

Secondary Research Paper-The Clinical Study about the “RHODOLIA ROSEA” in context to Futuristic Ayurvedic Medicine to be treat like COVID-19 and Other Symptoms.

JV`n Dr Panckaj Garg, JV`n Preeti Singh, JV`n Dr. Akanksha Shrivastav, JV`n Dr. Priyanka Chaudhary

University Centre of Planning, Integration & Correlation with Center of Integrative Health & Medical Science and Faculty of Pharmaceutical Science, Faculty of Ayurvedic Science, Jayoti Vidyapeeth Women’s University, Jaipur

E-Mail: jvwuni@yahoo.com

Idea Originator: Jv`n Dr Panckaj Garg

Acknowledge to the Idea Originator:

The idea is to analyse the University Centre of Planning, Integration & Correlation with Center of Integrative Health & Medical Science and Faculty of Pharmaceutical Science, Faculty of Ayurvedic Science, Jayoti Vidyapeeth Women's University, Jaipur — jointly made efforts to identify Ayurvedic Medicines for Corona Clinical Management with modern medicine. **“Dr. Garg thoughts** “Drugs formed by the same source in different therapy pharmacopoeias which can be used as a single or with integrated approach to achieve better results”. “On the basis of same source of medicine has been developed from “RHODOLIA ROSEA”, It is well developed medicine in Allopathic. **According to Hypothesis of “Dr. Garg Theory”** same source of medicinal plant “RHODOLIA ROSEA” (root part) can be applicable Ayurvedic Approaches .We can isolate efficient compound according to Ayurvedic Protocols and can apply for covid-19 patients. It will be more effective as an individual or Integrative form of research. **“Dr. Garg thoughts”** Integrated research & strongly recommended and suggested either individual or with form of integration because both medicines are formed from same resource and actions are also same against corona-virus symptoms. Principal Investigator Dr. Panckaj Garg is strongly suggested and recommended same source of the Medicine in modern medicine (which is recommended by the Food Drug Administration as a nucleotide analog, specifically an adenosine analog, evidenced to have broad-spectrum activity against the single-stranded RNA viruses. Current research prospective of the drug on COVID-19 has revealed that it is effective against certain key enzymes of SARS-CoV-2, that caused COVID-19. and also used worldwide in

Clinical Management of Novel Corona virus (COVID-19) in Ayurvedic medicines which is used either individual or integration on the basis of “Dr. Garg thoughts”.

HYPOTHESIS:

“Dr.Garg Theory” based on same source of medicine either individual or integrative form **“A hope for a cure “against covid-19.**

Faculty of Pharmaceutical Science, Faculty of Ayurvedic Science, Jayoti Vidyapeeth Women's University, Jaipur, **jointly made efforts to identify Ayurvedic Medicines for the Clinical Management of Corona with modern medicine. “Dr. Garg thinks”**that “Modern Medicine” viewed as the most promising treatment for COVID-19, has known and potential side effects and there is no good evidence that Alopahy reduced mortality in people with COVID-19. According to Hypothesis of **“Dr.Garg Theory”** medicinal plant **“RHODIOLA ROSEA”** can be applicable for the treatment of Covid-19 through Ayurvedic approaches. We can isolate effective compound according to Ayurvedic Protocols and can apply for covid-19 management. Rhodiola Rosea has shown marked anti oxidative, adaptogenic and antifatigue effect in the experimental study, this effect can be used to increase the immunity of the patient, can eventually be proved effective in the treatment of Covid-19. It will be more effective as an individual or Integrative form of research. “Principal thoughts of **Dr. Panckaj Garg** has strongly suggested and recommended use of Rhodiola rosea in the treatment of corona individually as Ayurvedic medicine as a integrated approach, on the basis of **“Dr. Garg thoughts”**. The need of integration is very important for the prevention and management during containment of Corona Virus (COVID – 19) infection. The Principal Investigator **Jv’n Dr. Panckaj Garg** always strives for betterment of community and through this project. He is very much committed for community health management and contemplating very seriously about the risk of COVID-19. He wants to serve the nation through effective treatment of Covid-19 with extensive research on herb Rhodiola Rosea(**JV’n Dr Panckaj Garg,et al 2020**).

