IOSR Journal Of Pharmacy And Biological Sciences (IOSR-JPBS)
e-ISSN:2278-3008, p-ISSN:2319-7676. Volume 16, Issue 5 Ser. II (Sep. –Oct. 2021), PP 60-71
www.Iosrjournals.Org

Invivo Antipyretic Effects Of Herbal Extracts on Brewer's Yeast Induced Pyrexia in Rats.

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Abstract:
Purpose: *To investigate the antipyretic activity of the etahanolic extract of Chonemorpha fragrans and Cynometra ramiflora leaves in rats.*
Methods: *Brewer's yeast was used to induce fever in Wistar rats which were divided into five groups. The animal groups were thereafter administered CFEE (200 mg/kg), CREE (200 mg/kg), CFEE+CREE (200mg/kg) paracetamol (reference standard, 100 mg/kg) and normal saline (control), respectively. The body temperature of the rats was measured rectally over a period of 2 h. CFEE & CREE were also phytochemically screened for alkaloids, steroids, carbohydrates, tannins, fixed oils, proteins, triterpenoids, deoxy-sugar, flavonoid, cyanogenetic and coumarin glycosides.*
Results: *CFEE (200 mg/kg), CREE (200 mg/kg), CFEE+CREE (200mg/kg) were significantly reduced yeast-induced pyrexia ($p < 0.05$, $p < 0.01$, respectively). Phytochemical tests for Chonemorpha fragrans showed the presence of alkaloids, glycosides, carbohydrates, flavonoids, saponins, sterols, proteins. Cynometra ramiflora showed presence of alkaloids, carbohydrates, flavonoids, tannins, saponins, sterols, phenols. GCMS Analysis results showed presence of few chemicals which were responsible for anti-pyretic activity. Histopathology of brain is also done which shows the effects of herbal extracts on brain tissues.*
Conclusion: *The etahanolic extract of Chonemorpha fragrans and Cynometra ramiflora leaves of possesses significant antipyretic activity.*
Keywords*: Antipyretic activity, Brewer's yeast, Chonemorpha fragrans and Cynometra ramiflora , Phytochemical screening, GCMS Analysis, Histopathology.*

Date of Submission: 11-10-2021 Date of Acceptance: 25-10-2021

I. Introduction:

PYREXIA: A fever, or pyrexia, is severe increment in body heat levels over a normal level for eg., the normal core temperature of 37 degrees centigrade. In layman terms, this has gotten wrongly connected with a clinical disorder of raised temperature, chills, shuddering, piloerection, vasoconstriction and disquietude which is generally trailed by vasodilatation and perspiring.

In any case, fever is taken as its unique definition in this content. This permits the fever in a wide scope of conditions, for example, anterior hypothalamic lesions and with heat stroke.

Fever might be a transformative variation to contamination. It's related with an increment in preparation of antibodies & diminished bacterial division. It is likewise observed in different mammals (warm blooded animals), birds, reptiles and amphibia.

Unreasonable fever, hyperpyrexia, may have various causes going from over-exercise to extraordinary sun exposure. Malignant hyperpyrexia is an intriguing subtype. A dangerous complication of hyperpyrexia is Heat stroke. **[1]**

Mechanism of action: This process of fever gives off an impression of being a guarded response by body against irresistible sickness & infectious diseases. At thepoint when microscopic organisms like bacteria or viruses attack body and cause tissue injury, one reaction of immune system isto produce pyrogens. These chemical substances are carriedby blood to the cerebrum, where they disturb the working of nerve center i.e., Hypothalamus, a part in brain that regulates body heat level. The pyrogens repress heat-detecting neurons and energize cold-detecting ones, and the adjusting of these temperature sensors misdirects the hypothalamus tothink that body is cooler than it really is. Accordingly, hypothalamus raises the body's heat level's over the typical range, along these lines causing a fever. The above-normal temperatures are suspected to help safeguard against microbial attack since they invigorate the movement, action, and augmentation of WBC's and increment

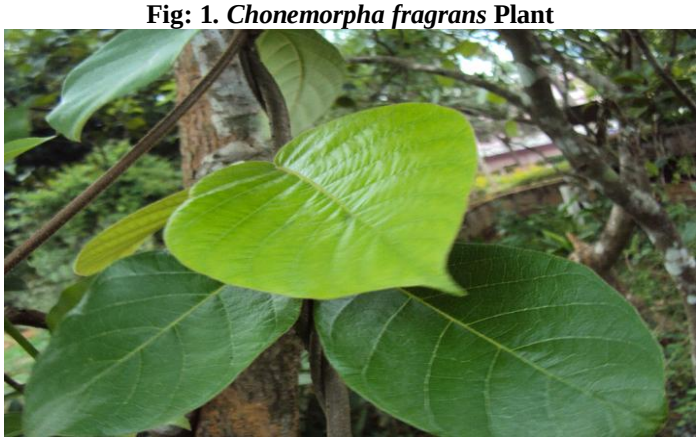
inthe preparation of antibodies. Simultaneously, raised heat levels may legitimately execute or represses development of certain microbes like bacteria & viruses that can endure just a limited temperature range. **[1]**

