

A LITERATURE REVIEW ON VALLATHAGI LEGIYAM – A CLASSICAL SIDDHA FORMULATION

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ABSTRACT

Medicinal plants and herbs have been from the historic period and have been proved to be a great importance to the health of the individuals and communities. Siddha system is one of the traditional systems of medicine practiced in South India. This paper scientifically reviews the poly herbal Formulation '**VALLATHAGI LEGIYAM**' that have been mentioned in the ancient Siddha literature Siddha Materia medica(Gunapadam part-1) for the treatment of many major diseases.

INTRODUCTION

Plants play a major role in all alternate system of medicines like Siddha, Ayurveda, Unani and Chinese. In the recent years there has been considerable researches going on traditional Siddha medicines focusing towards validation and standardization aspects.^[1] '**VALLATHAGI LEGIYAM**' is a Siddha herbal medicine containing Thirty ingredients. The Medicine prescribed for various ailments particularly for venereal disease and is claimed to possess Anti AIDS potential.^[2]

The main ingredient of Vallathagi legiyam is Semicarpus anacardium. Cherankottai is being in use since from the ancient days. Many preparation using it as a chief ingredient or an ingredient were seen in many Siddha classical texts like Therayar Karisal, Agathiyar Vallathi 600.^[3] This review deals with botanical name, family using parts, phytotoxicals and Pharmacological activity in the ingredients of Vallathagi legiyam.

MATERIALS AND METHODS**Vallathagi Legiyam^[4]****Ingredients**

A.

Cherankottai (*Semicarpus anacardium*. Linn) – 35 gram

Parangichakkai (*Smilax china*. Linn) – 35 gram

Thirikadugu (*Zingiber officinale*. Rosc, *Piper nigrum*. Linn, *Piper longum*. Linn) – 4 ½ gram.^[6]

Thirisugantham (*Myristica fragrans*. Houtt, *Myristica fragrans*. Houtt, *Syzygium aromaticum*.Linn) – 4 ½ gram.^[6]

Thirimangal (*Curcuma longa*. Linn, *Curcuma aromatica*. Salisb, *Coscinium fenestratum*. Colebr) – 4 ½ gram.^[6]

Omathuviyam (*Trachyspermum ammi*. Linn, *Hyoscyamus niger*. Linn) – 4 ½ gram.^[7]

B.

Jeeragathuviyam (*Cuminum cyminum*. Linn, *Nigella sativa*. Linn)– 4 ½ gram

Sitrarathai (*Alpinia officinarum*. Linn) – 4 ½ gram

Kothumalli (*Coriandrum sativum*. Linn) – 4 ½ gram

Chitramoolam (*Plumbago zeylanica*. Linn) – 4 ½ gram

Thanrikkai (*Terminalia bellirica*. Roxb) – 4 ½ gram

Siruthekku (*Clerodendrum sacralism*. Linn) – 4 ½ gram

C.

Kunkumapoo (*Crocus sativus*. Linn) – 2 ¼ gram

Koorasannai (Purified ox gall) – 2 ¼ gram

Kasthuri (*Moschus moschiferus* musk) – 2 ¼ gram

D.

Ellu (*Sesamum indicum*. Linn) – 35 gram

Velluli (*Allium sativum*. Linn) – 35 gram

Kachuram (*Phoenix dactylifera*. Linn) – 35 gram

Nei (Ghee) – 35 gram

Vellam (*Saccharum officinarum*. Linn) – 350 gram

Honey (*Apis melcifera*) – 17 gram

METHOD OF PREPARATION

From the above given ingredients (A) is taken in roller stone and grained waxy & sticky consistency.

Ingredient of (B) is made into fine powder from ingredients of (D) is added little by little and at last the ingredients of (C) is added and grinded into waxy consistency which should not be shinny & reflector and mix it throughly. This should be embedded into a paddy for 90days and then to be used.

Phytochemical and Pharmacological Activity of Vallathagi Legiyam.

