From Vaidyam to Kerala Ayurveda

The transformation of āyurveda under the influence of modernity, as it unfolded in the last century in the south western Indian state of Kerala, has been the subject of several studies. These studies focus mainly on the twin processes of institutionalisation and modernization, and stress the exemplary leadership of P.S. Varier and the cultural and political influence of his institution: the Arya Vaidya Sala, situated in Kottakkal in North Kerala. (fig. 1) Varier and his institutions symbolise modernity marked by scientific temper, technological innovation and entrepreneurship. They are emblematic of the cultural transformation of *vaidyam* [medicine], a formation of interrelated indigenous medical knowledge, into a unified regional medicine, currently known as Kerala Ayurveda.

Leena Abraham

The making of Kerala Ayurveda
Several socio-political conditions that emerged in the wake of colonialism prepared the ground for this transformation. They include spread of modern education and a print culture, introduction of technology, emergence of new governance systems and more importantly, the rise of social and democratic movements that challenged dominant power structures. This paper discusses some of these factors briefly and highlights the contributions of socio-political struggles by subordinate castes and classes, since the early twentieth century, in institutionalising vaidyam into Kerala Ayurveda.

Until a few decades ago, the term 'vaidyam' encompassed all traditions of indigenous medicine in the Kerala region. *Vaidyans* were learned practitioners of one or more vaidyam traditions such as, for example, *visha vaidyam* [treatments for poisonous bites] or *bala vaidyam* [treatments for children's ailments]. These vaidyam traditions were well established in the region when the Sanskritic textual tradition of āyurveda arrived in the sixth and seventh century. Subsequently the term 'vaidyam' came to denote both the local traditions as well as Sanskritic āyurveda. However, unlike elsewhere in India, a separate caste of *vaidyas* [āyurvedic physicians] did not emerge and the various strands of vaidyam became the domain of specific castes and occupational groups.

Despite their lower ritual and social status among other Brahmin communities the Brahmin *ashtavaidyans* [lit. eight families of Sanskritic vaidyas] of southwest India enjoyed higher social status and political power than other medical practitioners, and staked claim to the canonical āyurvedic tradition. However, textual traditions were also claimed by subordinate castes such as the Ezhavas. The case of Itti Achuthan, scholar and a trained vaidyan from the Ezhava caste, who was one of the main authors of the 12 volume text 'Hortus Malabaricus' of the late 17th century certainly was not an exception.[1] The vaidyam tradition incorporated both the Sanskrit āyurvedic text *Ashtangahrudayam* as well as regional medical texts such as *Sahasrayogam* and *Chikitamanjari*. Similarly, use of plant based decoctions and medicated oils, and therapeutic techniques such as *Dhara, Pizhichil, Nhavarakizhi, Sirovasti,* which belonged to the local vaidyam traditions, became part of the āyurvedic *pañcakarma procedures.* (fig. 2)

Though Hindu castes and āyurvedic practice were related, the ties were not rigid, as the presence of Christian and Muslim vaidyans testify. However, while the practice of vaidyam transcended class-caste-community boundaries to some extent, it remained strictly gendered. Vaidyam was exclusively a male profession. Only midwifery was conceded to women, of deprived castes and classes.

Towards the end of the colonial era the social configurations of medical practice in southwest India began to change. This was mainly due to socio-political changes under colonialism and nationalist responses to colonial medical policies that discriminated against indigenous medicines. The solution envisaged was institutionalisation of a standardized āyurveda at the national level, forcing reconstitution of regional vaidyam traditions. The emergence of the regional form of 'Kerala Ayurveda' exemplifies such a re-articulation.[2] Kerala Ayurveda is the legitimate āyurvedic form that was created out of the heterogeneous vaidyam, which was delegitimized in the process of building a pan-Indian āyurveda, in tune with the national identity. The institutionalisation of this new identity led to the decline of the various specialist traditions within vaidyam, reducing their status to that of 'folk medicine'. Although occasionally people seek out the rare expert vaidyan and recall legendary tales of vaidyans, the title 'vaidyan' has lost its social and cultural significance. These transformations represent not only the erosion of indigenous medical knowledge, but also changes in the social profile of traditional medical practitioners under the influence of colonial and postcolonial modernity.

