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## SIDDHA SYSTEM AND NANO TECHNOLOGY - A REVIEW

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### ABSTRACT

Nano technology is a magical word among the world community nowadays. This emerging science over rule's almost all departments like information technology, Civil engineering, Medical system etc. in technological applications. Recent developments in Nano Medical technology are helpful in the diagnosis and treatment aspects of certain life threatening diseases like Cancer and other diseases in cellular level. Siddha system of medicine is one of the oldest traditional systems in the world. This system exists in South India especially in Tamilnadu. Siddha system is an old age medicinal heritage established by Siddhars who are supernatural sages. Varmam, Alchemy, Yogic practices are the some of unique specialties in Siddha system. Concepts of various technologies of recent sciences like Biotechnology, Nano technology; Biochemistry, Pharmacology, etc. are found abundantly in Siddha system. This Article explains about Concepts of nano technology in Siddha medicinal pharmacology with Siddha literature references.

### KEYWORDS

Siddha System, Nano Technology, Nano Medicine and Single Medicine Multiple Application.

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### INTRODUCTION

Nano technology is a magical word among the world community nowadays. This emerging science over rule's almost all departments like information technology, Civil engineering, Medical system etc. in technological applications. Recent developments in Nano Medical technology are helpful in the diagnosis and treatment aspects of certain life threatening diseases like Cancer and other cell level diseases.

Siddha system of medicine is one of the oldest traditional systems in the world. This system exists in South India especially in Tamilnadu. Siddha system is an old age medicinal heritage established by Siddhars who were supernatural sages. Varmam, Alchemy, Yogic practices are the some of unique specialties in Siddha system.

Concepts of various technologies of recent sciences like Biotechnology, Nano technology, Biochemistry, Pharmacology, etc. are found abundantly in Siddha system.

This Article explains about Concepts of nano technology in Siddha medicinal pharmacology with Siddha literature references.

### **Nanotechnology Concept in Siddha**

Thirumoolar is one of the great Siddhar of Siddha system who mention about the particle size of Anu (Atom) in his text as follows

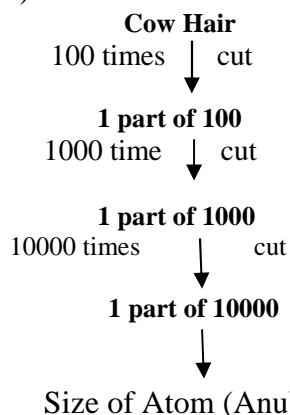
“Meviya Seevan Vadivathu Sollidil  
Koovin mayirondru noorudan kooritu  
Meviya Koorathu Ayira mayinaal  
Aviyin Kooru Noorayiram Thondrume”

#### **- Thirumanthiram\***

(\*This Literature is one of the oldest texts in which it is mentioned about Siddha Medical System and Yogic principles)

#### **Explanation of the above quote**

“Take one piece of cow’s hair and cut it into 100 Parts, then take one part of it and again cut it into 1000 parts, then take one part from that and again cut it into another 10000 parts. The remaining 1 part from those 10000 parts will resemble the size of the Atom (Anu in Tamil)”.



This is the perfect match of Nano technology concept with Siddha.

Apart from this, a lot of Small measurement units were also mentioned in Tamil Siddha Literatures.