S.no.	Name of The Ingredient	Parts Used	Phytochemical	Pharmacological Activity
1.	Cherankottai (Semicarpus anacardium. Linn) Fam: Anacardiaceae	Friut	Jeediflavone, semecarpufllavanene, gallufllavanone, semicarpetin, anacardic acid, cardol, catechol, stearic acid, arachidic acidbhilawanol ^[8,10,11,12,13, 14]	Analgesic, hypoglycemic effects, hepatoprotective, anthelminitic, anticancer, neuroprotective, antiinflammatory, antioxidant, antimicrobial, antispermatoginic, antiatherogenic, hypolipidimic, memory enhancing effect, cardioprotective, antituberculosis ^[8,9,10,11,12,13,14]
2.	Parangichakkai (Smilax china. Linn) Fam: Liliaceae	Rhizome	Saponin, glycoside, gum, starch, flavonoids, tannins, alkaloids ^[5, 17]	Anti-inflammatory, anticancer, antioxidant, antidiabetic, antiobesity, hepatoprotective, analgesic, antibacterial ^[15,16]
3.	Chukku (Zingiber officinale. Rosc) Fam: Zingiberaceae	Rhizome	Gingerol, 10-gingerdione, 6-shagaol, zingerone, bisapolene, zingiberene, zingiberol, B.zingiberane, quercetin ^[18, 19, 20, 21]	Anticancer effect, anticoagulant, antiemetic, anti-inflammatory, antioxidant, cardiovascular effect, antitissive, immunomodulatory effect, weight loss effect, antiarthitic, antimicrobial, radio productive, antigenotoxic mutagenicity ^[18, 19, 20, 21, 22]
4.	Millagu (Piper nigrum. Linn) Fam: Piperaceae	Fruit	Piperine, guinensine, piperamide, piperettine, pipericide, saementine, sarmentosine, piperolein-B, trichostachine ^[23, 24, 25, 26, 27]	Antibacterial, antifungal, antidepressant, antidiarrhoel, anti-inflammatory, antimutagenic, antioxidative, antipyretic, antispasmodic, antitumour, antithyroid, antihypertensive, hepatoprotective ^[23, 24, 25, 26, 27]
5.	Thippili (Piper longum. Linn) Fam: Piperceae	Fruit	Piperine, piperlogiminr, piprellenguminine, piplatis, piperolactum A, piperolactum B, fargosin, sesamine, asarininr, pipericide, guineensine ^[28, 32]	Immunomodulatory, stimulant, antiasthmatic, bio availability enhancement, hepatoprotective, hypocholesterolaemic, anti-inflammatory, antiameobic, antibacterial, cns stimulant, antioxidant, antiapoptosis, antidiabetic, antiobesity, antistress, radioprotective, melanin, inhibiting, anti snakevenom activity ^{[28,}