Medicine, modernity and societal responses
Modernity in early twentieth century southwest India was characterised by an expansion of literacy and modern education, spread of social reforms, and mobilisation for political rights involving various castes and classes. A print culture assisted by publishing quickened its pace and created new public spheres for the expression of ideas both old and new. Vaidyam, with its epistemology rooted in empiricist philosophies of Hinduism and Buddhism, influenced by Tantrism and astrology, having codified texts, and its practices structured by caste, class and gender divides,

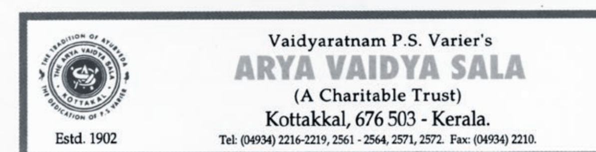
The
sum of the parts
does not result
in the whole.

As
practitioners
of Ayurveda,
we wholly
agree.

The philosophy of holism believes in a way of life that is integrative. Where man is but a part of nature. And harmony, the essence of life.

Which is exactly what we have been emulating, as authentic practitioners of Ayurveda, ever since our inception over 90 years ago. Treating and curing countless patients, from around the globe. With an approach to medicine, and life, that is wholly holistic.

Because the principles of Ayurveda are but the philosophy of holism, in practice!



Vaidyaratnam P.S.Varier
1869 - 1944

Ayurveda - The Authentic Way.

Revisiting the Kerala Ayurvedic sector

This note attempts to critique Kerala's priorities with regards to the Ayurvedic sector by revisiting the latest developments: the merging of traditional Ayurvedic firms with Indian and global companies; the promotion of a 'Kerala brand' of Ayurvedic industrial medicines in the form of a public-private consortium named CARe-Keralam; and the promotion of health-tourism and related industries. It can be argued that the market-centred promotion of Ayurveda leads to a 'pharmaceutical vicious circle', i.e., the commercialization of Ayurveda leads to more of the same. This will hinder the promotion of Ayurveda in public health and divert funds needed for innovative Ayurvedic research. I appeal for a different approach that has Ayurvedic therapies and medicines for specific diseases as its main focus.

Harilal Madhavan

The corporatization of Ayurveda
Industrial production of Ayurvedic medicines was the main response by Kerala's Ayurvedic sector to challenges such as the increasing demand for Ayurvedic medicines, the decreasing quality of manual production, and most importantly, the tough competition from the biomedical pharmaceutical industry.[1] Since independence, government policies have aimed at stimulating Ayurveda's industrialization, and in addition, bio-prospecting in areas such as pharmaceuticals, dietary supplements, cosmetics and other healthcare applications, shows the interest of global industries in exploiting traditional knowledge systems such as Ayurveda. Modern biomedical paradigms of quality control and drug formulation have shaped nationally and regionally based Ayurvedic industries.[2] Over the last few decades, Ayurvedic companies have increasingly marketed medical products for the treatment of 'lifestyle diseases', such as diabetics, osteoporosis, asthma, obesity and also a large number of food supplements, cosmetics and other herbal derivatives, including immunity boosters and aphrodisiacs.

However, in Kerala the Ayurvedic industry mainly produces medicines for the treatment of diseases, and not the cosmetics and nutraceuticals that make up a large part of the production of Ayurvedic manufacturers in other Indian states. In Kerala, there is also a fairly good Ayurvedic public health system. Ayurvedic outpatient facilities are more popular among the public than Kerala's biomedical public health facilities. State patronage before and after independence explains, at least partly, the favourable condition of Ayurveda in Kerala.[3]

An important development is the interest of industrial conglomerates in the brand name 'Kerala Ayurveda', which has led to mergers with Keralean Ayurvedic companies. It appears that the main intention of these mergers is not to establish Ayurvedic health centres, but to enter the business of Ayurvedic health-tourism. Many companies are looking to tap

Socio-cultural transformation of a regional medicine

was drawn into the various currents of modernity and political and institutional mobilisation in complex ways. The dominant view tends to erase the significance of medical reforms initiated by various subordinated social groups through their individual and collective action. In the following section I briefly discuss four constituting developments and pay special attention to political mobilisations as a important formative factor in the re-articulation of indigenous medicine in Kerala.

1. Commercial production
When opportunities arose for commercial production, a number of practitioners across castes and communities came forward and made their 'unique' family medical recipes commercially available and marketed them under their family name. Along with medicines from classical texts, formulations from local texts were also produced and marketed as āyurvedic medicines, catering mainly to a local clientele. Rather than homogenisation, the nascent āyurvedic industry witnessed a process of diversification with multiple players and products.

