International Journal of Medicine Research
ISSN: 2455-7404; Impact Factor: RJIF 5.42
Received: 17-10-2020; Accepted: 02-11-2020; Published: 22-11-2020
www.medicinesjournal.com
Volume 5; Issue 4; 2020; Page No. 27-31

Research of herbal drug for COVID-19 (Corona)

Mayuri K Lonare[1*], Jyoti B Chavan[2], Sachin B Somwanshi[3], Anagha V Baviskar[4]
[1-4] Department of Quality Assurance, Pravara Rural College of Pharmacy, (For Women) Chincholi, Nashik, Maharashtra, India

Abstract
A research work of herbal plant medicines viz. Neem leaf extract (Azadirachtaondica), 6-gingerol in Zingiber officinale, *Ficus racemosa* L. bark, and Cinchona bark, Spondias mombin Flower, holy basil leaf powder dry and Echinacea (Asteraceae) Flower were studied on covid-19(corona virus) and anti-viral activity.

Keywords: herbal medicine, antiviral, Corona (COVID 19)

Introduction
Infections viral disease are still major roll to public health and a major problem all over the world. A number of case of viral disease have been reported from different region of the world the viral diseass and constrained therapeutic efficacy most drugs Echinacea (Asteraceae), Cinchona bark, Spondias mombin Flower, holy basil leaf powder dry, Neem leaf extract (Azadirachtaondica), 6-gingerol in Zingiber officinale, *Ficus racemosa* L. bark, the traditional medicines are revalued extensive research programs for their therapeutic potential antivirals for respiratory virus infection the antiviral agent has been defied in as substances other than a virus or virus containing vaccine or specific antibody which can produce either a protective or therapeutic effect yo clear detectable advantage of the virus infect host. All world, herbal medicines are considered to be most important areas of in traditional medicine system. WHO (Wolrd health organization in 1978, the important of scienetific research into herbal medicine and then the developing countries of world has started research programs to clinically prove the therapeutic effect of their native medicinal plants in order to get registered as WHO list Essential drugs? Actute respiratory infections in humans are use to one or more group of known as viruses including more than 100 rhinoviruses (common cold Viruses), influenza viruses, corona viruses, respiratory syncytical virus. Herbal medicine drugs Echinacea (Asteraceae) Flower, Cinchona bark, Spondias mombin Flower, holy basil leaf powder dry, Neem leaf extract (Azadirachtaondica), 6-gingerol in Zingiber officinale, *Ficus racemosa* L. bark, the possible targets are A) The virion itself B) Cellular attachment or entry C) One or more of the many stages in viruds replication and development particularly those that involve virus –specific enzymes D) egress of progeny virus from infected cell.

Material
This herbal drug study was crried out laboratory of. Department of Pharmaceutical, Matoshri Miratai Aher College Of pharmacy, Karjule hairya, Parner, Ahmednagar, (MS), India, 414304. Department of Chemistryl, Matoshri Miratai Aher College Of pharmacy, Karjule hairya, Parner, Ahmednagar, (MS), India, 414304. Department of Pharmacognosy Matoshri Miratai Aher College Of pharmacy, Karjule hairya, Parner, Ahmednagar, (MS), India, 414304. Herbal gives in pharrmacognosy harribrium plant gardern and local market gives herbal plant Corn flower was dried powder (10g) and Ficus racemosa bark (10g), Chinchona bark (10g), Spondias mombin flower (10g), Holy basil (10g), Ginger (1g), Neem (1g).

