CHAPTER: 2
REVIEW OF LITERATURE
2.1 medicinal plants:

- Saotoing Pierre, et al 2011, this article deals with 49 medicinal plants species of to 27 different families which have potential fight against malaria. Out of these species the Cesalpiniaeae family is that the most useful for treatment of protozoal infection. For the traditional treatment of protozoal infection locals use way more neem tree, Mangifera indica, guava, Cassia occidentalis, genus Khaya senegalensis, Tamarindus indica, Citrus limonum, Eucalyptus sp., Caricacapaya and Cymbopogon citratus area unit used for the normal treatment of protozoal infection illness. They often used leaves and bark of those plants area unit the largely used components. They often offer the medicines within the kind of simmering.

- Tolu O. Odugbemi, et al this research deals with the development of new antimalarial drugs from different medicinal plants found in different areas like, Okeigbo, Nigeria, Alstonia boonei (Ahun), Azadirachta indica (Dongoyaro) and Khaya grandifoliola (Oganwo). Locals give these plants for treating malaria. Okeigbo,Southwest and Nigeria. Barks, roots, leaves or whole plants are used for the treatment of malaria. For this purpose plants from various species or their parts are combined together to prepare drug.

- Owolabi et al., 2007Since the beginning of human civilization, medicative plants are utilized by human beings for its therapeutic price. Nature has been a supply of medicative agents for thousands of years and a powerful variety of contemporary medicationis derived from naturally occurring sources. Several of those derivatives were supported the advantages of the source of in ancient drugs. The naturally occurring ancient drugs systems started to play a major role in care of health, with concerning eightieth of the world’s inhabitants relying chiefly on ancient medicines for his or her primary health care.

- Jain, The medicines derived from plant is used from unani and they are returned uses and medicinal properties of each medicinal plant. In India
around 3000 year medicinal plants are used to treat different types of diseases. The pharmacology of those systems contains an upscale heritage of autochthonous seasoningpractices that have helped to sustain the health of most rural folks of Republic of India. The traditional texts like Rig religious writing (4500-1600 BC) and Atharva religious writing mention the employment of many plants as drugs. The books on Ayurveda drugs like Charaka Vedic literature and Susruta Vedic literature talk to the employment of quite 700 herbs. By information of WHO (1977) there are many plants available all over the world which have one or more different parts of it which are very useful in preparation of different type of medicine in different types of disease treatment. This information related to plants is scientifically proved with different type of investigation as each plant have different properties. The herbal medicine is the term derived from the medicine made up of different parts of plants like roots, barks, steams, flowers, leaves as well as seeds.

• WHO 2001 by this volume it is clear that the medicines can be made by all the medicinal plants by different processes like, extraction, purification, concentration as well as fractionation. By which different types of medicines can be derived for different diseases.

• Okigbo et al., 2008, according to this research, medicinal plants have the ability to cure different types of diseases as they have many different as well as active ingredients which can cure the diseases and lower down the pain. In the most developing countries many medicinal plants are using to cure and to treat many type diseases and it is beneficial economic condition of that country.

• Lucy and Edgar, 1999. Modern collection still contains a minimum of twenty fifth medicine derived from plants and plenty of others, that are artificial analogues, designed on paradigm compounds derived from the herbs.

• The medicinal plants have naturally occurring properties which can aid different type of diseases. Kala, 2005 the continuing growing recognition of healthful plants is as a result of many reasons, as well as escalating religion inflavouring drugsthis property of
medicinal plant is very useful in developing medicinal industry by which many people can get employment. Many researchers derived medicines and chemotherapist medicine by extracting different medicinal plants.

- The researchers from WHO says that medicinal plants are very effective and they have lots of ability to make medicines. So it is clear that this properties of medicinal plant very safe and efficient. Singh and Panda, 2005; Agharkar, 1991. In this research the article gave the medicinal plant product to treat different types of diseases. Cough, asthma, pain skin diseases, piles, trouble heart, leprosy can be treated by Pedalium murex as it is cool tonic. It purifies the blood and helpful in urine discharge. It also removes the kidney stone

- Rashmi Chandra1 et al (2011), during this article the crude liquid extract of 2 healthful plants were analysed through an antimicrobial assay against human unhealthful escherichia, genus Pseudomonas putida (bacteria) and Malassezia furfur (fungus) by victimisation disc diffusion technique. The zones of inhibition, minimum restrictive concentration were additionally resolved. Among the plants tested Tulsi was found to be the very operative against plant strain as compared to microorganism strain. Tulsi exhibited twelve millimetre zone of inhibition. This study additional lyre in force the employment of those flavouring preparations because the dietary supplement also as associate degree envoy of preventing or controlling the microbe infections.

- Singh Vishwabhan (2011), In this article different parts i.e. leaves, stem, flower, root of Tulsi herb, which is native to India, frequently used for treatment of bronchitis, bronchial asthma, malaria, diarrhoea, dysentery, ophthalmic problems, insect bites etc. the analysis shown that Tulsi has anti-fertility, anti-cancer, anti-diabetic, anti-fungal, anti-microbial, hepato-protective, cardio-protective, and anti-emetic, anti-spasmodic, analgesic properties.

- Sumit Narval et al 2011, author says Tulsi plant is widely used for curing various ailments including cold, cough, abdominal pain, measles, anti-ulcer, bronchitis, anorexia, memory disorders and diarrhoea. This paper explains all
the phytochemical and pharmacological aspects of Tulsi to enable the doctors and clinicians to use this plant traditionally.

- N Sing (2012), in this article is about detail study, both experimentally and clinically to prove that Tulsi possess anti-Stress/adatogenic, anti-oxidants, Immuno modulators and anti-radiation properties. It also gives the knowledge that Tulsi plays a very important role prevention and treatment of cancer. The main aim of this research in this field, prevent and treat human carcinoma by initiating detailed studies in this field. It is worthwhile to review anti-cancer properties to give an overview of its status to scientists.

- Pallavi Dixit 2015, this paper, reviles the use of Tulsi plant by different culture which has existed till date globally. Tulsi plant has been used culturally and traditionally in India since ages as Ayurvedic medicines for treatment of medicines.

- P Kalyan Kumar et al Ancient Ayurvedic text like Atharva Veda have devoted lot of energy towards medicinal properties of tulsi which has pungent smell is bitter in teats. It is hot light and highly effective even in dry conditions. All parts of these plants have medicinal properties. The traditional belief of traditional belief of medicinal properties of Tulsi have been scientifically proved in this paper.

- Bhatt Mehul K 2012, this paper investigates anti-microbial activity of Ocimum Sanctum Methanolic extract against stems of gram positive and gram negative bacteria. Anti-microbial activity of the extract of Tulsi against gram positive bacteria i.e. bacillus subtilize and gram negative bacteria i.e. Escherichia coli has been determined by the author for microbial analysis.

- Sai Krishna. G, 2014 Tulsi is a wonder herb as it is used to purify expectorants. They explain that Tulsi is pungent and bitter in taste and have pungent in the post-digestive effect and has hot potency. It also has a variety of biological; pharmacological activities. Tulsi also has medicinal and biological properties due to its pungent odour bitter teats and hot potency. Tulsi also contain oil which has been confirmed through glycerine test.

- Gebreselema Gebreyohannes, Mebrahtu Gebreyohannes 2013 this paper exhibits the medicinal use of garlic and its products in various ways. The
therapeutic effect of garlic with minimal toxicity has been analysed for its medicinal values. Garlic has anti-microbial activity against various types of bacteria, fungi and viruses. The medicinal effects present in garlic are due to the presence of higher concentration of sulphur compounds in it.

- **Londhe V P, 2011** This paper reveals that garlic can be used to lower blood pressure and cholesterol, fight infections, and prevent cancer. The blood sugar level is also controlled by garlic using different types of mechanism. The authors have analysed that garlic may be able to prevent some solid tumours; hence it can also be used for prevention cancer. Garlic can also be used for the hepatoprotective, antihelmentics, anti-inflammatory, anti-oxidant, anti-fungal and wound healing.

2.2 compositions of medicinal plants:

- **A K Ghosh, 2011,** globally ginger has been used as a spice and flavouring agent. Ginger is composed of different chemical constituents of aldehyde, gingerols, shogaol and parasol etc. it is highly beneficial for general human body as it cures number of diseases like common cough, cold acidity prepare a better drug for the treatment of various diseases. It also revivials that ginger carry out a large number of pharmacological activities and have also been used against colon cancer. The higher level of analysis helps to prepare less toxic and highly potent drugs for effective treatments of diseases.

- **S K Gupta et al 2002,** this paper describes its chemical composition, and its various pharmacological activities Ocimum Sanctum plant, its chemical constituents and various pharmacological activities.

- **Shirin Adel P.R. and Jamuna Prakash, 2010,** this research analysed antioxidant components like polyphenols, vitamin C, beta carotene, flavonoids and tannins. Freeradicals which are present in antioxidant assays act as reducing agents and total antioxidant activity was done for ethanol, methanol, acetone, 80% methanol, 80% ethanol extract.

