

SIDDHA SYSTEM OF MEDICINE : A HISTORICAL APPRAISAL

K. H. KRISHNAMURTHY* AND G. CHANDRA MOULI**

Department of Biology
Jawaharlal Institute of Post-graduate Medical Education and Research
Pondicherry 605 006

(Received 19 December 1981: after revision 5 October 1982)

A historical appraisal of the Siddha System of Medicine seems to reveal as follows: In all probability there was a single system of Medicine called Āyurveda all over India growing continuously from *Saphitā* periods up to the modern times. It is only in later years of this long history that a specialized stress on the principles of rejuvenation, rasāyana and attempts to make the human body immortal, took place. This led to a somewhat esoteric specialization that occurred rather concentratedly in the southern region of the Indian subcontinent. Within these bounds however, a remarkable flourish of literature of the traditional eighteen Siddhars arose in Tamil which require all the scientific care that we can bestow upon them to understand their merits in the proper perspectives. Some hints towards this end are presented and pointers to future work have been commented upon.

INTRODUCTION

In the current attempts at the resuscitation of our indigenous systems of medicine, the value of an essentially historical appraisal of the two systems concerned, viz. Āyurveda and Siddha cannot be minimized. It is much more so with the lesser known and the not so copious of the two, viz. Siddha. This is what is attempted here in a necessarily brief manner. The objective is to sketch an overall picture of the situation, rather than to be intensive on any particular aspect. We do so under the following heads: (A). Historical evaluation with some modern writings furnishing our basic point of argument. (B). Comparison of the two systems. (C). Note on the specialities of the Siddha system and (D). Some points for future study.

A. HISTORICAL EVALUATION

Two modern works^{1,2} have been selected as two good representatives of thinking in some quarters on this line. Most of the original literature in Siddha are in Tamil and the system itself prevails almost wholly in Tamil Nadu. This literature however is considerably extensive and spreads over several centuries at least. A critical scrutiny of the points made out by these two authors would be highly revealing. A Tamil work by name *Sengonravai chelavu* is mentioned in ref. 1 as the oldest authoritative reference and this is also expected to take us to the Tamil Culture of even

*Project Officer.

**Research Fellow.

before 12,000 years ago. Unfortunately however, there is no such work available in Tamil now. This is neither mentioned in the general Tamil literature nor atleast its contents quoted somewhere. In fact, it is altogether another work, viz. *Tholkappium* that is accepted in most quarters as the oldest Tamil book available and not this *Sengonravai chelavu*.

Tholkappium is presumed to have been written in the first *Sangam* period (c 300 B.C.—300 A.D.). Its further timing is however given variously by different authors. Swamy's³ conclusion here seems to be valuable and quite scientific. For, it represents a necessary and unbiased surmise of the linguistic development of all the South Indian languages and not only Tamil. It also takes into consideration the Socio-economic details available in *Tholkappium* itself. Some of his conclusions are useful as follows in determining the history of the Siddha system itself.

According to him, the earliest epigraphic records in Tamil appears in the commencing years of the seventh century A.D. and these were written in both the *grantha* and the Tamil scripts. The still earlier cave inscriptions of Tamil Nadu range from third century B.C. to the corresponding third century A.D. (viz. it coincides with the *Sangam* period, as stated above) but contains a great deal of Prakrita words also. The appearance of *Vettelutthu*, is only from eighth century A.D. In all the languages of Dravidian group, the spoken words began to be committed to writing only between fifth and seventh century A.D. Before fifth century A.D., the southern variety of the *Brahmi* script itself was employed for writing the South Indian languages. The South Indian languages should have attained a near maturity stage only by the fifth century A.D. to seventh century A.D. as known from the epigraphic records of that time. There may be some quantum of literature developed prior to fifth century A.D. but not much evidence is available to say so. During the growth of the South Indian languages, the influence of Sanskrit especially in their vocabulary, is evident and this is more pronounced in the phase of writing.

