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| General Review | Therapeutics |
| 1 | Artesunate, Cimigenoside, Astragaloside, Andrographolide, Crocin, Celastrol, Betulin, Eucalyptus oil, Baicalin, Naringin, Icariin, Total flavonoids, Quercetogetin, Quercetin, Houttuynin, Curcumin, Resveratrol, Chrysophanol, Acetylshikonin, Magnolia fargesii, Sodium tanshinone IIA sulfonate, Salidroside, Ophiocordyceps sinensis, Stemonine, Matrine |
| 2 | Astragali radix, Atractyloclis lancea rhizoma, Ginseng radix, Angelicae radix, Bupleuri radix, Zizyphi fructus, Aurantii nobilis pericarpium, Glycyrrhizae radix, Cimicifugae rhizoma, Zingiberis rhizome. These components are part of the Japanese herbal Kampo medicine known as Hochuekkito (TJ-41) |
| 3 | Mallow tea, Nigella, Honey, Mint tea, Sage tea, Rosehip, Thyme tea, Lemon balm tea, Green tea |
| 4 | Fritillaria thunbergii, Prunus armeniaca, Platycodon grandiflorus, Scutellaria baicalensis, Ophiopogon japonicus, Houttuynia cordata, Salvia miltiorrhiza, Glycyrrhiza uralensis, Tussilago farfara, Magnolia officinalis |
| 5 | Ginseng, Glycyrrhiza, Schisandra, Sophora, Astragalus, Angelica, Polygonatum, Lycium |
| 6 | |  | | --- | | Adenostemma lavenia, Apium graveolens (Celery), Centella asiatica, Cosmos caudatus, Muntingia calabura, Zingiber officinale (Red Ginger) | |
| 7 | Ginger, Cinnamon, Saffron, Cardamom, Galangal. The above are ingredients of Compound Honey Syrup. |
| 8 | Zataria multiflora, Thymus vulgaris, Glycyrrhiza glabra, Crocus sativus, Nepeta bracteata, Hyssopus officinalis |
| 9 | Curcuma longa (Turmeric), Zingiber officinale (Ginger), Panax ginseng, Astragalus membranaceus, Cordyceps sinensis, Glycyrrhiza glabra (Licorice), Ephedra sinica, Radix platycodonis, Morus alba, Scutellaria baicalensis, Coptis chinensis |
| 10 | Acacia farnesiana, Acacia leucophloea, Acacia nilotica, Acacia torta, Acalypha indica, Adhatoda vasica, Ailanthus excelsa, Ailanthus malabarica, Althaea officinalis, Allium cepa, Amorphophallus campanulatus, Apium graveolens, Atropa acuminate, Brassica nigra, Boswellia serrata, Calotropis gigantean, Castaneae folium, Cassia sophera, Chelidonium majus, Cimicifuga racemosa, Clitoria ternatea, Coleus amboinicus, Convolvulus pluricaulis, Datura stramonium, Dorema ammoniacum, Echinacea purpurea, Elittaria cardamomum, Emblica officinalis, Ephedra sinica, Eugenia caryophyllata, Euphorbia hirta, Foeniculum vulgare, Glycyrrhiza glabra, Gonoderma lucidum, Hederae helix, Inula helenium, Iris germanica, Lactuca virosa, Laretia acaulis, Malva sylvestris, Matricaria recutita, Melilotus indica, Mentha heplocalyx, Ocimum sanctum, Parthenium integritolium, Prunus armenica, Pimpinella anisum, Piper cubeba, Piper longum, Plantago ovata, Polygala sibirica, Serenoa repens, Seutellaria baicaleneis, Sida cordifolia, Solanum trilobatum, Solanum xanthocarpum, Symphytum officinale, Taxus baccata, Trachyspermum ammi, Trifolium pretense, Turnera aphrodisiaca, Tussilago farfara, Ulmus fulva, Verbena officinalis, Viola tricholor, Withania somnifera, Yucca gloriosa, Zanthoxylum budrunga, Zingiber officinale, Zanthoxylum oxyphyllum |
| 11 | Eriodictyol, Luteolin, Quercetin, Kaempferol, Mitraphylline, Asperuloside, Eugenol, Sakuranetin, Kuwanon G, Naringin, Apigenin, Extracts from Astragalus membranaceus, Boerhavia procumbens, Ocimum gratissimum, Punica granatum, Siegesbeckia glabrescens, Callicarpa japonica, and others, Several polyphenols from green tea (epicatechin, epigallocatechin, epicatechin gallate, epigallocatechin gallate), Resveratrol |
| 12 | Xiaoqinglong decoction (XQLD): Ephedrae Herba (Ma Huang), Asari Radix et Rhizoma (Xi Xin), Glycyrrhizae Radix et Rhizoma (Gan Cao), Zingiberis Rhizoma (Gan Jiang), Pinelliae Rhizoma (Ban Xia), Schisandrae Chinensis Fructus (Wu Wei Zi), Paeoniae Radix Alba (Bai Shao), Ramulus Cinnamomi (Gui Zhi) |
| 13 | Shufeng Jiedu (SFJD): Reynoutria japonica (Japanese Knotweed), Forsythia suspensa (Weeping Forsythia), Isatis tinctoria (Indigo Woad), Bupleurum chinense (Chinese Thoroughwax), Patrinia scabiosifolia (Yellow Flowered Valerian), Verbena officinalis (Vervain), Phragmites australis (Common Reed), Glycyrrhiza uralensis (Chinese Liquorice) |