Pathophysiology of Pyrexia: Temperature is controlled inside nerve center. The trigger of a fever is called as pyrogen, achieves appearance of Prostaglandin-E2 (PGE2). PGE2 inturn circles back to nerve center, which makes a deliberate response in body, causing heat-creating effects on organize another higher temperature set point. Subsequently, the nerve center is seen as working like an indoor regulator. At thepoint when set point is raised, the body grows its temperature through both dynamic age and upkeep of warmth. Fringe vasoconstriction both decreases heat misfortune through skin and causes person to feel cold. Norepinephrine increases thermogenesis in earthy colored hued fat tissue, & muscle narrowing through shuddering raises metabolic rate.

This differences with hyperthermia, where the ordinary setting remains, & body overheats through undesirable maintenance of abundance heat or over-production of heat. Hyperthermia is typically the consequence of an unnecessarily hot condition (heat stroke) or an adverse-drug reaction. Fever can be differentiated from hyperthermia by the conditions encompassing it and its reaction to against pyretic medications.**[2]**

II. Review of Drug Under Study:

Fig: 1. *Chonemorpha fragrans* Plant



Description: Chonemorpha fragrans belonging to the family Apocynaceae, Chonemorpha fragrans is a heavy spreading laticiferous bush with delicate grayish to corroded earthy colored bark which yields fiber of good quality; leaves straightforward, inverse, huge, orbicular, fulvous to mentose underneath, noticeably veined; blossom enormous, whitish to cream-yellow, fragrant, in terminal or pseudo-axillary cymose panicle; organic products long, straight, woody, equal, follicular mericarps; seeds some, level, right away hooked with long white satiny trance like state**[3]**

Biological Source:

- Evergreen timberlands and hallowed grooves in the field **[4]**
- Dense sloping territories, frequently sticking to trees**[5]**.
- Chonemorpha fragransis a restorative plant found in western ghats of Maharashtra. The leaves, roots, bark-stem are utilized in Ayurvedic arrangement of meds. Leaves are utilized as churna/separate or in blend with the other plant- material in their detailing. **[6]**

Chemical Constituents: The root bark contains 3.03 % of complete alkaloids present are japindine, N-formyl chonemorphin, N-methyl chonemorphin. Chonemorphin dihydrochloride is an antiamoebic principle and show in vitro action against parasites Entamoeba histolytica (25µg/ml) trichomonas vaginalis (200µg/ml) and invitro movement against hepatic amoebiasis in brilliant hamster and intestinal amoebiasis in wealing wistar rodents. Nearness of fats, octacosanol, ceryl liquor, β – sitosterol and taraxasterol is accounted for. The leavesand twig contain baurenolacetate and β-sitosterol. The stem yields latex. It is purgative. japindine, N-formyl chonemorphin, N-methyl chonemorphin. Nearness of fats, octacosanolceryl liquor, β – sitosterol and taraxasterol is accounted for. Leaves & twig contain baurenolacetate and β-sitosterol**[7]**

Morphological Characters: Chonemorpha fragrans is a bold spreading lactiferous bush with delicate greyish to corroded to earthy coloured bark which yields good quality fibre.

Leaves- simple, large, opposite, fulvous tomentose underneath, orbicular, veined prominently.

Flowers- large,fragrant, whitish to creamy-yellow, in pseudo-axillary or terminal cymose panicle.

Fruits- straight, long, parallel, woody, many seeds, flat, shortly bent with white long silky coma, mericarp is follicular.

Taxonomy/Scientific Classification:[7]	**Vernacular Names: [7]**
Kingdom: Plantae Phylum: Division Class: Angiospermae Order: Gentianales Family: Apocynaceae Genus: Chonemorpha Species: Chonemorphafragrans	Hindi: Garbhedaro Telugu: Chaga Sanskrit: Murva, Morata Kannada: Manjinaru Malayalam: Perunkurumpa

Theraputic Activities: [7]

- Antidiabetic effect
- Antipyretic activity
- Anti-parasitic effect
- Skeletal muscle relaxant
- Anticancer action
- Anthelmintic action
- Gynaecological confusion
- Antibacterial Activity
- Antioxidant potential and DNA assurance capacity