**Reference: Kanaga sabapathi Kaiyedu**

### **Single Medicine Multiple Application Theory**

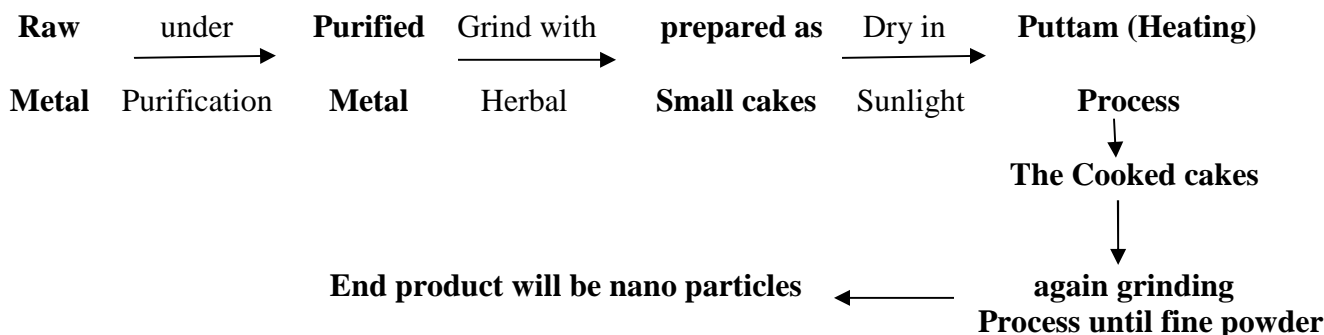
Preparing medicines from metals and minerals is one of the unique features of Siddha system. These medicines are prepared in the form of Parpam, Chendooram, Chunnam, Kattu, kalangu etc. In Siddha literatures, these Herbo- mineral Siddha medicines are indicated to be administered to humans in minimal doses. It is also said to administer these medicines in different variety of adjuvants like Milk, Ghee, Honey, Herbal juices etc. for different kinds of diseases. This is called as Single Medicine Multiple Application Theory.

Recent researches are explaining about the nano particles in Siddha Herbo mineral medicines.

If we can utilize a single Siddha Herbo mineral medicine, it will be processed and prepared in procedures, the end medicines particles will be nano or less than nano level. This is the uniqueness of the therapeutic actions of Siddha Herbo-mineral preparations.

Let us understand, procedure of how Siddha Herbo mineral Medicines are made into nano particles? To prepare an Herbo mineral preparation like Parpam in Siddha following changes are taking place to finish medicine and end product will be finished as nano particles.

**Siddha way of Nano Particle preparation:**



For Example, if we consider the Silver Parpam (Bhasma) preparation method, as per Therayar Siddha literature, first we have to purify the raw silver with 3 types of herbal juices for few days and grind with 4 types of Herbal juices continuously for 4 days. Then make this paste into small cakes and allow it to dry for 2 days. Then keep them inside the mud pot covered with mud pasted cloth. Then put this mud pot into the Puttam process (Heating process with traditional cow dung Cakes). Then allows it to cool and then powder the inside medicinal cakes. This is the procedure to prepare proper Silver Parpam. Siddha literature also

mentions quality control testing method of finished metal products (Panchmithram). If needed, this process may be repeated for ‘n’ times. Because of repeated grinding with herbal juices and heating process, the end products will become the nano particles.

The dosage of the above said silver Parpam is indicated to be 1/6<sup>th</sup> part of the beak of a crow in Siddha literature. Thus prepared medicines are therapeutic nano particles and are highly biologically active even if administered in very small doses.

S.No	Small Measurement Units mentioned in Siddha				
1	Mukkal – 3/4	Arai – 1/2	Kaal – 1/4	Naaluma - 1/5	Mumma mukkani – 3/16
2	Mummaa – 3/20	Araikka – 1/8	Irumaa – 1/10	Mukkani – 3/80	Maa – 1/16
3	Aria maa- 1/40	Kaani – 1/80	Araikaani – 1/160	Munthiri – 1/160	Keel Mukkal – 3/1280
4	Keel Arai – 1/640	Keel Kaal – 1/1280	Keel Naalumaa – 1/1600	Keel Mondru Veesam – 3/5120	Keel Arai kaal – 1/5120
5	Keel mukkani – 3/25600	Keel Araima – 1/12800	Keel Kaani – 1/51,200	Keel Munthiri – 1,02400	Immi – 1/1075200

**The Reasons behind why Siddha medicines are better than Modern Nano Particles**

S.No	Nano particles in Siddha Medicines	Instrumental manufactured Nano Particles
1	Purification with herbal juices, grinding with herbal juice and Puttam process increases the Siddha medicine’s therapeutic value.	Simply they make raw metal into nano particles
2	Single same medicine, but with different multiple adjuvant theory is the speciality of Siddha system of medicine.	Single medicine with multiple adjuvant theory is not present.
3	Less toxic because of proper purification, Grinding and heating process.	More toxic

## CONCLUSION

Siddha system of medicine contains a lot of hidden medical treasures that can be applied in the treatment of various life threatening diseases. Validation and interpretation of Siddha Herbo mineral medicines with modern nanotechnology will help to fill the gap areas of failure in other medical systems. Application and implementation of these Siddha medicines in a wide range throughout the world will be a boon for diseased population and help in promoting a healthy society.

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## CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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