- **Subhash Kumar Gupta, Anand Sharma, 2014** Ginger has been used as since ages and the most resourceful medicinal plant having large wavelength of biological activities. This paper also imparts the use of ginger in Ayurveda and Chinese medication for solidification heart issues catamenia disorders, malady, degenerative joint disease, epilepsy, nausea, inflammation, cough and
cold, complaint, cat menial cramps, cancer and enormous variety of diseases. Ginger additionally possesses anti-microbial and anti-oxidant properties.

- Natrajan Sudhakar, Theivanai, 2014, all the parts of the cerica papaya possesses s medicinal properties. Large amount of, latex is present in steam leave and front of papaya. The latex is found mainly in leaf, fruit and steam of this plant. Latex of unripe papaya fruit is pulled of enzymes like enzyme and chymopapain, besidecysteine, endopeptidases, and chitinases. This latex conjointly acts as AN inhibiter of aminoalkanoic acid peptidase. This paper has explained numerousproperties of papaya like anti-oxidants and free radicals scavenging activity, anti-cancer activity, and medication activity, treatment for break bone fever, anti-diabetic activity, wound healing activity and anti-fertility activity.

- Arvind G. et al 2013, this paper deals with the advantages of papaya. Papaya contains high content of vitamins A, B and C, chemical change enzyme like chymopapain that hasantiviral, antifungal and anti-bacterial properties. It may be used for action numerous diseases like warts, corns, sinuses, eczema, cuneal tubercles, force per unit area, dyspepsia, constipation, amenorrhea, general infirmity, expel worms and stimulateprocreativeorgansand lots of that is extremely helpful for more study.

- Girish k., Shankara Bhat s., 2008, this paper shows the flexibility and no uniformity of tropic trees like neem tree. That has nice potential and possesses preponderant helpful Norwoodmerchandise like leaves, bark, flowers, fruits, seed, gum, oil andorganic fertilizer. Margosadissent from different variety of tree due to its properties like antiallergenic, antidermatic, antifeedent, antifungal, medication, antipyorrhoeic, antiscabic, cardiac, diuretic, insecticidal, larvicidal, nematicidal, and contraceptive and conjointly the opposite biological activities and conjointly because of variety of biological activities. Margosa is taking into account as inexperienced treasure because of these activities.

- Chhibber S., Sharma N. 2014, traditionally neem is the one of the most useful medicinal plant in India. It has phenomenal therapeutic and ethno medicinal uses for mankind due to its beneficial properties and applications. This
research has been focused on insecticidal properties and medicinal utilisation of neem.

- Sharma Pankaj, Tomar Lokeshwar, 2011, this paper focuses on biological activities and preventive-primitive medicinal uses of neem tree. This paper also review the application of neem in curing problems like antifungal, anti-imflamatory, insecticidal, and other biological properties.

- Diedhiou Djibri, Faye Mamadou, 2015, it's been found by researchers that neem tree contains t ninety six.82% of the lipids and ninety two.20% of the proteins in its kernel, while 92.22% of the parietal constituents area unit gift in its hull. Neem tree seeds contain fourteen.99±0.37% of hydro soluble, 0.11±0.05% of polyphenols and 0.76% of oil. The proteins gift in neem tree contain regarding seventeen amino acids with aminoalkanoic acid because the predominant compound.

- Philomena George, 2011, during this paper the author discusses regarding the overall belief amongst the customers round the world as a result of flavourer medicine is natural so they're continuously safe. Safety of the merchandise cannot be associated with its natural origin. To know standard the traditional the standard drug it's terribly conventional to understand regarding the effective flavourer medical specialty of the drug. The advanced technology has helped the mortal to sight even the tracequantity of malignant neoplastic disease and harmful chemicals in these herbs. They need calculable potential dangerous effects of a number of the herb that are in ancient drugs since centuries.

- Vasavda Krupp et al Curcumene is that the major compound gift in Turmeric. Its medicine, inhibitor, antimutagenic, medicament, bactericide, hepatoprotective, expectorator and anticancer us medicine activities. This study reveals the data chiefly on the medicine activities of the Turmeric and its extracts and conjointly regarding medicative applications of Turmeric at the side of their safety analysis.

- Christos A. Damalas, 2011, this paper tells us about the study gives pesticidal properties of fresh aqueous juice of turmeric and essential oil of the plants which can be used as a pest controller in agriculture besides it uses as a
medicinal plant. Turmeric has a potential to act as natural pesticide for a protection of crop. Thus it can act as effective pest controller.

- Ekta Singh, et al 2012, this paper exhibits different aspects of scientific studies of Tulsi and gives scientific evidences on its various medicinal aspects i.e. antimicrobial, adatogenic, antidiabetic, nhepatoprotective, anti-inflammatory, anti-carcinogenic, radio protective, neuroprotective, cardio-protective, etc.

- Priyanka Madi Reddi 2013 Phytochemicals present in turmeric act as a powerful healing tool is the curcumin is the major phytochemical found in this plant. Anti-cancerous, anti-inflammatory, and anti-microbial health effects are present in the curcumin but it is not as useful as turmeric due to changes in bioavailability. Carcinogenic diseases can be treated with compound derived from this compound as it contains the adverse side effects.

- Prashanth G.K, G.M. Krishnaiah 2014, in this article the leaves of neem are analysed by GCMS and phytochemical screening. The leaf of neems are extracted with ethanol and in phytochemical screening it shows presence of saponins alkaloids and reducing sugars and in GCMS it shows different types of compounds.

- Mohamed ABD Elgadir, et al 2014, this paper deals with the study of potential of cerica papaya as a natural source of medicine. The different parts of Carica papaya plant when extracted with solvent show curing effects against number of diseases infections and wounds. The extracts are also highly effective when they are used as ant parasitic, antiseptic, ant parasitic, antimicrobial, anti-inflammatory, antihyperlipidemic, and antihypertensive and ant diabetic agent.

- Shiyou Li et al 2011, rhizomes of turmeric mainly consist of Curcuminoids. Leaves of turmeric containing essential oils like mono terpenes leaves and flowers. Sesquiterpenes are obtained in roots and rhizomes. The varieties, locations, sources, and cultivation culture are the important facts which effects on the variation of curcuminoids in turmeric. The composition of essential oils of rhizomes of turmeric varies with variation in verities and geographical locations. Both curcuminoids and essential oils differ in their contains with the type of method of extractions. Their stability also changes with extraction and
storage processes. The quality of commercial turmeric products can also change. Curcumin, demethoxycurcumin, and bisdemethoxycurcumin are used as marker compounds. The products, Ar-turmerone, turmerone, and turmerone are generally used to control the product quality of turmeric oil and oleoresin products.

- Ravi Kumar Pigili and Chinnalalaiah Runja, 2014, the researcher has the shows anti-dengue activities of various medicinal plant extracts. But they are not useful for dengue viral treatment. This article revises the anti-dengue activity of medicinal plant and they also gave the phytochemical constituents which are present in these medicinal plants. They showed that approximately 2.5 billion folks globally are suffering from dandy fever virus. It’s single stranded polymer virus that has four serotypes i.e. type 1, 2, 3 and 4. There are not any approved antiviral agents or immunizing agent out there for the treatment of dandy fever virus because of that there’s rapped increase in death rate globally. As there is not any artificial medication out there, therefore it’s essential to target healthful plants that are effective, safer and non-toxic.

- Shasank Sekhar Swain, and Debasmita Dudey, 2013, the in rural and urban areas around the world are more infected by dengue which is a mosquito born virus. The World Health Organization (WHO) and the government of all the countries are highly worried because of increase in of transition dengue in urban and semi-urban areas. Natural products are a rich potential source of anti-dengue compounds. It is essential to do laboratory investigations for identifying species that contributing to dengue control. The researchers have found out that some phytochemical structures plant sources are sources of dengue fever.

- Sai Krishna.G, 2014, in this article the researchers tells about medicative properties of different parts of Tulsi i.e. roots, leaves and seeds. In Ayurveda Tulsi has lots of importance as it is an aromatic antipatriotic and stimulant. It is active in biological and medicinal properties therefore medicine derived from Tulsi are also active like antiviral, antifungal, antimalarial, antiprotozoal, antipyretic, cardio protective, anti-cancer, anti-thyroid, anti-fertility, anti-ulcer,
radio protective immuno modulatory. It is also useful in set fever and customary cold are usually cured by victimization leaves of this plant.

- Siti Latifah Abd Kadir et al 2013, According to World Health Organization (WHO), break bone fever causes death round the world, in several regions. The analysisers during this research say that healthful plants square measure the most supply for a lot of urgency than among the past. Healthful plants square measure used wide to treat a diffusion of diseases like protozoal infection dengue, infections and much of further. Sometimes the plant medicines are safe less harmful and nontoxic as compare to artificial medicine. This text reviews potential anti-dengue activities from plants distributed around the world. Sixty-nine studies from 1997 to 2012 describe thirty one entirely totally different species from twenty four families that unit of measurement known for his or her anti-dengue activities.