Traditional Uses: The roots act as astringent, laxative, sweet, thermogenic, bitter, expectorant, depurative, digestive, antiscorbutic, carminative, anthelmintic, anodyne and febrifuge. These have been useful in vitiate diseases, scabies, leprosy, dyspepsia, constipation, colic, hyperacidity, cardiac debility, diabetes, cough, jaundice, bronchitis & intermittent fevers. Murva is utilized in diseases like anaemia(pandu), fever (jwara), diabetes (prameha), stomach disorders (udararoga), typhoid (visamajwara), urinary infections (asmari) and cough (ksaya) .its also utilized in curing diarrhoea, polyuria, boils, Leprosy, eye diseases, vomiting and poisoning conditions of kapha & vata, skin diseases, scabies, leprosy, dyspepsia, hyperacidity, jaundice, cough, bronchitis and intermittent fevers.

Fig: 2. *Cynometra ramiflora* Plant

Description: Cynometra ramiflora belongs to family Fabaceae, It isa tree, up to 26 m tall. Its crown is adjusted and umbrella fit as a fiddle. Its substitute, followed, pinnate leaves have 1-2 sets of pamphlets that are 1.2-20 by 0.5-7 cm. New foliage is pinkish to beige in shading. **[8]**

Biological Source: A tree in the family Fabaceae, Cynometra ramiflora is foundin mangroves and overwhelmed timberlands from New Caledonia in the western Pacific west to Queensland in Australia, New Guinea, Island Southeast Asia, and Tropical Asia as far west as India. Its wood is utilized for development and fuel, and parts of plant are credited therapeutic use.**[9]**

Chemical Constituents:

Roots are considered as purgative and laxative.

- Ethanolic remove yielded three mixes as significant constituents, viz., caffeic corrosive (1), apigenin (2) and 3-(2,3,4-trihydroxyphenyl)- 7-hydroxycoumarin (3).
- Leaves yielded flavonoids, tannins, alkaloid, phenolics, saponins & steroids. **[9]**

Morphological Characters:

Leaf- with 2 pairs of leaflets, pointed emerginate tip.

Flowers: white to creamy yellow, with stigma and style- straight, ovary curly hair outside and glabrous inside.

Fruits: clusters, with sub-terminal beak, mature fruits.
Dry scaly bark and dark coloured seeds.

Taxonomy/Scientific Classification:[9]	**Vernacular Names: [9]**
Kingdom: Plantae (unranked): Angiosperms (unranked): Eudicots (unranked): Rosids Order: Fabales Family: Fabaceae Genus: Cynometra Species: C. Ramiflora	Hindi: sinthomra raamiphlora Kannada: kanaga, kanaka Malayalam: irappa, irippa, irupa Tamil: irapu, irutpu, naipudukan, nay putukkan, naypputukkan Bengali: Shinguri, Shingar, Singra, Shingra, Seeri MALAYSIA: Katong laut. INDONESIA: Kateng, Kepel, Sala, Wunut. AUSTRALIA: cynometra, wrinkle pod mangrove.

Theraputic Activities:[9]
- Cytotoxic/Anticancer Activity
- Blood Glucose Lowering
- Neuropharmacological/Antibacterial/Antinociceptive
- Antioxidant
- Xanthine Oxidase Inhibitory Activity/Leaves
- Antibacterial/Stem Bark
- Anti-Ulcer/Leaves
- Glucose Lowering/Stem Bark

Traditional Uses: [9]
- Roots are purgative.
- Seeds & leaves are utilized as anti-herpetic.
- In Malabar, leaves are utilized to make lotions for skin ailments/diseases.
- Oil extractedfrom seeds are utilized for skin infections.
- In Bangladesh, leaves are utilized to make honeyed lotion & boiled in cow's milk is applied to scabies, leprosy, and different skin lesions. Seed oil is also utilized for same purpose.
- In Indonesia, hypertension, high uric acid & diabetes istreated by using plants. **[10]**

III. Materials and Methods:

Methadology:

Collection of Plant: The driedleaves of both plants Chonemorpha fragrans (Moon) Alston family Apocynaceae and Cynometra ramiflora family Fabaceae were collected, which are taxonomically identified and authenticated by Dr. K Madhava Chetty, Assistant Professor of Botany, Department of Pharmacognosy, Sri Venkateshwara University, Tirupathi.