| 14 | Yihuo Huatan Formula (YHF): Quercetin, Kaempferol, Luteolin, Stigmasterol, Baicalein, 7-O-methylisomucronulatol, Ellagic acid |
| 15 | Astragalus membranaceus, Panax ginseng, Cordyceps sinensis |
| 16 | Huangqi, Baizhu, Dangshen, Fuling, Wuweizi, Astragalus membranaceus, Atractylodes macrocephala, Codonopsis pilosula, Poria cocos, Schisandra chinensis |
| 17 | 20-S-ginsenoside Rh1, astragaloside IV, icariin, nobiletin, paeonol |
| 18 | Buzhongyiqi granule (renshen, huangqi, baizhu, danggui, chenpi, fangfeng, shenma, fuling, yuzhu, shashen), Naqitongluo decoction (huangqi, shanzhuyu, buguzhi, chenxiang, ganjiang, xixin, wuweizi, jiegeng, tanglizi, taoren, chuanxiong, houpo, chenpi), Yiqijianpi granules (dangshen, baizhu, fuling, huaishanyao, chenpi, shugeng, zhigancao), Sijunzitang and Jinkuishenqiwan decoction (rensheng, fuling, baishu, gancao, guizhi, shudihuang, shanzhuyu, shanyao, danpi, zhexie, zhifupian), Yiqigubiao pill (dang shen, fuxiaomai, baizhu, banxia, chenpi, zisu, fuling, fangfeng, yiyiren, kuandonghua, huangqin, chuanbeimu, pipaye), Suzijiangqitang granule (suzi, banxia, danggui, qianhu, houpo, rougui, suye, zhigancao), Yufeining granule (dangshen, huangqi, baishu, fangfeng, huangjing, shanzhuyu, wuweizi, hetaorou, tusizi, bajitian, gualou, fabanxia, zhebeimu, dangshen, taoren), Yupingfeng granules (huangqi, baizhu, fangfeng), Jianpibushenhuatan decoction (dangshen, huanqgi, zishuzi, zishiying, maozhucao, fuling, zhibanxia, chenpi, baizhu, taoren, xinren, shudi, dilong), Effective compound combination (ECC; 20-S-ginsenoside Rh1, astragaloside, icariin, nobiletin, paeonol) |
| 19 | Arctium lappa, Plantago major, Mikania glomerata Spreng, Equisetum arvense |
| 20 | Arctium lappa, Plantago major, Mikania glomerata Spreng, Equisetum arvense |
| 21 | Poria cocos, Citrus unshiu, Codonopsis pilosulae, Atractylodes macrocephala, Glycyrrhiza uralensis, Cornus officinalis, Rehmannia glutinosa, Astragalus membranaceus, Paeonia lactiflora, Prunus persica, Rheum palmatum, Prunus armeniaca, Pinellia ternata, Carthamus tinctorius, Pheretima aspergillum, Sinapis alba, Raphanus sativus |
| 22 | Atropa belladonna, Ganoderma lucidem, Sophora flavescentis, Glycyrrhiza uralensis, Aleurites moluccana, Nigella sativa, Magnoliae Flos, Echinacea purpurea, Epimedium, Chinese yam, Tanreqing |
| 23 | Ephedra (Ephedrae herba), Cassia twig (Cinnamomi ramulus), Dried ginger (Zingiberis rhizoma), Debark peony root (Paeoniae Radix Alba), Processed pinellia tuber (Pinelliae Rhizoma Praeparatum), Chinese magnoliavine fruit (Schisandrae Chinensis Fructus), Manchurian wildginger (Asari Radix Et Rhizoma), Perilla fruit (Perillae fructus), Bitter Apricot Seed (Armeniacae Semen Amarum), Officinal magnolia bark (Magnoliae Officinalis Cortex), Prepared Radix Glycyrrhizae (Glycyrrhizae Radix Et Rhizoma Praeparata Cum Melle), Snakegourd fruit (Trichosanthis fructus), Alum processed pinellia (Pinelliae Rhizoma Praeparatum Cum Alumine), Thunberg fritillary bulb (Fritillariae Thunbergii Bulbus), Cape jasmine fruit (Gardeniae fructus), White mulberry root-bark (Mori Cortex), Baical skullcap root (Scutellariae Radix), Chinese pulsatilla root (Pulsatillae Radix), Heartleaf houttuynia herb (Houttuyniae Herba), Peony root (Paeoniae Radix Rubra), American ginseng (Panacis Quinquefolii Radix), Dwarf lilyturf tuber (Ophiopogonis Radix), Dried tangerine peel (Citri Reticulatae Pericarpium), Longstamen onion bulb (Allii Macrostemonis Bulbus), Indian bread (Poria), Pepperweed seed (Descurainiae Semenlepidii Semen), Mustard seed (Sinapis Semen), Ginseng (Ginseng Radix Et Rhizoma). |
| 24 | Panax ginseng, Salvia miltiorrhiza, Jinshui Liujin decoction, Jiawei Yupingfeng decoction, Echinacea, Hedera helix, Ke Chuan Ping decoction, 13-Herb anti-cough–dyspnoea decoction, Yiqi Mianyi granule, Prospan cough syrup, Prospan herbal drops, Kesuning granule, Bufei Keli granule, Gubenhuatanquyu decoction |

