

## THE SIDDHA CONCEPTS OF PHYSIOLOGY INCORPORATED FOR THE FORMULATION OF CARDIO - PROTECTIVE DRUGS – A REVIEW

<sup>1</sup>Prof. Dr. M. Rajasekaran M.D(S) and <sup>2</sup>\*Dr. I. Nithyamala M.D(S)

<sup>1</sup>HOD and Research Guide, Department of *Gunapadam*, National institute of Siddha,  
Tambaram Sanatorium, Chennai 600047.

<sup>2</sup>Research Scholar, Department of *Gunapadam*, National institute of Siddha, Tambaram  
Sanatorium, Chennai 600047.

Article Received on  
20 Dec. 2016,

Revised on 10 Jan. 2017,  
Accepted on 31 Jan. 2017

DOI:10.20959/wjpr20172-7819

### \*Corresponding Author

**Prof. Dr. M. Rajasekaran**  
M.D(S), HOD & Research  
Guide, Department of  
*Gunapadam*, National Institute  
of Siddha, Chennai 600047.

### ABSTRACT

The Siddha system of medicine is a unique system of medicines profounded by Siddhars. It is based on 96 *thathuvam* / concepts of philosophy. The Siddha system of medicine has unique concepts like “*Andathil ullathe pindam, Pindathil ullathe Andam*(Extrinsic and intrinsic factors)” “*Unave marundu, marunde unavu*” (Food is medicine & medicine is food). The 96 *thathuvam* are concepts of philosophy adopted to formulate the cardio- vascular drugs. The auspicious time ie *Amirtha kadigai* for drug preparation & medication.

**KEYWORDS:** Siddha, *Basic concepts, thathuvam, Amirtha kadigai.*

### INTRODUCTION

The Siddha system of medicine is a unique system of medicines profounded by Siddhars. The Siddha system of medicine is an ancient documented medical system in the world.<sup>[1]</sup> It is based on 96 *thathuvam* / concepts of philosophy. The Siddha system of medicine has unique concepts like “*Andathil ullathe pindam, Pindathil ullathe Andam*” which indicates that composition & life of human body is similar to the composition of Universe eg. Extrinsic and intrinsic factors in health and diseases. The Siddha system of medicine has insisted “*Unave marundu marunde unavu*” which means “Food is medicine & medicine is food” as said by Saint Thiruvalluvar. There are several raw drugs used for drug preparation eg plants, minerals, metals, arsenics, salts, animal origin, marine products and synthetic products said by siddhars were being used for medicinal preparations, the value of

which the Siddha medicine proclaims should be scientifically studied & recorded for future use.<sup>[2]</sup> These are based on the natural concepts and issues of Siddhars as follows:

The 96 *thathuvam*<sup>[3,4]</sup> are natural substances / concepts of philosophy adopted to formulate the cardio- vascular drugs in the research.

The *pancha boothas* (The 5 basic elements) are

<i>Nilam</i> (Matter)	<i>Thee</i> ( heat & energy)
<i>Neer</i> (The liquid)	<i>Vali</i> (the vital air)
	<i>Vinn</i> (the cosmic space)

The five primordial elements like i)earth, ii)water, iii)fire, iv)air & v)sky may be represented as i)carbon, ii)Hydrogen & oxygen, iii) oxygen, iv)Atmosphere, hydrogen, nitrogen and inert gases & v) helium respectively, all these 5 elements manifest themselves in the conception of human being through these 96 basic factors and the drug molecules are developed accordingly.<sup>[5]</sup>