				29, 30, 31, 32, 33]
6, 7.	Sathikai, Sathipathiri (<i>Myristica fragrans</i> . Houtt) Fam: Myristicaceae	Seed, Aril	Comphene, p-cymene, sabinene, B- phellandrene, g- terpinene, limmene, myrcene, linalool, geranoil, myristicin, elamicin, myristic acid, lauric acid, tannin, calcium, iron ^[34, 35]	Antioxidant, antibacterial, antidiabetic, cytotoxicity, hepatoprotective, insecticidal, molluscidal, memory enhancing, hypolipidaemic, aphrodisae, antidepressent, hemolytic ^[34,35,36]
8.	Kirampu(<i>syzygium</i> <i>aromaticum</i> .Linn) Fam:Myrtaceae	Buds	eugenol, cartophyllin, eugone ^[5]	Antifungal, antibacterial, antioxidant, analgesic, anticarcinogenic, anaesthetic, anti-inflammatory, antithrobitic ^[37,38,39]
9.	Manjal(<i>Curcuma</i> <i>longa</i> .Linn) Fam:Zingiberaceae	Rhizome	Curcumin, curdione, curzaenone, cineol, borneol, zingiberene, sesquiterpine, sabinene, caryophyllene, geraniol ^[40]	Anti-inflammatory, neuroprotective, antiaging, hepatoprotective, nephroprotective, antiparasitic, hypolipidemic, immunostimulant, anticoagulant, antifacility, antivenom ^[40,41]
10.	Kasthuri Manjal(<i>Curcuma</i> <i>aromatica</i> .Salisb)Fa m:Zingiberaceae	Rhizome	Alpha-curcunene, d.camphor, germacrene D, curzerene, germacrone, myrcene, terpinolene, cuminic aldehyde, cuminyl alcohol, xanthorrhizol, curcuphenol, zingiberene, linalool, curzerenone ^[42]	Anti-inflammatory, wound healing, antitumour, anticancer, repellent, antiplatelet, antitissive, antioxidant, antimelenogenic, antinephrotoxic, antimicrobial, antidiabetic ^[42,43,44]
11.	Maramanjal(<i>Cosiniu</i> <i>m</i> <i>fenestratum</i> .colebr)F am:Menispermaceae	Stem	Berbercine, ascorbic acid, gallic acid, quercitin ^[45,46]	Antioxidant, antibacterial ^[45,46,47]
12.	Omam(<i>Tachysperm</i> <i>um</i> <i>ammi</i> .Linn)fam:umb elliferae	Seed	Carbohydrate, tannin, glycoside, saponin, nicotinic acid, ajwain, p- cymene, camphene, myrcene, cauone, dillapiole ^[48,50]	Antidiarrhoeal, antibacterial, gastroprotective, antihypertensive, antispasmodic, bronchodilatory, anti- inflammatory, diuretic, antitissue, enzyme modulation, antioxidant, antiepileptic, lithotriptic, analgesic, antifilarial ^[48,49,50]
13.	Kurosani Omam(<i>hyosymus</i> <i>niger</i> .Linn)Fam:Sola naceae	Seed	Hyoscyamine, atropine, tropane, scopolomine ^[51,52]	Bronchodiatary, antisecretry, urinary bladderrelaxant, spasmolytic, hypnotic, pupil dilating, sedative, antidiarrheal, antimicrobial.analgesic.antipyretic, anti- inflammatory, anticonvulsant ^[51,52]
14.	Seeragam(<i>Cumminu</i> <i>m</i> <i>cuminum</i> .Linn)Fam: Apiaceae	Seed	Thymindr, cuminol, cymene, limonene, euginol ^[53]	Antimicrobial, antidiabetic, anticancer, antioxidant, anti-inflammatory, analgesic, antihypertensive, hypolipidemic, antiulcer ^[54,55,56]
15.	Karunjeeragam(Nig	Seed	Volatile oil, saponin,	Anticoagulant, antibacterial, antifungal,

	ella sativa.Linn)Fam:Ra nunculaceae		melanthine, metarbine(glycoside) ^[5]	antidiabetic, anti-inflammatory, analgesic, testicularprotective, human neutrophil elastase activity, gastroprotective ^[57,58]
16.	Sitararathai(Alpinia officinarum.Linn)Fam: Zingiberaceae	Rhizome	Diaryheptanoid, acetoxycineoles, cineole, B-sisterol arabinoside ^[59]	Anti-inflammatory, antihyperlipidemic, anticancer, osteoblast, antiinfluenza, antibiotic resistance, antimicrobial activity ^[59]
17.	Kothumalli(Coriand rum sativum.Linn)Fam:A piaceae	Seed	Tannin, coriandrol(terpone) ^[5]	Antibacterial, hypnotic, antidepressant, sedative, anticonvulsant, antifungal, analgesic, antidiabetic, anticancer, hepatoprotective ^[60,61,62]
18.	Chitramoolam(Plum pago zeylanica.Linn)Fam: Plumbaginaceae	Root	Plumbagin, biplumbagin, chitranone, elliptone, coumarins acid, anthroquinones, steroids ^[63,64]	Antimicrobial, antiulcer, antiobesity, antiinflammatory, hepatoprotective, wound healing, cytotoxicity, antidiabetic, anticancer, antimalarial, antifertility activities ^[64,65]
19.	Thanrikkai(Terminal ia bellirica.Roxb)Fam: Combretaceae	Fruit	Bellericanin, gallotannicacid, termilignan, tannin, ellagic acid, ethyl gallate, galloyl glucose, phyllamblin, mannitol ^[67,68,69]	Analgesic, antidiarrhoel, antioxidant, wound healing, antidiabetic, antioxidant, antihypertensive, antispasmodic, antimicrobial, anticancer, antiulcer, antipyretic, antithrombotic ^[67,68, 69]
20.	Siruthekku(Cleroden drum secalism. Linn) Fam:Verbenaceae	Root	Oleanolic acid, queretaroic acid, seratogenic acid, B- sitosterol. D-manniitol ^[70, 71]	Hepatoprotective, antioxidant, anticancer, antiinflammatory, antipyretic, analgesic, antiallergic, antifertility, antifungal, woundhealing, antibacterial ^[70,71,72]
21.	Kunkumapoo(Crocu s sativus.Linn) Fam:Iridaceae	Stigma	Picrocrocin, safranal, zeaxanthin, lycopene, croctin, picrocrocin ^[75]	Antihypertensive, anticonvulsant, antigenatotoxic, anti-inflammatory, anticancer, antimicrobial, antidiabetic, antiobesity ^[73,74,75]
22.	Koorosanai(Purified ox gall)		-	Laxative, antispasmodic, expectorant, hepatoprotective, perfugerece ^[76]
23.	Kasthuri(Moschus moschiferus musk)		Olealdehyde, resibcyogenis, trifluoroacetate, benzeneactic acid, M- cresol, cholesterol ^[77]	Tonic, antispasmodic ^[76]
24.	Ellu(Sesamum indicum.Linn)Fam:P edaliaceae	Seed	Sesamol, sesamoln, seasamin, glycerol, ligmans, myristic acid, palmitic acidlinealeic acid ^[78, 79]	Antipyretic, antiinflammator, antioxidant, antimicrobial, wound healing, anticancer ^[78, 79]
25.	Velluli(Allium sativum.Linn) Fam:Liliaceae	Bulb	Allin, allicin, ajoene, allinase, peroxidase, myorsinase, aeginine ^[80,81]	Antibacterial, antiviral, antifungal, antiparasitic, wound healinh, antidiabetic, antioxidant, antitoxification, diuretic, anticancer, antihypertensive, anticancer, cardio