- **Materials Required:**
- **Plants:** Chonemorpha fragrans and Cynometra ramiflora plant leaves powder.
- **Animals required:** Male Albino Wistar rats weighing 150-200 gm.
- **Chemicals and Reagents:**
- Normal saline (0.9% w/v) - utilize as solvent to dissolve the test and standard drugs.
- Aspirin (20mg/kg) - standard drug for analgesia.
- Indomethacin (10mg/kg) - standard drug for inflammation and pyrexia.
- Ethanol (99% v/v) preparation of plant extracts.
- All chemicals & reagents of analytical grade are used for present research.
- **Preparation of Plant Extract:**

The leaves should be sliced into pieces and exposed to shade drying. On absolute drying, the pieces should be powdered and put away in impermeable holders at room temperatures. The powdered leaves will be macerated with ethanol upto 7 days & afterwards separated. The filtrate will be dissipated to acquire dried concentrate. The extract obtained will tested for analgesic, anti-inflammatory and anti-pyretic activites. The plant extricate will be made by maceration process. **[11]**

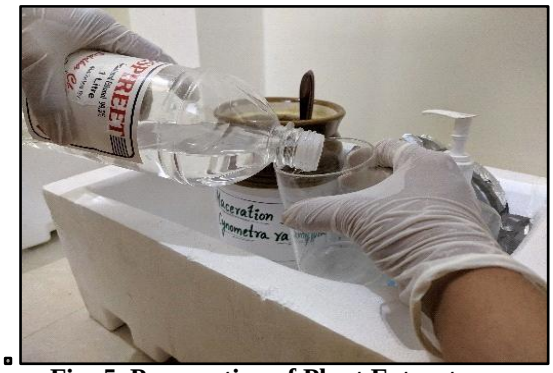


Fig: 5. Preparation of Plant Extract

Maceration: In maceration (for liquid extract), entire or coarsely powdered plant-sedate will be placed incontact with dissolvable in a stoppered compartment for a characterized period with visit unsettling until solvent issue is disintegrated. This technique is best reasonable for use if there should be an appearance of thermolabile medications. Utilizing this procedure, 500g/kg powder will be included, ethanol in the proportion 1:2 with fiery shaking was completed for 7 days consistently and was kept at room temperature. The filtrate in this manner will be obtained which is the ethanolic extricate. The filtrate got will be broken up in 0.9% ordinary saline which will be utilized as vehicle later on tests. **[11]**

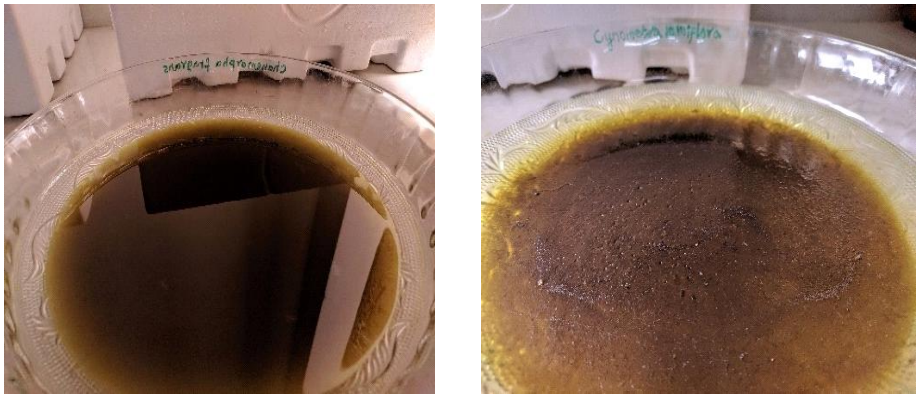


Fig: 6. Maceration

Experimental Animals:
Male Albino Wistar rats weighing 150-200 gm will be used. The experimental animals shouldbe maintained under std laboratory conditions (22-28℃, 12-h light/dark cycle under controlled temperature.) All animals should be acclimatized to the laboratory environment for not less than one week before the commencement of experiment. **[11]**

Fig: 7. Experimental Animals

Acute Toxicity Studies: Acute Toxicity Studies is performed according for the extract as per the intense harmful exemplary strategy according to Litchfield and Wilcoxon (1949) which is an acute toxic classic method. Intense poisonousness study will be conveyed out on plant extricates utilizing Male Albino mice in future. The mice must be fasted overnight and just before the starting of experiment, weight of mice is recorded. The animals has to be separated into five groups containing 6 animals each, the extract will be given orally in

expanding portion up to 2000mg/kg b.w. After treatment animals will be watched for toxicity or mortality for 72 hours. No adjustments in skin and hide, eyes, autonomic (salivation, lacrimation, poop) and central sensory system (ptosis, laziness, step, tremors) should be observed.**[11]**

Phytochemical Screening: Preliminary phyto-chemical screening will be performed according to the standard methods. The ethanolic leaf extracts of C. fragrans (C.F) and C. ramiflora (C.R) will be screened/tested for the presence of various phytochemicals like -Alkaloids, Flavonoids, Glycosides, Steroids, Terpenoids, Anthraquinones, Proteins, Phenols and Anthocyanins by employing standard conventional protocols. **[11]**

Fig: 8. Ethanolic extract & Phytochemical Testing

Screening Methods: [12]

Antipyretic Activity: Treatment with help of antipyretics hasbeen significant in the pre-anti-microbial period. Nevertheless, for the treatment ofacute viral-illnesses and for therapy of protozoal diseases like intestinal sickness decrease of raised temperature of body level by antipyretics isstill vital. For mitigating exacerbates, an antipyretic movement is viewed as a +ve symptom. To assess the properties, fever is initiated into rabbits / rats by infusion of lipo polysaccharides or Brewer's yeast.