Study Design: Prospective laboratory level observation study.
Study Location: This was a laboratory level study in Department of Pharmaceutical, Matoshri Miratai Aher College Of pharmacy, Karjule hairya, Parner, Ahmednagar, (MS), India, 4141112. Department of Chemistryl, Matoshri Miratai Aher College Of pharmacy, Karjule hairya, Parner, Ahmednagar, (MS), India, 4141113. Department of Pharmacognosy Matoshri Miratai Aher College Of pharmacy, Karjule hairya, Parner, Ahmednagar, (MS), India, 414111.
Method: - Soxhlet extraction: - Corn flower was dried powder (10g) and Ficus racemosa bark (10g), Chinchona bark (10g), Spondias mombin flower (10g), Holy basil (10g), Ginger (1g), Neem (1g) extracted with 55% of ethanol exaction soxhlet method and kept 6 hr and then filtered with silk cloth added in Soxhlet extraction method. Recorded and during treatment of different herbal preparations of the patent drug.
Statistical analysis: - Detailed phytochemical examination were corried out for 8 ingredient extracts as per the std. method. A) Tests for Alkaloids: - To the extracy, dilute hydrochloric was added. shaken well and filtered with the filterate, the following test were performed. 1) Mayer's reagent test: - To 3ml of filterate, few drops of mayer's reagent were added along sides of tube. formation of creamy precipitate indicates the presence of alkaloids. B) Tests for carbohydrates: - Molisch test: - 1) 2ml of aqueous extract was treated with 2 drops of alcoholic a-naphthol solution in a test tube and then 1ml of concentrated sulphuric acid was added carefully along the sides of the test tube. formation of the violet ring at the junction indicates the presence of carbohydrates. C) Tests for Reducing sugars: - Fehling's test: - To 1ml of aqueous extract, 1ml of Fehling's A and 1ml of Fehling's B solution were added in a test tube and heated on a water bath for 10 min. formation of red precipitated indicates the presence of reducing sugar. D) Tests for flavonoids: - Alkaline reagent test: - the extract was

treated with few drops of sodium hydroxide solution separately in a test tube. formation of intense yellow color, which become colorless an addition of few drugs of dilute acid indicates the presence of flavonoids. E) Tests for Glycosides: - Test legal 's: - 1ml of test solution was dissolved in pyridine. 1ml of sodium nitroprusside solution was added and made. alkaline using 10% sodium hydroxide solution. Formation of pink to blood red color indicates the presence of cardiac. F) Test for Phenol: - The extract (500mg) was dissolved in 5ml of distilled water to this few drop neutral 5% ferric chloricle solution were added, A dark green colour indicated the presence of phenolic compound. G) Test for steroids: -a) salkowski, s test –A red color produced in the lower choloroform layer when 2ml oranic exact was dissolved in 2ml of chloroform and 2ml concentrated sulphuric acid was added in it, indicates the presence if steroids. b) Liebermann burchard Test –Development of a greenish color when 2ml of organic exact was dissolved in 2ml of chloroform and treated with concentrated sulphuric acid and acetic acid indicates the presence of steroids.

New Methods for Drug Screening: -Computation Method: -Bioinformation and computational method have been used to discover novel pharmaceuticals. With the bioinformatics tools and software, one can simulate drug-receptor interactions. predict drug bioavailability andbio activity and illustrate the functional structure of the drug. Computational method can be applied in antiviral ldrug screening and p16(INK4a) peptide mimetics, which inhibit viral cell cycles, have been indentified via virtual screening.

Result

The herbal drug result in number of epidemiological chemical test studies have investigated for cellular and sub – cellular targets of these antiviral activity and result have been observed covid-19 anti-viral activity, anti-bacterial, anti – malarial, anti-oxidant, anti-inflammation. the result in chemical test and phytochemical test result in Tests for Alkaloids –present. Tests for carbohydrates-present. Tests for Reducing sugars-present. Tests for flavonoids- present. Test for steroids: -present. The herbal drugs that Echinacea (Asteraceae) Flower, Cinchona bark, Spondias mombin Flower, holy basil leaf powder dry, Neem leaf extract (Azadirachtaondica), 6-gingerol in Zingiber officinale, *Ficus racemosa* L. bark exaction herbal drug screening method used in result anti-viral, anti covid-19 activity present.