Gebreselema Gebreyohannes1 and Mebrahtu Gebreyohannes 2013, The medicinal values of garlic have lower toxicity over wide range of therapeutic effect plant extracts of garlic excess antimicrobialagainst many types of bacteria, fungi and viruses. High concentrations of sulphur compounds which are present in garlic give it medicinal values. Responsible for its medicinal values. The various chemical compound present in garlic are used to treat cardiovascular sickness, cancer, diabetes, pressure level, indurations of the arteries and symptom. This paper provides the data regarding the medicative values of garlic.

- Peter B. Bongiorno et al 2008, as per garlic is the second most utilized supplement. The sulphur compound present in garlic has high trace mineral content, and enzymes. Garlic also shows anti-viral, anti-bacterial, anti-fungal and inhibitor talents. The medicative properties of garlic cure several diseases like Alzheimer’s malady, cancer, disorder together with arteriosclerosis, strokes, high blood pressure, occlusion and hyperlipidaemias, children’s conditions, medical specialty applications, stress, and infections

- N. Dev, et al 2011, this paper deals with the qualitative analysis of the essential oil as well asotherextracts ofoscimum basilicum which shows that majority of the oil are mono andsesquiterpenes. It contains large number of biologically compounds. The certain characteristics of Oscimum basilicum leaf can be attributed to cultivation on adomestic land.
• Z.H.Tay and K.P. Chon, 2016, this paper deals with the antifungal potential of papaya leaf extracts against Ganoderma boninense, the causative infectious agent of BSR. The papaya leaf compounds have been extracted by using five different solvents. The highest yield was given by methanol and acetone.

• Caitlin N. Hahn and Jeremy R. Burkett, 2013, Eugenol present in Tulsi which is the most active ingredient of Tulsi is a potent adatogenic agent, with healing power across wide diseases Eugenol also has very wide range of healing potential of large number of diseases. For farther research, and therapeutic use it becomes essential to determining and understand the right Eugenol extraction conditions for preparing entirely completely different compositions of plant. This analysis provides the foremost favourable conditions for extraction of from freshly massive and building complex of Tulsi.

• Amarnath Shenoy, et al 2013, naturally occurring compounds present in tulsi and neem are used for chemical removal of plaque and calculus that have accumulated on the teeth due to their biocompatibility and anti-bacterial effect. This research has been conducted to find out when the precipitation takes place by combination of various irrigates during the debridement procedure. The paper also tries to find out the amount of precipitate find out during the procedure.

• Maria do Ce´u de Madeira, et al 2002, Traditionally doctors in STP use different medicinal herbs for treating temperature and malaria which show variation of activity against blood Stage parasites of anti-malarial resistant P. falciparum, still as against the organ development of P. Bergheim in hepG2 liver cells. Researchers have found that such combinations can also be used as preventive medicines product in risk group’s areas.

• Nwachukwu C. U. et al 2010, Traditional medicinal practitioners used parts of plant like bark root, seeds, fruit, leaf which gives active ingredient and products of secondary metabolites like alkaloid, terpenoids etc which are used to cure many diseases and to prepare drug stimulants. Health by traditional and orthodox medical practitioners. Drugs were prepared by two basic methods. The active ingredient of medicinal plant was extracted with hot boiling water and ticking it by simmering. Of different parts of the medicinal
plants have different effect on pathogenic. Hence depending on pathogenic essence of medicinal plants the particular part of the plant is extracted and administered to the patient for medicine purpose.

- Arun Kumar G, et al 2015 Endophytic organism have been isolated from three plant samples i.e. Azadirachta indica, Terminalia Arjuna, Catharanthus roseus. 14 fungi and 7 bacteria have been isolated from the plant. Antimicrobial activity of the seven bacteria was screened against multi drug resistance pathogens. The global requirement is to eradicate antimicrobial resistance to give proper medication to pathogen infected patients hence it is important to grasp the medical specialty of resistant pathogens, and their mechanisms of resistance and treatment choices out there within the space.

- Mohammad A. Hossaina, et al 2013 Traditionally Azadirachta indica i.e. neem which belongs to Meliaceae family and is very important medicinal plant, is used to treat and cure number of diseases. This paper deals with the variation of in vitro antioxidant activity. It characterizes the chemical combination of leaves of Azadirachta indica prepared through different crude extracts by using modern methods by and most sensitive gas chromatography with mass spectrometry (GC–MS). The antioxidant activity of different extracts was determined by using DPPH (2, 2-diphenyl-1-picrylhydrazyl) method. Results of GC–MS analyses showed that majority of identified compounds in various crude extracts contain normal hydrocarbons, phenolic compounds, terpenoids, alkaloids as well as glycosides. Presence of high percentage of compounds thus identified in the extracts is very important both chemically and biologically. The order of the evaluation of antioxidant capacity of different extracts is of chloroform > butanol > ethyl acetate extract > hexane extract > methanol extract.

- Kausik Biswas, et al 2002 This paper revise the clinical trials of bioactive compounds isolated from neem. The researcher in this study explained that less numbers of reports on the clinical trials finished bioactive compounds isolated from Azadirachta indica. Metal nimbidinate, the metal salt of Nimbidin, the bitterest ingredient isolated from seed oil has been found as a potent water pill beneath varied clinical conditions. in a very restricted trial, oral administration of a hundred mg nimbidin 3 times daily for ten consecutive
days to tropical symptom patients, caused 25% reduction in total white blood corpuscle count with a symptomatic relief.

- Vasavda Krup1 et al, 2013, in India turmeric is the best growing plant and used as spices in daily food. Many diseases can be treated by this medicinal plant. Cough, polygenic disorder and viscous disorders are treated by this disease. For the previous few centuries, scores of works are done to determine the medical specialty activities of its extract as well as individual turmeric. The main compound found in Turmeric plant is curcumin and it’s tried for its medicine, inhibitor, antimitogenic, medicine, medicament, hepatoprotective, and expectorator and anticancerous and lots of medical specialty activities. During this review research work provides update chiefly on the medical specialty activities of the Turmeric and its extracts and lots of healthful applications of Turmeric at the side of their safety analysis.

- Umar Huzaifa, Ibrahim Labaran Bashar, 2014, Bioactive constituents of medicinally important plant Allium sativum i.e. garlic have been investigated bit qualitatively and quantitatively. The phytochemical secretes. The phytochemical screening of the presence of flavonoids, alkaloids, saponins, tannins and cardiac glycosides were carried out by using standard methods of analysis. Quantitatively garlic contains highest percentage of tannins (2.52 g/100g) and lowest percentage of flavonoid (0.05 g/100g). The amount of Saponin found was approximately was found about 0.24 g/100g and C. glycoside found approximately 1.88 g/100g. These results exhibit pharmacological activity aqueous extract of garlic.

- Humayun Riaz et al 2015, the antimicrobial property of ginger are discussed in this article. Phytochemical screening of Chloroform plant extracts that exhibited presence of various chemicals in it. Cultures of E.Coli, Bacilli, and staphaurus and eubacteria faecal were went to determine the antimicrobial strength. The activity of ginger against completely different conditions is as a result of its different constituents like volatile oils, shogaols, Gingerols and diarylheptanoids. The therapeutic effectualness of varied constituents of ginger is balanced by genetic or metabolic activities of physical structure. Phytochemical analysis and antimicrobial assay of ginger root extract
was conjointly performed by the researchers. Antimicrobial activity of ginger was confirmed by analysing the condition totally different of various strains of bacterium and plant at different zone of inhibition.

- Ikeyi adachukwu p, et al 2013, the naturally occurring chemical compounds in plants is known as Phytochemicals. They are recognised by pharmacological activity and vide range of therapeutic actions. The phytochemical present in Carica papaya leaves are alkaloid, flavonoid, Saponin, Tannin and Glycosides etc.

- Anjali Tiwari et al 2016, the chemicals present in medicinal plants are used to curing various diseases personal enhancement. Most of the Mordenpharmaceuticals used for treating diseases are based on the medicinal plants and their chemical components. Phytochemical constituents of these three plants were carried out by using Methanol extracts of their dried leaves. The presence of alkaloids, glycosides, saponins, steroids, flavonoids, tannins and reducing sugar was detected by performing a qualitative phytochemical analysis. Azadirachta indica contain about 29.08%. Contained all the chemicals. Ocimum sanctum did not contain any flavonoids and reducing sugar.

- Rajesh.h. et al 2013, Medicinal plants are a richest source of various pharmacologically active molecules. The present paper deals with the Phytochemicals which are required to treat various diseases affecting the mankind. The plant Curcuma longa a rhizomatous perennial plant from to family Zingiberaceae. Due to various elements its properties like anti-inflammatory, antifungal, antimicrobial, veridical, anti-mutagenic and antioxidant properties. Phytochemical screening of Methanol extract of turmeric rhizome presence of tannins, alkaloids, saponins, flavonoids, terpenoids and cardiac glycosides.