1.) Antipyretic testing in rats

Purpose and Rationale: A sub-cutaneous infusion of Brewer's yeast suspension produces pyrexiain rats. A fall in temperature can obtained by administring compounds that have antipyretic activity.

Procedure: A Brewer's yeast of 15% suspension in 0.9% saline is made. Groups of6 Wistar rats ofany sex with a body weight of 150g are utilized. By additio of a thermocouple to a profundity of 2cm into rectum then underlying rectal temperatures are recorded. The mice are fevered by infusion of 10ml/kg of Brewer's yeast suspension sub-cutaneously in back beneath scruff of neck. Area of infusion is rubbed so as to expand spread of suspension underneath the skin. The room temperature is kept at 22–24 °C. Following yeast administration, food is withdrawn. 18 h post challenge, the elevation in rectal temperature is recorded. The estimation is repeated after 30min. only animals with an internal heat level of in any event 38 °C are taken into test. The animals get the test compound or the standard medication through oral administration. Rectal temperatures are noted again at 30, 60, 120 and 180 min post dosing.

Fig: 15. Antipyretic testing in rats

Evaluation: The contrasts between actual values and starting values are enlisted for each time span. The most extreme decrease in rectal temperature incontrast with control group is determined. The outcomes are contrasted and impact of std. medicaments, for example aminophenazone 100 mg/kg p.o. or on other hand phenacetin 100mg/kg p.o.

Experimental Design: The animals (Albino Wistar rats) will be divided into 6 groups, each group containing 6 rats (n=6). Total – 60 rats.

Groups	Drugs	Dose & Route
Group 1	Normal Saline	1 ml - i.p
Group 2	Toxic Control	10ml/kg - i.p
Group 3	Standard Control	10ml/kg -i.p
Group 4	CF Leaf Extract	200mg/kg - po
Group 5	CR Leaf Extract	200mg/kg - po
Group 6	CF + CR Leaf Extract	200mg/kg - po

IV. Results:

Phytochemical Evaluation: After successful Ethanolic leaf extracts of Chonemorpha fragrans and Cynometra ramiflora by Maceration process the following Phytochemical analysis was done and are summarised inthe following Table.

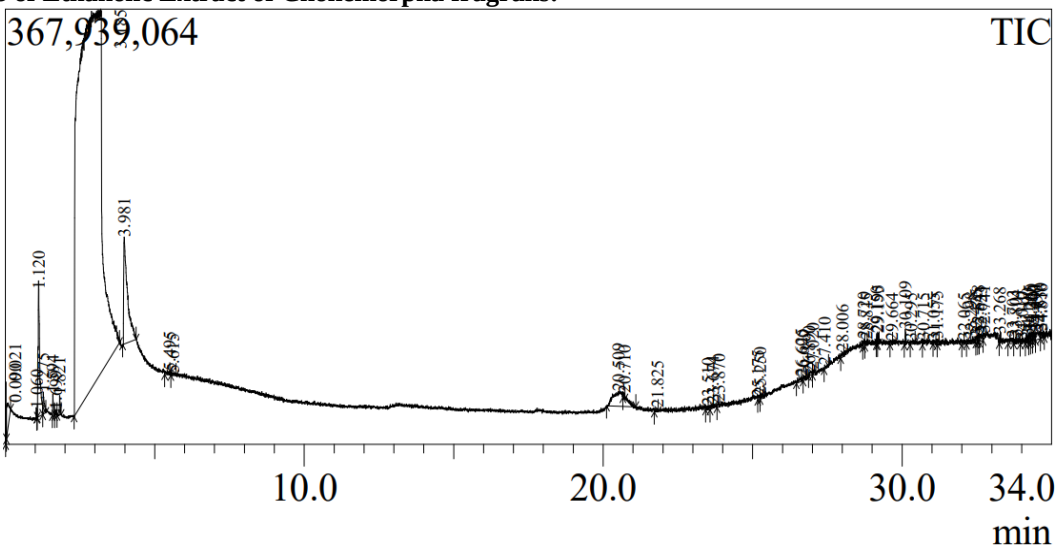
Table 1: Phytochemical Analysis of C. Fragrans & C. Ramiflora:

Type of constituents	C.F ethanolic leaf extract	C.R ethanolic leaf extract
Alkaloids	+	+
Glycosides	+	_
Carbohydrates	+	+
Flavonoids	+	+
Tannins	_	+
Saponins	+	+
Sterols	+	+
Phenols	_	+
Proteins	+	_
Triterpenoids	_	_

+ indicates presence and - indicates absence.