Swamy has concluded on such grounds, that *Tholkappium* has been written in the eleventh century or twelfth century A.D. specially if one takes note that the appearance of all of its commentaries took place mostly in the thirteenth century A.D. and also the similarity in the socio-economic data. If one goes by such a view of the comparatively very late origin of *Tholkappium* itself, the earliest accepted work in Tamil, it will be difficult to accept the immensely ancient period for the medical writings of the Siddhars that some enthusiasts claim. Connecting the ancient Tamil speaking people with the Indus Valley civilisation (refs. 1 and 2) also does not seem to lie on firm grounds. Among many other reasons here, it may be pointed out that the unique aspects of the Indus Valley civilisation particularly regarding its social hygiene, do not have any parallel in the excavations carried out till date in Tamil Nadu. No mention of this or anything connected with this, occurs even in the ancient Tamil Literature. Associating Tamil Culture with the bygone, almost amythical Lemuria is almost fanciful. For, the former is an event of historical periods and the

latter is an aspect of geological ages having to do with the origin and evolution of man and there is not much of an evidence to connect the two.

Another claim made (ref. 1) is that the Siddha medicine evolved and developed as an adjuvant to a system of philosophy termed as the *Śaiva Siddhānta* which itself is depicted as a product of Tamil Culture. It is pertinent to point out here the standpoint of the well known authority on Indian Philosophy, S. Radhakrishnan. He states that even though *Saivism* prevailed in South India much before the Christian era, a distinctive Philosophy called *Śaiva Siddhānta* got differentiated only about eleventh century A.D. *Agamas* constitute the basic literature of *Śaiva Siddhānta*. '*Śiva gnana bothem*' a standard work on *Śaiva Siddhānta* by Meykandar of thirteenth century A.D. is accepted by Kupuswamy himself as being a translation of the more ancient *Rourava agama*. Moreover, it is also well known that *Saivism* was popular all through the Indian sub-continent from the very ancient times and in various forms and this had also fostered enough literature in regional languages. Moreover all the literature for *Śaiva Siddhānta* are based on *Agamas* only. Therefore, neither the *Saivism* nor the *Śaiva Siddhānta* can be presumed to be restricted to Tamil region alone. However to still assert that the Siddha medicine is an adjuvant of *Śaiva Siddhānta*, it has been claimed (ref. 1) that the Siddha medicine has taken the 36 basic *tattwas* of *Śaiva Siddhānta* as its fundamental principles and has added sixty more on its own, making the total 96. In '*Siddha maruthuvanga churukkam*'⁵ six concepts of 96 *thattuvams* have been explained alright. Among them the generally accepted and implemented concept of Yugimuni⁶ resembles a *Vedānta* type of classification of its basic entities or axioms. Another famous work on Siddha, viz. '*Veidyā Sathaganadi*' proceeds on similar lines. These factors would make it clear that the Siddha medicine need not necessarily be an adjuvant of *Śaiva Siddhānta*.

As stated above, all the literature on Siddha medicine is in Tamil and its detailed dating however is much disputed. Moreover wherever such a dating is done the attempts lean essentially on epigraphic evidences. There is another possibility which has not been explored adequately. For instance, we may also attempt a comparison of the linguistic structure of the vast literature of the Siddhars and try to come to some valid conclusions of chronology at least up to the level of fixing broad periods of development, on such grounds as well. This method seems to be quite valid and scientific but not conscientiously tried so far for the works of the Siddhars. We can however point out one highly promising modern work in such a direction by Arunachalam⁷. We can also state though tentatively that all of the available works of the Siddha literature have quite a developed form of Tamil linguistically and in all likelihood they would have commenced on such grounds, from thirteenth century A.D. only. Among these works the composition of *Therayar* particularly is written in quite an advanced form of Tamil language so much so that it could have been written as late as even the sixteenth century A.D. Arunachalam dates *Therayar* to 1450 A.D. The statement given in *Kalalkalanjium*⁸, a highly respected Tamil Encyclopedia is much relevant. It goes to the extent of definitely stating that "Most of the language

of the Siddha medicinal literature seems to be later or even recent. It can therefore be presumed that some persons of these advanced times could have written them in the names of the ancient famous Siddhars".