				protective, Alzheimer disease protective ^[80,81]
26.	Kachram(Phoenix dactylifera.Linn) Fam:Areacaceae	Unripe fruit	Methyl luteolin, quercetin, epicatechin, snapic acid, coumaric acid, cafferic acid syringic acid cholesterol, campesterol, phytoxeinvectase, glucose ^[82]	Antifungal, antioxidant, hepatoprotective, gastrointestinal protective, anticancer, anti-inflammatory, antihyperlipiemic, immunostimulatory, gonodotopic activity ^[83]
27.	Nei(Ghee)		Fatyacid phospholipid, sterol, vitamin A, D, E, K, hydrocarbon, casein, copper, iron ^[84]	Antioxidant ^[84]
28.	Vellam (Saccharum officinarum. Linn) Fam:Poaceae	Stem (Sugar)	Phenolic acid, caffeic acid, apigenin, luteolin, tricrin, orientin ^[85]	Analgesic, antihepatotoxic, diuretic, acetyl cholinerelease, anti-inflammatory, antithrombatic ^[85]
29.	Honey(Apis melcifera)		Carbohydrate-monosacharide, fructose, fat, protein, glucose, vitamin ^[86, 87]	Antioxidant, anti-inflammatory, antiviral, wound healing, increase sperm count, enhance fertility, antitumour, cough reducing ^[86, 87]
29.	Honey(Apis melcifera)		Carbohydrate-monosacharide, fructose, fat, protein, glucose, vitamin ^[86, 87]	Antioxidant, anti-inflammatory, antiviral, wound healing, increase sperm count, enhance fertility, antitumour, cough reducing ^[86, 87]

CONCLUSION

The scientific review of Vallathagi Legium ingredients has antioxidant, anticancer, antitumour properties. So Vallathagi legiyam is a best choice for cancer patients. Allopathic medicine commonly practiced currently is only 100 years old although traditional medicine has been around for thousands of years no integration exists between it and allopathic medicine. Siddha, the science of long life and one of the most ancient medical systems still practiced on the indian subcontinent, can be used in combination with modern medicine to provide better treatment of Cancer.

REFERENCES

1. Sudha veerappan, chemical standardization and in vitro cytotoxic studies on Nelikai legiyam, Research gate, Aug, 2014.
2. Saraswathy, Development of high performance thin layer chromatography finger print parameters on make Vallathagi legiyam, Ancient science of life, July–Oct 99; 1: 19th.
3. S. Ramya, A literary review of Semicarpus anacardium. Linn – In traditional Siddha medicine, world journal of pharmacy and pharmaceutical science, Dec 10, 2018; 8.

