

## **A Review on The Concept of Organelle Ageing w.s.r. *Rasayana***

Ms. Himani Bhardwaj\*<sup>1</sup>

U.G. Student, Ishan Ayurvedic Medical College and Research Centre, Greater Noida)

### **Abstract**

Ayurveda is the science which deals with every aspect of life. This teaches us how to lead a healthy, happy and long life. The Aim of Ayurveda is to maintain the health of healthy and cure the diseases of diseased. Ayurveda is categorized into eight different branches and collectively it is known as Ashtanga Ayurveda. Out of the eight branches of Ayurveda, *Rasayana Chikitsa* is the one branch. In this, ageing is considered as disease due to natural process of degeneration and thus preventing premature ageing in a healthy way is also considered under the aspect of *Rasayana*. Thus, simply we can say *Rasayana* is a therapeutic Measure which promotes longevity, prevents ageing and provide immunity against diseases. *Guduchi* (*Tinospora cordifolia*) of family *Menispermaceae* is commonly called as *Giloy*, also known by the names of *Rasayani* (rejuvenating), *Chakralakshna* (as stem has circular wheel like structure)

.*Acharyacharak* has included *Guduchi* in *Vayasthapana Mahakasaya* which improves the quality of dhatus and act as *Rasayana*. *Guduchi* is also known by the name of Amruta because of its divine fluidity. Description of *Guduchi* action and indication of it in different texts through different time frames confirm the continuous use of the drug since long time. *Guduchi* is described under *Padamakadigana*, *Patoladigana*, *Guduchyadi Gana*, *Aragwadhadhi Gana* and *Vachadi Gana*. In *Agryaprakrana*, Acharya Charaka has described *Giloy* as the *Dravya* which work as *Sangrahak*, *Vatahara* and *Deepenaya*. To substantiate the above facts research was conducted on animal model *Drosophila melanogaster*, where the effect of *Guduchi Churna* was observed in enhancing the life span of it and was suggestive of *Rasayana* effect of *Guduchi Churna*. Hence, this paper attempts to explain the *Rasayana* effect of *Guduchi Churna* in the life span of human beings.

**Keywords:** *Drosophila Melanogaster*, *Guduchi*, *Rasayana*

## Introduction

Life is considered as the combination of body, sense organs, mind and soul. As long as these four are combined together life exist<sup>[1]</sup>. The science of life or knowledge of life is known as Ayurveda; this teaches us how to lead a healthy, happy and long life. Ayurveda has eight different branches collectively called as Ashtanga Ayurveda. Out of which *Rasayana Chikitsa* is one of the branches which rejuvenates the bodily cells and tissues providing a long and healthy life.

## Definition

The word *Rasayana* is composed of two words i.e. Rasa and Ayana. “Rasa” is fluid or juice and “Ayana” is pathway<sup>[2]</sup>. Hence, the pathway of the juice is known as *Rasayana*, a way through which one gets the excellence of Rasa (Dhatu). According to Acharya Charaka, substance which energizes or invigorates a healthy person by producing the best quality of Rasa, *Raktadhatu* and other dhatus is called as **Rasayana**<sup>[3]</sup>. In *Rasayana Chikitsa*, ageing is considered as a disease due to natural process of degeneration and thus preventing premature ageing in a healthy way is also considered under the aspect of *Rasayana*. Thus, simply we can say *Rasayana* is a therapeutic measure which promotes longevity, prevents ageing and provide immunity against disease. In human beings, ageing represents the accumulation of no. of changes<sup>[4]</sup>

At biological level, ageing results from the impact of accumulation of a wide variety of molecular and cellular damage over time. This leads to a gradual decrease in physical and mental capacity, a growing risk of disease and ultimately death. Ageing is one among the largest known risk factor of disease for most of human being. Ageing represents the accumulation of changes in a human being over time, encompassing physical, psychological and social changes. There are various theories regarding the pathophysiology of ageing in modern medicine.

## ***Guduchi as Rasayana***

Ayurveda, being rooted in the philosophy of *Swasthasya Swastha Rakshanam, Aaturasya Vikar Prashamanam*, (to help the healthy person to protect and maintain his wellness and

to help a diseased person to become healthy) has focused on the use of different *Rasayana dravyas*, out of which *Guduchi* has popular and an important place.

*Guduchi* (*Tinospora Cordifolia*) of family *Menispermaceae*, is commonly called as *Giloy*, *Rasayani* (rejuvenating), *Chakralakshana* (as stem has circular wheel like structure) and *Amruta* because of its divine fluidity. Description of *Guduchi*'s action and indication of it in different texts through different time frames confirms the continuous use of drug since long time. It is a powerful rejuvenator that has the ability to boost the immune system, improves digestion, reduces stress and provides other health benefits. One of the most notable effects of *Giloy* is its ability to act as a rejuvenator.