It is surprising to note that none of the Siddhars had used the term '*Siddha maruthuvam*' or '*Siddha vaidyam*' for their subject as the modern writers in Tamil on Siddha do. This term is not found in general Tamil literature also. Contrarily, it is the term *Āyurvedam* or *Āyurvedam* (an obvious *apabhraṃśa* form) that is employed. In fact Yugimuni as a disciple of Therayar specifically states in his '*Chikitsa Sara Sangraham*' that he has created this work after examining the Sanskrit literatures of Āyurveda, taught by Dhanwantari to explain the same in Tamil language in a better way. Agasthyar's quotation in his *Pariipooranam*⁹ is significant. "*Chonnar Āyurvedamithu Thotrum Kandam Nangam*"—"This (subject of) ayurveda is being told in four sections". It is not incorrect to presume therefore that a proper appreciation of the evolution and development of the Tamil language itself will be of some definite relevance in following its medical literature on Siddha. All the eighteen Siddhars wrote in old Tamil but we can clearly discern linguistic differences in their writing. For example, the language of Agastya is much simpler and probably older while his own disciple, Therayar employs advance prosodic forms and also exhibits skilful grammatical handlings.

We may now turn to the *acharya parampara* or the traditional lineage of the masters of the two systems. Here, we find varying sequences of names. But, to claim a radically different origin to what goes on as Siddha now does not seem to be justified even in this aspect. Kuppusamy mentions two traditions as follows and supports the first one: A. Lord Shiva—Nandikeswara—Tirumoolar—and others, B. Lord Shiva—Parvathy—Murugan—Agasthyar—Pulastyar—and others. In '*Siddha maruthuvanga churukkam*' the order is different: A. Lord Shiva—Nandi—Dhanwantari—Ashwini devars—Agasthyar—Pulastyar—Dharmasaumyar. B. Lord Shiva—Parvathy—Nandi—Ashwini devars—Agasthyar—Therayar and others. Vidyalankar¹⁰ gives the following order: Lord Shiva—Parvathy—Nandi—Dhanwantari—Agasthyar—Chulasthyar—Therayar—18 Siddhars.

While most Siddha scholars accept Agasthyar as the pioneer of the Siddhars, Kuppusamy alone prefers Tirumoolar—an assumption that does not seem to have any mention anywhere else. In the history of Tirumoolar by Chekkizar,¹¹ he is considered as a Yogi of Kylasa (obtained the name Tirumoolar later), who came to South India to have the *darśan* of Agasthyar mahārṣi dwelling at Podigai hills. It is clear therefore that Tirumoolar's period is later, to Agasthyar.

All the three traditions mentioned above include Dhanwantari and Ashwini twins and that too before Agasthyar. These two names are important in Āyurvedic tradition also. The inclusion of 18 Siddhars as the disciples of Therayar given by Vidyalankar is not valid as the names of Agasthyar and Pulastyar are found to be

included in the 18 Siddhar's list itself. To do so and thus exclude them from the primary list would reduce the traditional number of eighteen. Even though many names of Siddhars are found, the group of the 18 Siddhars is always quoted with importance and frequently, and, Agasthyar and Pulasthyar cannot be excluded from this list. Interestingly Pulasthyar seems to be equivalent to Chulasthyar who was himself probably Therayar!

The word 'Siddha' means one who possesses *siddhi*, namely supernatural powers. Interestingly again many of the Siddhars frequently mentioned, are not the natives of the present Tamil Nadu. These Siddhars are: Agasthyar (coming from the Himalayas to subdue Vindhya mountains and not returning at all), Pulasthyar (probably the father of Ravana, compare, 'Pulasthya Brahma'), Pulippani (Vyaghrapada, the grammarian ?) Gorakkar (Goraksha natha, a Raseswara Siddha) and Macchamuni (Matsyendra natha both coming from the north or central India), Yugimuni (probably Yougandharayana ?—Udayana's minister of Bhasa ?), Valmeekar (Valmiki ?), Kalangi, Dhanwantari, Dhakshinamoorthy (Romasha rishi of Mahabharatha ?) and Kakapusundar. As usual, we do not have any details of the life for most of the Siddhars. Much seems to be obtainable only by future scholarship. All the Siddhars who have done some medicinal works are included in traditional list of the Siddhars. Surprisingly however Natarajan, has added two purely Tamil scholars in his Siddhar's list, viz. Veeramamuni and Caldwell. This seems to be wholly uncalled for.