BACKGORUND

I-Stage of Research according to “Dr. Garg thoughts”The need of integration is very important for the prevention and management during containment of Corona Virus (COVID – 19) infection. The Hypothetical report covers the accurate investigation of the Ayurvedic study integrated with Rhodolia rosea chemical compound responsible for the corona patient’s symptoms. Driven by primary Research “Identification of Ayurveda & Homeopathic Medicine for Clinical Management of Covid-19 need Clinical Trial” context to Rhodolia rosea plant (**JV’n Dr Panckaj Garg,et al 2020**).

II-Stage of Research according t“Dr. Garg thoughts” So After that I stage of research, this hypothetical secondary research will based on “**The Clinical Study about the “RHODOLIA ROSEA in context to Futurastic Ayurvedic Medicine to be treat like COVID-19 and Other Symptoms.”** So these study research effect on COVID-19 different people in different ways. Most infected people will develop mild to moderate illness and recover without hospitalization but in some patients it developed and produces life threatening symptoms.

INTRODUCTION:

Rhodiola rosea, is a medicinal plant with demonstrated nontoxic substance properties, has recently been reported to contain active compounds with antiviral, antimicrobial activity. The goal of this study was to measure the antiviral properties of the bioactive metabolites of Rhodiola rosea in the persons who are affected by covid-19. Rhodiola roots contain polyphenols, rosavin, rosin, rosarin, organic acids, terpenoids, phenolic acids and their derivatives, flavonoids, anthraquinones, alkaloids, tyrosol, and salidroside. Polyphenols also work as anti-oxidant and anti-cancer. In older study on polyphenol improvement in the reduction of the viral concentration was observed.

Rhodiola rosea common name golden root, rose root, roseroot, Aaron's rod, Arctic root, king's crown, lignum rhodium, orpin rose is a perennial flowering plant in the family Crassulaceae.it found at high altitudes in the Arctic and mountainous regions throughout Europe and Asia. It has historically been used to treat a range of conditions, including fatigue, depression and anxiety, impotence, and nervous system disorders. Rhodiola rosea has also received attention for its

potential adaptogenic and ergogenic properties including the enhancement of physical and mental performance and reduction of fatigue(**JV'n Dr Panckaj Garg,et al 2020**).

CHEMICAL CONSTITUENTS OF RHODOLIA ROSEA: On the behalf of COVID-19 Pandemic:According to “Dr.Garg Thoughts” Rosavin is a cinnamyl alcohol glycoside found in the plant *Rhodiola rosea*. It is thought to be one of the compounds responsible for the antidepressant and anxiolytic actions of this plant, along with salidroside. Salidroside, a major bioactive component of ***Rhodiola rosea*** has been reported to modulate the expression of **antiviral** cytokines, such as $IFN\gamma$, and $TNF\alpha$, and inhibit the replication of coxsackievirus B3 perhaps through modulation of oxidative stress.

According to Hypothesis of “Dr.Garg Theory” same source of medicinal plant “RHODOLIA ROSEA” can be applicable for Ayurvedic Approaches .We can isolate efficient compound according to Ayurvedic Protocols and can apply for covid-19 patients. It will be more effective as an individual or Integrative form of research

OBSERVATION STUDY ACCORDING TO SAME COMPOUND USED IN AYURVEDA SAME AS A RHODOLIA ROSEA:

Dr.Garg II Stage of Research indicates that main bioactive compounds Rosarin and Salidroside can responsible for the covid-19 symptoms. Rosarin is a cinnamyl alcohol glycoside found in the plant *Rhodiola rosea*. Same as this theory cinnamyl alcohol (Styron) also present in the **STORAX** of (*Liquidambar orientalis* , *Liquidambar styraciflua*) balsam of Peru (***Myroxylon balsamum***) but these two plan species not present in the Ayurvedic classics according to responsibility of Pharmacopeias but responsible activity are same as Rosarin so we can use in the treatment of covid. Dr.Garg strongly recommended according to this present research on the basis of chemical compound of Rosarin same as CINNAMON LEAVES (***Cinnamomum verum***, ***Cinnamomum cassia***) used in the combination and integrative form of the medicine for the treatment of COVID-19 Symptoms. According to Ayurvedic Literature Cinnamic Acid used in the treatment of Immunity Booster - Against Cold, Cough, Respiratory Tract syndrome.in the serum of subjects ingesting *Rhodiola rosea* may exert protective effects against virus replication following intense and prolonged exercise by inducing antiviral activity. All over Hypothesis Description mention below for the justification of Correlation:

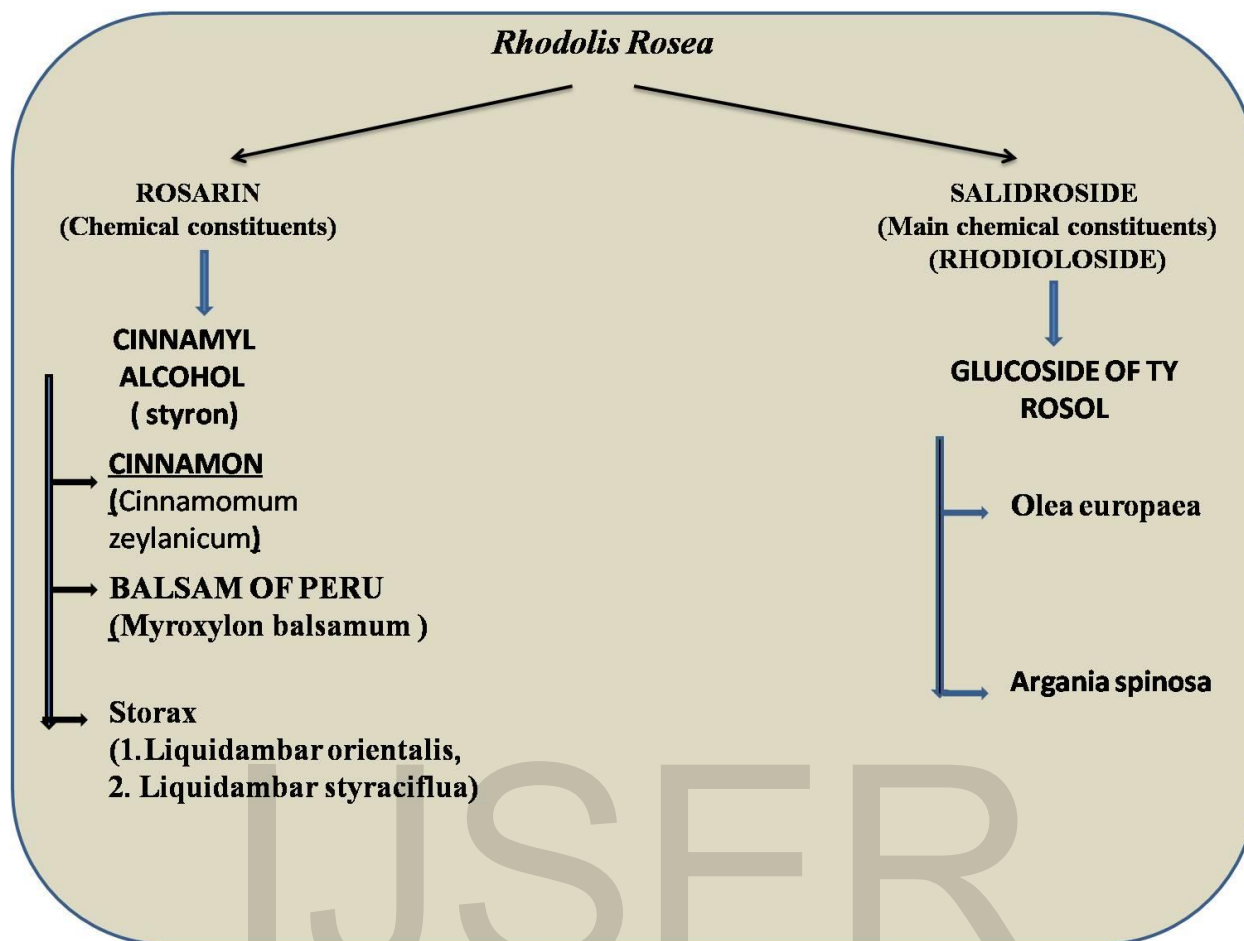


Figure: 1 Correlation of chemical constituents context to Ayurvedic medicine

Table: Description of Ayurvedic medicine correlation with Rhodolia Rosea

S. No.	Plant Name	Botanical Name	Sanskrit Name	Useful Part	Chemical Compound	Correlated symptoms of Covid-19	Dose	Uses according to Ayurvedic literature	Modern Symptoms
1	Golden Root	<i>Rhodolia Rosea</i>	NA	Root	Rosarin, Salidroside (Rhodioloside) Cinnamyl Alcohol (Styron)	Antiviral activity, Immunity boosting, lung problems	Dose can be decided after clinical trial	NA	Found Modern evidences
2	Dalchini	<i>Cinnamomum zeylanicum</i>	Twak	Dried bark - Dalchini	Cinnamyl Alcohol (Styron)	Cough, Common cold & Flu	Decoction- 15 to 25ml, Powder - 0.5 to 1 gm Oil- 2 to 5 Drops	Tuberculosis (Cinnamic Acid), Immunity Booster - Against Cold, Cough, Headache (Decoction Made Of Twak Clears Respiratory Tract) Cough Asthma	Found Modern evidences
3	Tejpatra	<i>Cinnamomum zeylanicum</i>	Twak	Leaves	Cinnamyl Alcohol (Styron)	Cough, Common cold & Flu	Decoction- 15 To 25ml, Powder - 0.5 to 1 gm Oil- 2 to 5 Drops	Tuberculosis (Cinnamic Acid), Immunity Booster - Against Cold, Cough, Headache (Decoction Made Of Twak Clears Respiratory Tract) Cough Asthma	Found Modern evidences
4	Olive	<i>Olea europaea</i>	Jaitun	Olive Leaf, Olive Leaf Extracts, Fruit	Cinnamyl Alcohol (Styron)	Immunity Stimulator Anti Viral Common Cold, Respiratory Discomfort	Decoction- 15 to 25 ml Powder - 5 to 10 Gm Oil - 5 to 25 ml	Abdominal Chill Influenza Chest Discomfort Asthma Tuberculosis Malaria Swine Flu Flu	Found Modern evidences

Rhodiola rosea and polyphenolic bioactive compounds from the plant, such as rosavin, salidroside, syringin, triandrin, and tyrosol, have been reported to exert beneficial effects against several pathogens. For example, flavonoids isolated from the roots of Rhodiola rosea have been shown to inhibit the activity of neuraminidases from *Clostridium perfringens* and influenza virus, and exert anti-influenza virus activities in vitro. More recently, studies have shown that Rhodiola inhibits dengue virus growth in blood by regulating the innate immune response genes,