GCMS ANALYSIS:

GCMS of Ethanolic Extract of Chonemorpha fragrans:



Peak Report:

S.no	Retention time	Chemical constituents	Area %	Uses
1	20.509	Dimethyl Sulfoxide	1.75	Decreases fever, pain and inflammation.
2	22.450	Sulfamide	1.02	Treats fever, Anti-inflammatory, Treats bronchitis, bacterial menengitis, ear and eye infections, UTI Infections, severe burns.

3	32.760	Butyric acid	0.20	Reduces body temperature, Treats inflammatory conditions (non-specific bowel inflammation, diverticulitis, diversion colitis)
4	23.870	2-Propanol	1.34	Treats fever, used to prevent migraine headaches and chest pain (angina)
5	25.175	Propanoic acid	1.02	Reduces body temperature, Treatment of inflammation associated with tissue injury.
6	25.250	Coumarin-6-ol	1.07	Anti-inflammatory and anti pyretic

GCMS of Ethanolic Extract of Cynometra ramiflora:
Peak Report:

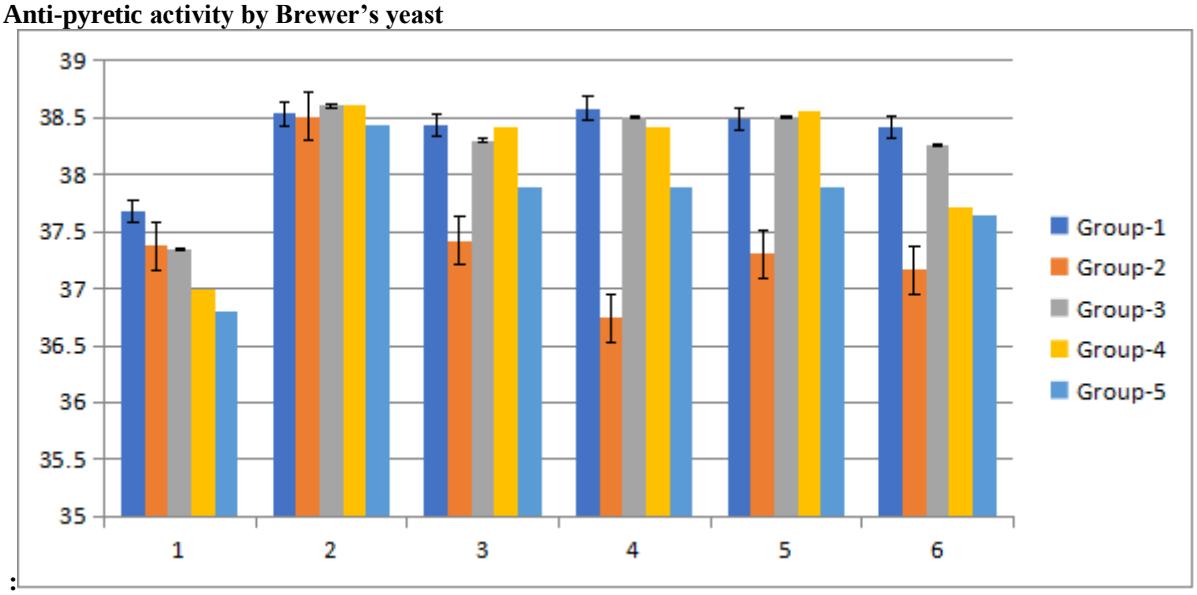
S.no	Retention time	Chemical constituents	Area %	Uses
1	34.039	Benzoic acid	0.09	Treat skin irritation and inflammation caused by burns.
2	34.405	Hexadecanoic acid	0.13	Anti inflammatory
3	32.625	Hydroxybutyric acid	0.07	Anti-pyretic,Analgesic
4	29.365	phenothiazone 32	0.09	Reduces fever and treats moderate to severe pain.
5	33.535	Thiatriazole	0.07	Anti-pyretic,Anti inflammatory
6	31.055	Pyridine-2	1.02	Relieve symptoms caused by irritation of the urinary tract such as pain, intense burning, and the feeling of needing to urinate urgently or frequently.