Discussion

The reviewed above indicate that Echinacea (Asteraceae) Flower, Cinchona bark, Spondias mombin Flower, holy basil leaf powder dry, Neem leaf extract (Azadirachtaondica), 6-gingerol in Zingiber officinale, *Ficus racemosa* L. bark extract contain multiple bop- activities collectively in activate and or inhibit corona virus at different levels. There are also intracellular mechanisms at play which include a widespread reversal of virus –induced pro-inflammatory cytokine secretion mediated one or more signaling pathways. The antiviral activities and presence of the known marker compounds for Echinacea (Asteraceae) Flower, Cinchona bark, Spondias mombin Flower, holy basil leaf powder dry, Neem leaf extract (Azadirachtaondica), search for evidence of alternative bioactive compounds. We found recently the antiviral activity in ethanol exactract Echinacea (Asteraceae) Flower, Cinchona bark, Spondias mombin Flower, holy basil leaf powder dry, Neem leaf extract (Azadirachtaondica), 6-gingerol in Zingiber officinale, *Ficus racemosa* L. bark extractwas able to bind the polymeric matrix polyvinyl – polyprrolidone (PVPP) and colud subsequently be eluted and recovered corona viruse. The recent studies on PVPP have shown its effectivencess in seclectively removing tannins and other polyphenols from plant exacts by a variety chemical interaction. The antiviral components of exact Echinacea (Asteraceae) Flower, Cinchona bark, Spondias mombin Flower, holy basil leaf powder dry, Neem leaf extract (Azadirachtaondica), 6-gingerol in Zingiber officinale, *Ficus racemosa* L. bark coulde be include polyphenols.The antiviral and corona viruse and anti-inflammatory activities could be due in medicinies plant partly chemical constituents caffiec acid derivative, alkylamides and polysaccharides, 6-gingerol, Allohydroxycitric acid, Chorogenic acid, Butylester, quinidine, ibuprofen, Azadirachtin, meliantriol, salanin, nimbin.

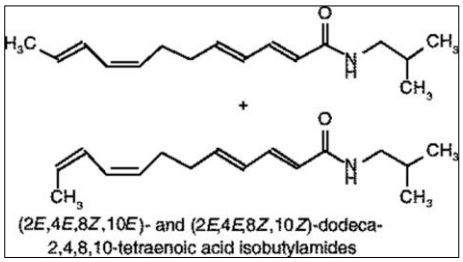
- **Dose: -** administered orally at 200 mg/ kg body weight
- **Monograph:** - Neem

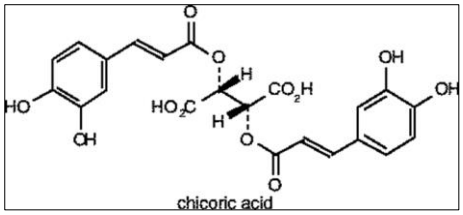
Fig 1

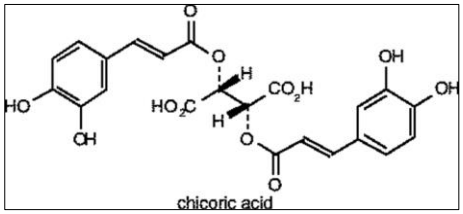
- Neem: - synonym: - margosa.
- Biological source: - Azadirachta indica.
- family: - meliaceae.
- macroscopic characters: - leaves: - alternate, exptipulate, impairipinnete leaf lets 20-25 cmin length lanceolata closely clustered towards the ends of bronches. serrate margin, green, bitter.
- Chemical: - Azadirachtin, meliantriol, salanin, nimbin.
- Use: - reducing sugars, saponins insecticide, antifeedant, nematocide and antimicrobial properties
- **Corn Flower – (**Echinacea)
- Scientific name: Echinacea