**References**

1. Cao X, Wang Y, Chen Y, et al. Advances in traditional Chinese medicine for the treatment of chronic obstructive pulmonary disease. *Journal of Ethnopharmacology* 2023; 307: 116229.

2. Isago H, Mitani A, Kohno S, et al. The Japanese Herbal (Kampo) Medicine Hochuekkito Attenuates Lung Inflammation in Lung Emphysema. *Biological and Pharmaceutical Bulletin* 2021; 44: 39–45.

3. Sahin ZA, Sahin M. The view of patients with Chronic Obstructive Pulmonary Disease (COPD) on complementary and alternative medicine (CAM) in eastern Turkey. *African Journal of Traditional, Complementary and Alternative Medicines* 2013; 10: 116–121.

4. Lin T-H, Chen S-I, Su Y-C, et al. Conventional Western Treatment Combined With Chinese Herbal Medicine Alleviates the Progressive Risk of Lung Cancer in Patients With Chronic Obstructive Pulmonary Disease: A Nationwide Retrospective Cohort Study. *Front Pharmacol*; 10. Epub ahead of print 13 September 2019. DOI: 10.3389/fphar.2019.00987.

5. Lyu YR, Lee S-W, Kim S-Y, et al. Herbal Medicines for the Treatment of Chronic Obstructive Airway Diseases (Asthma or Chronic Obstructive Pulmonary Disease): A Prospective Observational Study. *Evidence-Based Complementary and Alternative Medicine* 2022; 2022: e3485757.

6. Rahminiwati M, Iswantini D, Takemori H, et al. Indonesian Medicinal Plants with Anti-inflammatory Properties and Potency as Chronic Obstructive Pulmonary Disease (COPD) Herbal Medicine. *Pharmacognosy Journal* 2022; 14: 432–444.

7. Poursaleh Z, Choopani R, Vahedi E, et al. Effect of Herbal Medicine Formulation (Compound Honey Syrup) on Quality of Life in Patients With COPD: A Randomized Clinical Trial. *Tanaffos* 2022; 21: 336–347.

8. Baniamerian R, Tahermohammadi H, Daneshfard B, et al. Herbal Treatment of COPD and Asthma According to Persian Medicine: a Review of Current Evidence. *Tanaffos* 2023; 22: 187–199.