INVIVO Models for Anti-pyretic activity:
Anti-pyretic activity at different time intervals by inducing Baker's Yeast:

Groups	Drugs	**Time interval** BBT	**Time interval** **0 min**	**Time interval** **30 min**	**Time interval** **60 min**	**Time interval** **90 min**	**Time interval** **120 min**
	Rectal temperature (°C)	**Rectal temperatur e (°C)**	**Rectal temperatur e (°C)**	**Rectal temperatur e (°C)**	**Rectal temperatur e (°C)**	**Rectal temperatur e (°C)**	**Rectal temperatur e (°C)**
I	**Control (normal saline) 10ml/kg, p.o**	37.68 ± 0.18	38.53 ± 0.20	38.43 ± 0.13	38.58 ± 0.14	38.48 ± 0.17	38.42 ± 0.09
II	**Standard (Paracetamol) 100mg/kg, p.o**	37.37 ± 0.14	38.51 ± 0.15	37.42 ± 0.08 (p<0.01)	36.74 ± 0.15 (p<0.01)	37.3 ± 0.07 (p<0.01)	37.16 ± 0.09 (p<0.01)
III	**CFEE (200 mg/kg)**	37.35 ± 0.21	38.60 ± 0.23	38.30 ± 0.21 (p>0.05)	38.5 ± 0.10 (p>0.05)	38.5 ± 0.10 (p>0.05)	38.26 ± 0.12 (p>0.05)
IV	**CREE (200 mg/kg)**	36.99 ± 0.21	38.60 ± 0.23	38.41 ± 0.11 (p>0.05)	38.41 ± 0.15 (p>0.05)	38.55 ± 0.12 (p>0.05)	37.72 ± 0.23 (p<0.05)
V	**CFEE + CREE (200 mg/kg)**	36.8 ± 0.27	38.43 ± 0.13	37.88 ± 0.22 (p<0.05)	37.88 ± 0.22 (p<0.05)	37.88 ± 0.22 (p<0.05)	37.65 ± 0.19 (p<0.05)

The observation are mean ± S.E.M. p> 0.05-Not Significant, p<0.05- Significant, p< 0.01- Highly Significant as compared to control . BBT-Basal Body Temperature, p.o- per oral

Anti-pyretic activity by Brewer's yeast



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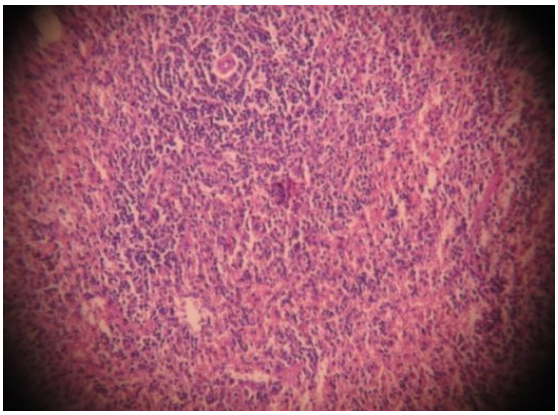
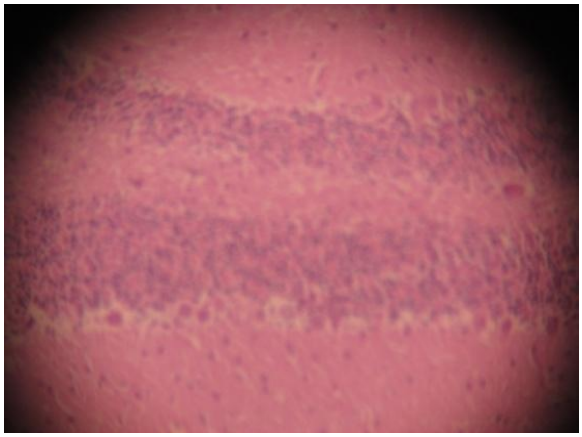
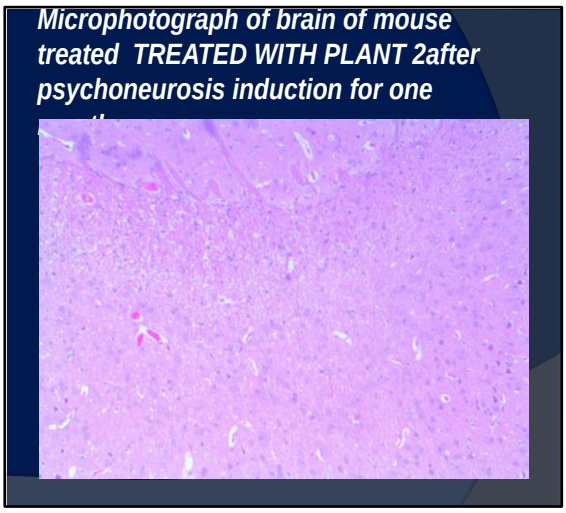
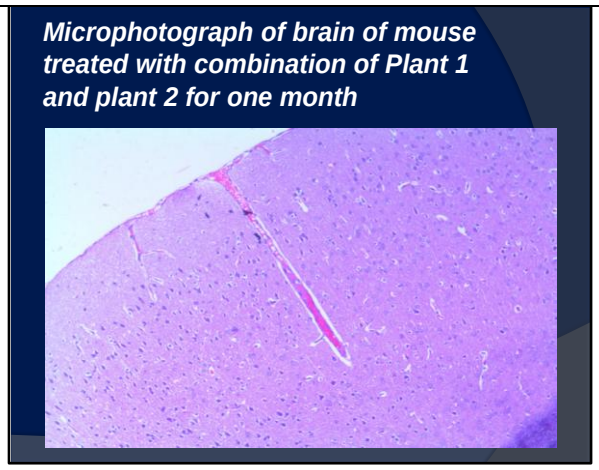
Effect of CFEE and CREE on Brewer's Yeast induced Pyrexia in rats.