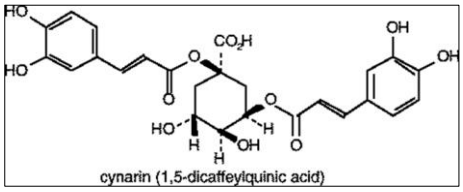
Fig 2

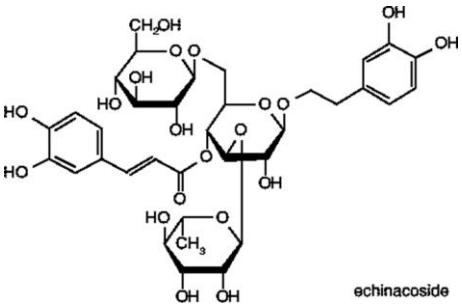
- Order: Asterales
- **Organoleptic properties**
- Odour- mild, aromatic
- Taste-sweet initially but quickly becoming bitter followed by a tingling sensation on the tongue
- Uses -fever, menstrual disorders, vaginal candidiasis, as a laxative, tonic, bitter, also as a diuretic and an expectorant, throat infection.











- **Spondias mombin flower –Synome-** Yellow Mombin, Hog Plum, Caja Fruit,

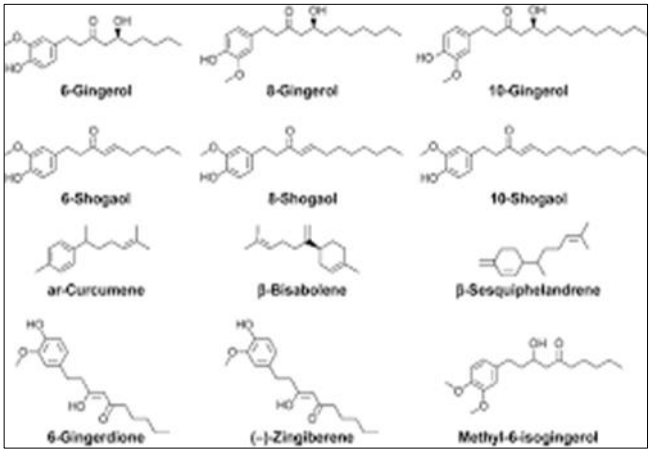
Fig 3

- **Family –** Anacardiaceae
- **Uses- a**) used in folk medicine to make cure-all teas for digestive tract ailments b) lower back pain c) rheumatism d) angina e) sore throat f) malarial fever g) congestion h) diarrhea i) urethritis j) metrorrhagia

Ginger-Biologicalname-Zingiberofficinale

- Family - Zingiberaceae
- Species-Z. officinale

Fig 4



- Chemical constituent

Uses-Anti–inflammatory, antioxidant effects, antibiotics against bacteria/microorganism.

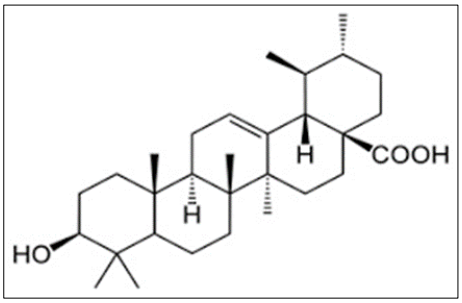
- **Chinchona bark-**scientific name – Cinchona/ Quinine
- Biological name –cinchona calisaya
- chemical name- Quinine
- Family-: -Rubiaceae

Fig 5

- Colour-Yellowish to green color
- Odour –distinctive
- Test-Highly bitter and astringent
- Shape and Size –Curve and 2-7cm/long.
- Chemical constituent- 1] Quniarnine 2] Alkaoids 3] chinchotannic acid 4] chinchotine 5] Hydroquinine 6] chinchonidine
- Uses- mild influenza, swine flu, common cold, malaria, and fever. Other uses are for cancer, mouth and throat diseases, enlarge speen, and muscle cramp. eye lotions to numb pain, kill germs, and astringent. Cinchona extract is also applied to the skin for hemorrhoids, ulcers, stimulating hair growth
- **Holy basil –**Scintific name –Ocimum tenuiflorum
- Family-Lamiaceae