An evidence from the inscriptions

At present the informations about two inscriptions were studied by the authors to know the particulars regarding medicine in ancient Tamil Nadu as available from archaeology. They are as follows: 1. A Chola inscription¹² which indicates that at Tiruvaduthurai one *mutt* was attached to the temple solely for the medical students. 2. The famous Tirumukkudal inscription¹³, frequently stated by the modern Siddha scholars as evidence for establishing the prosperous status of Science and Medicine in ancient Tamil Nadu. This inscription was made by Rajakesarivarman alias Viracholan in A.D. 1062.

The first inscription tells that the students were studying three works particularly, viz. *Aṣṭāṅga Hṛdayam*, *Vyākaraṇa* and *Rūpāvātāra*. It is well known that *Aṣṭāṅga Hṛdayam* is a popular and authoritative book on Āyurveda.

The Second Inscription gives information about the maintenance of a hospital and the particulars of payment for the physicians, the surgeons, the pharmacy men and the nurses. The medicines to be stored for one year have also been given clearly. They are twenty in number as follows: 1. *brahmyam kadumbori*, 2. *vasa haritakī*, 3. *gomutra haritakī*, 4. *daśamūla haritakī*, 5. *bhallataka haritakī*, 6. *gandhira*, 7. *bālakeranda thyla*, 8. *pañcāṅga thyla*, 9. *lasunadhayeranda thyla*, 10. *uttama karandai thyla*, 11. *śukla* *sa ghrīta*, 12. *bilvādi ghrīta*, 13. *mandukara vatika*, 14. *dravatti*,

15. *vimla*, 16. *suntri*, 17. *tamradi*, 18. *vajra kalpa*, 19. *kalyāṇaka lavaṇa*, and 20. *purāṇa ghṛta*. The names of the drugs in this whole list of medicines clearly show that they are confined to Āyurveda. Besides, the surgeon is mentioned in this inscription as "*Salya kriyai saivon*". This *salya kriyā* or surgery is a specific branch in Āyurveda. These two inscriptions thus do not give any particulars about Siddha medicine but clarify that the popular existence of Āyurveda in Tamil Nadu is undeniable.

B. COMPARISON OF THE TWO SYSTEMS

To be designated as separate and distinctive, it is necessary that the system of Medicine concerned should have its basic principles as well as theory discussed or atleast delineated well in its early and formative literature. We find this to be definitely so for āyurveda, where in addition, there is a vast literature as well as quite a long historical continuity commencing from almost the Vedic times, specially of the *Sanhitā* period. This does not seem to be so, when we take into consideration even the earliest works of the Siddha literature in Tamil. Nonetheless, we do find here, enough evidences to say that the teachings and therapeutic practices of Siddha do not very much deviate from what is indicated in Āyurveda literature. In fact a discussion of the basic principles of what is called Siddha system of medicine is present only in modern books written on Siddha medicine for example *Siddha maruthuvanga churukkam* and not in the ancient works like Agasthyar's *Paripurnam*, Bhogar's *Elayaram* etc.

It is traditional to say in Siddha that its description of Physiology is based on 96 *tattvas* or principles. Most of these principles are also found in Āyurveda but a totalising of them as a *set* of 96 seems to be unique for the Siddha. As an illustration of specific items in which the two systems have very much in common, we can mention the following: *tridoṣa siddhānta*, *pañca bhuta* theory, three *guṇas* and *śadrasas*. To specify a minor difference we can cite that Siddha gives the regional localization in the body of the three *doṣas*, in much greater detail than what is usually available in Āyurveda.

It is to be noted that in general, the original Tamil literature on Siddha is not elaborate on describing such basic principles of medicine. Infact, it is more concerned with the severely practical aspects of diagnosing the disease, securing the required pharmaceutical preparations and administering them. It is solely a few modern works in Tamil on Siddha which attempt to create what is essentially an extrapolation as regards the basic principles.