<i>Thathuvam</i> - concepts	Number	May Represent	Corresponding Vascular supply
<b><i>Bootham</i> - The natural substances</b>	5	Earth, water, Fire, Wind & Sky	Blood vessels, Heart muscles, the blood circulation & the blood formation involves these 5 natural substances as Carbohydrate, water, chemo - receptors, baro - receptors, iono - tropic, chrono - tropic & blood gases & intracellular spaces etc. The blood vessels involving in 5 systems.
<i>Pori</i> – Sense organs of the body	5	1.Skin, 2.Mouth, 3.Eyes, 4.Nose & 5. Ears.	1.The blood supply to skin originates from 3 main sources, the direct cutaneous system, the musculo - cutaneous system and the fascio -cutaneous system. <sup>[6]</sup> 2.Pharyngeal artery, Lingual Artery etc <sup>[7]</sup> 3.opthalmic artery –central artery of retina etc <sup>[7]</sup> 4.Anterior ethmoidal, posterior nasal branch from spheno - palatine branch of maxillary artery etc for the Nose <sup>[8]</sup> 5.Superficial temporal, posterior auricular, Maxillary, Stylomastoid branch, Posterior auricular Arteries etc for the ear <sup>[8]</sup>
<i>Pulan</i> - Sense	5	Skin Perception, taste, Vision,	,,

		Smell & Hearing.	
<i>Kanmendriyam</i> - The functional organs	5	Hands, Legs, Mouth, Genital organs & Anus	Hands- axillary, brachial artery etc <sup>[8]</sup> , Legs – femoral artery etc <sup>[8]</sup> , Genital organs – internal & external iliac arteries etc & Anus- internal pudental arteries <sup>[8]</sup>
<i>Gnanendriyam</i> - functions of the higher centres of the brain	5	Speech, Smell, Perspiration, Excretion - Urination, Ejaculation & ovulation	
<i>Karanam</i> - Mental faculties	4	<i>Manam</i> - Mind, <i>Buddhi</i> – intellect, <i>Siddham</i> – Fruition & Fulfillment <i>Agangaram</i> – Super ego	
<i>Arivu</i>	1	Realism – The ultimate truth	
<i>Naadi</i>	10	Pulse	
<i>Vaayu</i>	10	Air; oxygen, Hydrogen, Carbon - di - oxide, Nitrogen, Carbon - monoxide during (Coma & death), Sulphur - di -oxide in abscess, carcinoma, gangrene, rigor mortis (Cadaveric changes).	
<i>Aasayam</i> - The pouch organs	5	Stomach, Small - intestine, Urinary -bladder, Rectum, Vas deferens/Fimbriae.	
<i>Kosham</i> – Systems	5	Gastro - intestinal, Respiratory, Central nervous, Cardio - vascular, Genito -Urinary systems.	
<i>Aadhaaram</i> - Ganglions	6	<i>Mooladaram</i> ; Ano - rectal region <i>Swathittanam</i> ; Pelvis, Pelvi-ureteric junction, Prostate-penile region or Pelvi – urethra & Mons pubis region. <i>Manipooragam</i> ; Umbilical region <i>Anagadham</i> ; epi - gastric region <i>Visuththi</i> ; root of the neck – throat pit. <i>Aagnai</i> ; Root of the nose – between the eye brows.	Sympathetic and parasympathetic nerves controls the pelvic organs.
<i>Mandalam</i>	3	<i>The Gnyayiru mandalam</i> (the heart function) – The purkinje system – the atrio - ventricular node, sino - atrial node – Bundle of His & the Purkinje fibres – the iono- tropic & the chrono-tropic transmission of cardiac impulses – the systolic & the diastolic, systematic functions. <i>Thingal mandalam</i> – The central nervous system – the higher intellectual functions. <i>Thee mandalam</i> – Basal metabolic	