4. Murugesu Muthaliyar, Gunapadam, 2013; 1: 490.
5. Dr. S. Somasundaram, Maruthuva thavaraviyal, 1.
6. Deva Asirvatham Sameul, Marunthu sei iyalum kalaium, 2014; 338.
7. Samasivam pillai. T. V, Dictionary, 1998; 1235.
8. Tiwari prashant, pharmacology, phytochemistry and toxicology of Semicarpus anacardium, international journals of pharmaceutical science review and research, Jan-Feb, 2017; 25-31
9. Pacas jain, A potential ethnomedicinal plant, Semicarpus anacardium. Linn – A review international journal of research in pharmacy and chemistry, 2013.
10. Amalek brantikumar, a review article on bhallataka(Semicarpus anacardium. Linn), International ayurvedic medical journal, Jan 2015; 3.
11. Pallavi. D. Akare, therapeutic significance of Semicarpus anacardium. Linn, a review international journal of Ayurveda pharmaceutical, July-Aug, 2015.
12. Rajendra, Semicarpus anacardium. Linn, a wonderful plant with varied Medicinal properties, journals of pharmaceutical research, Oct-Dec, 2016; 15.
13. Ashwini Kumar A. Raut, bhallatak (Semicarpus anacardium. Linn) a review, indian journal of traditional knowledge, Oct, 2007; 6: 653-659.
14. Mona semalty, Semicarpus anacardium. Linn, a review, pharmacognosy review, Jan-June 2010; 4.
15. Sabaisenthil. B, a review Pharmacological activities of smilax china & Smilax zeylanica, International Journal of chemical and pharmaceutical science, 2017, March 8.
16. Thomas walter, a review of the herbal to treat skin disorders in traditional Siddha medicine, journals of Pharmacological and toxicological studies, Jan-March, 2014.
17. Saravanakumar. S, Phytochemical screening of the methanol extract of root tuber of smilax china, ijppr, 2014; 15: 963-966.
18. Rajesh kumar Mishra, Pharmacological activity of Zingiber officinale, International Journal of pharmaceutical and chemical science, July-Sept 2012; 1.
19. Riazcu rehman, Zingiber officinale (pharmacological activities), journals of Medicinal plants research, Feb 2011; 5: 344-48.
20. Basil.D, Zingiber officinale (Ginger), a future outlook on its potential in prevention and treatment of diabetes and prediabetic states, new journal of science, 2014.
21. Mohaddese mahbousi, Zingiber officinale. Rosc essential oil a review on its composition and bioactive, clinical phytoscience, 2019.
22. Qian-Qian mao, bioactive compounds and bioactives of ginger, foods, 30 May 2019.

23. Dirgha raj joshi, a review on diversified use of the king of species, Piper nigrum (Black Pepper), *Ijpsr*, 2018; 9: 4089-4101.
24. Emad. M. Abdallah, black pepper fruit (Piper nigrum. L) as Antibacterial agent, a mini review, *journals of bacteriology and mycology open access*, 2018; 6.
25. Zoheer A Damanhowi, a review on therapeutic potential of piper nigrum. Linn the king of spices, *medicinal and aromatic plants*, 2014; 3.
26. Nisar ahmed, biological role of Piper nigrum. Linn – A review, *asian pacific journal of tropical biomedicine*, 12 Nov 2012.
27. Zahrae Mohammed kaho, evaluation of Antibacterial activity of Piper nigrum extract against streptococcus mutans and E. Coli, *Journal of pharmaceutical science and research*, 2019; 11: 367-370.
28. Chauhan khushbu, Phytochemical and therapeutic potential of Piper longum. L, a review, *IJRAP*, 2011; 2(1): 157-161.
29. S. C. Jagdale, Antioxidant activity of Piper longum. Linn, *international journals of biological chemistry*, 2009; 119-125.
30. P.D. Lokhande, Antibacterial activity of extract of Piper longum, *Journal of pharmacology and toxicology*, 2007; 574-579.
31. Ashalatha. M, a review article on pippali(Piper longum. Linn), *International ayurvedic medical journals*, Sept 2015; 3.
32. Dhanalakshmi, phytochemistry and Pharmacological of Piper longum, a systemic review *world journal of pharmaceutical science*, 2017; 6: 381-398.
33. Maitreyi zaveri, chemistry and Pharmacological of Piper longum. L, *Research gate*, Nov-Dec 2010; 5.
34. Honey Jose, a descriptive review on Myristica fragrans. Houle, *hygeia. J. D. Medicine*, May-Oct 2016.
35. Preetee jaisual, biological effects of myristica fragrans, *ARBS annual review of biomedical science*, Dec, 2009; 21-29.
36. Prerna jain, anti-inflammatory activities of Myristica fragrans (Nutmeg) using HRBC membrane stabilizing methods, *International Journal pharmaceutical science review*, May-June, 2017; 40-42.
37. M.Vivida martoss, antifungal activities of thyme, clove and oregono essential oil, *journals of safety*, Feb 2007; 97-101.
38. Sabahat saead, in vitro Antibacterial activity of clove against gram negative bacteria, *pok. J. Bot*, 2008; 40(5): 2157-2160.