Histopathology:

GROPUS	IMAGE	EXPLANATION
Group I		Shows normal brain tissue
Group II		Mice of group 2, which are treated with toxic control, had shown broad no. of flame shaped CA3 hippocampal neurons (soma). Mice of toxic group, manifested noxious cellular composition with erratically organized cells. It also showed intense no. of Deteriorated cells, basophilic appearance and karyopyknosis.

Group III		STANDARD DRUG: Mice of group 3, given with std.Drug i.e., imipramine 2mg/kg by i.p route had demonstrated CA3 region with healthy cells of hippocampus. This group of mice had recoverd their cells very closely to healthy cells
Group IV		Shows oedema of parenchyma and few neuronal degeneration.
Group V:		Showed mild oedema nd neurodegenertion
Group VI		Showed mild oedema nd neurodegenertion



V. Discussion:

My selected extracts from cynometra ramiflora and chonemorpha fragrans are effective singularly and also when used together.

Eddy's hot plate method had been performed and chonemorpha fragrans + cynometra ramiflora was effective up to 98% while chonemorpha fragrans is 82% effective and cynometra ramiflora is 88% effective.

Radiant heat method was performed and chonemorpha fragrans was effective up to 90% while cynometra ramiflora was effective up to 85%.

chonemorpha fragrans + cynometra ramiflora was effective up to 80%.

Writhing test had been performed and chonemorpha fragrans + cynometra ramiflora was effective up to 99% and chonemorpha fragrans was effective up to 86% and cynometra ramiflora was 82% effective.

Carrageenan induced paw edema had been performed chonemorpha fragrans + cynometra ramiflora was effective up to 98%, chonemorpha fragrans was effective up to 92% and cynometra ramiflora was effective up to 78%.

Oxazolone induced ear oedema was performed and chonemorpha fragrans + cynometra ramiflora was 96% effective, chonemorpha fragrans was 88% effective and cynometra ramiflora was 77% effective.

Antipyretic test was performed and chonemorpha fragrans + cynometra ramiflora was effective up to 97%, Cynometra ramiflora was 87% effective and chonemorpha fragrans was effective up to 80%.
All the effects were compared against standard group.

VI. Conclusion

The ethanolic extricates of Chonemorpha fragrans and Cynometra ramiflora has exhibited promising Analgesic, Anti inflammatory and Anti-Pyretic activities because of the presence chemical constituents found out by phytochemical screening.

The alkaloids are important as those are natural products with wide range of medicinal properties including pain relief, analgesic which are present in Chonemorpha fragrans and Cynometra ramiflora. They bind to nociceptors and either activate or inactivate them & inhibit or activate ion channels thus decreasing pain.

The flavonoid has been established to modify inflammatory reaction by inhibiting release of prostaglandins, an inflammatory compound that results in pain, thus reducing pain, inflammation & fever.

Therefore, the plan of work was successful and was utilized inanimal studies & also helpful in treating analgesia, inflammation, pyrexia and other associated complications. **[13]**

Thus, this study was conducted toinvestigate the phytochemicals in Chonemorpha fragrans and Cynometra ramiflora and for conducting animal studies to treat Analgesia, Inflammation and Pyrexia either by utilizing the plant individually or in combination on Male - Albino Wistar rats.

Medicinal plants & their chemical constituents have been widely utilized for pain relieving i.e., analgesics, anti-inflammatory and antipyretic properties. They have their roles in prevention & treatment of analgesia, inflammation and pyrexia.

In this perspective the Ethanolic extricates of Chonemorpha fragrans and Cynometra ramiflora and their chemical constituents were investigated for having properties to treat these ailments with the helpof GCMS Analysis and Preliminary phytochemical screening.

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