		rate, appetite, temperature elevated during the time of ovulation, orgasm & calories.	
<i>Malam</i> – 3 impurities of the mind; (mental abnormalities)	3	Super ego, deed, the lust.	
<i>Dhodam</i> - deviations	3	<i>Vatham</i> , <i>Pitham</i> & <i>Kabam</i>	
<i>Eedanai</i> - bondages	3	Lust for material wealth, Bondages with spouse, children, Worldly bondages and greed.	
<i>Gunam</i> - personalities	3	<i>Sathvam</i> – Pious, <i>Rajo Gunam</i> – Masculine & athletic & <i>Thamo Gunam</i> – Lethargic personalities.	
<i>Vinai</i> - deeds	2	Good & bad deeds	
<i>Raagam</i> - abnormal Mental faculties	8	<i>Kamam</i> – lust, <i>Krotham</i> – cruelty & conflict, <i>Lobam</i> – Excessive desire, <i>Mogam</i> – Greed, <i>Madham</i> – Violent behavior, <i>Macharyam</i> – Vengeance, <i>Idumbai</i> – Adamant, <i>Agankaram</i> - Excentric.	
<i>Avathai</i> - stages of life	5	<i>Nanavu</i> – Consciousness, <i>Kanavu</i> – Dreams, <i>Urakkam</i> – Sleeping & tranquility, <i>Perurakkam</i> – Deep sleep & Coma, <i>Uyir padakkam</i> – death.	
TOTAL NATURAL SUBSTANCES / CONCEPTS <i>THATHUVAM</i>	96		

The food substances or medicines react to the body as per the above 96 major concepts.

The human body formed by these 96 basic factors as follows:-

<i>Uyir Thathukkal</i> the three humours, viz. <i>Vaatham</i> , <i>Pitham</i> and <i>Kabham</i> .	<i>Udal Thathukkal</i> <i>Saaram</i> , <i>Senneer</i> , <i>Oon</i> , <i>Konzhuppu</i> , <i>Enbu</i> , <i>Moolai</i> and <i>Sukkilam</i> (Spermatozoa) / <i>Sronitham</i> (ovum)
---	--

Everything in the Universe is “**Aimbootha mayam**” (having the properties of *Pancha boothas* – Five elements).<sup>[9]</sup>

### ***Vaatham***

*Vaatham* represents vayu, mind, dryness, pain, flatulence, sensitiveness, lightness & also air, Dryness, cold, subtle, rough, unstable and light are certain qualities of *Vaatham*. it is classified into the following 10 routes of action (*Dasa Vayu*) as follows:-

S.No	Type of Vaayu	Function
1	<i>Praanan</i> (Heart centre)	Refers to (vagus nerve)cardiac plexus in heart region & controls heart & blood circulation.
2	<i>Abaanan</i>	Corresponds to the pelvic plexus besides being the seat of <i>kundalini</i> or material energy & controls excretions (The Nervi ergentis, Lumbo - sacral & Coccygeal plexus)
3	<i>Viyaanan</i>	Corresponds to the(Naso - pharyngeal nerve, ciliary plexus at the root of the nose and base of the skull & controls desire).
4	<i>Samaanan</i>	Corresponds to the Gastro - intestinal tract which helps digestion. (HCl, Pepsin, Gastrin, biliary juice, Pancreatic juice & insulin).The vagus nerve is involved.
5	<i>Udhaanan</i>	Corresponds to the pharyngeal plexus in the throat region & controls breathings & speech. (Hypoglossal Nerve, Glosso - Pharyngeal Nerve)
6	<i>Naagan</i>	Responsible for higher intellectual functions, yogam & praanayamam. It brightens the intellectual power. It helps in speech & Vision. It causes gooseflesh. Auditory, Glosso - pharyngeal & Peripheral nerves.
7	<i>Koorman</i>	Responsible for acute - vision. It starts from the brain and makes the eyelids to twinkle. It helps in yawning and closing the mouth.The optic Nerve, the glosso - pharyngeal & hypoglossal nerves are involved.
8	<i>Kirukaran</i>	Responsible for salivary & nasal secretion, taste, appetite, memory, causes cough & sneezing.
9	<i>Devathathan</i>	The cell built - up, Eye rotation, arguments, anger, genital & rectal functions.
10	<i>Dhananjayan</i>	At the time of conception, the sperm up to its neck will unite with the ovum & fertilization will take place and Nitrous oxide is produced in the fertilization which helps the sperm to penetrate the oval coat & the life starts with the induction of Nitrous oxide.