2. Print culture
The proliferation of Indian medical literature shows the heightened literary activity among vaidyans. By the middle of the 19th century, among books on various subjects published in the local language of Malayalam, books on āyurveda formed the largest subject category. Many vaidyans converted their personal/family manuscripts into printed books, produced their own commentaries and Malayalam translations of Sanskrit texts, and published autobiographical accounts. Ezhava vaidyans made significant contributions to the vast and heterogeneous body of medical literature. By the early decades of the twentieth century southwest India saw many medical journals devoted to traditional medicine such as Danwantari, Vaidyamanjari, Ayurveda and others. These journals published scholarly articles, written by a wide variety of vaidyans, on medical theory and practice, and political discussions on the future of their medicine.

3. Training institutions
Medical schools to train vaidyans were established in southwest India several decades before the first biomedical college was established in the region in 1952. The first modern institution to train vaidyans in Kerala was established in 1890 in response to the request made by the court vaidyan of Travancore state.[3] Between 1918 and 1939 six new schools were started with grants from the princely state of Travancore and by 1940 there were eleven such institutes training vaidyans. Graduates of these schools were employed in the state dispensaries or received grants to set up their own clinics. The princely state of Cochin established an āyurvedic college in 1914 and extended grants to vaidyans. In contrast, token support was offered by the British state in the Malabar region. However, the state support for vaidyam later declined as the newly established institutions of western biomedicine began to claim a larger share of state funds.

Fig. 1 (left): advertisement of the Arya Vaidya Sala.

Fig. 2 (above): Kerala Ayurveda treatment room.

4. Political mobilisation
The support extended by the princely states and the discriminatory policies of the colonial state prompted the political organisation of vaidyans. In 1902 – before the formation of the National Ayurvedic Congress in 1907 – the Ayurveda Samajam was established in Kerala. The activities of other organisations such as the Uttara Kerala Vaidya Samajam and Ayurveda Mahamandalam also inspired vaidyans to establish clinics, dispensaries and training schools, thus producing a vibrant āyurvedic movement in Kerala.

Democratic and reform movements
The political awakening and social reforms inspired especially by the social reformer Sree Narayana Guru, who challenged caste oppression in Kerala society, altered the thinking and practice of the Ezhava vaidyans.[4] Narayana Guru, who practised vaidyam himself, encouraged its pursuit as a profession. Reforms targeted at the practice of Ezhava vaidyans who integrated *jyothisham* [astrology], *bhootavidya* [supernatural healing] and *mantravadam* [healing through chants] with medicine resulted in the separation of medicine and religion as distinct domains of healing. These internal reforms contributed to the secularisation and rationalisation of medicine, which was central to modern institution building.

Further, less known among the various influences on medical transformation is an impetus that came from a section of Ezhavas and other subordinate castes, inspired by the communist ideology. They mobilised and claimed political and institutional space for vaidyam within the modern structures of the postcolonial nation state. Although the first government āyurvedic school started in 1890, Ezhavas and other subordinate castes, who had traditionally practised medicine, were permitted admission only in 1914, after prolonged protests.[5] In 1939 they demonstrated against the newly formed Kerala University, which refused formal recognition of āyurvedic colleges. The state-wide protest marches and hunger strikes received public support, which forced the university to finally recognise āyurvedic academic departments. Political mobilisation involving both students and teachers continued against the repeated attempts to relocate the college from its spacious and central location to the outskirts of the city. The communists provided the leadership for these struggles. These struggles were efforts to institutionalise āyurveda, by demanding parity in pay from state departments and bureaucratic systems, similar to that of western biomedicine. The āyurvedic institutional development was part of the efforts of subordinate groups to democratise the governance structures of the newly established independent state by aligning it with the larger social and political struggles for equality.

Social reform movements and radical communist movements contributed, albeit in different ways, to the institutionalisation of vaidyam into Kerala Ayurveda. Unfortunately, both these movements failed to acknowledge the historical gender asymmetry in āyurvedic practice and made no efforts to address women's exclusion in their struggles for social justice. The entry of women into the colleges of āyurveda in large numbers became possible only much later, ironically, because of the lowering of āyurveda's social status that was linked to the ascendancy and masculinisation of biomedicine. The current neo-liberal expansion of āyurveda may alter the caste, class and gender configurations in āyurvedic education and practice, and may undermine some of the gains made in the earlier era through broad-based egalitarian visions. Medical knowledge and practice will therefore continue to be important sites for social and political struggles.