- Lincy Joseph, et al 2015, this paper helps to evaluate anticonvulsant activity to determine the flavonoid content (TFC), total tannin. Also the acute toxicity studies are carried out as per OECD guidelines. For anticonvulsant activity Hydro alcoholic extracts were screened which shows the presence of carbohydrate, flavonoid, tannins and terpenoids.
Abdul Wadood et al 2013, Phytochemicals have 2 varieties constituent i.e. primary and secondary. Chlorophyll, proteins sugar and amino acids are primary and terpenoids and alkaloids secondary constituents. All the Medicinal plants have antifungal, medicinal drug and anti-inflammation activities. The leaves of 10 completely different healthful plants are taken for phytochemical analysis to seek out the phytochemical constituents of all the plants. Tree nilotica, genus Psidium gujauva, Luffa cylindrical, Morus alba, mulberry, gourd, Fagonia cretica, pomegranate tree, Ficus palmate and peach locally available in Mardan region of Asian country. The leaves of those designated healthful plants were studied to the phytochemical analysis to seek out the phytochemical constituents all told the plants. Analysis of plants showed that the terpenoids, phlobatannins, reducing sugar, flavonoids and alkaloids were found all told these healthful plants.

P.B. ayoola & a. Adeyeye, 2010 In this research minerals, phytochemical composition and vitamins are analyze from green yellow and brown leaves of papaya. The bioactive compounds like saponins, cardiac glycosides, alkaloids are present in sample of leaves and tannins are absent and this is indicated by phytochemical screening test. They conjointly contained the vitamins, thiamine. Therefore inexperienced papaya leaf gave a supply of essential nutrients whereas yellow papaya was a supply of iron is. These leaves are used for formulation of medicine to cure varied diseases.

Philomena George, 2011, this paper revises the health hazards of herbal medicines. The Morden technology has been able to detect traces of carcinogenic and toxic components in this drugs which affects the patients indirectly.

Subash Kumar Gupta1, Anand Sharma, 2014, Ginger has wide range of biological activity and used by both Ayurveda and Chinese practitioners for curing large number of illness. It also shows antimicrobial and antioxidant properties. The medicinal properties of ginger are due to gingerols, parasol, and shogol.

Fulchan Ali, et al 2013, This paper deals with the herbal treatment of swine flu by using various immuno enhancer like allium sativum, occimum sanctum etc.
• Avani Shah, R. Krishnamurthy, 2013. Ayurveda, siddha, unani and folk traditions medicinal plants used for treatment of diseases. Natural medicines and herbal medicines are better treatment options for swine flu as they have least side-effects. These medicines can be extracted from more than 700 medicinal plants available in nature. These plants are full of antibiotic properties and are safe for human beings.

• Tahir Jameel, et al 2012, there are four serotypes of dengue fever viruses’ one, two, three and four reckoning on matter subgroup of viruses. Three type of virus can be detected with the help of complete blood count (CBC) of patient. The dengue fever is confirmed by using serological markers in lab and clinical tests. Presence of raised haematocrit, leucopenia with relative limphocytusis and presence of a typical limphosites along with plasmacytoid cells confirmed the pattern of disease.

• Jaggi Lal, 2012, Curcuma longa is a natural antiseptic. The spice is sometimes also called the ‘Indian saffron. Components present in turmeric are named as curcuminoids, which include mainly curcumin (deferulolyl methane), demethoxycurcumin and beside methoxy curcumin. Curcumin and curcuminoids are most active compounds. Due to its different molecular structure it shows strong anti-oxidative and anti-inflammatory properties.

• Hamid Nasri, et al 2014, Curcumene has terribly helpful properties with inhibitor activities and is beneficial in several conditions like inflammation; lesion and cancer too. It additionally has antifungal, antimicrobial activities. It’s the potential against varied cancer, diabetes, allergies, arthritis, Alzheimer’s malady and different chronic and arduous curable diseases. The most purpose of this review was to supply a short outline of the new and current information of the turmeric. Turmeric is employed to treat varied diseases particularly aerophilic stress elicited ones like cancer, Demand inflammatory disorders. It is also used as hepatoprotective, nephroprotective, medicine and anti-HIV to combat AIDS. Curcumin, as a spice, exhibits nice promise as a therapeutic agent. It’s terribly low toxicity too.

• Middha Himanshu, Parihar Pradeep, 2012, Agar well diffusion method was used to determine the antimicrobial activity of clove, cinnamon; Datura and
Tulsi were evaluated in different solvents by. The bioactivity of selected plants material was observed maximum in pet ether against Staphylococcus aureus, Proteus vulgaris, Escherichia coli, Klebsiella pneumonia, except Tulsi. Tulsi acetone extract gave maximum activity. The bio autographic results proved the max. Zone of inhibition of clove, cinnamon, datura and tulsi were observed at Rf 0.639, 0.147, 0.803 & 0.263 respectively which shows that the compound preserved at these Rf values having potent antimicrobial activity.

- Singh J, et al 2016, the use of Tulsi has been used as supply of medication in human antiquity. Tulsi (Ocimum sanctum Linn. Gurke.) Has been used for thousands of years in written material owing to its numerous healing properties. Tulsi is legendary and the ‘incomparable one’ from India. The Ocimum sanctum has been selected for the standardization due to its medicinal importance.

- Lalit Mohan et al, 2011, In Ayurvedic medication the leaves, seeds and root Tulsi plant are used for treating several diseases. Tulsi contains several nutrients and alternative biological active compounds and thus it’s extremely advanced in nature. Several researchers’ studies established that Ocimum sanctum has anti-stress, inhibitor, hepatoprotective, immune modulating, anti-inflammatory, medicament, antiviral, antifungal, antipyretic, medicament, medicinal drug, and antimalarial drug and hypolipidemic properties with a good margin of safety.

- Kanagathara N, et al 2011, spectroscopic techniques are used as diagnostic tool in clinical chemistry. The study of blood by chemical analysis techniques is employed for understanding the biological nature and for diagnosing the illness, however conjointly for the identification of the illness. Within the gift work, FTIR and UV-Vis chemical analysis technique is used to check the spectral variations within the blood serum of traditional blood samples.

- Nurlidia Mansor et al 2016 this article is related to suitability of thiosulfates or allicine present in Garlic. Allicine can be used as possible to be used as a possible bio-inhibitor for urea fertilizers when added to Malaysian paddy fields allicin has been quantified by spectrophotometric assay. The results show
stability of allicin for local soil temperatures (30-35 °C) but unsuitable for paddy field usage since it decomposes at pH lower than 6.0.

- Rohit K. Ajage and Veena S. Kasture, 2014, The present paper deals with simple and presiced UV spectroscopic method which has been developed and valid as per ICH guideline for the estimation of active constituents within the polyherbal Ayurvedic. In this method developer used was a mixture of methanol:water 50:50. It can be used for routine analysis of herbal formulation containing with annoyed colchicine and gingerols.

- FARHIN INAM, et al In this paper a simple sensitive and précised reversed part high performance liquid chromatographic methodology has been developed valid and used for quantitative measuring of Eugenol from methanolic extracts of spices. The extraction was done by soxhelt methodology exploitation methanol:acetonitrile:water in 10:50:40 as mobile part. All the experiment was applied in 280nm.

- S. Balasubramanian, et al 2014, Tulsi belongs to the family Lamiaceae. This articleisdoneto determine the phytocomponents gift within the methanolic extract of the leaves of Tulsi by victimization GC-MS analysis. From the GC-MS results 3 compounds were known as major constituents, they're benzene, 1, 2-dimethoxy-4-(2-propenyl)-, Isocaryophyllene and Eugenol.

- Sazada et al. (2009) shows the Tannins, saponins, phlobatannins, flavonoids, anthraquinones, terpenoids, steroids, alkaloids, carbohydrates and glycosides distribution in four healthful plants happiness to completely different families were investigated and compared

- Victor Njoku and Chidi, 2009 the analysed preliminary phytochemicals in some of the important medicinal and aromatic plants. The leaves and fruits of Pedalium murex were experimented to evaluate the phytochemical components. Preliminary phytochemical screening of petroleum ether and alcohol extracts of Symplocos racemosa was carried out by Davmurari (2010).

- Abdul-kabir khan et al. (2009) selected eight plant species belonging to 7 families for the screening of alkaloids, saponins, tannins and total phenolics contents from their matured and immature plant leaves and stems. Aurapa
and Wandee (2009) estimated total anthraquinone glycosides from the boiled filtrates of Senna siamea young leaves.

2.3 separation techniques:

- Bhise and Salunkhe (2009) used tlc and HPTLC techniques to screen phytochemical elements from Ashwagandha, Tulsi, Mulethi, Shatavari, Gokharu, Arjun, Giloy, Safed musli, Kalimirchi, Haldi and Jaiphal.

- Preeti et al. (2009) made qualitative and quantitative analyses of phytochemical components in Leidium sativum using HPTLC. Methanol extracts of Ocimum basilicum were analysed by TLC and HPTLC techniques to get fingerprint information by Maria et al. (2009). Sirohi et al. (2009) evaluated total sugar, protein, tannin and Saponin contents of aqueous, methanol and acetone extracts of twenty one different herbal plants and their parts.

