Review Article



Herbal Drugs Having Antiviral Potency Can be Used in Treatment of Corona Virus Disease

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ABSTRACT

During the past few years herbal medicine has gained exponential growth in the field of medicine in all over the world. In comparison to other countries India is the largest producer of herbal medicine. The current review focuses on herbal preparation and plant recently evaluated having antiviral potency in the world. This paper until focus on different beneficial aspects of herbal medicine as Antiviral activity and these herbal drugs can be used for the treatment of Corona virus disease.

Keywords: Antiviral, Coronavirus, herbal drug.

INTRODUCTION

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21.

22.

23.

Swertia Chirata¹

Syzygium Aromaticum 22

Termenalia Chebulla⁵

Zingiber Officinale 22

ccording to WHO Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as middle east Respiratory syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). Coronavirus disease (COVID-19) is a new strain that was discovered in 2019 and has not been previously identified in humans. Coronaviruses are zoonotic, meaning they are transmitted between animals and people. Details investigation found that SARS-CoV was transmitted from civet cats to humans and MERS-CoV from dromedary camels to humans. Several known coronaviruses are circulating in animals that have not yet infected humans. Common signs of infection include respiratory symptoms fever, cough, shortness of breath, and breathing difficulties. In more severe cases infection can cause pneumonia, severe acute respiratory syndrome kidney failure and even death.

Table 1: Herbar plants used as antiviral drugs can be used to treat coronavirus disease					
S.No.	Biological Source	Common Names	Family	Part used	Solvents Extracts
1.	Allium Sativum ¹³	Garlic	Alliaceae	Bulbs	Juice
2.	Aloe vera ¹¹	Ghrit Kumari	Asphodelaceae	Leaves	Glycerine
3.	Astragalus membranaceus ²¹	Mongolian Milkvetch	Fabaceae	Root	Aqueous and Methand
4.	Azardirachta indica 18	Neem	Meliaceae	Bark	Phosphate buffer salin
5.	Cinnamonum Cassia ⁹	Chinese Cassia	Lauraceae	Bark	Aqueous
6.	Cissus Quadrangularis ⁸	Chadhuri	Vitaceae	Stem	Methanol
7.	Echinaceae Purpurea 16	Purple Coneflower	Asteraceae	Aerial parts	Aqueous and Ethanol
8.	Eucalyptus Camaldulensis ³	Red River Gum	Myrtaceae	Leaves	Ethanol
9.	Ficus Benjamina ⁷	Weeping Fig	Moraceae	Leaves	Ethanolic
10.	Glycyrrhiza Glabra ²⁰	Licorice	Fabaceae	Roots	Water and Alkaline
11.	Lilium Candidum ⁷	Madonna Lilly	Liliaceae	Leaves	Ethanolic
12.	Melissa Officinalis ¹⁴	Lemon Balm	Lamiaceae	Leaves	Aqueous
13.	Mentha Piperita. L. ¹⁵	Peppermint	Lamiaceae	Leaves	Ethanolic
14.	Ocimum Basilicum 12	Sweet Basil	Lamiaceae	Leaves	Aqueous and Ethanol
15.	Passiflora Edulis ⁴	Passion fruit	Passifloraceae	Leaves	Ethanol
16.	Phyllanthus Urinaria ⁶	Gripeweed	Euphorbiaceae	Whole Plants	Acetone, Ethanol and Methanol
17.	Poncirus Trifoliata ²	Citrus	Rutaceae	Seeds	Ethanol
18.	Sambucus Formosana Nakai ¹⁷	Galamat	Adoxaceae	Stem	Ethanol
19.	Strobilanthes Cusia ¹⁹	Assam indigo	Acanthaceae	Leaves	Methanol

Chirayata

Myrobalan

Cloves

Ginger

Table 1: Herbal plants used as antiviral drugs can be used to treat coronavirus disease

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Renunculaceae

Myrtaceae

Combretaceae

Zingiberaceae

Leaves and

Flower Buds

Stems

Fruits

Rhizome

Aqueous

Aqueous

Aqueous

50% Ethanolic

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CONCLUSION

From this study, it is clear that the medicinal plant play a vital role against viral disease.

