



**A REVIEW ON SCIENTIFIC EXPLORATION OF SIDDHA MINERAL
FORMULATION GURU SANJEEVI MEZHUGU AGAINST SARS-COV2 VIRAL
REPLICATION**

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ABSTRACT

In recent days siddha system of medicine has emerged as an arena for research especially in the management of microbial infection. A variety of infection can affect human which can cause common cold to severe symptoms. Most of the viral infected diseases won't respond to medications that easily. Amid the ongoing COVID 19 pandemic, India has witnessed a massive surge of cases. In the COVID 19 pandemic, India recorded more than 26 lakhs new cases and nearly 23,800 death per week. So, we are in a necessity to give an end solution for this pandemic. The calcium based nanoparticle present in medicine. Guru Sanjeevi Melugu can be given as decoy because virus utilize this calcium component to activate calcium dependent enzymes and transcription factor to promote virus replication. Thus when this medicine enters into virus through calcium decoy, copper and zinc content of medicine has the potency in virus prevention and replication by degradation of RNA and virus envelope which leads to lysis of virus. In the text of siddha anuboga vaithiya navaneetha thirattu, it is mentioned that this medicine works best on fever, cold, delirium, lymphadenitis etc. It is also mentioned that they have used this medicine for all chronic infections so that this have named as sanjeevi mezhugu. Siddha traditional practioners uses this medicine for chronic infections and disorders. Due to its efficacy and its indication mentioned in siddha literature this medicine can be present virus replicative and effective management of SARS-COV2. The aim of this article is to explore mode of action and hypothetical effectiveness of Guru Sanjeevi Mezhugu against SARS-COV2. This review article deals with the effectiveness of Guru Sanjeevi mezhugu to fight against virus

KEY WORDS: *Guru Sanjeevi mezhugu, SARS-COV2, COVOD 19 virus, Calcium, Fever cold, RNA*

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1. Introduction

Corona virus are a group of common ancient and diverse virus. They infect many mammalian and avian species and cause respiratory, gastrointestinal and central nervous system disease. Corona virus virions contains and an envelope, a helical capsid and single standard and positive sense RNA genome [1]. This corona virus has various divisions such as α , β , δ , ω , which includes large replicase transcriptase poly protein [2]. This review article explains the scientific exploration of siddha mineral formulation of *Guru Sanjeevi Mezhugu* against SARS-COV₂ viral replication.

2. Symptoms and pathogenicity of corona virus

- 1.Fever
- 2.Headache
- 3.Sore throat
- 4.Chest tightness
- 5.Itchy cough
- 6.Diarrhea
- 7.Nausea
- 8.Respiratory tract infection
- 9.Pneumonia
- 10.Immune deficiency
- 11.Gastroenteritis
- 12.Renal disease
- 13.Neurologic infection
- 14.Hepatitis
- 15.Diminish egg production
- 16.Multi organ failure
- 17.Death [3]

3. Preparation of Guru Sanjeevi mezhugu

3.1 Purification process

Ingredients which are purified,

- 1.Lingam(Red sulphide of mercury)
- 2.Veeram(Hydrargyrum perchloride)
- 3.Rasakarapuram(Mercurous chloride)
- 4.Rasachenthooram(Hydrargyrum)
- 5.Gaandham(magnetic oxide of iron)
- 6.Soodam(Camphor)
- 7.Sambraani(Benzoin)
- 8.Vellai padaanam(white arsenic)
- 9.Thurusu(Cupric sulphate)
- 10.Paal thutham(Zinc sulphate)
- 11.Mirthaarsingi(Lead ore)
- 12.Kanthagam(Sulphur)
- 13.Arithaaram(Arsenic trisulphide)

3.2 Preparation

The above ingredients have to be grinded with “Chenthoora thiravagam” for 90 hours and with sunambu thaneer. Then it has to be incinerated in a moderate temperature and then it is cooled and stored. Then 3½ gram of purified Croton tinglium(Nervaalam) have to be grinded in kalvam in addition to honey it is finely grinded, then add that stored medicine with this mixture and it is grinded with honey for 12 hours until it become mezhugu patham and it is stored in ceramic container[4].

4. Preparation of chenthoora thiravagam

- 1.Vediyuppu(Potassium nitrate) – 15 parts
- 2.Seenakaaram(Alum) -10 parts
- 3.Navaacharam(Ammonium salt) -1 part
- 4.Annabethi(Iron sulphate) – 1 part
- 5.Thurusu(Cupric sulphate) -½ part
- 6.Inthuppu(Sodium chloride impura) - ½ part
- 7.Kariyuppu(Sodium chloride) - ½ part

The above ingredients is powdered and the concentrated liquid is collected from it through distillation process.