- G. Devendran and U. Balasubramanian, 2011, this paper cover the qualitative analysis of all possible chemical compounds of Tulsi leaves using GCMS technique.

- Harikrishnan et al.2010, In this study the researchers have studied about individual as well as ethanolic mixture of leaf extracts of neem and tulsi by GCMS. Mixture of neem and tulsi 24 and 23 compounds found individually and around 26 compounds found in mixture. There are major 4 compounds were found in a neem and are n- palmitic acid (14.34%), phytol (19.96%), 9,12,15-octa-decatrienoic acid, (18.57%), and antioxidant (11.37%). phenol,2-methoxy- 3- (2- propenyl) (15.32%), 9,12,15---octadecatrienoic acid, (16.94%), and 9,12,15- octadecatrienoic acid, alkyl group organic compound, (22.05%) are the major compounds found in tulsi. In the mixture n-exadecanoic acid (16.58%), phenol,2- methoxy- 3- (2- propenyl) (20.62%), and 9,12,15- octadecatrienoic acid, (25.98%) are the three major compounds are found. In this mixture there are four new compounds are found i.e. eudesma- 4(14),11- diene (0.18%), 6- azabicyclo[3.2.1]octane (0.51%), cyclohexane,1- ethyl- 1- methyl- 2,4- bis(1- methylene)- , 1S- Elemen (0.77%), and globulol (1.45%). From this it is clear that the mixture of extract of these two medicinal plants have high antimicrobial properties.
• Rabe and van Staden, 1997 in this research around twenty one medicinal plants which are having historical use for curing different types of disease selected from South Africa. This plant has properties like anti-infectious and have septic nature. These properties are tested by two different ways by agar diffusion and dilution. From this 21 medicinal plant only 10 medicinal plant shown activities against gram positive bacteria. The very best activity was found within the alcohol extracts from guava land Warburg salutary. The bulk of the medicament activity was gift within the methanolic, instead of the liquid extracts.

• Caitlin N. Hahn and Jeremy R. Burkett, 2013 this paper ascertain the optimum conditions need for extraction of eugenol. This study investigates the optimum conditions beneath that eugenol may be extracted from freshly big and commercially ready samples of holy basil (O. sanctum).

• Sunday Ahamefula Ezekwe and Paul Chidoka Chikezie, 2017 this paper helps to determine phytocomponents gift in binary compound Extract of Unripe Fruit (AqEUF) of Carica papaya using GC–MS detection system. The research worker showed that AqEUF of C. papaya was composed of sort of metabolites and therapeutic active substances yet as novel substances.

• Balasubramanian, d.ganesh and surya narayana vvs, 2014, In this article by using GCMS analysis phytocomponents present in Tulsi leaves are determined by methanolic extract. Phytol, omega-6 fatty acid, Homo-γ-linolenic acid, saturated fatty acid and Tricyclic acid are the main compounds resulted from GCMS.

• Suresh V Nampoothiri, et al 2012, The comparison of essential oil constituents of 3 most well liked cultivars of ginger, was verify by mass spectrometry. 81 constituents accounting for 95.24%, 97.1% 84% of the gorubathane, shingboi and thingria oils severally, were known. Conclusions: the key compounds of gorubathane oil were zingiberene (32.2%) and sequiphellandrene (10.9%). Tshhien gmbaoi o cilo nwsetriteu egnertsa niina.it hingria oil were zingiberene (12.58%) and Ar-curcumene (9.89%) and of composition of 3 (20.07%) and neral (9.44%).

• Rao et al, 1998 isolated inhibitor compound from genus Azadirachta seed kernels victimisation air mass liquid natural process with a hydrophobic
reverse-phase tube. The eluted molecule had lambda max at 224 and 272 nm and was a potent matter of plant lipoxygenases. In in vivo studies of Macrotyloma uniform throughout germination, low levels of lipoxygenase activity and lipide peroxides were found upon treatment with the genus Azadirachta extract. The inhibitor property of arisht initial time reportable during this study. Recent investigations have shown that the inhibitor properties of plants can be correlative with aerophilic stress twenty nine defence and totally different human diseases as well as cancer, arteriosclerosis and also the aging method

- Nayek Sumanta1, et al 2014 within the gift article, the researchers has investigated the comparative extraction of chemical actionpigments (chlorophyll-a, chlorophyll-b and carotenoids) by victimisation totally different solvents. This study is additionally specialised in the various extraction magnitude relation of biomolecules with relevancy time length. Differing kind’s area unit ascertained in extraction rate for chlorophylls and carotenoids. This article tells concerning analysis of extraction of chlorophyll with fuel, alcohol and dissolver from harvested stuff. The chlorophyll in several plants was calculated. The absorbance of chlorophyll a and b, their distinction was explained by spectrometry.

- Brown AW, 1986, in this article the researchers tells about solution on problem of mosquito resistance. They also describe the description of the world health organization standard methods to reduce mosquitoes present in the environment.

- Sukumar K, et al 1991, in this review the researchers focus on chemicals used from plant sources along with plant parts by extraction. The effect of mosquito species and their life stages also specified in this article. For this study around 344 plant species are observed.

- Manguin et al 2010. Now days in whole world mostly widely spreading disease is known as dengue which is spread by mosquito bong microorganism. From last 50 years the graph of this disease is increases and also spread in new countries including small cities and villages. Associate in Nursing calculable fifty million break bone fever infections occur annually
and just about two.5 billion individuals boardbreakbone fever endemic countries Some of the population i.e. more than 70% the dengue fever spread worldwide.

- Hochedez et al. 2006. Aedes albopictus is a vital vector of breakbone fever aside from dandy fever disease, Ae. albipictus will transmit pathogens and viruses, like the West river virus, black vomit virus, St. Joseph Louis Barrow phlebitis, and Chikungunya fever. it absolutely was initial delineate as ‘the banded dipterous insect of Bengal’ by Skuse in 1894 from city, India the mosquito is about 2 to 10 mm in length with a black body and silvery patches or dots found on their abdomen.

- Novak 1992, the researcher in this article tells about the aggressive attack of the mosquito is in between early morning to late afternoon. It feeds on the different hosts including man indoor as well as outdoor.

- Rahuman et al. 2008, from history man is using plants as a medicine and secondary metabolite. DDT was used as vector management since few centuries, but it was disturbing management of the environment. Different countries were using different chemicals like turpentine which is natural resin, nicotine, hellebore, anabasine etc. WHO 2005, From the first fifties dichloro, diphenyl and different artificial organochloride and insecticide pesticides were extensively accustomed interrupt transmission of vector borne diseases by reducing densities, human-vector contact and, specifically, the longevity of vector mosquitoes. Within the mid-1970s, the revival of vector borne diseases, beside development of insect powder resistance in vector population, poor human acceptance of indoor house spraying and environmental considerations against the employment of pesticides diode to a rethinking in vector management methods

- Debella et al, 2007. In this research it is tells that the medicinal of plants can be used as mosquito killer. In this research they also tell that plants are traditionally used as medicine. For control of mosquito the medicinal plants are used in local areas. The medicinal plants have large number of physiological as well as biological activities which can act as a pest or insect killer. Natural product have shown that it's doable to supply an
excellent vary of biological activities, as well as toxicity, repellent action, and
antifeedent and growth regulation properties.

- Huang and holmium 1998, to study the insecticide the plant terpenioids are
  most widely chemical study for the students. It gives economical interest in
  students by studying its toxic effect larval lifecycle repellent chemical activities
  and so on.

- Bowers 1992, the presence of alleged secondary compounds, that don't have
  any renowned operate in chemical process, growth or alternative aspects of
  plant physiology, provide plant materials or their extracts their anti-insect
  activity. Secondary compounds embody alkaloids, terpenoids, phenolic,
  flavonoids, chromates and alternative minor chemicals. These chemicals
  might kill, retard or accelerate development or interfere with the life cycle of
  the insect in alternative ways that. These chemicals will disrupt major
  metabolic pathways and cause speedy death, act as attractants, deterrents,
  phagostimulants, and anti-feedants or modify ovipositor. Though compared
  with trendysynthetics the plant substances are comparatively weak. The
  biological science pesticides are usually pest specific, promptly perishable
  and typically lack toxicity to higher animals.

- Casida and Quistad 1998; Isman 2000, a significant motivation to market
  analysis at the lower environment has the most value as it behaves healthier
  product and social registration law utilisation of affordable pesticides which
  have good reaction towards environment. In this research researchers says
  that botanical studies are very useful and interesting for chemist and biologist
  as they have complex structure different property and as well as potency.
  From last two centuries pyrethrrum is the best biological component. The tree
  azardica indica have lots of effect towards mammals for low toxicity.

  against dipterous insectlarvaewillvaryconsiderablybetting on plant species,
  plant components used, age of plant components (young, mature or
  senescent), solvent used throughout extraction further as upon
  the accessible vector species.
• Sukumar et al. 1991, have delineated the existence of variations within the level of effectiveness of phytochemical compounds on course dipterous insect species vis-à-vis plant components from that these were extracted, responses in species and their organic process stages against the required extract, solvent of extraction, geographical origin of the plant, sensitivity of a number of the compounds within the extract, result on growth and copy. Changes within the larvicidal effectualness of the plant extracts will occur because of geographical origin of the plant; response within the completely different dipterous insect species and; because of variation within the species of plant examined and between plant components accustomed study the larvicidal effectualness.