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Notes
1 Manilal, K.S. 1996. *Hortus Malabaricus and Itty Achuden: A Study on the role of Itty Achuden in the Compilation of Hortus Malabaricus* (In Malayalam). Kozhikode: Mentor Books.
2 Abraham, L. 2009. 'Medicine as Culture: Indigenous Medicine in Cosmopolitan Mumbai', *Economic and Political Weekly*, XLIV(16):68-75.
3 Colonial Kerala consisted of the British ruled Malabar in the North and two princely states: Cochin in central and Travancore in contemporary South Kerala.
4 Cleetus, B. 2007. 'Subaltern Medicine and Social Mobility: The Experience of Ezhavas in Kerala', *Indian Anthropologist* 37(1):147-172.
5 I am indebted to Dr. Mohanlal for drawing my attention to this particular strand of institutional development.

Towards a pharmaceutical vicious circle?

into this increasing potential of Kerala in health tourism (31% growth in tourist arrivals in 2005). These new developments not only affect the scale of Ayurvedic drug production, but they also influence marketing strategies. Examples are the integration of Ayurveda in elite hospitals and Ayurvedic treatments being offered at the workplace to keep everyone healthy, fit and happy. Corporatization in the form of tertiary healthcare might increase the cost of healthcare due to the utilization of high-end medical technologies. Ayurveda's corporatization also has implications for the insurance industry. The Ayurvedic manufacturing association of Kerala has already requested to have Ayurveda included under insurance coverage. They argue that this will boost the growth of the industry and lower medical costs.[4]

It must be said that focusing on particular diseases – the so-called 'disease specialization approach' – is a far better strategy than concentrating on how to capture the global market.

A 'Kerala brand'
There are over 750 small and medium enterprises engaged in the manufacturing and distribution of traditional Ayurvedic and herbal products in Kerala. These firms have expressed a need for communal facilities, such as quality control units, more advanced production technology and the introduction of a joint Kerala brand name for their products. The reason for this is the unhealthy competition among firms and the slowing down of their growth due to increasing production costs, shortage of quality raw materials, a lack of approved standardization procedures, and even unethical marketing and corrupt practices. A change in policy is necessary, which will take a non-conventional approach to promoting and developing the sector. Efforts are being made to bring these small Ayurvedic manufacturers onto a common platform to initiate growth. Meetings have been held with Ayurvedic manufacturers, under the auspices of the Kerala infrastructure organization (KINFRA) and the industrial development organization (KSIDC). The parties have arrived at a consensus and intend to form a consortium with the objective of jointly promoting Kerala as a global destination for sourcing Ayurvedic products and services of internationally acceptable standards. This was achieved through the formation of a Special Purpose Vehicle (SPV), namely CARe-KERALAM (Confederation for Ayurvedic Renaissance-Keralam Pvt. Ltd) (fig. 1 see p34). It is assumed that the turnover of the Ayurvedic industry in Kerala of 300-500 million US$ can easily be doubled in size if proper quality control and Good Manufacturing Practices are adopted.

Besides the major firms like Pankajakasthuri, The Arya Vaidya Pharmacy, The Vaidyarathnam Oushadhasala, Nagarjuna, Sitaram, Sreedhareeyam, around 240 companies all over Kerala have joined the campaign, with a considerable share equity. To the total cost of 3.56 million US$, Ayurvedic manufacturers contributed 0.2 million US$. The consortium CARe-KERALAM wants to secure the supply of good raw materials, provide quality control, perform R&D, and market the brand 'Kerala Ayurveda'. CARe-KERALAM will also work on the documentation of Ayurvedic products, which is a pre-requisite for marketing Ayurvedic products (as drugs) in foreign markets. As a first step, the consortium only selects generic Ayurvedic formulations for branding, and its members receive a brand logo for their products. The organizational structure of this initiative is debatable as top-level decision making still lies with those with the largest share in the consortium.

Tourism promotion and privatization
According to the Kerala State Industrial Development Corporation (KSIDC), the tourism sector is the most profitable investment choice. Investments in Ayurvedic health resorts are especially profitable. KSIDC data shows that in 2009, around 54% of the total loans (1.4 million US$) were diverted to the tourist industry, out of which around 82% went to tourist resorts where Ayurvedic products and treatments are popular. The promotion of Ayurveda in state health tourism started in 1994. Around that time the Kerala Tourism Development Corporation (KTDC) started Ayurvedic health centres in its premium properties, like Hotel Samudra in Kovalam, south of Kerala's capital Trivandrum. From then onwards there has been a conscious effort by the government to promote Kerala Ayurveda as part of tourist packages, through marketing and financial subsidies given to private resorts and other entities. In this way Kerala aims to contribute to the 34 billion US$ Indian healthcare industry.[5] Now most hotels and government guesthouses in Kerala, as well as the state's major biomedical hospitals, have an Ayurvedic wellness centre or a separate Ayurvedic wing.