5. Purification of Nervalam

Nervalam is tied in a cloth and it is soaked and boiled in cow dung milk, cow’s urine and lemon juice separately, then its outer cover and centre part is removed and roasted in cow’s ghee[5]. As listed in Table 1.

6.Sunambu thaneer (limestone) preparation

70g limestone added to 4.2l of water and shake for 2-3 minutes then placed immovable to separate the limestone from water and stored [8].

7. Advisable dosage for patients

Medicine dosage : 32.5 mg to 65 mg (¼ - ½ kunri)

Adjuvant: Palm jaggery, dry ginger, butter

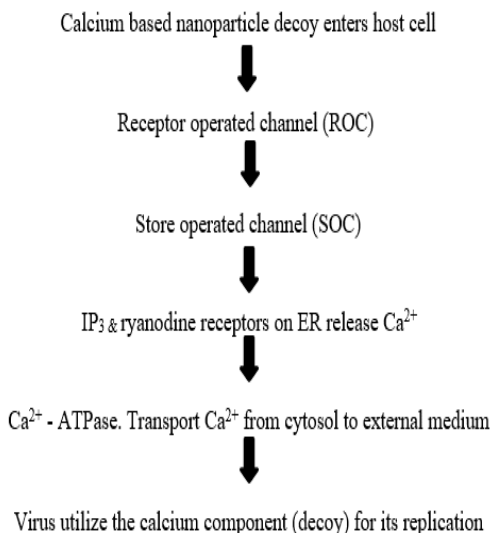
Treatable disease: Fever, Delirium, skin diseases, ulcer, chronic diseases, lymphadenitis, fistula, stomach cancer, venereal diseases.

Diet restrictions : Salt and tamarind have to be avoided [4]

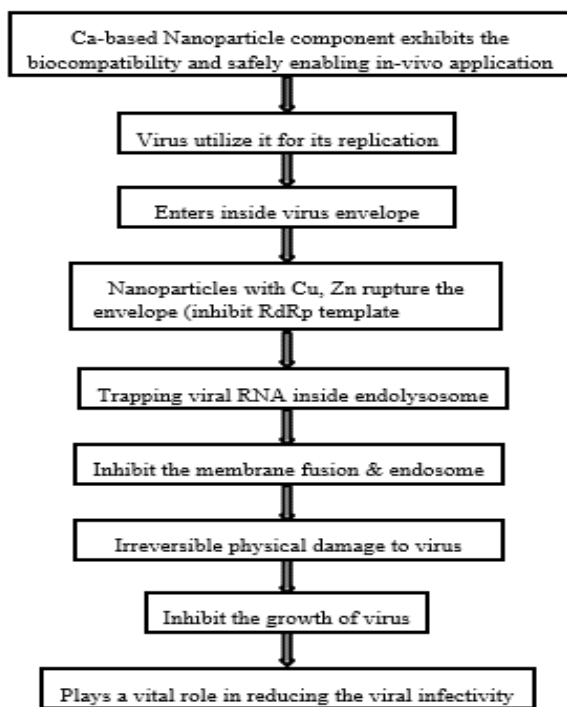
8. Nanoparticle component of medicine and its entry:

Calcium based nanoparticle with copper and zinc decoy enters host cell and to receptor operator channel (ROS) and store operator channel (SOS). Virus utilize

this calcium based decoy for its replication, thus it enters the virus envelope. Nanoparticle with copper and zinc rupture the envelope of virus by inhibiting RdRp template binding and trapping the viral RNA endolysosome, thereby inhibiting the membrane fusion which causes irreversible physical damage to virus. It plays a vital role in reducing the viral infectivity and also increases the host immune response.



9. Lysis of virus



10. Research article based potential benefits of Guru Sanjeevi Mezhugu ingredients

This potential benefits of Guru Sanjeevi Mezhugu ingredients were listed in Table 2.

11. Proposed therapeutic action of Guru Sanjeevi mezhugu

1. Inhibit RdRp template binding of corona virus
2. Cardio protective
3. Regulates the respiratory pH
4. Antiviral activity
5. Rupture the envelope of virus
6. Immune booster
7. Hepatoprotective
8. Maintain hemostasis

12. Discussion

This article explores the scientific validation of Guru Sanjeevi melugu against SARS-COV2. Guru Sanjeevi melugu is a herbo mineral drug mentioned in siddha anuboga vaithiya navaneetha thirattu. The ingredients of this drug treats respiratory problem, pyrexia inflammation, anaemia, peptic ulcer, viral infection, bacterial infection, jaundice, pain, microbial infection, vatha diseases, arthritis, chronic low back pain as mentioned in various literature.