• Senthilkumar et al. 2009, the entire super molecule, saccharine, and lipids were conjointly found to be reduced in conjunction with bound amino acids in Associate in Nursing. stephensi treated larvae suggesting that the eighteen treatment lowered feeding, improper utilization of digestible food, and interference with the hormones control the super molecules synthesis resulting in reduced nutrient profiles. The reduction in total lipids was ascertained thanks to stress iatrogenic by the plant extracts.

• The epidemic of infectious disease in Nagpur in 1965 documented the presence of infectious disease four viruses in this region (Rodrigues et al., 1972). Within the same year, another eruption was ascertained in Madras that was caused by infectious disease three viruses (Myers et al., 1968). Later, outbreaks of infectious disease occurred in city (MP) by infectious disease virus three in 1966 (Sehgal et al., 1967, Rodrigues et al., 1973) in Asansol in 1967 by infectious disease a pair of and four, in Old Delhi in 1967 by infectious disease a pair of (Balya et al., 1969), in Kanpur in 1968 and 1969 by infectious disease four and infectious disease a pair of (Chaturvedi et al., 1970; Chaturvedi et al., 1972), in Ajmeer in one969 by infectious disease 1 and infectious disease three (Ghosh et al., 1974), in twelve Gwalior in 1970 by infectious disease three (Arora et al., 1970), in urban centre in one971 by infectious disease 1 and infectious disease a pair of (George and GD, 1975); (Raghavan et al., 1970) in Jaipur in one971 and 1973 by infectious disease 1 and a pair of (Padbiri et al., 1973; Mathew et
al., 1976), in Jammu in 1974 by infectious disease a pair of (Mathew et al., 1977) and in Trichur in 1974 by infectious disease a pair of (Sreenivasan et al., 1979). Infectious disease three has been isolated throughout the epidemic at city in 1983 (Mukerjee et al., 1987). A deadly disease of infectious disease at Rajasthan in 1985 was because of infectious disease three viruses (Chouhan et al., 1990). Infectious disease a pair of was isolated throughout the epidemics of infectious disease in urban and rural areas of Gujarat state throughout 1988 and 1989 (Mahadev et al., 1993). Outbreaks occurred at Gwalior in 2003 and 2004 by infectious disease three (Dash et al., 2005, 2006).

- Padbiri et al., (1995) rumoured infectious disease in Mangalore, Karnataka in 1993. In Punjab, there was a pandemic of infectious disease in 1996 (Kuldip et al., 1997). The eruption of infectious disease in Old Delhi in 1996 was because of infectious disease a pair of (Chusak et al., 1993; Dar et al., 1999). Hence, the presence of all four kinds of dengue fever virus and incidence of the disease everywhere the Republic of India were well documented

- Hayes et al., 1988, dengue fever viral infection in human causes a spectrum of un-wellness starting from in apparent or gentle symptom un-wellness to severe and fatal harm disease. Typical clinical symptoms noted throughout outbreaks in Republic of India were symptom of three to five days period that sometimes prolonged to ten days, gastro viscos disorders, myalgia, hurting and rash. In recent years, many studies on clinical manifestation of infectious disease infection are revealed which offer the idea for the prompt diagnosing of infectious disease infection.

- Bhattacharjee et al. 1995, Virological investigation was created by man of science to ascertain the etiologic agent of a symptom eruption amongst a floating population of C.R.P.F. Jawans, stationed at city throughout May-July, 1993. The un-wellness was fifteen related to fever, severe headache, body ache and hurting that lasted for 2-4 days in most of the cases.

- Agarwal et al., 1999 delineated the clinical diagnosing of breakbone fever in 206 patients with break bone fever throughout the 1996 epidemic in
Lacknow, India. It had been found that ninety seven the concerns of the patients had severe frontal headache. Ninety available hurting efflorescence was seen in forty maximize the patients, unconditioned reflex in twenty nine maximize the patients and hurting in knee and hip joints in nine maximize the patients. Anuresis was gift in a pair of patients. Pathology was noted in 14 July, abnormal condition in four the concerns (associated with gentle jaundice in one patient) and hypertrophy in book of the patients. Involvement of the centre and lungs was seen in one patient.

- Narayanan et al., 2002, created a study to spot symptoms, signs and laboratory values of breakbone fever throughout a pandemic of infectious disease at metropolis in 2001 and rumoured that youngsters UN agency developed complications had additional fever, body pain and injury than youngsters with infectious disease and didn't have complications. The mean age of their study population was six.07 (with shock) and six.96 (without shock).

- Sombatsiri et al, 1995 Azadirachta indica A. Juss, referred to as tree in vernacular, belongs to the mahogany family and is wide distributed in Asia, Africa and alternative tropical components of the planet. In Nepal, tree plants square measure distribute in the Terai (tropical) and also the foothills (subtropical) of the country. Tree may be a versatile healthful plant, nearly each a part of that is being employed in lore and ancient systems of medication for the treatment of a range of human ailments. Neem oil, bark and leaf extracts are therapeutically used as folks medication to manage diseases like infectious disease, viscous infestation, respiratory disorders, constipation, and skin infections. However, except for these uses, there square measure many reports on the biological activities and medicine action supported fashionable scientific investigations, like medicinal drug and, inhibitor, etc.

- Chandra and Gupta, 1972, Turmeric is that the one amongst the foremost vital and ancient spices of Republic of India, and a standard item of
export. Turmeric of commerce is that the cleansed, boiled, dried and polished rhizomes of the plant herbaceous plant L. it's employed in cookery preparations, medication and cosmetic industries. Turmeric powder and also the contemporary juice extracted from the rhizomes are accustomed treat cold, diarrhoea, skin infections, infectious disease and variety of an alternative ailment. A number of the healthful properties of turmeric like medicinal drug anti-bacterial and anti-protozoa1 activities are incontestable in experimental animals. Recently, the sterol lowering and anti-oxidant properties of turmeric are incontestable in human subjects. The turmeric powder has been accustomed management seed borne diseases in rice

- Purseglove et al 1981, The Latin term 'Zingiber' comes from the traditional Tamil root 'in giver', that means ginger stem. Ginger grows well in heat, wet environmental condition up to Associate in nursing altitude of 1500 m in wide selection of soil with smart drain. Ginger is employed in medication as a carminative and aromatic stimulant to the channel and outwardly as a rubifacient and counter pain in the ass. It had a name as Associate in nursing aphrodisiac. It’s wide employed in medication in Republic of India and much East.

- Grieve, 1979, Ginger includes a long revered history as a spice. It’s believed to be native to Asia but, there’s no accord of opinion relating to the centre of origin of ginger.

- Rosengarten (1969) Kung futzu is the Chinese thinker and gave lots of information about ginger. Its healthful properties square measure mentioned by Discords in his D. pharmacological medicine. It had been included to Deutschland and France within the 9th century and to England within the 10th century. Within 11th century England was understood the importance of ginger which was found in anglo, Saxon, leech books. By the 13th and 14th centuries it had been acquainted to English palates, and next to pepper, was the foremost in style spice. Arabs took it from Republic of India to geographic region (1 3th century). The Portuguese Mendoza, introduced ginger into United Mexican States presently once the invention of that country. In Jamaica this information was carried successfully. In many
developing and non-developing countries the use of ginger root was transported. Ginger is currently commercially cultivated in nearly each tropical and climatic zone countries within the world with tillable land for export crops. Republic of India and Jamaica turn out the most effective quality ginger. In the ginger production Keralais number one state in India. Alternative states are Assam, state, Himachal Pradesh, West Bengal and Sikkim.

- Joe et al., 2004, many medical specialty effects are rumoured. The infection in bile duct liver and gall bladder are treated by turmeric extract because it has high essential oils and curcumin. In Indian system of drugs, turmeric is employed as a viscous tonic and blood purifier. Mixed with heat milk it’s aforementioned to sensible for respiratory illness. The juice of the contemporary stalk is employed as associate ant parasitic for skin infection. Outwardly it’s applied to indolent ulcers and a paste made of the pulverized stalk alongside lime kind a remedy for inflamed joints. Oil of turmeric has feeble antiseptic properties. Additionally, terribly recently the wound healing and detoxifying properties of curcumin have conjointly received substantial attention.

- Sethi and Subha Rao, 1964, Turmeric is employed for preparation functions as powder turmeric. Its varied applications in baking business and as an important ingredient in flavourer. Curcumin is that the principle colouring constituents, that imparts the characteristic yellow colour to turmeric. It not solely to flavour however conjointly won’t to colour butters, pickles mustards and different foods. It conjointly won’t to colour liquors, fruit drinks, cakes and jellies. Pure curcumin is employed in colouring change vegetable fat (Vanaspati) and different food materials.