### ***Pitham***

*Pitham* exhibits itself in five forms in our body. They are as follows:-

S.No	Type of <i>Pitham</i>	Function
1	<i>Analam</i>	Gives appetite & helps digestion (HCl)
2	<i>Ranjakam</i>	Colours the blood cells (Oxy - haemoglobin)
3	<i>Sathakam</i>	Controls the whole body (basal metabolic rate)
4	<i>Aalochakam</i>	Brightens the eyes (The rods and cones)
5	<i>Prasakam</i>	Gives complexion to the skin (the tanning effect of the skin)

### ***Kabham***

*Kabham* has five forms which are as follows:-

S.No	Type of <i>Kabham</i> ( Bio - Lubricant)	Function
1	<i>Avalambakam</i>	Helps the lubrication of the heart and lungs(Peri-cardial, intra - pleural fluid)
2	<i>Kiletham</i>	Helps mastication and blending the food(Ptyalin)

3	<i>Bothakam</i>	The mouth secretion ; Perceives the taste (Saliva)
4	<i>Tharpakam</i>	Keeps the head cool (Cerebro - spinal fluid, vitreous humour & aqueous humour)
5	<i>Santhikam</i>	Lubricates & aids free movements of joints ( Synovial fluid)

**The Siddha Gunapadam concepts of drug formulations for the Cardio – protective actions** are as follows:-

Siddha Concepts	Drug activity
1.Kaippu ( Vaayu + Aagayam) , 2.Pulippu ( Mann + Theyu ) 3.Uppu ( Neer + Theyu) 4. Kaarpu (Theyu + Vaayu) 5.Kaarpu (Theyu + Vaayu) 6.Inippu (Mann+ Neer)	1.Anti - microbial activity ( for $\beta$ - hemolytic streptococci) 2.Anti - hypertrophic activity 3.Hypolipidemic activity 4.Anti - infarct activity  5.Thrombolytic & Anti-Platelet aggregation activities 6. Anti – hypertensive activity ( $\beta$ blocker , ACE inhibitor & Calcium channel blockers)

The human physiology & bio-physics are the same. The bio - physics concepts will enlighten the functions of internal organs, blood circulation, the cellular functions, the enzyme pathway, the sympathetic and para - sympathetic system also interacts with biochemicals for the normal function & the variations in disease manifestations etc.

According to Book *Abithana Chintamani*<sup>[10]</sup> – ‘*Vidana Malai*’ - *amirtha kadigai* is the auspicious time for drug preparation , medication and the disease will be amenable to treatment. *Amirtha kadigai* is the specific time for the exposure of D3 solar rays. Exposure of medicines at the *amirtha kadigai* time will have more potency due to absorption of D3 rays (*Amuda kadir*).

**The Amitha kathir / Amirtha kadigai timings of 27 star constellations are as follows:-**

Stars- Kadigai / Naazhigai (24 minutes/Naazhigai)	Stars- Kadigai/ Naazhigai (24 minutes/Naazhigai)	Stars- Kadigai/ Naazhigai (24 minutes/Naazhigai)
1.Ashwini – 22,23,24,25 2.Bharani – 31,32,33,34 3.Kirithigai – 51,52, 53,54 4. Roghini -15,16,17,18 5.Mirugasiridam -31,32,33,34 6.Thiruvadirai -41,42,43,44 7. Punarpoosam-15,16,17,18 8. Poosam – 12,13,14,15 9.Aayilyam – 41,42,43,44	10.Magam– 21,22,23,24. 11.Pooram - 31,32,33,34 12. Uthiram – 34,35,36,37 13. Hastham – 8,9,10,11 14. Chithirai – 17,18,19,20 15. Swathi – 23,24,25,26 16. Visagam – 21,22,23,24 17. Anusham -15,16,17,18 18. Kettai – 32,33,34,35	19.Moolam - 15,16,17,18 20. Pooradam – 11,12,13,14 21. Uthradam -15,16,17,18 22. Thiruvonam -21,22,23,24 23. Avittam -15,16,17,18 24. Sadayam – 21,22,23,24 25. Poorattathi – 11,12,13,14 26. Uthirathathi – 19,20,21,22 27. Revathi – 13,14,15,16



