayasimha Chagalamarri, Surender Jangra and Praveen Kumar Kavadi

Abstract

The prevalence of obesity is associated with many health-related problems. Currently, more than 300 million people are considered to be obese. According to the World Health Organization (WHO), by 2030, 87 and 439 million people will be affected in India and the world, respectively. Today, herbal medicines are gaining interest in the treatment of obesity and diabetes, because of their minimal side effects. Gymnemic acid – an active component isolated from *Gymnema sylvestre* – has anti-obesity and antidiabetic properties, decreases body weight and also inhibits glucose absorption. Several components extracted from *Gymnema* prevent the accumulation of triglycerides in muscle and liver, and also decrease fatty acid accumulation in the circulation. In this paper, an attempt has been made to review the effects of various extracts from *Gymnema sylvestre* in the regulation of carbohydrate and lipid metabolism in both animal and clinical studies.

© 2013 Society of Chemical Industry

Keywords: *Gymnema sylvestre*; obesity; diabetes; metabolism

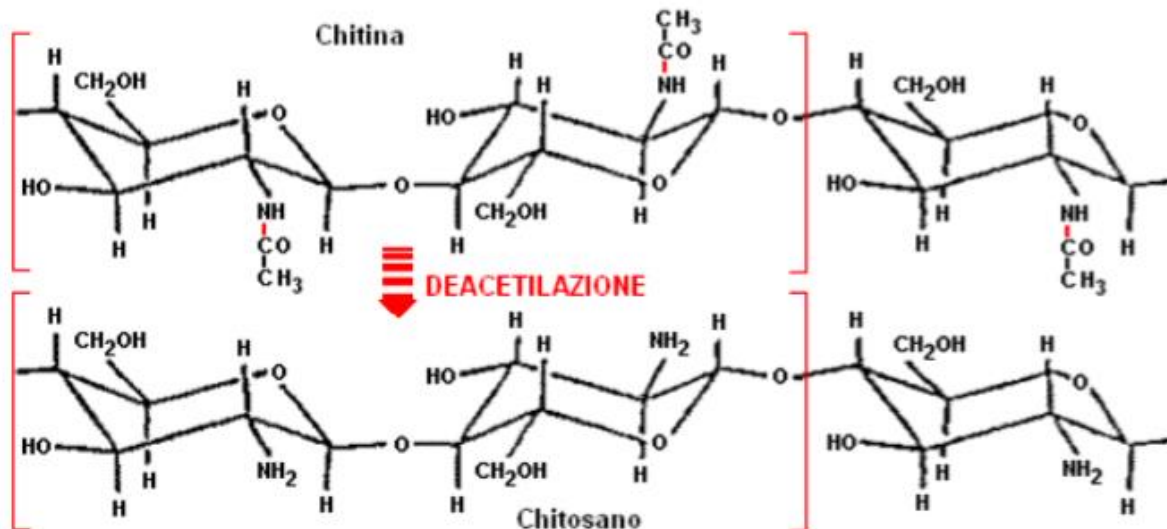


Il **chitosano** è un polisaccaride cationico lineare composto da D-glucosamina e N-acetil-D-glucosamina collegate in modo casuale (1-4) prodotte commercialmente dalla deacetilazione della chitina. Il peso molecolare del chitosano nelle preparazioni commerciali varia da 3.800 a 20.000 Da. Il chitosano è insolubile in acqua. Il grado di deacetilazione varia dal 60 al 100% nelle preparazioni commerciali.

La **chitina** un polisaccaride tra i più diffusi in natura: consiste in un glicano composto da unità β 1-4 a unità di N-acetilglucosamina, componente dell'esoscheletro di crostacei e insetti nonché della parete cellulare dei funghi. Più spesso è ottenuta dai gusci di granchi e gamberi.

I **COS Chito-Oligosaccaridi (COS)** sono derivati del chitosano (polimeri policationici composti principalmente da unità di glucosamina) che possono essere prodotti sia tramite idrolisi enzimatica che chimica dal chitosano.