Here are some of the potential effects of *Giloy*, including its use as a rejuvenator in different texts:-

*Guduchi* is described under *Padamakadigana* (increase breast milk, mitigates *vata* & *pitta*) nourishing and increase life span [5].

*Patoladigana* (mitigates *kapha*, *pitta*, indicated in skin disorders, fever and jaundice)6.

*Guduchyadigana* (mitigates *pitta* and *kapha*, indicated in fever, vomiting, burning sensation and increased power) [7]

*Aragwadhadigana* (indicated in skin Disease, toxicity, diabetes and cleanses the chronic wounds [8].

*Vachadigana* (indicated in *amatisara*, *Medoroga*, *Kapharoga* etc.)

Acharya Charaka has included *Guduchi* in *Vayasthapana Mahakasaya* which improves the quality of dhatus and act as *Rasayana* [9].

Hence, *Guduchi* is a *Rasayana*, which helps to improve vitality, increases energy levels and promotes overall health and well-being.

### **Effect of *Guduchi Churna* on the Life Span of *D. Melanogaster***

The vinegar fly, *Drosophilla melanogaster*, is an attractive model organism for studying the mechanism of ageing because of its relatively short life span. Research was conducted on

this model in which increase in the life span of F1 generation of *Drosophila* was observed and hence is suggestive of *Rasayana* effect of *Guduchi Churna* even this prevails to next generation <sup>[10]</sup>.

At lower concentration of *Guduchi Churna* there was a significant increase in life span of flies, when the concentration was increased further it did not show more increase in life span.

This indicates that there is a particular concentration of *Guduchi Churna* which cause maximum life span extension (around .25g/ml), beyond this concentration no further increase in life span was seen, which may be due to threshold absorption of *Guduchi Churna*. Although the exact mechanism of the action of *Guduchi Churna* by which the plant's product is able to enhance the survivability of *D. melonagaster* could not be ascertained from this study, but has validated the concept of *Vayasthapana* and *Rasayana* effect of *Guduchi Churna*.

## Discussion

*Rasayana* is the means of attaining excellence qualities of *Rasadi Dhatus* and all the properties of *Rasayana* are present in *Guduchi* which is one among the potential drug of Ayurveda. *Guduchi* is highly valued in Ayurveda for its detoxifying, rejuvenating, immune supporting, anti-inflammatory and anti- diabetic properties. During Covid -19 pandemic, *Giloy* had been widely used as a medicine for prevention as well as therapeutic management.

Some researchers also suggest that, the alcoholic and water extracts of *Guduchi* are reported to have beneficial effects on immune system and have been tested successfully for their immunomodulator activity.

## Conclusion

*Guduchi* is a miraculous drug in Ayurveda. It is one among four *Medhya Rasayana* which helps to maintain the mental health of human being. *Guduchi* has rejuvenating, anti-diabetic, immunomodulator and many other properties. Hence, it should be consumed on a regular basis to get all the benefits of *Rasayana*.

## References

1. Charaksmhita sutra sthan chapter 1 verse 41 by dr.bhramanandtripathi and dr.Gangasanaypandey, chaukamba publication.2019.pp287.
2. Sanskrithindishobdkosh by woman apate page 8-5, chaukhambha publication prakashan, 2007.pp252.
3. Charaksmhita by dr.bhramanandtripathi and dr.gangasahaypandey, chikitsasthan chp-1, verse.5chaukamba publication.2018, pp4.
4. A theory of ageing based on the modulation of cell cycle signating by hormones gerontology, edition 2004, pp 50-265-90.
5. Astang Hridaya by DR.R.vidyanathandforeward by prof.R.H Singh, sutra Stan chp-15 verse 12, chaukamba subharatiprnakasha edition; 2021.pp213.
6. Astang Hridaya by DR.R.vidyanathandforeward by prof.R.H Singh, sutra Stan chp-15 verse 15, chaukamba subharatiprnakasha edition; 2021.pp876.
7. Astang Hridaya by DR.R.vidyanathandforeward by prof.R.H Singh, sutra Stan chp-15 chapter 16, chaukamba subharatiprnakasha edition; 2021.pp55.
8. Astang Hridaya by DR.R.vidyanathandforeward by prof.R.H Singh, sutra Stan chp- 15 verse 17, 18, chaukamba subharatiprnakasha edition; 2021.pp456.
9. Charaksamhita sutra sthan, chapter 25 verse 40 by dr.bhramanandtripathi and dr.Gangasanaypandey, chaukamba publication.edition 2007, pp667.
10. Pathak ,p.vyas,M.Vyas,H .&Naria,M.Rasayana effect of guduchichurna on the lifespan of drosophila melanogaster, AYU(An International Quarterly Journal of research in Ayurveda,2016;37(1):67.