- Chattopadhyay, 1967, Turmeric is laid low with varied diseases of fungal and microorganism origin. Of those the leaf blotch, leaf spot and stalk rot area unit the foremost diseases. Leaf blotch caused by Taphrina maculans, leaf spot by Colletotrichum capsici and stalk rot caused by fungus graminicolumn lead to goodly crop losses (Butler, 1918). Stalk rot that accounts for the loss of collections within the farm is caused
by fungus graminicolumn L. Subram. The long length sorts area unit free from leaf spot sickness.

- Sharma & Krishnamurthy, 1962 rumoured the brown rot plant sickness disease within the rhizomes of C. aromatic sort of turmeric. Shoot borer, Dichocrosis punctiferalis. Gd. is that the major tormentor


- Summanwar and Ram, 1993. The limiting think about the cultivation of papaya is its susceptibility to variety of microorganism diseases that occur in numerous components of the country, inflicting serious economic loss to growers quite a few microorganism diseases that are well studied and area unit of major importance area unit papaya ring spot.

- Thomas and Krishnaswamy, 1939; Nariani, 1956, and papaya mosaic (Conover, 1962; DE Bokx, 1965; Capoor and Verma, 1958; Zettler et al., 1968a and b). A quick info on major microorganism diseases of papaya is given in table one. 1. Papaya top sphacelus sickness was recorded by Lastra and Quintero (1981). It displayed the presence of animal virus (Lastra and Quintero, 1981) whereas papaya leaf reduction rumored by Singh (1969) was caused by papaya leaf reduction virus. Papaya concentrated prime, a sickness attributed to infection in terribly recent literature was found to be related to true bacteria like organism by level and Halliwell (1969). Recently phytoplasmas are found to be related to papaya sickness in

- Australia Gibb et al 1996. The sickness was recorded in Republic of India by Thomas and Krishnaswamy (1939) and was ab initio suspected to be caused by the tobacco leaf curl virus (Nariani, 1956) that may be a constituent member of the Gemini virus cluster (Goodman, 1981). Summanwar and Ram, 1993. The malady is characterised by different curl, crink and distort of leaves in the middle of vein thickening and lower in leaf size. The margins of
leaf are rolled and down and also inward to create inverted cup with thick veins. The affected leaves become coriaceous and brittle and petioles get twisted in a very zigzag manner. The inter-venial arras is raised on the side because of hypertrophy which supplies rigidity to the leaves. The affected plants fail to flower or bear fruits. In advanced stages, defoliation takes place and therefore the plant growth is in remission.

- Kapil R. Raje et al. 2015, says Turmeric is the most important crop for human as it contains chemical known as curcuminoids. To search the potential of turmeric property the extract of turmeric was examine with kollar insect. The termites not show any effect with paraffin extract. However paraffin extract of root turmeric powder was shown about 9.6 mg or 1 mg. It also tells that this substance is soluble in polar and non-polar solvents. Thus it removes all the inactive parts from curcuminoids. All the active components are separates on thin layer chromatography and visible under UV light.

- Guddadarangavvanahally K. et al, 2002, Curcumin removed turmeric natural resin (CRTO) was extracted with methane series and targeted to induce turmeric oil, which was fractionated victimisation colloid chromatography to get 3 fractions. These fractions were analysed by gigahertz and GC-MS. Turmeric oil contained aromatic turmerone (31.32%), turmerone (15.08%) and curlone (9.7%), whereas fractions III has aromatic turmerone (44.5%), curlone (19.22%) and turmerone (10.88%) as major compounds. Also, ventilated compounds (5,6,8D10) were enriched in fraction. Turmeric oil and its fractions were tested for inhibitor activity victimisation the -carotene-linoleate model system and also the phosphomolybdenum methodology. The fraction III showed most inhibitor capability. These fractions were conjointly accustomed confirm their protecting impact against the mutagenicity of metal chemical compound by suggests that of the Ames take a look at. All the fractions and turmeric oil exhibited a markedly anti-mutagenicity however fraction III was the foremost effective. The inhibitoreffects of turmeric oil and its fractions could give a proof for his or her antimutagenic action.
- Vijayalaxmi A et al. 2015, in the present study it tells about beta caryophyllene has different anti-arthritic activities which are useful for its anti-inflammatory activity. Beta caryophyllene consist of best anti-inflammatory activity. In this study beta caryophyllene was tested with CAF i.e. complete Freund’s adjuvant rats. This histopathology and radiology conjointly disclosed the management in inflammation with beta caryophyllene.

- Rodianah binti alias, 2013, during this study the research worker says that Caryophyllene chemical compound that exists as white crystalline solids with melting points of 62°C, is wide used as a vital material in perfumery business and recently had been proprietary as anti-neoplastic agent. This ninety nine pure chemical compound is extremely way more high-ticket than the first caryophyllene thanks to the problem in production. Experiments were distributed to supply caryophyllene chemical compound by mistreatment cheap and safe methodology. During this study, four objectives were studied; extraction, separation, purification of caryophyllene from clove buds that were later utilized in this synthesis of caryophyllene chemical compound during this study.

3. Dengue and malaria:

- WHO, 1997, the structure of virus of dengue is RNA with a single-strand. The virus is of the Flavivirus genus and the Flaviviridae family. The virus is transmitted to humans by the bite of an infected Aedes species of mosquito that carries one of the 4 serotypes of the virus: DEN-1, DEN-2, DEN-3, and DEN-4 (WHO, Special Programme for Research and Training in Tropical Diseases {TDR}, 2009). Infection with dengue virus is characterized by abrupt onset of a high-grade fever as well as headache, retro-orbital pain, myalgia’s, and rash. Illness can become complicated by plasma leakage leading to dengue haemorrhagic fever and can progress to dengue shock syndrome.

- WHO, TDR, 2009 Along with malaria, dengue fever should be considered in the differential diagnosis when a patient presents with a febrile illness, especially with a recent travel history. If the patient presents within 5 days of the onset of symptoms, the virus is usually present in the bloodstream and therefore, detectable by tests including virus isolation, nucleic acid
amplification tests 23 (NAATs), or antigen detection tests. Virus isolation in cell culture is very specific. However, the test must be performed by an experienced technician and results take at least one week. NAATs such as RT-PCR are very sensitive and specific for dengue virus infection. Results are available in 24-28 hours. A disadvantage is that an experienced technician at a facility with proper equipment must carry out this test. The NS1 antigen detection kit detects the presence of the non-structural protein 1 of dengue virus using ELISA. This test is less expensive than RTPCR and virus isolation and results are ready in a few hours.

- WHO, TDR, 2009. Patients may be admitted if warning signs are present, if there are co-existing conditions, or if they do not have a caregiver at home or means of transportation to a hospital should they experience warning signs. Pregnant women as well as infants with dengue virus infection should also be admitted. For a patient with warning signs, first the haematocrit must be measured and then IV fluids should be aggressively administered. The patient’s status and haematocrit levels must be reevaluated and IV infusion rates may be adjusted accordingly. Vital signs and peripheral perfusion should be monitored until the patient has advanced to the recovery phase. Urine output, blood glucose, and organ function should also be monitored. In a patient who is admitted without warning signs of severe dengue, IV fluid therapy should only be started if the patient cannot tolerate oral fluids. HCPs should watch for warning signs of severe dengue and measure the patient’s temperature, fluid intake and urine output, haematocrit and WBC and platelet counts.

- Sabin Vaccine Institute, 2011, The Dengue Vaccine Initiative (DVI) was established in 2010 and on February 10, 2011, the International Vaccine Institute (IVI) announced its collaboration with the poliovirus vaccine Institute and also the Johns Hopkins University (JHU), and also the World Health Organization to support analysis on the event of a secure, affordable, and effective infectious disease immunogenic. The initiative is funded by a grant from the Bill and Melinda Gates Foundation. The DVI works with researchers and policy manufacturers to develop an infectious
disease immunogenic and a concept for its distribution to those in would like of the vaccination.

- White & Breman 2010. Malaria may have a variety of different manifestations from asymptomatic to mild to severe with the potential of being fatal. Incubation period is typically 7-30 days, but months may pass between transmission of the parasite and onset of symptoms. Classically, malaria is considered an illness with stages of fever, chills, and rigors that occur every 2-3 days. However, this course of symptoms suggests infection with P. vivax or P. ovale and is rarely seen. Most often, those with malaria experience the symptoms of uncomplicated malaria without a pattern that was just described. The symptoms commonly include fever, lack of sense of wellbeing, shaking chills, diaphoresis, headache, fatigue, nausea, vomiting, myalgia, orthostatic hypotension and general malaise. Physical exam may reveal diaphoresis, splenomegaly, hepatomegaly, mild jaundice, and tachypnea.