RIG-I, MDA5, and ISG, to promote an effective antiviral immune response. *Rhodiola rosea* and its potential as a therapeutic strategy against a variety of infectious diseases.

Salidroside are the main chemical compound of *Rhodiola Rosea*,so this salidroside are responsible for the Antiviral Activity, Salidroside, a major bioactive component of *Rhodiola rosea* has been reported to modulate the expression of antiviral cytokines, such as IFN γ , and TNF α , and inhibit the replication of coxsackievirus B3 perhaps through modulation of oxidative stress. This Research indicate that bioactive compounds in the serum of subjects ingesting *Rhodiola rosea* may exert protective effects against virus replication following intense and prolonged exercise by inducing antiviral activity.

Proven Theory: A novel approach to the treatment of corona one which makes use of natural Phytochemical Ayurvedic compound in integrative forms. The present study investigated the effect of *Rhodiola rosea* L. hydroalcoholic extract (RHO) on corona with the help of integration medicine. In a first stage of Research According to **Dr.Garg Hypothesis**, **“Identification of Ayurveda & Homeopathic Medicine for Clinical Management of Covid-19 need Clinical Trial”** context to *Rhodiola rosea*. In a second stage of Clinical Research **“The Clinical Study about the “RHODOLIA ROSEA”in context to Futurastic Ayurvedic Medicine to be treat like COVID-19 and Other Symptoms.”** The effects of RHO on the acquisition, expression, and reinstatement of covid. *Rhodiola Rosea* with same Ayurvedic compound can proven the same effect in a integrative form of medicines. *Rhodiola Rosea* ,Rosarin,saledeside produce motivational effects by *Cinnamomum zeylanicum* (Dalchini) with individual or Integration itself but attenuated the acquisition and expression corona. Target the replication of the virus. Baricitinib would try to quell the body’s immune response, which is thought to be responsible for some of the damage to the organ that occurs with COVID-19.

“Combination therapy may prove to be an important strategy in the treatment of COVID-19,” said according to “Dr.Garg Theory”. “Especially in severe disease where there may be need for the antiviral and immunomodulatory approach.”