Various herbal plant extract has significant antiviral activity our review result shows that above-mentioned medicinal plant can used to be treat viral disease including coronavirus disease. An Herbal plant *Echinea purpurea* and *Sambucus formosana* nakai had already reported to treat coronovirus disease. It is also reported that Tryptanthrin isolated from *Strobilanthes cusia* leaf against Human coronavirus disease. During study it was also reported that the herbal medicinal product Sinupret¹⁰ can be used against viruses causing respiratory infections.

Hence the review study is concluded that the abovementioned herbal drug possess anti-viral activity, can be used to treat Covid 19 disease and it has been proved by different animal models which gives many works to develop the future trials. The Herbal formulation of above mentioned herbal drugs can be used to treat Covid 19 disease.

REFERENCES

- H. Verma, P.R.Patil, R.M. Kohhapure, V.Gopalkrishna " Antiviral activity of the Indian medicinal plant extract, *Swertia chirata* against herpes simplex Viruses: A study by in-vitro and molecular approach. Indian Journal of Medicinal Microbiology, Volume 26 Issue 4, 2008, 322-326.
- Yooni Heo, Yeondon Cho, Young Bong Kim "Anti viral activity of Poncirus trifoliate seed extract against Oseltamivir- resistant influenza virus. Journal of Microbiology, 56, 2018, 586-592.
- Aya Abu- Jafar and Mahmoud Hulelhel "Antiviral activity of Eucalyptus Camaldulensis leaves ethanolic extract of Herpes viruses infection. International Journal of Clinical Viriology, 01, 2017, 001-009.
- Jabareen A, M,Huleihil "Effects of Passiflora edulis leaves on Herpes Viruses infection J.Virol Antivir Res, 2, 2013, 1-16.
- Kesarwani. A, Polachira SK, Nair R, Agarwal A, Mishra N.N, "Anti-HSV 2 activity of Terminalia Chebula retz extract and its constituents chebulagic and chebulinic acids. BMC Complement Altern Medicine., 17, 2017, 110.
- Cheng HY, Yang CM, Lin T.C, Lin L.T, Chiang L.C., Lin C.C. "Acetone, ethanol and methanol extracts of Phyllanthus Urinaria inhibit HSV-2 infection in-vitro Antiviral Res, Vol 67, 2005, 24-30.
- Yarmolinsky L, Huleihel M, Zaccai M, Ben- Shabat S,, Mills D" Aniviral activity of ethanol extracts of Ficus Binjamina and Lilium candidum in-vitro N.Biotechnol, 26, 2009, 307-313.
- 8. P. Balasubramanian, K. Jayalakshmi, N.Vidhya, R.Prasad, A. Khaleefathullah, Sheriff, G.Kathiravan , K.

Rajagopal and Sripathi M. Sureban "Antiviral activity of ancient system of Ayurvedic medicinal plant Cissus Quadranularis L. (vitaceaea)" Journal of Basic and clinical Pharmacy, Vol 001 issue 001, 2010, 37-40.