The pharmacological properties of the substances are described under five headings in Āyurveda as *rasa*, *vīrya*, *guṇa*, *vipāka* and *prabhāva*. Such detailed specifications for their drugs are usually not explicit in the Siddha literature. It looks that they display a preponderant evaluation only for the *rasa* aspect of the drugs.

Even this much of specification is found only in the modern works in Tamil on Siddha and not the ancient compositions.

C. NOTE ON THE SPECIALITIES OF THE SIDDHA SYSTEM

Having assessed as above the historical as well as the subjectwise frame work for the two systems comparatively, though very grossly, it is necessary to stress what is considered as the specialities of the Siddha system. As its very name suggests, this system endeavours to make its user, a Siddha by making his body fully resistant. It is because of this primary objective the emphasis is always given here more on the imperishable mineral (specially the mercury) preparations rather than the ephemeral plant drugs. Correlated with this there is an intensive and astonishingly efficient list of elixir preparations in Siddha, in some of which plants also play an unique part.

The second speciality is the *Nāḍi Śāstra*, an examination of pulse as an aid in diagnosis. It is accepted by most that such a pulse reading came to India from Arabic sources and is not found at all in the ancient Āyurvedic works, viz. *Vṛddha trayī*. Illustrative descriptions about the minute variations in the pattern of pulse along with the details of their correspondences to diseases and symptoms are provided in almost all the ancient books of Siddha system. Vidyālaṅkāra (ref. 10) gives thirteenth century A.D. as the commencement of *Nāḍi Śāstra* in India. This is during the Muslim regime and he presumes that this was introduced in India possibly by the Hakims. He also adds that in Āyurveda the knowledge about *nāḍi* is seen from thirteenth century A.D. only, Śārṅgadhara being the earliest.

A general examination of the contents of the Siddha literature indicates that almost all of them contain extensive description of *nāḍi* in a very elaborate form. Many preparations consisting of mercury and also a general mentioning of the alchemy occur. The basic data such as *pañca bhūta* theory, *tridoṣas* and the like on which their course of treatment, as well as, the details of diagnosis completely depend are just presumed but not elaborately explained. It is quite likely that this was so, because these latter aspects were well known then, fully accepted and therefore did not require any further elaboration. The former aspects alone were something new and therefore needed the elaboration.

A very interesting detail of the Siddha not found in Āyurveda refers to an investigation technique of the patient's urine. This however is found in Therayar's work only which is presumed to be considerably recent. Here a drop of oil is dropped on the patient's urine collected early in the morning. Depending upon the shape of the oil that spreads on the surface of the urine as time passes on, the diagnosis would be made. Naturally here the interaction between the viscous oil and the density of the urine is what was observed and studied. Moreover, such a technique was also

considered as so important as to be included as an integral part of the *Envagai thervu* or the *Aṣṭa vidha parikṣā* to clinch the diagnosis.

As indicated above, it is in the chemical aspects, that the advances made by Siddha system seems to be quite distinctive. The potency of the drugs made in this system is expected to be maintained for an enormous number of years and these are also expected to have an almost versatile curative range. Some of those preparations have technical terms for which there are no analogues in Āyurveda. They are *kattu*, *kalangu*, *chunnam* and *guru*.* A preparation specially noted for its usefulness in creating high potency medicines is *jayaneer*. Another very highly praised preparation is *muppu* which is simply unparalleled in Āyurveda. Being itself a potent drug, this *muppu* is expected to act as a catalytic agent in preparing other potent drugs also. Besides, this *muppu* finds an application in alchemy. There are several methods indicated for making *muppu* and the Siddhars differ very much amongst themselves in the details they provide for the purpose.