This Guru Sanjeevi melugu helps in combating SARS-COV2 by inhibiting RdRp template binding of corona virus. The combination of Cu and Zn in this medicine helps in breakdown of viral envelope by inhibiting the RdRp template binding with the help of calcium decoy.

Thus it not only reduces the viral load but also enhances the immunity which facilitates fast recovery. Thus Guru Sanjeevi melugu and its mode of action would be a need of the hour in present biosphere of mounting resistance towards anti-viral therapy. Further future research would be warranted to validate and confirm the hypothesis of target action against SARS-COV2

13. Conclusion

While the quest of antivirals against SARS COV2 is increasing day by day despite the discovery of vaccines to combat this multifactorial disorder, the present article deals with the scientific exploration of

Guru Sanjeevi melugu, its mode of action and effectiveness against SARS-COV2 viral replication. Further molecular docking studies and wet lab studies would be warranted in near future to validate and confirm this hypothesis of target action against SARS-COV2.

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Table 1: Purification process of the selected ingredients

S.No	Ingredient	Procedure / Methodology
1	<i>Lingam</i> (Red sulphide of mercury)	Lemonjuice, cow's milk, <i>Acalypha indica</i> juice → have to give surukku with it.
2	<i>Veeram</i> (Hydrargyrumperchloride)	Dip the veeram inside the mixture of tender coconut juice and camphor and it is heated for half an hour.
3	<i>Rasam</i> (Hydrargyrum)	Rasam with juice of <i>leucas aspera</i> have to be kept in sunlight for 10 days
4	<i>Soodam</i> (Camphor)	Soodam with juice of sengaluneer plant and it is kept in Sunlight.
5	<i>Vellai paadanam</i> (White arsenic)	The powdered form of vellai paadanam is tied in a cloth and dipped in a mixture of piper nigrum(milagu) and <i>Amaranthus tricolor</i> (sirukeerai) and it is heated
6	<i>Thurusu</i> (Cupric sulphate)	It have to be heated until it changes to white color
7	<i>Miruthaar singi</i> (Lead ore)	Miruthaar singi is boiled in the juice of banana stem and it is dried. This procedure is repeated for five times
8	<i>Kanthagam</i> (Sulphur)	The mixture of maruthani leaf(<i>lawsonia inermis</i>) with curd is placed in a vessel above this the kanthagam is placed on the shield of cloth and incinerated for 7 times
9	Vediyuppu (Potassium nitrate)	1 part of vediyuppu is mixed with 4 part of water and heated then the egg white is added to it and heated. The above sediments have to be excluded and filtered after heating. Then it is kept in a sunlight.
10	<i>Seenakaram</i> (Alum)	Have to dissolve the seenakaram in water and boiled until it becomes kuzhambu patham. Then it is cooled.
11	Navacharam(Ammo ni chloridum)	Navacharam is mixed with warm water and it is filtered and cooled.

12	Annabethi(Iron sulphate)	Annabethi is mixed with water and a small quantity of kanthaga thiravagam then it is filtered and cooled.
13	Inthuppu(Rock salt)	It is mixed with kaadi for 3 days and kept in a sunlight
14	Kariyuppu(Sodium chloride)	Kariyuppu is mixed with juice of banana stem and heated, then the lemon juice is added to it and kept in a sunlight.
15	Gaandham(Magnetic oxide of iron)	Powdered form of gaandham is boiled with kaadi and kollu kudineer(horsegram) and taken

Table 2: Research article based potential benefits of Guru Sanjeevi Mezhu ingredients

S.No	Ingredients	Treatable diseases	Ref. no.
1	Lingam (Red sulphide of mercury)	Respiratory problem Fever Ulcer Cardiac problem	[7]
2	Veeram (Hydrargyrum perchloride)	Fever Microbial infection Pain Inflammation	[8]
3	Rasakarpooram (Mercurous chloride)	Respiratory problem	[9]
4	Rasa chenthooram (Hydrargyrum)	Arthritis Anemia Jaundice Gonorrhoea Chronic fever Joint infection Peptic ulcer	[10][11]
5	Gaandham (Magnetic oxide of iron)	Chronic low back pain Inflammation Ulcer Jaundice Vatha diseases	[2]
6	Soodam (Camphor)	Viral infection Bacterial infection	