- Munazza Fatima, Najam-us-Sahar Sadaf Zaidi, Deeba Amraiz and Farhan Afzal" In-vitro antiviral activity of *Cinnamonum cassia* and its nano particles against H7N3 influenza A virus. J. Microbiol. Biotechnol. 26(1), 2016, 151-159.
- B.Glatthaar- Saal miller, U.Rauchhaus,, S.Rode, J, Haunschild, A. Saalmuller. "Antiviral activity in-vitro of two preparations of the herbal medicinal product Sinupret against viruses causing respiratory infections. Phytomedicine, 19, 2011, 1-7.
- 11. Keivan Zandi, Moloud Abbas Zadeh, Kohzad Sartavi and Zahra Rastian "Antiviral activity of Aloe Vera against Herpes Simplex Virus type 2. An in-vitro study. African Journal of Biotechnology, Vol. 6(15), 2012, 1770-1773.
- 12. Chiang LC, Ng LT, Cheng PW, Chiang W, Lin CC"Antiviral activities of extracts and selected pure constituents of Ocimum Basilicum Clinical and Experimental Pharmacology and Physiology, 32(10), 2005, 811-816.
- 13. Mehrbod. P, Amini. E, Tavassoti-Kheiri-M" Antiviral activity of garlic extract on influenza virus" IJV, volume 2, n.o 1, winter 2008/ Spring 2009, 1-5.
- Cohen R.A, Kucera L.S, Hermann Jr, EC "antiviral activity of Melissa Officinalis (lemon Balm) extract. EXP Biol Med: 1964; 117-43.
- 15. YuXian Li, YiBoliu, AiQinMa, Yong Bao, ManWang, and ZhenLiang Sun " Invitro antiviral, anti-inflammatory and antioxidant activities of the ethanol extracts of Mentha Piperita L. Food Sci-Biotechnol, 26(6), 2017, 1675-1683.
- James Hudson and Selvarani Vimalanathan "Echinacea- A source of Potent antivirals for respiratory virus infections" Pharmaceuticals (Basel). 4(7), 2011 Jul, 1019-1031.
- 17. Jing-Ru Weng, Chen-ShengLin, Hsuch-Chou Lai, Yu-Ping Lin, Ching-Ying Wang, Yu-Chi Tsai, Kun-Chang Wu, Su-Hua Huang, Cheng-Wen Lin "Anti viral activity of Sambucus Formosana Nakai ethanol extract and related phenolic acid constituents against human Coronavirus NL63 Virus research, 273, 2019, 1-8.
- Tiwari. V, Nissar. A, Darmani, Beatrice Y, J.T.Yue, and Shukla. D " In vitro antiviral activity of neeem (Azardirachta indica L.) bark extract against herpes simplex virus type-1 infection " Phytother Res., 24(8), 2010, 1132-1140.
- 19. Yu-Chi Tsai, Chia-Lin Lee, Hung-Rong Yen, Young-Sheng Chang, Yu-Ping Lin, Su-Hua Huang, and Cheng-Wen Lin "Anti viral action of Tryptanthrin isolated



from *Strobilanthes cusia* leaf against Human Corona Virus NL 63 Biomolecules, 10, 366, 2020, 1-17.

- Kunihiko Fukuchi, Noriyuki O KU Daira, Kazunori Adachi, Reina ODAI-IDE, Shingeru Watanabe, Hirokazu Oh No, Shigemi Terakubo, Hideki Nakashima, Yoshihiro Uesawa, Hajme Kagaya, and Hiroshi Sakagami "Anti-viral and anti-tumor activity of Licorice root extracts. In vivo, 30, 2016, 777-786.
- 21. Humaira Majeed Khan, Syeda Maryam Raza, Aftab Ahmad Anjum, Muhammad Asad Ali, "Anti-viral, Embryo toxic and cytotoxic activities of Astragalus membranaceus root extracts Pak J Pharm Sci, 32(1), 2019, 137-142.
- Hamada A, Aboubakr, Andrew Navertz ; Nhungoc T, Luong, Shivani Agrawal, Sobhy A.A, El- Sohaimy, Mohammed M, Youssef, Sagar M.Goyal, "Invitro antiviral activity of Clove and Ginger aqueous extracts against *Feline calcivirus*, a surrogate for Human Norovirus" J Food Prot, 79(6), 2016, 1001-1012.
- 23. Choi J-G, Jin Y-H, Lee H, Oh TW, Yim N-H, Cho W-K and Ma J Y "Protective effect of Panax noto ginseng root water extract against influenza A virus infection by enhancing antiviral interferon-medicated immune responses and natural killer Cell activity. Front. Immunol, 8, 2017, 1542.

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