CONCLUSIONS

In the light of the above appraisal, our tentative understanding of the historical aspects of the Siddha system of medicine can now be stated as follows. In the whole of India including Tamil Nadu and in all likelihood, there was a single system of medicine called Āyurveda that had been growing continuously from the *samhitā* period. This was also divided into eight specialized branches even before the times of Caraka and Suśruta. Infact, these two highly respected authors represent only two aspects of this larger science (for which adequate but still ill explored hints exist in their great and seminal works) namely, a medically oriented medicine and a surgically oriented medicine respectively. It is very much possible that there was a vaster literature which did comprise of all of these eight branches. The familiar tradition that Brahma taking pity on the human beings who could not master this vastness, condensed it in several stages is an indication of the abridgment and the specialization in this *grantha santati* that did take place in the historical growth of this literature. But the division of the whole of Medical science into eight major sections was never lost sight of and every individual expert always remembered this larger tradition even though he was emphasising only one segment of it.

It is this fact that vouchsafes for the immense popularity of Vāgbhaṭa's *Aṣṭāṅga Hṛdayam* which literally means the heart or the *essence* of the eight branches only (but not the whole of it which is probably described elsewhere).

In the Siddha literature, classical as well as modern, by which we mean the ancient Siddhars and the present day compositions respectively, none of them mention the whole of the eight branches. The word *Aṣṭāṅga hṛdaya* or the *Aṣṭāṅga* nature

*As pointed out by the referee, there is an analogous preparation *agnisthāyīkaraṇam* in Āyurveda to the *Kattu* of Siddha.

of the medicine does not exist. In fact the term Siddha itself does not exist in any of the classical literature of the respected Siddhars even, indicating thereby very clearly that these authors meant and wrote about Āyurveda only, (see specially Yugimuni) though only some portions of it, as many other authors in India had done before.

A probable explanation for this state of affairs is that these experts were writing on some branches of Āyurveda, whose vaster tradition was already known and did not require any further repetition by them. In this sense they specialized in some branches of study, which happened to be chiefly, general medicine. Such a conclusion gains a support from the remarks on Āyurveda by Jullies Jolly¹⁴ also.

It is significant to note that surgery was mostly omitted and some of the branches for instance *Bhūta vidyā* and *Agāda tantra* or *Vājikaraṇa* do not get specialized and separate study in the Siddha literature. But in the general medicine where further, more emphasis was on the *kāyakaḷpa* activity, much specialization is definitely exhibited. In fact the major purpose of the Siddha system of medicine was to convert the degenerative human body to a *vajra kāya* and confer an immortality.¹⁵ It is because of this, mercury which was considered the most potent of the metals and indestructible, enters specially into many of their drug preparations. Such a *kāya* is considered as a Siddha *kāya*. Alchemy forms a natural and an integral part of this course of action. It is this tendency of the historical growth of the subject emphasising almost exclusively on the immortalising of the body that might have caught the imagination of the people and had been responsible for giving a separate name to this general Āyurvedic tradition, as *Siddha medicine* or a system of medicine which makes their users, *siddhas*.

In consonance with our above presumption we may also note that the botanical wealth of this Siddha system is not much different either in their varieties or in preparations in comparison with what we have in Āyurveda.

SOME POINTS FOR FUTURE STUDY

Such a bird's eye view on the two systems as attempted here, has some values for research. For instance, it will serve as a basic point for further refutation or building up. It is essential to have some such concrete points as presented here to proceed further, instead of merely impressionistic feelings. It is presumed that this article may serve in some measures towards this objective. The current works dealing with the history of Siddha medicine seem to restrict themselves more to the language of Tamil in which it is written than to the details, the efficacy and the specialities of the subject. Thereby they often aim to gain a popularity of the regional language Tamil rather than highlighting the merits and excellence of the science of medicine which was much fostered in this part of the country under the name Siddha medicine. It is probably salutary therefore that the future workers should emphasize more on

the subject rather than the language aspect of this branch of knowledge. For, the evaluation of such a practical science as medicine is more properly done for the contents and the effectiveness thereof rather than the language in which it is written.

In order to utilize the Siddha pharmacopia on modern lines it is necessary to undertake two sets of activities. 1. To prepare a National Formulary of the plant drugs. It is noteworthy that even such an elementary task has not been done and a modern type of pharmacognostic work on the Siddha plant drugs of the current times is simply not available. 2. The innumerable essentially mineral preparations and the role of the plants in various stages of such mineral preparations is also worth being studied further. In this connection it is worthwhile to examine, if there are differences in the plant wealth of the earlier and later Siddhars. For instance there does occur a considerable amount of difference in plant wealth of a recent āyurvedic author like Bhāvamiśra compared to Suśruta.