Recentemente, queste sostanze sono state oggetto di un aumento di attenzione da parte dei ricercatori nonché dei clinici nonché delle aziende produttrici di farmaci, integratori e cosmetici.



EFSA

Relativamente ai claims sulla salute del chitosano si è invece espressa l' **EFSA** (*European Food Safety Authority*), che ne ha appunto valutate le attività biologiche e salutistiche, riconosciute e validate dal gruppo dei suoi esperti scientifici, i quali ritengono il chitosano costituente alimentare, oggetto delle indicazioni sulla salute, sufficientemente caratterizzato.

Cinque studi sugli animali e uno studio sull'uomo relativo agli effetti del chitosano sui lipidi nel sangue fornendo dati per la fondatezza scientifica dell'indicazione.

Gli esperti dell' EFSA hanno valutato la revisione sistematica della **Cochrane collaboration (Jull et al., 2008)** relativa agli effetti del chitosano sui lipidi del sangue e ha incluso l'unico studio di intervento umano presentato per la fondatezza scientifica dell'indicazione.

Il gruppo di esperti scientifici ha osservato che il consumo di chitosano ha mostrato un piccolo ma statisticamente significativo effetto sulla riduzione sia delle concentrazioni totali (combinando cinque studi) che del colesterolo LDL (combinando due studi), nessun effetto è stato osservato sulle concentrazioni di colesterolo HDL.

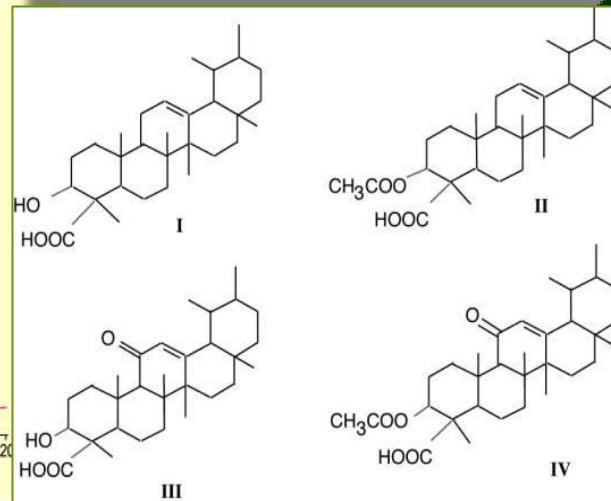
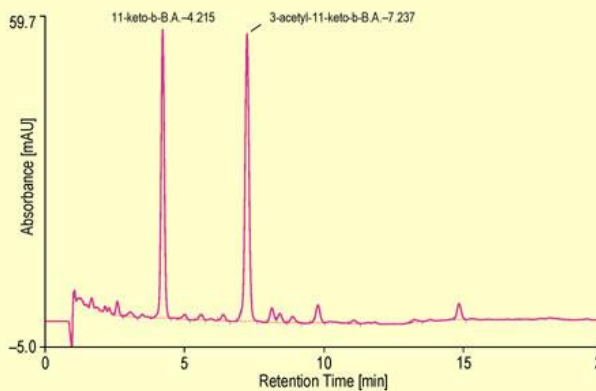
Concludono **che è stato stabilito un rapporto di causa ed effetto tra il consumo di chitosano e il mantenimento delle normali concentrazioni di colesterolo LDL nel sangue.**

La seguente formulazione riflette le prove scientifiche: "Il chitosano può contribuire a mantenere normali livelli di colesterolo nel sangue".

Boswellia serrata



Determination of Boswellic Acids
in Boswellia Extracts—250 nm



Boswellia serrata resina

- ★ Una recente revisione Cochrane ha analizzato gli effetti delle terapie a base di erbe nell'osteoartrosi (OA).
- ★ Gli Autori riportano un'elevata evidenza che la Boswellia serrata migliora il dolore e la funzionalità nei pazienti affetti da osteoartrite

CameroN M, Chrubasik S. Oral herbal therapies for treating osteoarthritis. Cochrane Database Syst Rev 2014; 5: CD002947.

Modalità di assunzione

Resina ES: 200-1000 mg pro dose

Controindicazioni: non conosciute





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