Rhodiola rosea, informally referred to as the ‘golden root’ or ‘arctic root’, is an adaptogenic plant that has been reported to display positive effects on covid-19 pandemic. [Mao JJ et al 2015]. The additional therapeutic effects of *R. rosea*, which derive primarily from its root

extract, have been outlined in clinical trials for improving immune system and physical strength capacity during covid-19 pandemic, alleviating low physical strength, and ameliorating symptoms of problem in breathing [Olsson EM et al 2009]. Although the traditional medicinal uses of *R. rosea* derive from Eastern Europe and Asia, *R. rosea* products have gained popularity worldwide among athletes as a by Ayurvedic therapy to prevent fatigue and improve performance [Panossian A et al 2010]. Current proceeding within the Rhodiola Rosea chemical compound is belonging to the Ayurvedic classics plants. Further, this research report also takes into account the impact of the novel COVID-19 pandemic on the Rhodiola Rosea chemical compound integrated with their Ayurvedic plant compound and offers a clear assessment of the community improvement fluctuations during the pandemic time.

Utilizing the *Integration* model system provides an integrative approach to study the relationship between an herbal extract supplementation and the impact it may have on the covid-19 symptoms. The Hypothetical report covers the accurate investigation of the Ayurvedic study integrated with Rhodolia rosea chemical compound responsible for the corona patient's symptoms. Driven by primary Research "**Identification of Ayurveda & Homeopathic Medicine for Clinical Management of Covid-19 need Clinical Trial**" context to Rhodolia rosea plant and this hypothetical secondary research will based on "**The Clinical Study about the "RHODOLIA ROSEA" in context to Futuristic Ayurvedic Medicine to be treat like COVID-19 and Other Symptoms.**", the Rhodiola Rosea Extract study offers reliable and authentic results come may be . An outbreak of pneumonia in December, 2019 in Wuhan, China, has now been determined to be caused by a novel coronavirus. It is named as Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) (Zhou P et al 2020). The disease has since spread to 185 countries and regions, with more than 2.06 million confirmed cases and more than 1, 34,354 deaths as of April 16, 2020 [Dong E et al 2020]. Despite worldwide efforts to contain it, the pandemic is continuing to spread for want of a clinically-proven prophylaxis and therapeutic strategy. Consequently, it is necessary that scientific community must draw on pluralistic knowledge systems available globally. Drawing on the original Ayurveda classics, contemporary scientific studies, and our experiential knowledge on similar clinical settings, here we propose a pragmatic plan for interventions. We provide a graded response depending on the stage of infection and proximity with disease among individuals in a population. Notwithstanding the fact that no system of medicine has any evidence-based treatment for

COVID-19 as yet, clinical interventions are being done worldwide. Similar strategy is required to be implemented.

Future scope of Research study:

The proposed future scope of this study is to see the action of antiviral activity of *Rhodiola rosea* on covid 19 symptoms as mentioned above. This work is done with the help of clinical trial of the patients those affected by corona virus. It is a integrated approach of ayurveda with same chemical compound pland along with main bioactive compound of *Rhodolia Rosea* component like Rosarin, Salidroside responsible for the antiviral activity and immunity boosting activity against COVID-19 Pandemic. After get the greatfull efforts and motivational zeal could help India protect its people from the pandemic, given the state of most Indian hospitals, the enormous population and living conditions like packed slums that leave its people particularly susceptible to outbreaks. This Present study Enthusiased people to feel passionate and research about cureness of life, from this pandemic. They do everything with a good attitude and good energy on this research. According to “Dr.Garg research hypothesis” and feel motivated to go further for grateful efforts for clinical trial permission for the betterment of community. It’s our recommendation to respective authorities to permit us for this trial or give consent to other research organizations to work on it for the community management.

Summary & Conclusion for the Clinical Trial: This research proposal is being submitted to AYUSH Ministry, Govt.of India and CCRAS to focus on the development of an effective treatment as well as preventive therapy for Covid-19 patients. In today’s epidemic outburst circumstances, there is a need of Integration to cure COVID-19. The study According to “Dr.Garg Hypothesis” We can determines the efficacy of *Rhodiola rosea* root as efficiently Integrative medicinal approach along with Ayurvedic medicine.

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