- CDC, 2009, the treatment for malaria is chosen based upon three aspects of infection. First, knowing the species of Plasmodium causing the infection is essential. The course of malaria varies depending on the infecting species. For example, P. falciparum and P. Knowles are known to cause more severe infections and must be treated aggressively. Some species (P. vivax and P. ovale) may lie dormant in the liver and therefore, require additional treatment to prevent a relapsing infection. Also, P. falciparum and P. vivax are resistant to certain drugs depending on which area of the world the infection was acquired. A second aspect to consider is the clinical status of the patient. Those with uncomplicated malaria can receive oral medications while those with severe malaria need to be treated parentally. The third factor is the drug susceptibility of the infecting parasite. It is important to know what area of the world a person was visiting when he or she became infected with malaria because there are different patterns of drug resistance in different parts of the world. This information will guide the proper selection of drug therapies. If there is a confirmed case of malaria without successful determination of the infecting species, treatment that targets P. falciparum should be chosen.

- WHO, 2008a. The treatment of chikungunya fever is completely symptomatic as there is no antiviral drug for chikungunya infections. Acetaminophen is the
drug of choice for relief of symptoms. Those recovering from CHIKF and experiencing joint manifestations may benefit from mild exercise and the application of cold compresses.

- WHO, 2008a, People suffering from the sequelae of chikungunya virus can receive some benefit from interventions, those suffering from osteoarticular problems can continue with NSAIDs and cold compresses for relief. Exercise and physiotherapy should be used to prevent the formation of contractures. Because the chronic manifestations may be caused by an immunologic response, a short course of steroids should be considered. Steroids should also be considered in those with verities and retinitis with changes in their vision. Chronic dermatological issues should be cared for by a dermatologist who may use zinc-oxide cream or calamine lotion for hyperpigmentation and popular eruptions. Patients with psychosomatic problems should be assessed and be given psychosocial support.

- WHO 2009,
  1. The vectors for the malaria is Anopheles species for dengue Aedes aegypti Aedesalbopictus and for chikungunya it is an Aedes aegypti Aedesalbopictus same as dengue.
  2. Incubation Period for malaria is 7-30 days while, for dengue and chikungunya are 4-10 days and 2-4 days respectively.
  3. Clinical Manifestations: in malaria, Fever, shaking chills, headache, myalgias, fatigue, nausea, and vomiting, orthostatic hypotension are the common signs.

- For dengue,
  1. Dengue Fever: Sudden high-grade fever, headache, retro-orbital pain, myalgia’s, arthralgia’s, weakness, rash, nausea, vomiting, petechial, epistaxis, gingival bleeding
  2. Dengue Haemorrhagic Fever: Fever lasting 2-7 days, haemorrhagic manifestation, thrombocytopenia, increased vascular permeability
  3. Dengue Shock Syndrome: DHF plus hypotension, pulse pressure 20 mm Hg, or frank shock
Common for dengue and chikungunya is Fever, severe arthralgia, backache, and headache, myalgias, and maculopapular rash. Infrequent: stomatitis,
oral ulcers, hyper pigmentation, exfoliates dermatitis. Occasional occurrence in children: vomiting, diarrhoea, photophobia, retro-orbital pain, meningeal syndrome, encephalopathy

- **Diagnosis:**
  1. Malaria: Blood smear (Giemsa stain) RDT PCR
  2. Dengue: Within day 5 of symptom onset virus isolation, RT-PCR, antigen detection via ELISA After day 5 of symptom onset: IgM ELISA, IgM rapid test, IgG ELISA
  3. Chikungunya: First week of illness: Virus isolation and RT-PCR After first week of illness: IgM and IgG antibodies, ELISA

- **Treatment:**
  1. Malaria: Artemisinin-based combination, chloroquine, primaquine, atovaquone, proguanil, quinine, quinidine, doxycycline, clindamycin
  2. Dengue Fever: Supportive DHF and DSS: ICU hospitalization
  3. Chikungunya: Supportive

- **Prognosis:**
  1. Malaria: Uncomplicated malaria: mortality rate of 0.1% Severe malaria: mortality rate of 10-20%
  2. Dengue: DHF: mortality rate < 1%
  3. Chikungunya: Mortality rate < 0.5% Sequelae: Musculoskeletal pain, attention difficulties, memory and mood disturbances, and depression

- Alonoso- Paz. et al 1995 Many plants have different bioactive molecules and because of that bioactive molecules these plants become rich source of medicines. Now a day’s many drugs are produced from natural sources. Sometimes the traditional system of medicine is used by many practitioners for curing diseases. They use medicinal plant extracts for curing various diseases. In this review the researchers reveal about photochemical and antimicrobial properties of different medicinal plants including Azadirachta Indica, Basil etc.

- Rabe and van Standen (1997) In this review the researchers have selected 21 medicinal plants from south African which were traditionally used for curing different diseases from that area. According to researchers all the selected medicinal plant show activity against Basilus Subtis due to which the
methanolic extracts of these medicinal plants gave better results as compared to aqueous extract.

- Fabry et al (1998) in this study the researchers analyzed different antibacterial activities of stem, bark and leave of Azadirachta indica. By using different solvents these properties were tested.

- Sombatsiri et al (1995) researcher in this article has discussed the antioxidant activities of Azadirachta Indica. Researchers have proved that Neem has various medicinal properties. Many parts of Neem plant are used for treatment of human ailments. The Neem oil is used for different diseases like leprosy, intestinal problems, constipation and skin infections etc. They also reported different properties like anti-inflammatory and anti-oxidant.

- Maxwell (1995) In this article researcher tells about antioxidant properties of Neem plant as human beings are suffering from free radical effects and are closely related to different diseases toxicity and ageing problems. The selected medicinal plants can treat various human diseases including cancer, atherosclerosis and ageing problems.

- Rao et al (1998) in this article the researcher isolated and antioxidant compounds of Azadirachta Indica. During this study low level of lipoxygenase activity and lipid peroxides were found while treating with seeds extract of this plant. The antioxidant properties of Azadirachta Indica were reported for the first time in this research.

- M.Akram et al (2010) in this article the researchers tell about different medicinal properties of curcuma longa and curcumin. They also tell about different properties of cur cumin like antioxidant, anti-inflammatory, antiviral and antifungal. They also predict the mechanisms of action of antioxidant effects, anti-inflammatory effects anti-carcinogenic effects, hepato protective effects, anti-microbial effects, Cardiovascular effects, gastrointestinal effects, etc. They also indicate that the cur cumin enhances immunity.

- Ficker et al In these study researchers used 11 plants from zingiberaceae family for testing antifungal activities. The different extract of this plant species shows best anti-fungal and antimicrobial properties including curcuma longa.

- Christiane et al the researchers described different parts of curcuma longa extract. By using GCMS they found two active terpenoids from root extract.
They also proved that the mother rhizome had three times more terpenoids as compared to the other parts of plant.

Nakasone and Paulla (1988) in this review the researcher gave general description of papaya plant. They tell about family of papaya also papaya contains 31 species from that 3 are from America and one is from Africa. They also discuss the economically importance of papaya fruit. They gave the different name of papaya from different countries like papaw or paw paw from French, melonenbaum from German malakol from Thailand, Mugua from China. They have discussed the different characteristic of this plant. Stem of this plant is about 5-7 m in height; leaves of this plant are lobed with venation. The leaf is 40-50 cm in diameter and also 15 mature leaves are present on the plant. There are two to three flowers held on the stem of the plant, out of which male flowers are smaller as compared to female flowers. The fruit of this plant is about 7-30 cm in length. The fruits are from female trees. The seeds of these plants are gray-black in colour.

Australian Government department of health and ageing (2003) in this review the researcher tells about importance of papaya fruit. The fresh fruit is used for drinks jam and candies. The ripe fruits are usually eaten raw. Unripe fruit is used as vegetable. They have also discussed the industrial uses of papaya fruit and leaves. The leaves and fruits have lots of protein and alkaloids and also have lots of medicinal uses. They have found that the enzymes papain present in green fruit is used by pharmaceutical industries.

Agri-food business development centre: Researcher gave the nutritional composition of papaya per 100 gm

2. Fat- 0.1g
3. Protein- 1g
4. Fiber-0.5g
5. Carbohydrates- 13.5g
6. Calcium-31 mg
7. Potassium-17 mg
8. Magnesium -0.8 mg
9. Sodium- 2mg
10. Vitamin B1-0.08 mg
11. Vitamin B2- 0.15 mg
12. Carotene- 2431 ug

- Brouk 1975 researched about different uses of papaya fruit. The fruit is can be preserved and can be cooked in various ways. It also tells about medicinal uses of papaya fruit.
- Mortan (1997) in this review researcher tells about medicinal uses of papaya, the various parts of plants have different medicinal values. Each part of plant contains different compounds which are medicinally very useful; the compounds differ in fruit, leaves, roots etc.
- Eno et al (2000) In this review researcher tells about pharmacological properties of papaya leaf with anti-helminthic antifungal action etc.
- Morton (1997) IT tells toxicity of papaya fruits and fresh latex. When latex is kept for long time in contact with skin it provoke the skin irritation, it has malicious positioning, some people are allergic to this plant.
- Sharma and ogbide (1982) in this review the researchers give chemistry of papaya leaves.
  1) Fresh leaves 75% of water
  2) Pectinous matter and salt 7%
  3) Malic acid 0.44%
  4) Papain 5.3%
  5) Fat 2.4%
  6) Resin 2.9%