39. Monika mittal, Phytochemical evaluation and Pharmacological activity of *sygium aromaticum*, a comprehensive review, International Journal of Pharmacological and pharmaceutical science, 2014; 67-72.
40. Junaid niazi, pharmacy therapeutics of *curcuma longa* a potent patent, International Journal of pharma professional research, july 2010; 1.
41. L. L. Leon, biological activities of *Curcuma longa*. L, Mem inst oswalde cruz, rio de janerio, july 2001; 96(5): 723-728.
42. Sikha.A, Pharmacological activities of wild turmeric (*Curcuma aeomatica*. Salib) a review journal of pharmacogony and phytochemistry, 2015; 1-4.
43. Anoop.K,*Curcuma aromatica*. Salib a multifacted species, International Journal of phyto pharmacy research, 2015; 6: 10-15.
44. Pranav kumar AVR, comparative evaluation of effect of extracting solvents on therapeutic activities of *Curcuma aromatica* rhizomes, ironian journal of pharmaceutical science, 2013; 83-97.
45. K.U Tushar, *coscinium fenestratum*. Colebr a review on the race ceitically enlargement and highly traded Medicinal species journal of plant science, 2008; 133-145.
46. Santhosh.w. Goveas, evaluation of antimicrobial and antioxidant activity of stem and leaf extract of *Coscinium fenestratum*, asian journal of pharmaceutical and clinical research, 2013; 6.
47. Lorishnamarthy karthilea, the potential of antioxidant activity of methanolic extract of *Coscinium fenestratum*, saudi journal of biological science, 2019; 1037-1042.
48. Hayiz muhammed asif, a puroramic view on Phytochemical, nutritional, ethanobotanical ises and Pharmacological values of *trachyspermum ammi*. Linn asian pacific journal of tropical biomedicine, 2014; 543-553.
49. Than. N. T, screening of *Trachyspermum ammi* Antibacterial activity, biochemistry and analytical biochemistry, 7.
50. Kamal jeet, *Trachyspermum ammi*, a comprehensive review international research journal of pharmacy, 2012.
51. Anahita alizadeh, black henbane and its toxicity a descriptive review avicenna journal of phytomedicine, 2014; 297-311.
52. Sajeli begum, bioactive non alkaloidal secondary metabolites of *Hyoscyamus niger*. Linn seeds a review, Research journal of seeds science, April, 2010.
53. Ahamed Resa gohori, review of phyto chemistry of *Cuminum* seeds and its standards from field to marker pharmacogony journal, Sept, 2011; 13.