Fig 6

- Biological name- Ocimum tenuiflorum
- Synonymus- Ocimum sanctum, Geniosporum tenuiflorum (L) merr.
- Chemical constituent -1] Oleanolic acid 2] Ursonic acid 3] Rosmarinic acid 4] Eugenol 5] Carvacrol 6] B-Caryophyllene 6] B-elemene
- Colour-Leaves are green or purple
- Odour –Characteristic
- Shape and Size –Ovate and 5cm (2.0 in) long blade
- Use –H1N1 (Swine flu), Common cold, Headche, Fever, Stress, Diabetes



Holy basil chemical structure

- **Ficus racemosa-Bark**
- Scientific name –Ficus racemosa
- Synomus –Ficus glomerata

Fig 7

- Family –Moraceae
- Biological name-Ficus racemosa
- Colour–Grey-raddish brown
- Odour –Characterstic
- Use- Antibacterial activity, Anti-inflammatory activity, Anti-oxidant activity, Cardioprotective activity, asthma, drycough.

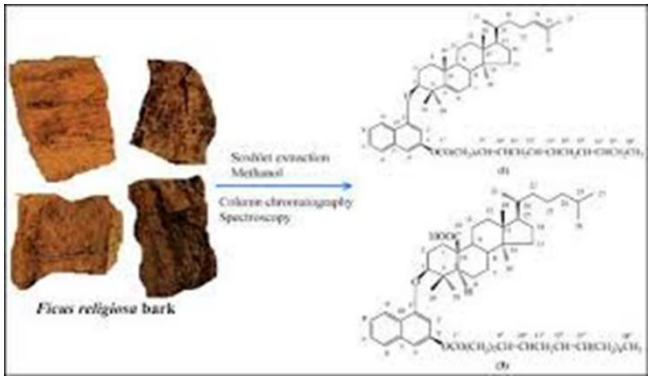
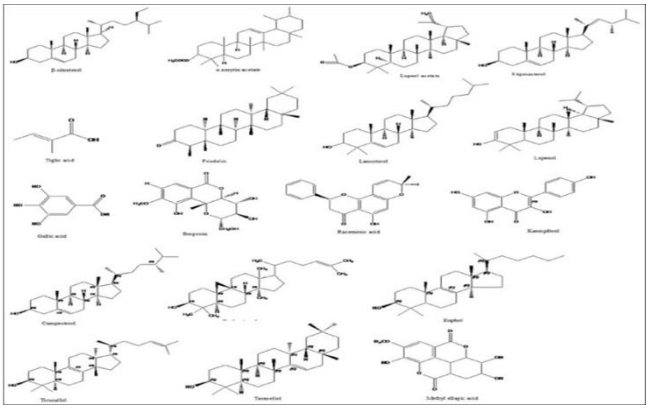


Fig 8

Chemicalconstituent-.