The 360 degrees of geo - stationary orbit of the earth is astronomically / astrologically divided by 12 *Rasis* = 30 astrological unit per *rasi*. Each *rasi* has 2 1/4 *natchathiram* or stars. Our physiological area of the human beings is directly related to environment.

A *natchathiram* timing will vary depending upon the days of the month in the calendar. The latitude & longitude of the earth which receives the stellar rays will have effect on the flora, fauna including human beings which results in biological and pathological changes.

The solar, lunar rays, the rays of full moon and new moon days will also have effect on potentiation of prepared medicine and the disease manifestations also has impact with these rays. The potentiation of medicine is made under Lunar rays, full moon rays & medicines exposed during the day time, at evening hours will improve the drug potency & the drug activity. eg. the fullers salt collected during full moon day around 12.00 AM on the swathi *natchathiram* days during the month of chithirai combined with Friday will increase the drug efficacy of fullers earth and siddha medicine is using this technique for more than 5000 years. the innovative pharmaceutical technology, the bio - pharmaceuticals & the pharmacotherapy may also be applied using the siddha concepts eg in the formulation of cardio - protective drugs which will be followed in the recent research.

## CONCLUSION

The basic concepts of Siddha *Gunapadam* & *amirtha kadigai* the auspicious time for drug preparation & medication should be incorporated for the formulation of cardio - protective drugs and this concept of *amirtha kadigai* may be incorporated for internal & external medicines of 64 major types mentioned in siddha system for better therapeutic benefits and the innovative drug development and molecular development can be done using the Siddha pharmaceutical sciences concept in future for better therapeutic benefit for the mankind.

## REFERENCES

1. Shukla SS, Saraf S, Saraf S. Fundamental aspect and basic concept of siddha medicines. *Syst Rev Pharm*, 2011; 2: 48-54.
2. History of Siddha medicine N Kandaswamy Pillai, Second edition 1998 Department of Indian Medicine & Homeopathy Chennai 600106.
3. *Siddha maruthuvanga churukkam* K S Uthamarayan third edition Department of Indian Medicine & Homeopathy Chennai 600106, 2003; 94-103.

4. *Thotrakrama aaraichiyum siddha maruthuva varalaarum* K S Uthamarayan third edition Department of Indian Medicine & Homeopathy Chennai 600106, 2003; 94-103.
5. [http://www.tkdil.res.in/tkdil/langdefault/Siddha/Sid\\_Siddha\\_Concepts.asp](http://www.tkdil.res.in/tkdil/langdefault/Siddha/Sid_Siddha_Concepts.asp).
6. *Grays anatomy Churchil livingstone 39<sup>th</sup> edition 2006 Elsevier Ltd*, 169.
7. *BD Chaurasia's Human anatomy BD Chaurasia CBS Publishers & distributors New Delhi 110002 fourth edition, 2004*; 105-118, 207-225.
8. *A text book of human anatomy T S Ranganathan S.Chand & Company Ltd ram nagar, New Delhi – 110055 sixth edition, 2002*; 49-139, 140–243, 393 579, 589-597.
9. *Noi nadal Part I* Anonymous Department of Indian Medicine & Homeopathy Chennai, 600106.
10. Abithana Chintamani Singaravelu Mudaliyar A Asian Educational services New Delhi 110049 Twelfth edition, 2010; 71.