9. Panda SR, Jain S, Syamprasad NP, et al. Herbal Medicines for the Treatment of COPD. In: Dhara AK, Mandal SC (eds) *Role of Herbal Medicines : Management of Lifestyle Diseases*. Singapore: Springer Nature, pp. 167–184.

10. Ram A, Balachandar S, Vijayananth P, et al. Medicinal plants useful for treating chronic obstructive pulmonary disease (COPD): Current status and future perspectives. *Fitoterapia* 2011; 82: 141–151.

11. Santana FPR, Pinheiro NM, Mernak MIB, et al. Evidences of Herbal Medicine-Derived Natural Products Effects in Inflammatory Lung Diseases. *Mediators Inflamm* 2016; 2016: 2348968.

12. Zhen G, Jing J, Fengsen L. Traditional Chinese medicine classic herbal formula Xiaoqinglong decoction for acute exacerbation of chronic obstructive pulmonary disease: A systematic review protocol. *Medicine* 2018; 97: e13761.

13. Willcox ML, Hu X-Y, Oliver T, et al. Treating acute exacerbations of COPD with Chinese herbal medicine to aid antibiotic use reduction (Excalibur): a randomised double-blind, placebo-controlled feasibility trial. *Front Pharmacol*; 14. Epub ahead of print 25 September 2023. DOI: 10.3389/fphar.2023.1221905.

14. Zhang X-W, Liu W, Jiang H-L, et al. Dissection of Pharmacological Mechanism of Chinese Herbal Medicine Yihuo Huatan Formula on Chronic Obstructive Pulmonary Disease: A Systems Pharmacology-Based Study. *Sci Rep* 2019; 9: 13431.

15. Chen X, May B, Di YM, et al. Oral Chinese Herbal Medicine Combined with Pharmacotherapy for Stable COPD: A Systematic Review of Effect on BODE Index and Six Minute Walk Test. *PLOS ONE* 2014; 9: e91830.

16. An X, Zhang AL, May BH, et al. Oral Chinese Herbal Medicine for Improvement of Quality of Life in Patients with Stable Chronic Obstructive Pulmonary Disease: A Systematic Review. *The Journal of Alternative and Complementary Medicine* 2012; 18: 731–743.

17. Li J, Xie Y, Zhao P, et al. A chinese herbal formula ameliorates COPD by inhibiting the inflammatory response via downregulation of p65, JNK, and p38. *Phytomedicine* 2021; 83: 153475.

18. Xiong C, Li Y, Zhuang G, et al. Clinical efficacy and safety of Chinese herbal medicine versus placebo for the treatment of chronic obstructive pulmonary disease: A systematic review and meta-analysis. *Complementary Therapies in Medicine* 2021; 59: 102691.

19. Possebon L, de Souza Lima Lebron I, Furlan da Silva L, et al. Anti-inflammatory actions of herbal medicines in a model of chronic obstructive pulmonary disease induced by cigarette smoke. *Biomedicine & Pharmacotherapy* 2018; 99: 591–597.

20. Chen HY, Ma CH, Cao K-J, et al. A Systematic Review and Meta-Analysis of Herbal Medicine on Chronic Obstructive Pulmonary Diseases. *Evidence-Based Complementary and Alternative Medicine* 2014; 2014: e925069.

21. Kwon C-Y, Lee B, Lee B-J, et al. Herbal Medicine Compared to Placebo for Chronic Obstructive Pulmonary Disease: A Systematic Review and Meta-Analysis. *Front Pharmacol*; 12. Epub ahead of print 20 October 2021. DOI: 10.3389/fphar.2021.717570.

22. Clarke R, Lundy FT, McGarvey L. Herbal treatment in asthma and COPD – current evidence. *Clin Phytosci* 2015; 1: 4.

23. Li J, Zhang H, Ruan H, et al. Effects of Chinese Herbal Medicine on Acute Exacerbations of COPD: A Randomized, Placebo-Controlled Study. *International Journal of Chronic Obstructive Pulmonary Disease*, https://www.tandfonline.com/doi/abs/10.2147/COPD.S276082 (2020, accessed 27 May 2024).

24. Guo R, Pittler MH, Ernst E. Herbal medicines for the treatment of COPD: a systematic review. *European Respiratory Journal* 2006; 28: 330–338.