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A narrative review of research in Ayurveda

Ayurveda witnessed a shift towards rational principles in the practice of medicine, at a very early stage in its evolutionary history. The early classical Ayurveda textbooks *(samhitas)* talk about the validation of knowledge and distinguish between real and chance effects of therapy.[1] These works also contain elaborate methods to study properties of drugs, to develop new medical formulations, and protocols to study and understand the occurrence of new diseases.[2] Research, it appears, was therefore in some way ingrained in the tradition of Ayurveda from the very beginning. Yet, there is no evidence of organized research activities in the evolutionary history of Ayurveda, nothing of the kind that can be compared with modern medical research. For centuries, Ayurveda seems to have perpetuated itself as a tradition of practices and knowledge transmitted through apprenticeship or more formal methods of pedagogy, in some instances akin to a university education. Research in the modern sense of the word is a recent development in the field of Ayurveda, it seems.

P. Ram Manohar

THE ENCOUNTER WITH WESTERN MEDICINE sparked the debate in modern times regarding the necessity of research in Ayurveda. For quite some time, staunch traditionalists swore that Ayurveda was time-tested and that there was no scope for any new research. On the other hand, the progressive-minded emphasized that Ayurveda needs to be subjected to the acid test of scientific scrutiny and only what survives can be accepted. The truth seems to lie somewhere in between these two extreme views. Just because Ayurveda has a continuity of tradition spanning many centuries, cannot be reason enough for its authenticity and its acceptance as a whole. An obvious reason is that there have been interruptions in the transmission of Ayurvedic knowledge as well as ups and downs in its evolution. There is evidence that much of the knowledge preserved by oral traditions has been lost in the passage of time. Therefore, it is necessary to revisit Ayurveda and find proper applications of it for present times.

Importantly though, the reductionist methods of modern science cannot be blindly accepted and used as a suitable yardstick to measure the worth of Ayurveda. Perhaps we need to develop methods of evaluation and validation outside the purview of modern science; or scientific methods could be tweaked to make it more appropriate for Ayurveda; or new methods of enquiry and validation could be developed and expanded on the basis of the epistemological premises of Ayurveda itself? In all honesty, the Ayurvedic community has not yet been able to develop a clear perspective of the kind of research needed to give it a push as a credible system of medicine and a knowledge system in its own right.

The beginnings of modern research

The beginnings of modern research in Ayurveda can be traced to the pre-colonial period and the first encounters of Europeans with indigenous healthcare systems in India. During this period, many traditional medical practices like rhinoplasty[3] and smallpox inoculations[4] were documented. The Portuguese physician Garcia Da Orta was the first European to describe drugs from Ayurvedic pharmacopoeias.[5] Hendrick Van Rheede, the Dutch Governor of Malabar, later commissioned the work on the *Hortus Malabaricus,* which documents the medicinal wealth of plants in Kerala, with stunning drawings and notes.[6] Much of the research that followed has been from a medical historical, linguistic and philological point of view. In the span of one-and-a-half centuries scholars like Hoernle, Filliozat, Roşu, Zimmerman, Leslie, Meulenbeld, Wujastyk and others, built a body of knowledge centered around Ayurveda bringing to light many unknown facts about the Indian medical tradition. Jan Meulenbeld's *History of Indian Medical Literature* deserves special mention here because this monumental work comprehensively surveyed the history of Ayurvedic literature like never before.[7] However, much of this research has approached Ayurveda from a historical and philological point of view. I am of the opinion that we do not have good examples of anthropological studies in Ayurveda that capture the richness and depth of India's living medical traditions that survived into modern times.

Though India's first prime minister Jawaharlal Nehru emphasized the need to initiate research in Ayurveda with inputs from modern science, and the father of the nation Mahatma Gandhi also pointed out the need to validate the practices of Ayurveda, it took a long time for independent India to establish organized and formal mechanisms for systematic research in Ayurveda. Even today, much is still unprocessed in terms of the quality and direction of the research initiatives in the field of Ayurveda.