Conclusion

The natural product is acquiring substantial importance for the treatment of Covide -19 and antiviral. Recent advances in scientific research have proved the role of Echinacea (Asteraceae), Cinchona bark, Spondias mombin Flower, holy basil leaf powder dry, Neem leaf extract (Azadirachtaondica), 6-gingerol in Zingiber officinale, *Ficus racemosa* L. bark, for management of covide-19 and antiviral activity. the character is also being investigated as bioactivity principle for anti-viral activity, anti-bacterial, anti –malarial, anti-oxidant, anti-inflammation. There is need to evaluate this natural compound clinically. Substantial clinical data need to be generated to establish the anti-viral activity, anti-bacterial, anti –malarial, anti-oxidant, anti-inflammation potential of this compound and to support the emergence of safe and effective covide -19 and anti-viral agent. Cost effective synthesis procedures and purification process need to be developed. It is seen from the literature that Echinacea (Asteraceae), Cinchona bark, Spondias mombin Flower and is a medicinal plant used a phytomedicine to treat a wide range of health complications like covide-19 as well as medicinally important chemical like 6-gingerol, Hydroquinine, B-strigmasterol, alkaloids, flavoids, echinacoside, tannine, azadirachtin have been reported to be present in various part its diversity of traditional uses. Echinacea (Asteraceae), Cinchona bark, Spondias mombin Flower, holy basil leaf powder dry, Neem leaf extract (Azadirachtaondica), 6-gingerol in Zingiber officinale, *Ficus racemosa* L. bark, extract decreased respiratory tract infection level. The exact mechanism for reducing respiratory tract infection and reduced throat infection and reduced fever and cold is not well understood. anti-viral activity, anti-bacterial, anti –malarial, anti-oxidant, anti-inflammation potential of this compound and to support the emergence of

safe and effective covid -19 and anti-viral agent.

References

1. Ayoka AO, Akomolafe RO, Akinsomisoye OS, Ukponmwan OE. Mini -Review Medicinal and Economic Value of Spondias mombin African Journal of Biomedical Research. 2008; 11:129-136.
2. James Hudson, Selvarani Vimalanathan. Echinacea—A Source of Potent Antivirals for Respiratory VirusInfections pharmaceuticals ISSN 1424-8247. 2011; 4:1019-1031
3. Jim Hudson, Selvarani Vitnalanathan, Linda Kang, Virginie Treyvaud Amiguet, John Livesey. Characterization of Antiviral Activities in Echinacea Root Preparations Pharmaceutical Biology. 2005; 43(9):790-796.
4. Thor Arnason J. Chemical composition of the leaves of Azadirachta India Linn. International Journal of Advancement in Engineering Technology, management, and Applied Science, 2014, 21-31.
5. John D Mitchell, Douglas C Daly. A revision of Spondias L. (Anacardiaceae) in the Neotropics, Phyto Keys. 2015; 55:1-9.
6. Mehta Devansh. Ficus Racemosa Linn. - A Review on Experimental Lead Approach research gate Jan, 2019.
7. Saleh I Alqasoumi. Quantification of 6-gingerol in Zingiber officinale extract, ginger-containing dietary supplements, teas and commercial creams by validated HPTLC densitometry, Fabad J Pharm. Sci. Research Article. 2009; 34:33-420.
8. Kokate CK, Purohit AP, Gokhale SB. – Text Book of Pharmacognosy Edn4, Nirali publishers, Pune, 2010, 411005.
9. Harsh Mohan. Text Book of Pathology, Edn 6, Jaypee Brother Medical Publishers (p) Ltd. New Dehli, 2010, 818.
10. Gaud RS, Atmaram Pawar. Text Book of Modern Dispensing Pharmacy, Edn3, Career Publications, Nashik, 2009, 422001.
11. Noor A, Bansal VS, Vijayalakshmi MA. Current update on antidiabetic biomolecules from key traditional Indian medicinal plants. Curr Sci. 2013; 04(6):721-727.
12. Khalsa KPS, Tierra M. The way of Ayurvedic Herbal: A Complete Guide to Natural Healing and Health with Traditional Ayurvedic Herbalism. Lotus Press, USA, 2009, 59-60.
13. Panda H. Herbals Cultivation and Medicinal Uses, Edn 2, National Institute of Industrial Research, New Delhi, 2005, 358.
14. Bárbara Cabrala, Emerson MS Siqueiraa, Mariana AO Bitencourtb, Maíra CJS Limab, Ana K Limac, Caroline F Ortmannd, *et al*. Phytochemical study and anti-inflammatory and antioxidant potential of Spondias mombin leaves, Revista Brasileira de Farmacognosia 26, 2016, 304-311.