Attempting to chronologically fix the dates of the Siddha works on the basis of the linguistic nature, is an interesting point.

Finally if one concedes that *nāḍiparikṣā* is essentially an introduction from the Muslim periods onwards it is curious to note that as it exists now and also as it is described in the past, such a reading of the pulse, is utilised to diagnose the variations of the *tridoṣa* only and for no other purpose. Does it mean that the Indian physicians utilized the technique of *nāḍiparikṣā* brought from outside and introduced, say, from Śārṅgadhara onwards and they did so according to their own earlier theoretical principles of *tridoṣa* ? How do the Unani physicians utilize the *nāḍi* if they at all do ? If they do not, how do we explain such a situation or why should we persist in saying that *Nāḍiparikṣā* was an introduction from the Muslim period, when the Muslim hakims themselves do not use it ?

ACKNOWLEDGEMENT

The authors are deeply grateful to the authorities of Central Council for Research in Āyurveda and Siddha, New Delhi, for the granting of a Project on Siddha Medicinal Plants and the opportunity afforded thereby to carry out this piece of work. Sincere thanks are due to the authorities of the Indology Institute, Pondicherry for the assistance rendered during the reference work. They also thank Miss. R. D. Maragathamani, for all the assistance she has unstintingly rendered.

REFERENCES

- ¹Kuppusamy Mudaliar, K. N., *Aninthurai—Siddhan Maruthuvam*, Part I, Government Press, Madras, 1954.
²Natarajan, K., *Notes on Thotrakrama Araichi and Maruthuva Varalaru for Pre-Siddha students*, 1980-81. GCISM, Palayamkottai 627002.
³Swamy, B. G. L., The date of Tholkappium—a retrospect. *Annals of Oriental Research*, University of Madras, Silver Jubilee Volume. 1975, pp. 292-315.

- ⁴Radhakrishnan, S., *Indian Philosophy*, Vol. II—Seventh Impression. 1962, pp. 722. The Macmillan Company, New York; George Allen & Unwin Ltd., London.
- ⁵Uthamarayan, C. S., *Siddha Maruthuvanga churukkam*, Government Press, Madras, 1953.
- ⁶*Yugimuni Chikitsa Sara Sangraham*, Published by Kandasamy Mudaliar, November, 1897.
- ⁷Arunachalam, M., *History of Tamil literature through the centuries—15th Century*. Gandhi-vidyalayam, Tiruchitrambalam, Mayuram-Thanjavur, Dt. 1969.
- ⁸*Kalaikalanjium.*, Vol. No. 4, *Siddhargal*, Tamil Valarchi Kazagam, Madras, First edition. 1956, p. 645.
- ⁹Agasthyar, *Agasthyar Paripuranam or Agasthyar Perunool*. Nalukanda Vaidya Kaviyam. p. 2.
- ¹⁰Vidyalankar, A., *Ayurved Ka Brihat Itihas*, Hindi Samithi Uttarpradesh Shasan, Lucknow. Second edition, 1976.
- ¹¹Chekkizar, *Periapuranam or Thiru Thondar puranam*, published by Tirupandal Kasi Mutt. 1950, p. 557.
- ¹²Gurumurthy, S., Medical Science and dispensaries in ancient South India as gleaned from epigraphy. *Indian Journal of History of Science*, Vol. 5 (1), 1970, p. 77.
- ¹³*Epigraphica Indica*.
- ¹⁴Julies Jolly, *Indian Medicine*. Translated by C. G. Kashikar, Munshiram Manoharlal publishers Pvt. Ltd., New Delhi 1977.
- ¹⁵Ramana Sastri, V. V., Philosophy of Siddhas in *A Text book of Ayurveda*, Vol. 1, Section II, by Dr. Lakshmpathy, Second edition, p. 285. Printed at Jain Baskarodhaya Press, Jamnagar.