Today's research

Today's institutional research environments for Ayurveda are broadly of three kinds. The first constitutes postgraduate and doctoral programs in Ayurveda educational institutes. Here Ayurveda students learn the first lessons of research. The compilation of research theses deposited in the Ayurveda schools have revealed a large number of titles ranging from literary to experimental and clinical research.[8] Much of this research seems to be flawed in methodology and quality, and barely a handful is ever published or scrutinized by peers in the field. The apex for research is the Central Council for Research in Ayurvedic Sciences (CCRAS)[9] run by the Government of India, with various units spread out in the length and breadth of the country, constituting the second environment for research in the government sector. The Council has many publications to its credit, conducts research in specialized areas, and also funds research done at other organizations through grants offered under an extramural scheme. The Council is, however, criticized for not generating outputs that could actually have an impact on the global scientific community at large. The third category of research institutions are in the private sector, undertakings that are mostly attached to the pharmaceutical industry and engaging in research related to quality control and standardization of commercially manufactured Ayurvedic medicines. Many such research units are recognized by the Government of India as SIROs (Scientific and Industrial Research Organizations). An example is the Dabur Research Foundation. In a limited way, modern scientific institutions provide a fourth environment for research on Ayurveda.

In Ayurveda, more than often, it is a case of understanding how medicines already-in-use work, rather than developing new drugs that have never been used by humans, and therefore need testing.

What is absent is systematic research on the fundamentals of Ayurveda, especially with a focus on the epistemological premises of Ayurveda. Modern positivist scientific research on Ayurveda was for a long time more or less centered on ethnobotany and ethnopharmacology. Ayurvedic pharmacopoeias were seen as a rich source of information that could provide leads for the development of new drugs with the help of modern drug discovery protocols. Ethnobotanical surveys

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The elevation of Ayurveda as Unique Selling Proposition (USP) of Kerala Tourism, has increased the number of Ayurveda massage centres in the major tourist destinations of the state. Around 58 hotels other than Ayurvedic resorts, including five-star and four-star hotels that offer Ayurveda as a luxury package, also applied for partial funding last year. The Government of Kerala endorses a number of Ayurvedic centres by labelling them as *Green Leaf* or *Olive Leaf*. These centres enjoy interim service tax exemptions and tax holidays. However, from the medical tourism literature we know that Ayurvedic treatments have too often been adapted to cater to the preferences and requirements of tourists. It is also known that these establishments sometimes charge exorbitant prices. In a market driven-economy, where cost is always equated with quality, these prices may mislead many who come to Kerala for good quality Ayurvedic treatments.

Changing focus

The Eleventh Five Year Plan (2007-12) aimed to integrate the Indian medical systems Ayurveda, Yoga, Unani, Siddha, Homeopathy and Sowa-Rigpa (AYUSH) into public healthcare and to improve their accessibility. For this purpose the money invested in AYUSH was tripled to 705 million US$, compared to the preceding Five Year Plan in which 12.6% was allocated to industry. In addition to the core areas such as education, research, industry, and medicinal plants, the Eleventh Plan has added four target areas: mainstreaming AYUSH in public health; upgrading technology used by the AYUSH industry; giving assistance to Centres of Excellence; and revitalizing and validating local or folk expressions of AYUSH. The complete negligence of Ayurveda in recent health policy documents, zero efforts to implement the strategy of the central Indian government (National Rural Health Mission) to co-locate Ayurvedic and biomedical facilities in Kerala, and failing to incorporate Ayurveda in public health, shows the commercial bias of the State of Kerala. Ayurveda has not been consciously included in any of the recent public health programmes, but an innovative health system approach must be more inclusive and recognize the worth of plural medicine. When indigenous medical systems are taken into account, inequality in healthcare utilization can be minimized.[6]

Interventions in Ayurveda should focus on how the local market can be supplied with affordable Ayurvedic medicines and treatments. The upgrading of Ayurveda must not completely depend upon the demands of the world market. Ayurvedic medicine could have a large domestic market if only the industry would provide the public with better quality medicines at affordable prices. The argument promoted by the consortium CARe-KERALAM is that Ayurveda needs to first capture the world market through its health supplements and proprietary products, which will subsequently bring demand for Ayurvedic drugs. Unfortunately, the consortium's decisions are made by a select core group, and so the interests of a large number of small Ayurvedic manufacturers are not being adequately addressed.

What is really needed in Kerala's Ayurvedic sector is a favourable research environment for manufacturers and public laboratories to develop drugs for the treatment of diseases in areas where Ayurveda has shown good results, such as *chikunguniya,*[7] dengue fever, arthritis, and respiratory ailments, among others. In addition we need to identify future potential focus areas, including palliative care and paediatrics. In conclusion, it must be said that focusing on particular

Fig. 1: CARe KERALAM cluster.