54. Prof. Dr. Ali esmail al snafi, the Pharmacological activity of cuminum cyminum a review ISOR journal of pharmacy, june, 2016; 6: 46-65.
55. Remagnoil. c, antifungal activities of essential oils from fruit of Indian Cuminum, pharmaceutical, July, 2010; 234-838.
56. Wanna. j, chemical composition and antimicrobial activity of cumin oil cuminum cyminum, Apiaceae, Sept 5, 2010; 1355-8.
57. Aftab ahammed, a review on therapeutic potential of Nigella sativa a miracle herb, asian biomedical, May, 2013; 3(5): 337-352.
58. Saba rajasekar, pharmacognosy and pharmacology of Nigella sativa, a review international research journal of pharmacy, june, 2016; 56-59.
59. Mansowreh masoudi, remedial effect of Alpinia officinarum, scholous research library, 2017; 9(4): 78-84.
60. Prof. Dr. Ali esmail ali snofs, a review on chemical constituents and Pharmacological activities of Coriandrum sativum, isor Journal of pharmacy, July, 2016; 17-42.
61. Mosoud zare shelazh, Biological activities of new microbial peptide from Coriandrum sativum, International Journal of Bioscience, 2014; 4(6): 89-99.
62. Chemical composition and insecticidal activity of essential oils from Coriandrum sativum seeds against calleschorum maculaatum, isrn pharmaceuticals, 2012; 5.
63. Smita. S, a review on plumbago zeylanica. Linn, a divine Medicinal plant, International Journal pharmaceutical science review research, Jan-Feb, 2015; 119-127.
64. Ankita sharma, a multifarious patent hebe Plumbago zeylanica a mini review international journal of recent scientific research 28th june, 2015.
65. Kumar ganesan, etho Medical and Pharmacological potentials of plumbago zeylanica. L a review american journal of phyto medicine and clinical therapeutic, 2013; 313-337.
66. Arpita roy, a review on pharmaceutically important medical plant, plumbago zeylanica, ayurvedic and herbal medicine, 2017; 225-228.
67. Anindita jeb, Pharmacological activity of Baheda(Terminalia bellirica) a review, journal of pharmacognosy and phyto chemistry, 2016; 194-197.
68. Manesn palsingh, ethanoband modern Pharmacological profile of baheda(Terminalia bellirica) a review, the pharmaceutical and chemical journals, 2018; 153-162.
69. Ashutosh gupta, Pharmacological aspects of Terminalia bellirica, research gate, 2017.
70. Parnium B.S, Pharmacological review on clerodendrum serratum. Linn. Moon journal of pharmacogonosy and phyto chemistry, 2015; 126-130.

71. Pallab kar, antioxidant and pharmaceutical potential of clerodendrum. L an overview, International Journal of green pharmacy, Oct-Dec, 2014.
72. Mukesh K. Singh, clerodendrum serratum a clinical approach, journals of applied pharmaceutical science, 2012; 11-15.
73. Prason crocus sativus. L for cancer chemo prevention a mini review, journals of traditional and complementary medicine, 2015; 81-87.
74. Arshad husain rahman, saffron and its active ingredients role in the prevention and treatment of diseases, pharmacognosy journal, 2017; 873-879.
75. R. Srivastava, Crocus sativus. L, a comprehensive review pharmacognosy review, July-Dec, 2010; 4.
76. Dr. R. Thiyagarajan, Gunapadam Thathu Jeevam vaguppu part, 2013; 2&3: 628,602.
77. Diyan. Li, the musk chemical composition and microbial of Chinese forest musk deer males, scientific reports, Jan 2016.
78. Shasmitha.R, health benefits of Sesamum indicum a short review asian journal of pharmaceutical and clinical research, 2015; 8.
79. Sepide miraj, bio activity of Sesamum indicum, review study, scholar research library, 2016; 325-334.
80. Prasan, Garlic (*Allium sativum*. L) a review of potential therapeutics application, International Journal of green pharmacy, April-June, 2012.
81. Dr. M. D. Khorshed Alam, medicinal plant *Allium sativum* a review, journal of Medicinal plants studies, 2016; 72-79.
82. Dr. Necta Mahesh Deshpande, dates fruit (*Phoenix dactylifera*. Linn) a review on nutritional value, Phytochemical and Pharmacological action, wjpr, july 2017; 6: 419-426.
83. Ahmad ateq, *Phoenix dactylifera*. Linn a review international journal research Ayurveda pharmaceutical, May-June, 2013.
84. Tammay Hazera, Natural antioxidant used in Ghee, a mini review, Journal of food research and technology, Aug 2014.
85. Amandeep singh Phytochemical profile of sugarcane and its potential health aspect, pharmacognosy review, 2015 May 5.
86. Sultan Ayoub meo, role of honey in modern medicine, saudi journal of biological science, 6 Dec 2016.
87. Tahereh Eteraf oskokel, traditional and modern uses of natural honey in human diseases a review journal of basic medical science, Sept 28, 2012.